

Appendix L

**USCG Dry Cargo Sweepings Scientific
Investigation: Sweepings Characterization –
Chemical and Physical Analyses**

3 USCG Dry Cargo Sweepings Scientific Investigation: 4 Sweepings Characterization – Chemical Analyses

PREPARED FOR: U.S. Coast Guard

PREPARED BY: CH2M HILL

DATE: February 16, 2007

5 Introduction

6 The purpose of this characterization task was to collect and analyze representative samples
7 of dry cargo sweeping to aid in the evaluation the impacts of past, ongoing and potential
8 future dry cargo sweeping practices in the Great Lakes.

9 As part of that effort, samples of dry cargo sweeping were collected for chemical, physical
10 and biological analysis of from Great Lakes' cargo vessels. Four distinct types of sweepings
11 were collected which included:

- 12 1. Taconite (iron ore)
- 13 2. Limestone
- 14 3. Coal from the western region (Wyoming Basin)
- 15 4. Coal from the eastern region (Appalachians)

16 Project Quality Objectives

17 As stated previously, samples of dry cargo sweepings were collected from cargo vessels as
18 critical inputs to the overall evaluation of the potential impacts to the receiving Great Lakes
19 waters. Given this overall objective, this sampling and analysis effort was designed to:

- 20 • Collect representative samples of the four dry sweepings materials from cargo vessels
- 21 • Provide analytical data for identified key chemical, physical and biological parameters
22 to assist in assessing the overall impacts of these sweepings on the Great Lakes
- 23 • Yield data of sufficient quality to support project decisions regarding the need for
24 further study or impact control strategies

25 Therefore, the overall data quality objectives of this effort are to generate data of sufficient
26 quality to allow for:

- 27 • Comparison of chemical concentration of cargo sweepings to established ecological and
28 human health criteria
- 29 • Direct measurement of toxicological /biological impacts via established protocols
- 30 • Physical and chemical characteristics to allow modeling of sweeping releases into the
31 Great Lakes.

32 Key to meeting this overall data quality objective is the selection of analytical and
33 toxicological methods of appropriate sensitivity to allow criteria comparisons or to
34 determine toxic effects. Of similar importance is the selection of sampling methods that
35 ensure representative samples of cargo sweeping from the decks and sumps of each vessel.

36 Sample Collection and Required Analyses

37 Sampling Strategy and Techniques

38 During vessel loading and unloading operations, some of the cargo solids are inadvertently
39 deposited on the decks and in the cargo hold walkways as spillage from the various
40 loading/conveying systems. These materials can pose “slip, trip, and fall” hazards to ship’s
41 personnel and a normally handled by water washing and moved directly overboard (deck
42 sweepings) or collected into low lying wet sumps in the cargo hold areas where they are
43 periodically pumped overboard. Based on previously conducted research, the mass of
44 cargo sweeping generated per event vary from a few pounds to as much as 200 lbs (USCG,
45 2005).

46 Based on discussions with representatives of the Lake Carriers’ Association (LCA), results
47 of a shipboard reconnaissance visit conducted by USCG, LCA, and CH2M HILL personnel
48 in September, and a Data Quality Objectives planning meeting, a sampling strategy was
49 developed to allow rapid collection of representative samples of the four dry cargo
50 sweeping materials.

51 Because of the type of loading and unloading techniques employed, deck cargo sweepings
52 are generated from the loss of material from dock-side conveying systems (loading) and
53 from the shipboard conveying system during unloading. This sweeping must be cleared
54 from the decks at the start of each voyage. Deck sweeping (washing) is accomplished by
55 use of firefighting hoses delivering 200-400 gallons per minute of lake water to wash solid
56 materials directly overboard. These activities may be conducted up to several times per
57 week depending on the number of loading/unloading cycles.

58 Conversely, cargo hold sweepings are normally generated during unloading operations and
59 are cleared from below-decks walkways by water wash down. These washings are collected
60 into one or more (total number of sumps depends on the design of the individual vessel)
61 low-lying sumps (typically 100-200 gallon each) equipped with dredge pumps. During
62 wash down operations, these sumps may be cleared several times. Depending on the
63 amount of cargo residue in these walkways, water wash-down and sump pump-out may
64 only be conducted two or three times per month and cargo materials may stay in contact
65 with wash water in these sumps for some period of days.

66 Analysis of these dry cargo sweeping techniques clearly identified the need to address the
67 collection of deck sweepings separately from the collection of sump liquids and solids.
68 Deck solids have relatively short contact time with wash water whereas sumps solids may
69 have contact time on the order of several days. Therefore, sampling techniques were
70 identified for collection of:

- 71 • Deck Sweeping Solids
72 • Cargo Sump Solids
73 • Cargo Sump Liquids

74 In addition to these field samples, quality control samples including field duplicates, field
75 blanks, and matrix spikes/matrix spike duplicates were also collected. More details on the
76 overall data approach to data quality are provided in the Measurement Quality Objectives
77 (MQO) Section of this memorandum.

78

79 Cargo Ship Visits

80 In order to collect the necessary samples, arrangements were made to visit eight cargo ships
81 at ports on Lake Erie and Lake Superior. Table 1 identifies each vessel visited, its cargo, the
82 location of the port facility, and dates that samples were collected. All samples were
83 collected during the month of October, 2006. The sampling effort required two separate
84 mobilizations.

85 **Mobilization 1:** Two CH2M HILL personnel from Corvallis, OR and Atlanta, GA and a
86 representative of the Lake Carriers' Association (LCA) from Cleveland, OH traveled to
87 Duluth, MN on September 30th. Samples of Western Coal and Taconite were collected over
88 the next five days as ship schedules permitted. Typically, sampling on ship occurred in a
89 three to five hour window during loading operations. Equipment preparation before the
90 event, follow-up preparation of sample chains of custody (COCs), and packaging of samples
91 for shipping required an additional four to five hours. Following the completion of taconite
92 and western coal sampling, one CH2M HILL person and the LCA representative traveled to
93 Cleveland on October 5th to stage for collection of eastern coal and limestone samples.
94 Weather on the Great Lakes and changing ship schedules caused some delay in gaining
95 access to the remaining vessels. Eastern Coal samples were collected from two vessels as
96 indicated in Table 1 during the week of October 9th with assistance from a second
97 CH2M HILL person traveling by vehicle from Dayton, OH. Weather and ship schedules
98 forced the team to demobilize later that week as no firm schedule could be established for
99 collection of samples from the final limestone cargo vessel.

100 **Mobilization 2:** During the week of October 23rd, the final limestone samples were collected
101 from the second vessel (Table 1). CH2M HILL personnel mobilized from Corvallis, OR and
102 Cleveland, OH and were joined by the LCA representative from Cleveland. Sampling was
103 completed in the evening hours of October 27th and samples were shipped on Saturday for
104 Monday delivery to the laboratories.

105 Deck Sweepings

106 Deck sweeping solids were dust and coarse grain materials, which accumulate on the outer
107 deck surfaces of each vessel. Prior to collection of deck solid samples, a rapid survey of the
108 deck surface of the vessel was conducted to identify areas that contain significant layers of
109 dust or deposits of dry materials. Typically, these areas were located on a track between the
110 inshore side of the vessel (loading side) and the area around the cargo hold transited by the
111 conveyer boom (Figure 1). Samples were collected using a new Teflon brush and
112 polyethylene scoop. Each vessel had from 20 to 30 cargo holds, and solid materials were
113 collected from as many hold areas as needed to provide the necessary sample volume.

114 Typically, 10-12 hold areas of about 1 meter square each were swept for sample collection
115 (Figure 2). Solid samples were first composited in clean, 2-L polyethylene pail and sub-
116 samples were transferred to individual sample containers as required by each analytical
117 method. Given the mechanism of deposition of solids onto the deck surfaces, solids were
118 highly mixed and were expected to be representative of the cargo materials being loaded.
119 During the sampling, the mass of dry cargo on the deck was roughly estimated and found
120 to be generally consistent with the mass of sweepings reported in ships logs as documented
121 in previous reports (USCG, 2005).

122 Direct collection of deck sweepings during the wash down operation was not feasible
123 because of logistic and safety considerations. An approach was developed to simulate deck
124 sweepings wash samples by collecting additional volumes of solids and preparing the
125 slurry in the laboratory using water from Lake Erie and Lake Superior. This methodology is
126 described in the memorandum titled *Dry Cargo Sweepings Slurry Simulation* (CH2M HILL,
127 October 2006, Attachment 1). In this fashion, six total samples were created for all cargo
128 types using the following ratios with lake water from Erie and Superior:

- 129 • Taconite: 39 lbs of solids to 1 lb of water
130 • Coal: 28 lbs of solids to 1 lb of water
131 • Limestone: 43 lbs of solids to 1 lb of water

132 Deck solids from each of the two vessels per cargo type were added on a 50/50 mass basis
133 to the water. These samples were then submitted to the laboratories for the required
134 analyses.

135 **Sump Solids and Liquids**

136 Samples from the below decks sumps were collected following a rapid survey of the area to
137 determine the number and condition of each sump. In some cases, two sumps were
138 available; in other cases up to eight sumps were available, but only one or two sumps
139 contained water and solid materials. Table 2 presents a summary of sump conditions by
140 vessel.

141 For each sump, the protective steel grating was removed and the sump probed using a clean
142 wooden dowel to determine liquid depth and presence of solids. Generally sumps were
143 about 60 cm deep and varied in length and width. For sump solids, material was collected
144 using a clean 1-L glass jar and materials were transferred to the required individual sample
145 containers. For liquid samples, a single sample (or a single composite of two sumps where
146 available) were collected as sequential volumes using clean 1-L glass jar and transferring to
147 the required method sample containers. Liquid samples for the bioassay methods were
148 collected in a four liter polyethylene Cubetainer ©. Filtered samples for metals were
149 collected using a clean 40-mL plastic syringe equipped with a 0.54 micron in-line filter.
150 Sample volumes were withdrawn sequentially for each sump and filtered into the acid-
151 preserved 250-mL polyethylene sample bottles. Typical sump conditions are shown in
152 Figures 3, 4 and 5 for taconite, coal and limestone cargos, respectively.

153 In every case, all samples were stored in 60-L plastic coolers and transferred off each vessel
154 to a sample holding area where sample chain-of-custodies were completed, and samples
155 were packed for Federal Express shipping to the various laboratories.

156 **Analytical Methodology**

157 Analytical methodologies were selected to generate data of sufficient quality to support the
158 identified project data quality objectives. As an outcome of the Data Quality Objectives
159 meeting held in Duluth, MN on September 27 specific analytical methods and target
160 analytes were identified for the cargo sweepings characterizations *USCG Dry Cargo*
161 *Sweepings Scientific Investigation: Characterization Methods Review* (CH2M HILL, December
162 2006). Table 3 presents a summary of methods by sample matrix. Analytes associated with
163 each method are shown in Attachment 2.

164 **Field and Quality Control Samples**

165 Field samples of cargo sweepings and sump solids and liquids for each cargo and vessel are
166 summarized in Table 4. As previously stated, samples from two vessels for each cargo type
167 were collected to access the variability between cargo materials.

168 A number of quality control samples were also collected during the field effort. These
169 samples are described in the next section and summarized in Table 5.

170 **Measurement Quality Objectives (MQO)**

171 MQO's were established for all analyses by monitoring and controlling the normal data
172 quality indicators (representativeness, bias, accuracy, precision, sensitivity, comparability,
173 and completeness).

174 **Precision** is the degree of agreement among replicate measurements of the same property.
175 For this study, field duplicate samples will be collected for all cargo types and matrices. In
176 some cases, such as field filtration of samples for dissolved metals, a duplicate sub-sample
177 will be processed through a separate filter. In the assessment of overall precision, the
178 laboratory will often use reference samples (e.g., laboratory control samples or laboratory
179 duplicate samples) to assess precision associated with sample preparation and analysis.)

180 **Bias** is the systematic measurement of processes that cause errors in one direction for a
181 particular measurement. Bias is measured through analysis of standards of known
182 concentrations, through proper instrument calibration, and in some cases, inter-laboratory
183 comparisons. For this study, bias will be controlled in the laboratory by QC measures
184 (instrument calibration standards, method blanks, etc.) associated with each method.

185 **Sensitivity** is defined as the minimum concentration above which the data user has
186 reasonable confidence that the parameter was consistently detected and quantified.
187 Analytical reporting limits are developed from method detection limits that are measured
188 per 40 CFR Part 136. In the cases of toxic organics and metals, the reporting limits for each
189 analyte should be approximately 3 to 5 times lower (where possible by the method) than the
190 concentration of concern identified in the criteria list. For nutrients and physical
191 parameters, the requirements are based on comparison to typical concentrations expected in
192 the Great Lakes waters.

193 **Representativeness** is the degree to which a measurement accurately and precisely
194 represents a condition or characteristic of a population at the sampling location. This
195 measure is qualitative and the degree of representativeness depends on the sampling
196 strategy and selection of locations.

197 **Completeness** – In general, a completeness goal of 100% is desired. A completeness of
198 100% would indicate that analyses were completed for all methods and analytes planned for
199 each sampling location, and that all of the resulting data was useable. However, many
200 factors (weather, sample location accessibility, matrix effects) generally force the actually
201 completeness to a lower value. For this effort, the completeness goal is 90%.

202 **Comparability** is an expression of the level of confidence that two or more data sets can be
203 used to support a common analysis of a condition or characteristic. For this effort, the data
204 set being collected for dry cargo sweeping will form a baseline. In order to ensure
205 comparability with future efforts, SOPs for sampling will be employed and updated to
206 reflect actual practice and standard, and the analytical methodology employed will be well
207 documented.

208 A relatively conservative approach was taken in developing the required number of field
209 quality control samples as the number of parent field samples were rather small, which
210 resulted in a larger number of field QC than would normally be expected using a standard
211 EPA Superfund or RCRA approach. Field QC samples included:

- 212 • Field Duplicates – One sample collected for each cargo type and vessel combination.
- 213 • Field Blanks: One sample collected for each cargo type using reagent grade water for in-line filters used to collect field filtered water samples to assess any bias introduced by field collection methods.
- 216 • Matrix Spike/Matrix Spike Duplicate (or Duplicate in the case of metals): One sample pair collected for each cargo type and matrix combination for metals and semi-volatile organics only.

219 In addition to these field QC samples, a number of laboratory quality control samples were
220 also analyzed. These included method blanks, laboratory control samples (LCS), and
221 interference check samples. The type and frequencies of specific QC samples performed by
222 the laboratory depend on the specified analytical method. Internal QC methods require
223 performance on a sample batch basis and include analyses of method blanks, LCSs, and
224 actual environmental samples such as duplicates, matrix spikes, and matrix spike
225 duplicates. Additional QC is incorporated into the analytical sequence.

226 Analytical Laboratories

227 Samples for chemical and physical analyses were shipped to Lancaster Laboratory of
228 Lancaster, PA. Analyses of nutrients were performed by the CH2M HILL Applied Science
229 Laboratory. Bioassay samples were submitted to EnviroSystems, Inc. of Hampton, New
230 Hampshire.

231 Sample Results

232 Analytical results for all samples collected as part of this effort are presented in Attachment
233 3. A complete copy of all laboratory data packages is provided in Attachment 4. Bioassay
234 results are reported in a separate memorandum *USCG Dry Cargo Sweepings Scientific*
235 *Investigation: Sweepings Characterization – Toxicological Analyses* (CH2M HILL, February
236 2007).

237 Data Quality Assessment

238 Intervessel Comparison of Results for Individual Cargos

239 Samples results from each of the two vessels carrying the same cargo were compared to
240 assess the variability of the cargo material itself. In order to facilitate a rapid comparison,
241 the results of Vessel 1 and Vessel 2 were compared by calculating the ratio of their
242 respective concentrations. A ratio of 1 indicates equivalent results for Vessel 1 and Vessel 2.
243 These ratios are summarized in Table 6. In general, these ratios indicate reasonable
244 comparability between vessels of the same cargo. However, sump liquid samples show
245 considerably greater variability which may be indicative of differences in solid to liquid
246 volumes, solid surface areas, and/or solid/liquid contact times.

247 Field Duplicate Results

248 Field duplicate samples were collected for deck sweeping, sump solids and sump liquid
249 samples as indicated previously in Table 5. Results for the native samples and
250 corresponding field duplicates were compared calculating the ratio of concentration results.
251 These ratios are summarized for all parameters detected in the native samples in Table 7. A
252 ration of 1.0 indicates that native and field duplicate results were equivalent. Generally
253 ratios were in the range of 0.8 to 1.3 indicating very good analytical precision.

254 Assessment of Laboratory Data Quality Indicators

255 A streamlined data quality evaluation was performed on the data to identify any significant
256 issues that would adversely impact data usability. Surrogate recoveries, laboratory control
257 sample results, MS/MSD results, and blank sample results were reviewed. For a small
258 number of field samples, analyte concentrations exceeded calibration ranges and the
259 samples were reanalyzed following dilution. Both native and diluted results are reported.

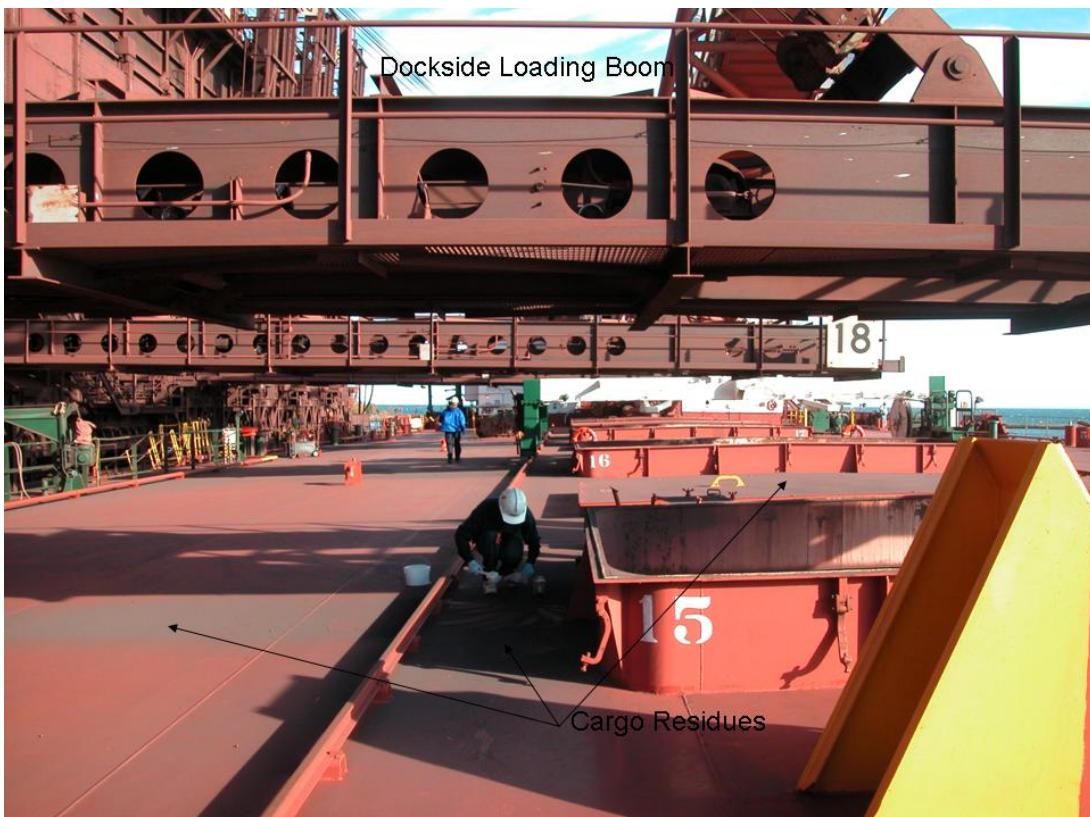
260 LCS and MS/MSD results were generally good with some variability seen for results where
261 native concentrations significantly exceeded the spiking levels. Some low level
262 contamination was seen in results for general chemistry parameters (nitrate, chloride, etc.),
263 as well as calcium and aluminum in metals blanks.

264 Comparison of Sample Results to Criteria

265 The ultimate data quality objective was to facilitate a comparison of cargo sweeping results
266 to benchmark criteria previously established. In order to be conservative and to
267 acknowledge some variability in the results for similar cargo in different vessels, the
268 maximum result for each combination of cargo type and matrix was compared to each
269 benchmark criterion for chronic effects. The benchmark criteria used were conservative (i.e.,
270 if concentrations are under the criterion there would be little to no likelihood of toxic effects,
271 and for exceedances less than 10 times the criterion there may be an indication of toxic
272 effects. Also, the criteria are intended for comparison to environmental media (i.e., in
273 surface water or sediment after the sweepings have mixed with native water or sediment)
274 thus direct comparison to the source material (i.e., sweepings) is a large overestimate of
275 toxic effects. To make these comparisons more clear, the maximum concentration result was
276 divided by its corresponding criterion to develop a ratio. Ratios greater than one indicate an

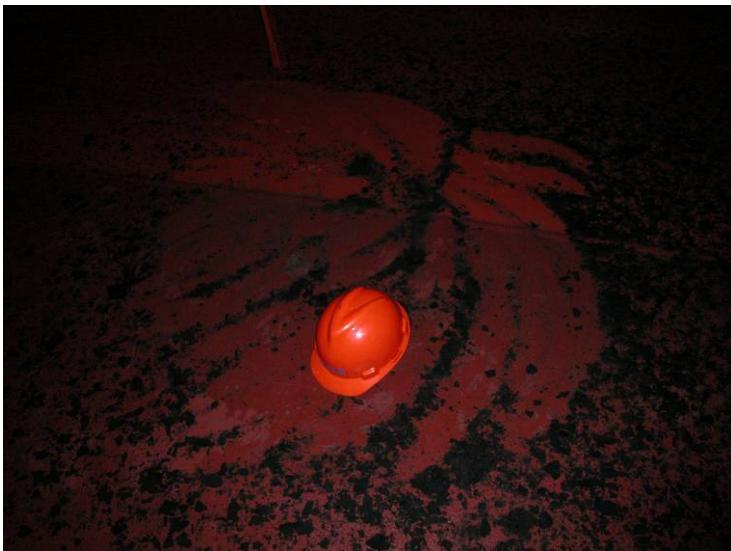
277 exceedance for that analyte. Table 8 presents the results of those comparisons. Twenty-one
278 analytes exceeded criteria in one or more samples. The majority of those exceeding criteria
279 had ratios lower than 10, indicating sample results were ten times or less above the criteria.
280 Only copper and pyrene had higher exceedance ratios in Western Coal Sump solids and
281 liquids, respectively.

282 **FIGURE 1**
283 Typical Cargo Residue Deck Deposition Pattern—Taconite (M/V Edwin R. Gott)

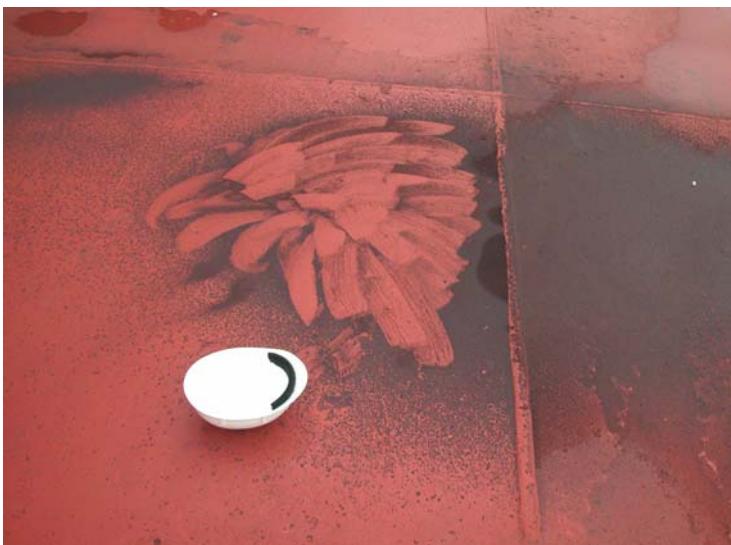


284

285 **FIGURE 2**
286 Typical Sample Collection Size—W. Coal (M/V American Integrity)
287 and Taconite (M/V Edwin R. Gott)



288



289

290 FIGURE 3
291 Sump Conditions – M/V Edwin R. Gott (Taconite)



292

293 FIGURE 4
294 Sump Conditions – M/V American Integrity (Western Coal)



295

296
297

FIGURE 5
Sump conditions – M/V Pathfinder (Limestone)



298

299
300

Attachment 1

Dry Cargo Sweepings Slurry Simulation

302
303

Dry Cargo Sweepings Slurry Simulation

PREPARED FOR: Project Team
 PREPARED BY: Jamie Maughan
 DATE: October 6, 2006

304
 305 One of the objectives of the sweepings characterization was to simulate the "slurry" of dry
 306 cargo residue that was washed off the deck during a sweeping event. In order to simulate
 307 the slurry we estimated the following:

- 308 • Average mass of residue from a deck sweeping event
 309 • Average volume of water from a deck sweeping event
 310 • Concentration of sweepings in the slurry going over board

311 We estimated the average mass of sweeping by extracting from the USCG data base for 2004
 312 all reported sweeping events from decks. We calculated the average mass from all events
 313 separately for iron, stone, and coal. We estimated the volume of water by applying the time
 314 of washing for the same events to the estimated rate of washing. The actual wash time was
 315 estimated as half the time reported as the washing operation to account for breaks, moving
 316 the hose, and hosing of areas with no sweepings. The washing rate was estimated as half
 317 the typical hose capacity (half of 300 gallons per minute, or 150 gallons per minute). Half
 318 the capacity was used to account for using less than full pressure and loss of water through
 319 leaks. This estimated volume of water was again divided in half as a conservative safety
 320 factor (i.e. over estimate the concentration of dry cargo residue in the slurry). The estimated
 321 mass of residue was divided by the estimated volume of water to derive an estimated slurry
 322 concentration. The results are summarized below.

	mean sweeping Wt.	st. dev.	count	Wash water (lbs)	Ibs water to lbs sweeping	Ibs water to lbs sweeping Safety factor (divided by 2)	gallons of water to lbs of sweepings
Iron	233.33	365.39	239	73451.04603	314.78832	157.3941578	39
Stone	269.39	240.54	74	59736.48649	221.74567	110.8728367	28
Coal	150.38	117.52	154	51391.55844	341.75231	170.8761551	43

324

325

Attachment 2

Summary of Target Analytes by Method

Summary of Target Analytes by Method

Analysis Method	Analyte
A2710F	SPECIFIC GRAVITY
D422 (Grain Size)	0.001 MM
D422	0.002 MM
D422	0.005 MM
D422	0.02 MM
D422	0.05 MM
D422	0.064 MM
D422	0.075 MM
D422	0.15 MM
D422	0.3 MM
D422	0.6 MM
D422	1.18 MM
D422	19 MM
D422	2.36 MM
D422	3.35 MM
D422	37.5 MM
D422	4.75 MM
D422	75 MM
E160.2	TOTAL SUSPENDED SOLIDS
E160.3	MOISTURE
E300.0A	Chloride
E350.3	Ammonia-N
E351.4	Total Kjeldahl Nitrogen as N
E353.2	Nitrate/Nitrite-N
E365.1	Phosphate, Ortho as P
E365.1	Phosphate, Total as P
E405.1	BIOCHEMICAL OXYGEN DEMAND
E410.4	CHEMICAL OXYGEN DEMAND
E415.1	DISSOLVED ORGANIC CARBON
E415.1	TOTAL ORGANIC CARBON

Analysis Method	Analyte
E868	BULK DENSITY
SM5310B	TOTAL ORGANIC CARBON
SW6010B	ALUMINUM
SW6010B	ALUMINUM - DISS
SW6010B	CALCIUM
SW6010B	CALCIUM - DISS
SW6010B	IRON
SW6010B	IRON - DISS
SW6010B	MAGNESIUM
SW6010B	MAGNESIUM - DISS
SW6010B	SILVER
SW6010B	SILVER - DISS
SW6010B	ZINC
SW6010B	ZINC - DISS
SW6020	ARSENIC
SW6020	ARSENIC - DISS
SW6020	CADMIUM
SW6020	CADMIUM - DISS
SW6020	CHROMIUM
SW6020	CHROMIUM - DISS
SW6020	COPPER
SW6020	COPPER - DISS
SW6020	LEAD
SW6020	LEAD - DISS
SW6020	NICKEL
SW6020	NICKEL - DISS
SW6020	SELENIUM
SW6020	SELENIUM - DISS
SW7470A	MERCURY
SW7470A	MERCURY - DISS
SW7471A	MERCURY
SW8270SIM	2-FLUOROBIPHENYL
SW8270SIM	ANTHRACENE

Analysis Method	Analyte
SW8270SIM	BENZO(A)ANTHRACENE
SW8270SIM	BENZO(A)PYRENE
SW8270SIM	CHRYSENE
SW8270SIM	DIBENZ(A,H)ANTHRACENE
SW8270SIM	FLUORANTHENE
SW8270SIM	FLUORENE
SW8270SIM	NAPHTHALENE
SW8270SIM	NITROBENZENE-D5 (surrogate)
SW8270SIM	PHENANTHRENE
SW8270SIM	PYRENE
SW8270SIM	TERPHENYL-D14 (surrogate)
SW9012A	CYANIDE - DISS
SW9012A	TOTAL CYANIDE

327

Table 1
Vessels Visited for Collection of Dry Cargo Sweepings

Cargo	Vessel Name	Operation	Location	Sample Date	Captain
E. Coal	American Courage	Loading	Ashtabula, OH	10/6/2006	John Chidester
E. Coal	American Republic	Loading	Sandusky, OH	10/9/2006	Tim Kehl/Tim Crowe
Limestone	Earl W. Oglebay	Unloading	Conneaut, OH	10/27/2006	Jim Fisher
Limestone	Pathfinder	Loading	Sandusky, OH	10/10/2006	Gary Schmidt
Taconite	Edwin H. Gott	Loading	Two Harbors, MN	10/1/2006	Steve Kelley
Taconite	Paul R. Tregurtha	Loading	Duluth, MN	10/3/2006	Tim Dayton
W. Coal	American Integrity	Loading	Superior, WI	10/4/2006	Pat Nelson
W. Coal	American Spirit	Loading	Superior, WI	10/3/2006	Dan Bartels

Table 2
Summary of Sump Sample Collections

Cargo	Vessel Name	Sump(s) Samples	Sump Conditions
E. Coal	American Courage	1. Aft centerline sump - 7 ft x 2ft x 14" deep 2. Starboard forward sump - 7.5 ft x 2 ft x 20" deep	Sumps contained mixture of coal, taconite and sandy materials - NOT SAMPLED per workplan
E. Coal	American Republic	1. Aft centerline sump - 17 ft x 30" x 20" deep 2. Forward port sump - 7ft x 27" x 19" deep	1. Nominal residue - limestone fines 2. Gravel and sand in foreward sump NOT SAMPLED per workplan
Limestone	Earl W. Oglebay	Five sets of starboard and port sumps, 6 ft x 2 ft x 18" deep each - 1. First sample from port and starboard No. 1 sump 2. Second sample from port and starbaord No. 5 sump	1. First sample from - No. 1 (star) full of water, nominal solids, No 1 (P) full of water with 0.5 gallons of solids 2. Second sample from - No. 5 (s) full of water with < 1 quart of material, No. 5 (p) full of water < 0.5 gallons of solids
Limestone	Pathfinder	1. Forward starboard sump 22" x 28" x 5" deep 2. Aft centerline sump 6 ft x 19 ft x 3ft deep, , equipped with three pumps	1. Less than one gallon of fine sediments, used for dewatering only, Not Sampled (not representative) 2. Majority of aft sump is full of compacted material
Taconite	Edwin H. Gott	1. Centerline aft sump - 12 ft x 30 in wide 2. Midship portside sump - 4ft long x 2 ft wide x 2 ft deep	1. 14"-16" in of sediment in corners with 8'-10" in water 2. 3"-4" in of sediments, 10" of water at center
Taconite	Paul R. Tregurtha	1. Two part sump at aft centerline - 6ft long x 2ft wide x 28 in deep at max 2. Sump#2 port side 6ft x 2 ft x 2ft deep at max	1. Some sediments in corner and crossover pipe, 8" of water at max 2. About 3 gallons or solids in total, 10" of water at max
W. Coal	American Integrity	1. Centerline aft sump 20ft x 8 ft x 2 ft deep 2. Forward starboard sump for of solids but normally not used	1. High solids loading with 8" of water. Field filtration of liquid not possibel due to filter blockages - unpreserved toatl samples collected for lab filtration 2. Forward starboard sump not sampled
W. Coal	American Spirit	1. Port Outboard Aft sump - 4ft long x 2 ft wide x 2 ft deep 2. Starboard Outboard aft sump - 4ft long x 2 ft wide x 2 ft deep	1. Sump full of water with about 2 gallons of solids present 2. Standing water above the sump line with less than 1 gallon of solids

Table 3
Analytical Methods for Dry Sweepings Characterizations

Sample Type	Parameter	Analytical Method
Deck Solids Sweepings and Sump Solids	PAHs	SW8270C SIM
	Total Metals	SW6020
	Cyanide	SW9012A
	Mercury	SW7471A
	TOC	SW9060
	Total Phosphate	E365.1
	Ortho-Phosphate	E365.1
	Total Kjeldahl Nitrogen	E351.4
	Ammonia	E350.3
	Nitrate/Nitrite	E353.2
	Chloride	E300.0
	Total Solids (Moisture)	E160.3
	Grain Size	ASTM D422-63
	Bulk Density	ASTM E868-82
	Bioassay	Hyallella azteca,
		Chironomus tentans
Liquid Sump Samples	PAHs	SW8270C SIM
	Total/Dissolved Metals	SW6010
	Total/Dissolved Cyanide	SW9010B
	Total/Dissolved Mercury	SW7470A
	BOD	E405.1
	COD	E410.1
	TOC/DOC	SW9060
	Total Phosphate	E365.1
	Ortho-Phosphate	E365.1
	Total Kjeldahl Nitrogen	E351.4
	Ammonia	E350.3
	Nitrate/Nitrite	E353.2
	Chloride	E300.0
	Total Suspended Solids	E160.2
	Specific Gravity	SM2710F
	Bioassay	Pimephales promelas,
		Daphnia Magna

Table 4
Dry Cargo Samples and Associated Analytical Methods

Table 5
Summary of Quality Control Samples by Cargo Type, Vessel and Analytical Method

					Specific Gravity	Grain Size	Moisture	Chloride	Ammonia	Total Kjeldahl Nitrogen	Nitrate/Nitrite	Total and Orthophosphate	Biological Oxygen Demand	Chemical oxygen Demand	Dissolved Organic Carbon	Bulk Density	Total Organic Carbon (b)	Metals and Cyanide (a)	Polycyclic Aromatic Hydrocarbons
Cargo	Vessel Name	QC type	Field ID																
E. Coal	American Courage	FD	CLECV3-DS-1-D		X	X										X	X	X	X
		MS/MSD	CLECV3-DS-1MS													X	X	X	X
	American Republic	FD	CLECV4-DS-1-D		X											X			
Limestone	Earl W Oglebay	FB	CLELV2-LS-1-BK																X
		FD	CLELV2-DS-1-D		X											X			
			CLELV2-LS-1-D		X											X			
	PathFinder	FD	CLELV1-DS-1-D		X	X	X	X	X	X	X	X				X	X		
			CLELV1-LS-1-D		X		X	X	X	X	X	X	X	X			X		
			CLELV1-SS-1-D		X	X										X	X		
		MS/MSD	CLELV1-DS-1MS														X		
			CLELV1-LS-1MS													X	X		
			CLELV1-SS-1MS													X			
Taconite	Edwin R. Gott	MS/MSD	DLHTV1-DS-1-D		X	X	X									X	X		
			DLHTV1-LS-1-D				X	X	X	X	X	X							
			DLHTV1-LS-D		X											X	X		
			DLHTV1-SS-1-D		X	X										X	X		
		MS/MSD	DLHTV1-DS-1MS														X	X	
			DLHTV1-LS-1MS													X	X		
			DLHTV1-SS-1MS													X			
	Paul R. Tegurtha	FD	DLHTV2-DS-1-D		X											X			
			DLHTV2-LS-1-D		X											X	X	X	
W. Coal	American Integrity	FB	DLHCV2-LS-1-BK																X
		FD	DLHCV2-DS-1-D		X												X		
			DLHCV2-LS-1-D		X											X	X	X	
		MS/MSD	DLHCV2-DS-1MS																X
	American Spirit	FD	DLHCV1-DS-1-D		X	X	X									X	X	X	X
			DLHCV1-LS-1-D		X		X	X	X	X	X	X	X	X		X	X	X	X
			DLHCV1-SS-1-D		X	X										X	X	X	X
			DLHCV1-SS-1-DRE																X
		MS/MSD	DLHCV1-DS-1MS													X	X	X	X
			DLHCV1-LS-1MS													X	X	X	X
			DLHCV1-SS-1MS													X	X	X	X

Notes

(a) Metals and cyanide = for liquid samples, both total and dissolved metals were analyzed

(b) Also dissolved organic carbon for liquids

FD = field duplicate

FB = field blank

MS/MSD = Matrix spike/matrix spike duplicate pair

Table 6

Comparison of Vessel 1 and Vessel 2 by Concentration Ratio - Detected Parameters Only

AnalysisMethod	Analyte	Taconite			Western Coal			Eastern Coal			Limestone		
		Deck Sweepings		Sump	Deck Sweepings		Sump	Deck Sweepings		Solids	Deck Sweepings		Sump
		Solids	Solids	Liquids	Solids	Solids	Liquids	Solids	Solids	Solids	Solids	Solids	Liquids
A2710F	SPECIFIC GRAVITY			1.0				1.01					1.0
D422	0.001 MM												2.0
	0.002 MM												0.5
	0.005 MM												0.4
	0.02 MM												0.5
	0.05 MM												0.7
	0.064 MM												0.7
	0.075 MM	0.3						0.6					0.7
	0.15 MM	0.3						0.9					0.8
	0.3 MM	0.3						1.5					0.8
	0.6 MM	0.6						1.9					1.1
	1.18 MM	0.9						2.1					1.0
	19 MM	1.0	1.0					1.1	1.2				1.0
	2.36 MM	1.0	9.5					2.2	1.1				0.7
	3.35 MM	1.0	6.9					1.9	1.0				18.5
	37.5 MM	1.0	1.0					1.0	1.0				1.0
	4.75 MM	1.0	4.8					1.7	1.1				0.8
	75 MM	1.0	1.0					1.0	1.0				1.0
E160.2	TOTAL SUSPENDED SOLIDS							0.1					2.3
E160.3	MOISTURE			2.0				0.9	0.2				3.2
E300.0A	Chloride		2.6					4.3					0.4
E410.4	CHEMICAL OXYGEN DEMAND								0.1				0.3
E415.1	TOTAL ORGANIC CARBON			24.2						0.6			0.5
E868	BULK DENSITY	1.0						1.0	2.6				0.9
SW6010B	ALUMINUM	2.1	2.1					0.8	0.1				5.5
	CALCIUM	7.7	2.0	1.6				0.7	0.3	2.5			3.2
	IRON	1.7	1.5	9.7				0.6	99.3	0.1			1.9
	MAGNESIUM	5.3	2.0	1.9				1.2	0.4	1.9			4.2
	ZINC	1.5	2.1					0.3	3.5				0.1
SW6020	ARSENIC	0.7	1.2	6.5				1.1	11.2				2.4
	ARSENIC - DISS			6.4									1.2
	CADMIUM				1.0								1.3
	CHROMIUM		1.0	1.3	2.4			1.0					0.6
	CHROMIUM - DISS				2.4								0.7
	COPPER		1.4	0.7	11.8			0.6	9.1	0.9			0.6
	COPPER - DISS				7.6					1.5			0.5
	LEAD		0.9	0.2	34.1			0.3	4.3	0.8			0.7
	LEAD - DISS				36.3					2.0			0.3
	NICKEL		2.9	1.3	5.7			0.6	20.7	0.5			1.1
SW7471A	NICKEL - DISS				4.5					1.7			0.5
	SELENIUM												2.0
	SELENIUM - DISS												0.3
	MERCURY												0.2
													0.1
SW8270SIM	ANTHRACENE							0.8	0.0				
	BENZO(A)ANTHRACENE							0.9					
	BENZO(A)PYRENE							0.6	0.1				
	CHRYSENE							0.9					
	FLUORANTHENE							0.7					
	FLUORENE							0.4		0.3			
	NAPHTHALENE							0.3					
	PHENANTHRENE							1.0		0.2			
	PYRENE							0.5					

Table 7

Comparison of Native and Field Duplicate results (detected analytes only)

Analysis Method	Analyte	Native to Field Duplicate Concentration Ratios											
		Taconite			E. Coal		W. Coal			Limestone			
		Deck Sweepings	Solids	Liquids	Deck Sweepings	Solids	Solids	Liquids	Deck Sweepings	Solids	Solids	Liquids	Deck Sweepings
A2710F	SPECIFIC GRAVITY			2.0					1.0				2.0
E160.3	MOISTURE			0.8		0.9		1.1	0.6		2.0		0.6
E300.0A	Chloride		1.0	1.0				1.2	1.1		1.3		0.9
E350.3	Ammonia-N			1.5					1.2		0.6		1.0
E351.4	Total Kjeldahl Nitrogen as N			1.1					1.4		1.5		0.9
E353.2	Nitrate/Nitrite-N			0.9					0.8		1.6		0.9
E365.1	Phosphate, Ortho as P			1.1					1.1				1.6
	Phosphate, Total as P			1.0					0.8		0.9		0.6
E405.1	BIOCHEMICAL OXYGEN DEMAND												1.0
E410.4	CHEMICAL OXYGEN DEMAND								1.1				2.0
E415.1	DISSOLVED ORGANIC CARBON			1.1									
	TOTAL ORGANIC CARBON			1.9					1.2				2.2
E868	BULK DENSITY	2.0			2.0		2.2	1.1		1.8		0.5	
SM5310B	TOTAL ORGANIC CARBON				1.1		0.8	0.7					
SW6010B	ALUMINUM	0.9	1.0		1.1		1.0	0.1		0.9		1.0	1.6
	CALCIUM	1.1	0.9	1.0	0.8		1.0	0.3	1.0		1.0		0.7
	IRON	1.0	0.9	1.4	1.2		0.4	0.6	1.1		1.8		0.9
	MAGNESIUM	1.1	0.9	1.0	0.7		1.0	0.6	1.0		1.1		1.1
	SILVER								0.5				
	ZINC	1.2	0.8	1.0	0.1		0.6	0.3		1.0		0.9	1.3
	ZINC - DISS			1.0									
SW6020	ARSENIC	0.9	1.0	1.0	0.9		0.8	0.8		1.1		0.9	1.0
	ARSENIC - DISS			1.0									0.9
	CADMIUM	0.7	0.7	0.9	1.2		1.2	0.3		1.0		0.9	0.9
	CADMIUM - DISS			0.8									
	CHROMIUM	1.0	1.0	1.0	1.0		0.7	1.0	1.1		1.0		0.9
	CHROMIUM - DISS			1.0					0.5				1.1
	COPPER	1.0	0.7	1.0	0.9		0.9	0.1	1.3		1.1		1.0
	COPPER - DISS			1.0					0.8				0.3
	LEAD	0.8	0.4	1.0	0.7		0.9	0.0	1.2		0.4		0.9
	LEAD - DISS			1.0					1.0				1.1
	NICKEL	1.0	0.8	1.0	0.9		0.9	0.9	1.1		1.1		0.9
	NICKEL - DISS			1.0					0.8				0.9
	SELENIUM					0.9		0.7	1.8		1.2		1.0
	SELENIUM - DISS												0.9
SW7470A	MERCURY			0.7									
	MERCURY - DISS			1.0									
SW7471A	MERCURY				1.0		0.9						
SW8270SIM	2-FLUOROBIPHENYL				1.4		1.0	1.7	1.0				
	ANTHRACENE				1.0		0.9	0.2					
	BENZO(A)ANTHRACENE				1.3		0.8	0.6					
	BENZO(A)PYRENE				1.1		1.1						
	CHRYSENE				1.2		0.8	0.6					
	DIBENZ(A,H)ANTHRACENE				1.7		0.9						
	FLUORANTHENE				1.0		1.0	0.6	1.0				
	FLUORENE				1.1		0.6	0.5	1.0				
	NAPHTHALENE				0.9		0.8	0.1	0.9				
	PHENANTHRENE				0.9		0.8	0.3	0.9				
	PYRENE				1.0		0.6	0.8	1.0				
SW9012A	TOTAL CYANIDE						0.8						

Table 8
Benchmark Ratios

Analyte	Liquid			Solid			Taconite				Eastern Coal				Western Coal				Limestone					
	Acute Benchmark (a)	Chronic Benchmark (a)	Units	Acute Benchmark (a)	Chronic Benchmark (a)	Units	Sump		Deck Sweepings		Deck Sweepings		Sump		Deck Sweepings		Sump		Deck Sweepings		Sump			
							Solids	Liquid	Solids	Liquid	Solids	Liquid	Solids	Liquid	Solids	Liquid	Solids	Liquid	Solids	Liquid	Solids	Liquid		
ALUMINUM	0.75	0.087	MG/L																				1.3	
ARSENIC				33	9.79	MG/KG							1.3										3.0	
BENZO(A)ANTHRACENE	0.49	0.027	UG/L	1050	108	UG/KG							1.4										3.4	
BENZO(A)PYRENE	0.24	0.014	UG/L																				2.6	
CADMIUM	0.0045	0.000246	MG/L	4.98	0.99	MG/KG		2.7															1.1	
CADMIUM - Dissolved	0.016	0.000209	MG/L				111	43.4	MG/KG														8.9	
CHROMIUM																							7.2	
CHRYSENE	0.24	0.014	UG/L	1290	166	UG/KG							1.0	3.2									7.1	
COPPER	0.014	0.0093	MG/L	128	31.6	MG/KG		2.9															61.4	
COPPER - Dissolved	0.013	0.0089	MG/L					2.2															1.5	
FLUORANTHENE							2230	480	UG/KG															
IRON	Not Available	1	MG/L							6.2		1.3												9.8
LEAD	0.082	0.0032	MG/L	128	35.8	MG/KG		2.4															6.6	
LEAD - Dissolved	0.065	0.0025	MG/L					1.2															5.2	
NAPHTHALENE							561	176	UG/KG				1.5										2.0	
NICKEL							48.6	22.7	MG/KG				1.0										1.2	
PHENANTHRENE							1170	204	UG/KG				3.1										1.4	
PYRENE	0.24	0.014	UG/L	1520	195	UG/KG							1.6	3.2									31.4	
SELENIUM	0.024	0.005	MG/L																				1.9	
SELENIUM - Dissolved	0.022	0.0046	MG/L																				2.4	
ZINC	0.12	0.118	MG/L	459	121	MG/KG							2.4										1.7	

Notes

(a) Chronic benchmark used for calculation of ratios

Also exceeds acute benchmark

328

329

Attachment 3
Analytical Data Summaries

Great Lakes Cargo Sweepings Characterization

Analytical Data Summary

Vessel: American Spirit
Cargo: W. Coal

Flags: U = Not Detected
J or B = Estimated. Below Reporting Limit
F = Filtered

Great Lakes Cargo Sweepings Characterization

Analytical Data Summary

Vessel: American Integrity
Cargo: W. Coal

Analyte	DLHCV2-DS-1 Deck Sweepings			DLHCV2-DS-1-D Deck Sweepings			DLHCV2-LS-1 Liquid Sump Sample			DLHCV2-LS-1-D Liquid Sump Sample			DLHCV2-SS-1 Solid Sump Sample		
	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units
BIOCHEMICAL OXYGEN DEMAND							5.9	U	MG/L	6.2	U	MG/L			
CHEMICAL OXYGEN DEMAND							354	MG/L	420	MG/L					
TOTAL ORGANIC CARBON							4.8	MG/L	4.3	MG/L					
DISSOLVED ORGANIC CARBON															
SPECIFIC GRAVITY							0.99	NONE	1	NONE					
Phosphate - Total as P															
Phosphate - Ortho as P															
Total Kjeldahl Nitrogen as N															
Nitrate/Nitrite-N															
Ammonia-N															
Chloride	3.92	MG/KG					24.8	MG/L							
TOTAL HARDNESS							23.0	MG/L							
DISSOLVED HARDNESS															
BULK DENSITY	0.71	G/CC	0.59	G/CC						0.68	G/CC				
0.001 MM	0.5	U	% PASSING	0.5	U	% PASSING				0.5	U	% PASSING			
0.002 MM	0.5	U	% PASSING	0.5	U	% PASSING				0.5	U	% PASSING			
0.005 MM	0.5	U	% PASSING	0.5	U	% PASSING				0.5	U	% PASSING			
0.02 MM	0.5	U	% PASSING	0.5	U	% PASSING				0.5	U	% PASSING			
0.05 MM	0.5	U	% PASSING	0.5	U	% PASSING				0.5	U	% PASSING			
0.064 MM	0.5	U	% PASSING	0.5	U	% PASSING				0.5	U	% PASSING			
0.075 MM	24.5	% PASSING	16.3	% PASSING						0.5	U	% PASSING			
0.15 MM	28.2	% PASSING	26.5	% PASSING						0.5	U	% PASSING			
0.3 MM	32.9	% PASSING	43.6	% PASSING						0.5	U	% PASSING			
0.6 MM	37.5	% PASSING	62.2	% PASSING						0.5	U	% PASSING			
1.18 MM	39.7	% PASSING	71.5	% PASSING						0.5	U	% PASSING			
2.36 MM	40.4	% PASSING	73.4	% PASSING						15.5	% PASSING				
3.35 MM	47.7	% PASSING	78.2	% PASSING						20.7	% PASSING				
4.75 MM	56.3	% PASSING	83	% PASSING						27.9	% PASSING				
19 MM	93.2	% PASSING	98.2	% PASSING						84.8	% PASSING				
37.5 MM	100	% PASSING	100	% PASSING						98.9	% PASSING				
75 MM	100	% PASSING	100	% PASSING						100	% PASSING				
TOTAL CYANIDE	0.27	J	MG/KG		0.005	U	MG/L			0.28	U	MG/KG			
CYANIDE - DISS					0.005	UF	MG/L								
MERCURY	0.0394	J	MG/KG		0.00028	U	MG/L			0.0167	U	MG/KG			
MERCURY - DISS					0.000056	UF	MG/L								
ALUMINUM	3470	MG/KG			0.955	MG/L				3340	MG/KG				
ALUMINUM - DISS					0.0802	UF	MG/L								
ARSENIC	1.27	J	MG/KG		0.0011	J	MG/L			1.7	J	MG/KG			
ARSENIC - DISS					0.00067	UF	MG/L								
CADMIUM	0.425	MG/KG			0.000099	U	MG/L			0.061	U	MG/KG			
CADMIUM - DISS					0.000099	UF	MG/L								
CALCIUM	9060	MG/KG			6.28	MG/L				7800	MG/KG				
CALCIUM - DISS					5.96	F	MG/L								
CHROMIUM	7.94	MG/KG			0.028	MG/L				9.9	MG/KG				
CHROMIUM - DISS					0.0083	JF	MG/L								
COPPER	19	MG/KG			0.0056	MG/L				14.8	MG/KG				
COPPER - DISS					0.0015	F	MG/L								
IRON	5460	MG/KG			9.79	MG/L				2880	MG/KG				
IRON - DISS					0.0522	UF	MG/L								
LEAD	5.48	MG/KG			0.0013	MG/L				2.67	MG/KG				
LEAD - DISS					0.000054	JF	MG/L								
MAGNESIUM	1800	MG/KG			2.21	MG/L				1580	MG/KG				
MAGNESIUM - DISS					1.98	F	MG/L								
NICKEL	4.72	MG/KG			0.0033	MG/L				4.56	MG/KG				
NICKEL - DISS					0.0011	JF	MG/L								
SELENIUM	0.489	U	MG/KG		0.0005	U	MG/L			0.594	U	MG/KG			
SELENIUM - DISS					0.0005	UF	MG/L								
SILVER	0.225	U	MG/KG		0.0016	U	MG/L			0.273	U	MG/KG			
ZINC	47.1	MG/KG			0.0696	MG/L				15.8	MG/KG				
ZINC - DISS					0.0081	UF	MG/L								
TOTAL SUSPENDED SOLIDS					232	MG/L									
MOISTURE	24.3	%								37.7	%				
ANTHRACENE	88	UG/KG			0.038	J	UG/L			27	UG/KG				
BENZO(A)ANTHRACENE	110	UG/KG			0.091	UG/L				36	UG/KG				
BENZO(A)PYRENE	35	UG/KG			0.037	J	UG/L			9.4	J	UG/KG			
CHRYSENE	75	UG/KG			0.1	UG/L				29	UG/KG				
DIBENZ(A,H)ANTHRACENE	13	U	UG/KG		0.02	U	UG/L			8	U	UG/KG			
FLUORANTHENE	480	UG/KG			0.33	UG/L				120	UG/KG				
FLUORENE	71	UG/KG			0.078	UG/L				22	UG/KG				
NAPHTHALENE	360	UG/KG			0.29	UG/L				94	UG/KG				
PHENANTHRENE	220	UG/KG			0.32	UG/L				90	UG/KG				
PYRENE	720	UG/KG			0.44	UG/L				150	UG/KG				

Flags: U = Not Detected
J or B = Estimated Below Reporting Limit
F = Filtered

Great Lakes Cargo Sweepings Characterization

Analytical Data Summary

Vessel: American Courage
Cargo: E. Coal

Analyte	CLECV3-DS-1 Deck Sweepings			CLECV3-DS-1DL Deck Sweepings			CLECV3-DS-1-D Deck Sweepings		
	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units
BIOCHEMICAL OXYGEN DEMAND									
CHEMICAL OXYGEN DEMAND									
TOTAL ORGANIC CARBON	525000		MG/KG				462000		MG/KG
DISSOLVED ORGANIC CARBON									
SPECIFIC GRAVITY									
Phosphate, Total as P									
Phosphate, Ortho as P									
Total Kjeldahl Nitrogen as N									
Nitrate/Nitrite-N									
Ammonia-N									
Chloride	3.12		MG/KG						
TOTAL HARNESS									
DISSOLVED HARNESS									
BULK DENSITY	0.83	G/CC		0.79	G/CC				
0.001 MM	0.5 U	% PASSING		1	% PASSING				
0.002 MM	0.5 U	% PASSING		2.5	% PASSING				
0.005 MM	0.5 U	% PASSING		5	% PASSING				
0.02 MM	0.5 U	% PASSING		7	% PASSING				
0.05 MM	0.5 U	% PASSING		11	% PASSING				
0.064 MM	0.5 U	% PASSING		16.5	% PASSING				
0.075 MM	16.7	% PASSING		19.1	% PASSING				
0.15 MM	24.8	% PASSING		26.9	% PASSING				
0.3 MM	36.2	% PASSING		38.8	% PASSING				
0.6 MM	54.2	% PASSING		56.6	% PASSING				
1.18 MM	68	% PASSING		71.5	% PASSING				
2.36 MM	73.3	% PASSING		77.6	% PASSING				
3.35 MM	82	% PASSING		83.9	% PASSING				
4.75 MM	90.8	% PASSING		89	% PASSING				
19 MM	100	% PASSING		100	% PASSING				
37.5 MM	100	% PASSING		100	% PASSING				
75 MM	100	% PASSING		100	% PASSING				
TOTAL CYANIDE	0.18 U	MG/KG		0.19 U	MG/KG				
CYANIDE - DISS									
MERCURY	0.146	MG/KG		0.146	MG/KG				
MERCURY - DISS									
ALUMINUM	2730	MG/KG		2550	MG/KG				
ALUMINUM - DISS									
ARSENIC	11.3	MG/KG		12.4	MG/KG				
ARSENIC - DISS									
CADMIUM	0.456	MG/KG		0.376	MG/KG				
CADMIUM - DISS									
CALCIUM	4740	MG/KG		6120	MG/KG				
CALCIUM - DISS									
CHROMIUM	9.84	MG/KG		10	MG/KG				
CHROMIUM - DISS									
COPPER	13.9	MG/KG		15.6	MG/KG				
COPPER - DISS									
IRON	16900	MG/KG		14200	MG/KG				
IRON - DISS									
LEAD	6.54	MG/KG		8.96	MG/KG				
LEAD - DISS									
MAGNESIUM	1170	MG/KG		1570	MG/KG				
MAGNESIUM - DISS									
NICKEL	21.7	MG/KG		23.2	MG/KG				
NICKEL - DISS									
SELENIUM	3.2	MG/KG		3.46	MG/KG				
SELENIUM - DISS									
SILVER	0.175 U	MG/KG		0.169 U	MG/KG				
SILVER - DISS									
ZINC	41.2	MG/KG		295	MG/KG				
ZINC - DISS									
TOTAL SUSPENDED SOLIDS									
MOISTURE	3	%		3.2	%				
ANTHRAZENE (See DLHCV3-DS-1DL)				13 J	UG/KG	22	UG/KG		
BENZO(A)ANTHRAZENE (See DLHCV3-DS-1DL)				33	UG/KG	53	UG/KG		
BENZO(A)PYRENE (See DLHCV3-DS-1DL)				20	UG/KG	30	UG/KG		
CHRYSENE (See DLHCV3-DS-1DL)				170	UG/KG	240	UG/KG		
DIBENZ(A,H)ANTHRAZENE (See DLHCV3-DS-1DL)				10 U	UG/KG	11	UG/KG		
FLUORANTHENE (See DLHCV3-DS-1DL)				59	UG/KG	83	UG/KG		
FLUORENE (See DLHCV3-DS-1DL)				52	UG/KG	54	UG/KG		
NAPHTHALENE (See DLHCV3-DS-1DL)				270	UG/KG	430	UG/KG		
PHENANTHRENENE (See DLHCV3-DS-1DL)				420	UG/KG	630	UG/KG		
PYRENE (See DLHCV3-DS-1DL)				310	UG/KG	200	UG/KG		

Flags: U = Not Detected
J or B = Estimated Below Reporting Limit
F = Filtered

Great Lakes Cargo Sweepings Characterization

Analytical Data Summary

Vessel: American Republic
Cargo: E. Coal

Analyte	CLECV4-DS-1 Deck Sweepings			CLECV4-DS-1-D Deck Sweepings		
	Result	Flag	Units	Result	Flag	Units
BIOCHEMICAL OXYGEN DEMAND						
CHEMICAL OXYGEN DEMAND						
TOTAL ORGANIC CARBON						
DISSOLVED ORGANIC CARBON						
SPECIFIC GRAVITY						
Phosphate, Total as P						
Phosphate, Ortho as P						
Total Kjeldahl Nitrogen as N						
Nitrate/Nitrite-N						
Ammonia-N						
Chloride	328	MG/KG				
TOTAL HARDNESS						
DISSOLVED HARDNESS						
BULK DENSITY	0.78	G/CC	0.81	G/CC		
0.001 MM	0.5 U	% PASSING	0.5 U	% PASSING		
0.002 MM	0.5 U	% PASSING	0.5 U	% PASSING		
0.005 MM	0.5 U	% PASSING	0.5 U	% PASSING		
0.02 MM	0.5 U	% PASSING	0.5 U	% PASSING		
0.05 MM	0.5 U	% PASSING	0.5 U	% PASSING		
0.064 MM	0.5 U	% PASSING	0.5 U	% PASSING		
0.075 MM	6.2	% PASSING	5.1	% PASSING		
0.15 MM	10.1	% PASSING	7.7	% PASSING		
0.3 MM	22.5	% PASSING	17.7	% PASSING		
0.6 MM	47.8	% PASSING	40	% PASSING		
1.18 MM	69	% PASSING	60.4	% PASSING		
2.36 MM	74.9	% PASSING	68	% PASSING		
3.35 MM	78.2	% PASSING	71	% PASSING		
4.75 MM	81.1	% PASSING	73.7	% PASSING		
19 MM	95.3	% PASSING	86.1	% PASSING		
37.5 MM	100	% PASSING	92.4	% PASSING		
75 MM	100	% PASSING	100	% PASSING		
TOTAL CYANIDE	0.18 U	MG/KG				
CYANIDE - DISS						
MERCURY	0.0162 J	MG/KG				
MERCURY - DISS						
ALUMINUM	1600	MG/KG				
ALUMINUM - DISS						
ARSENIC	6.59	MG/KG				
ARSENIC - DISS						
CADMIUM	0.39	MG/KG				
CADMIUM - DISS						
CALCIUM	1950	MG/KG				
CALCIUM - DISS						
CHROMIUM	17	MG/KG				
CHROMIUM - DISS						
COPPER	24.2	MG/KG				
COPPER - DISS						
IRON	5770	MG/KG				
IRON - DISS						
LEAD	9.99	MG/KG				
LEAD - DISS						
MAGNESIUM	245	MG/KG				
MAGNESIUM - DISS						
NICKEL	12.6	MG/KG				
NICKEL - DISS						
SELENIUM	5.99	MG/KG				
SELENIUM - DISS						
SILVER	0.184 J	MG/KG				
SILVER - DISS						
ZINC	11.2	MG/KG				
ZINC - DISS						
TOTAL SUSPENDED SOLIDS						
MOISTURE	2.2	%				
ANTHRACENTE	35	UG/KG				
BENZO(A)ANTHRACENTE	150	UG/KG				
BENZO(A)PYRENE	120	UG/KG				
CHRYSENE	180	UG/KG				
DIBENZ(A,H)ANTHRACENTE	17	UG/KG				
FLUORANTHENE	220	UG/KG				
FLUORENE	180	UG/KG				
NAPHTHALENE	3100	UG/KG				
PHENANTHRENENE	930	UG/KG				
PYRENE	280	UG/KG				

Flags: U = Not Detected
J or B = Estimated Below Reporting Limit
F = Filtered

Great Lakes Cargo Sweepings Characterization

Analytical Data Summary

Vessel: Edwin R. Gott
Cargo: Taconite

Analyte	DLHTV1-DS-1 Deck Sweepings			DLHTV1-DS-1-D Deck Sweepings			DLHTV1-LS-1 Liquid Sump Sample			DLHTV1-LS-1-D Liquid Sump Sample			DLHTV1-SS-1 Solid Sump Sample			DLHTV1-SS-1-D Solid Sump Sample			DLHTV1-SS-2 Solid Sump Sample					
	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units			
BIOCHEMICAL OXYGEN DEMAND																								
CHEMICAL OXYGEN DEMAND																								
TOTAL ORGANIC CARBON							67.8		MG/L	69		MG/L												
DISSOLVED ORGANIC CARBON							60.2		MG/L	56		MG/L												
SPECIFIC GRAVITY							1		NONE	1		NONE												
Phosphate - Total as P	0.5 U	MG/KG					0.837		MG/L															
Phosphate - Ortho as P	0.297	MG/KG					0.0326		MG/L															
Total Kjeldahl Nitrogen as N	39.6 B	MG/KG					1.99 B		MG/L															
Nitrate/Nitrite-N	1.07	MG/KG					0.135		MG/L															
Ammonia-N	0.724 B	MG/KG					0.0777 B		MG/L															
Chloride	11.8	MG/KG		11.9	MG/KG		11.4		MG/L															
TOTAL HARDNESS										112.1		MG/L												
DISSOLVED HARDNESS										107.5		MG/L												
BULK DENSITY	2.08	G/CC		2.26	G/CC																			
0.001 MM	0.5 U	% PASSING		0.5 U	% PASSING																			
0.002 MM	0.5 U	% PASSING		0.5 U	% PASSING																			
0.005 MM	0.5 U	% PASSING		0.5 U	% PASSING																			
0.02 MM	0.5 U	% PASSING		0.5 U	% PASSING																			
0.05 MM	0.5 U	% PASSING		0.5 U	% PASSING																			
0.064 MM	0.5 U	% PASSING		0.5 U	% PASSING																			
0.075 MM	9.6	% PASSING		25.7	% PASSING																			
0.15 MM	10.4	% PASSING		46.4	% PASSING																			
0.3 MM	13.2	% PASSING		64.6	% PASSING																			
0.6 MM	54.2	% PASSING		80	% PASSING																			
1.18 MM	87.6	% PASSING		94.7	% PASSING																			
2.36 MM	96.9	% PASSING		99.5	% PASSING																			
3.35 MM	97.2	% PASSING		99.9	% PASSING																			
4.75 MM	99.9	% PASSING		99.9	% PASSING																			
19 MM	100	% PASSING		100	% PASSING																			
37.5 MM	100	% PASSING		100	% PASSING																			
75 MM	100	% PASSING		100	% PASSING																			
TOTAL CYANIDE	0.17 U	MG/KG		0.18 U	MG/KG		0.005 U		MG/L	0.005 U	MG/L		0.21 U		MG/KG	0.22 U		MG/KG	0.2 U		MG/KG			
CYANIDE - DISS							0.005 UF		MG/L	0.005 UF	MG/L													
MERCURY - DISS	0.01 U	MG/KG		0.0102 U	MG/KG		0.000056 U		MG/L	0.000079 J	MG/L		0.012 U		MG/KG	0.0124 U		MG/KG	0.0117 U		MG/KG			
MERCURY - DISS							0.000081 JF		MG/L	0.000081 JF	MG/L													
ALUMINUM	847	MG/KG		912	MG/KG		0.287		MG/L	0.0802 U	MG/L		1270		MG/KG	1260		MG/KG	1000		MG/KG			
ALUMINUM - DISS							0.0802 UF		MG/L	0.0851 JF	MG/L													
ARSENIC	5.21	MG/KG		5.82	MG/KG		0.0137		MG/L	0.0141	MG/L		5.31		MG/KG	5.2		MG/KG	5.14		MG/KG			
ARSENIC - DISS							0.0122 F		MG/L	0.0123 F	MG/L													
CADMIUM	0.038 U	MG/KG		0.0543 J	MG/KG		0.00059		MG/L	0.00067	MG/L		0.0547 J		MG/KG	0.0737 J		MG/KG	0.0483 J		MG/KG			
CADMIUM - DISS							0.00037 F		MG/L	0.00046 F	MG/L													
CALCIUM	23200	MG/KG		21600	MG/KG		29.9		MG/L	29.4		MG/L			25400		MG/KG	27000		MG/KG	21700		MG/KG	
CALCIUM - DISS							28.5 F		MG/L	28 F		MG/L												
CHROMIUM	10.2	MG/KG		10.4	MG/KG		0.0026		MG/L	0.0026		MG/L			10.4		MG/KG	10.9		MG/KG	11.1		MG/KG	
CHROMIUM - DISS							0.002 F		MG/L	0.002 F		MG/L												
COPPER	3.31	MG/KG		3.42	MG/KG		0.0271		MG/L	0.0271		MG/L			4.06		MG/KG	6.15		MG/KG	4.22		MG/KG	
COPPER - DISS							0.0168 F		MG/L	0.0197 F		MG/L												
IRON	515000	MG/KG		499000	MG/KG		6.22		MG/L	4.51		MG/L			536000		MG/KG	602000		MG/KG	519000		MG/KG	
IRON - DISS							0.81 F		MG/L															
LEAD	0.901 J	MG/KG		1.07	MG/KG		0.0075		MG/L	0.0077		MG/L			1.32		MG/KG	3.22		MG/KG	7.49		MG/KG	
LEAD - DISS							0.0029 F		MG/L	0.0029 F		MG/L												
MAGNESIUM	5900	MG/KG		5560	MG/KG		9.09		MG/L	8.92		MG/L			6830		MG/KG	7290		MG/KG	5970		MG/KG	
MAGNESIUM - DISS							8.83 F		MG/L	8.56 F		MG/L												
NICKEL	4 J	MG/KG		3.98	MG/KG		0.0074		MG/L	0.0077		MG/L			4.17		MG/KG	5.01		MG/KG	4.1		MG/KG	
NICKEL - DISS							0.0059 F		MG/L	0.0061 F		MG/L												
SELENIUM	0.74 U	MG/KG		0.363 U	MG/KG		0.0005 U		MG/L	0.0005 U		MG/L			0.443 U		MG/KG	0.456 U		MG/KG	0.43 U		MG/KG	
SELENIUM - DISS							0.0005 UF		MG/L	0.0005 UF		MG/L												
SILVER	0.85 U	MG/KG		0.825 U	MG/KG		0.0016 U		MG/L	0.0016 U		MG/L			0.204 U		MG/KG	0.207 U		MG/KG	0.196 U		MG/KG	
ZINC	7.32 J	MG/KG		6.25 J	MG/KG		0.143		MG/L	0.141		MG/L			17.2		MG/KG	22.4		MG/KG	84.6		MG/KG	
ZINC - DISS							0.109 F		MG/L	0.109 F		MG/L												
TOTAL SUSPENDED SOLIDS															16.5	%		19.6	%		14	%		
MOISTURE	0.5 U	%		0.5 U	%																			
ANTHRAZENE																								
BENZO(A)ANTHRAZENE																								
BENZO(A)PYRENE																								
CHRYSENE																								
DIBENZ(A,H)ANTHRAZENE																								
FLUORANTHENE																								
FLUORENE																								
NAPHTHALENE																								
PHENANTHRENE																								
PYRENE																								

Flags: U = Not Detected
J or B = Estimated Below Reporting Limit
F = Filtered

Great Lakes Cargo Sweepings Characterization

Analytical Data Summary

Vessel: Paul R. Tegurtha
Cargo: Taconite

Analyte	DLHTV2-DS-1 Deck Sweepings			DLHTV2-DS-1-D Deck Sweepings			DLHTV2-LS-1 Liquid Sump Sample			DLHTV2-LS-1-D Liquid Sump Sample			DLHTV2-SS-1 Solid Sump Sample			DLHTV2-SS-2 Solid Sump Sample		
	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units
BIOCHEMICAL OXYGEN DEMAND							3.5 U	MG/L		3.3 U	MG/L							
CHEMICAL OXYGEN DEMAND							12.8 U	MG/L		12.8 U	MG/L							
TOTAL ORGANIC CARBON							2.8	MG/L		2.9	MG/L							
DISSOLVED ORGANIC CARBON																		
SPECIFIC GRAVITY							1	NONE		1	NONE							
Phosphate, Total as P																		
Phosphate, Ortho as P																		
Total Kjeldahl Nitrogen as N																		
Nitrate/Nitrite-N																		
Ammonia-N																		
Chloride	4.49	MG/KG					68.1	MG/L										
TOTAL HARDNESS							71.7	MG/L										
DISSOLVED HARDNESS																		
BULK DENSITY	2.03	G/CC	1.93	G/CC						1.75	G/CC	1.74	G/CC					
0.001 MM	0.5 U	% PASSING	0.5 U	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.002 MM	0.5 U	% PASSING	0.5 U	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.005 MM	0.5 U	% PASSING	0.5 U	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.02 MM	0.5 U	% PASSING	13	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.05 MM	0.5 U	% PASSING	34.5	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.064 MM	0.5 U	% PASSING	37.5	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.075 MM	30.3	% PASSING	38.6	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.15 MM	32	% PASSING	40.8	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.3 MM	45	% PASSING	52.8	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.6 MM	88.1	% PASSING	94.6	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
1.18 MM	99.3	% PASSING	99.4	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
2.36 MM	99.6	% PASSING	99.5	% PASSING						10.4	% PASSING	8.1	% PASSING					
3.35 MM	99.8	% PASSING	99.7	% PASSING						14.5	% PASSING	8.7	% PASSING					
4.75 MM	99.9	% PASSING	99.9	% PASSING						20.7	% PASSING	9.6	% PASSING					
19 MM	100	% PASSING	100	% PASSING						100	% PASSING	100	% PASSING					
37.5 MM	100	% PASSING	100	% PASSING						100	% PASSING	100	% PASSING					
75 MM	100	% PASSING	100	% PASSING						100	% PASSING	100	% PASSING					
TOTAL CYANIDE	0.18 U	MG/KG			0.005 U	MG/L				0.19 U	MG/KG	0.19 U	MG/KG					
CYANIDE - DISS					0.005 UF	MG/L												
MERCURY	0.0102 U	MG/KG			0.000056 U	MG/L				0.0113 U	MG/KG	0.0111 U	MG/KG					
MERCURY - DISS					0.000056 UF	MG/L												
ALUMINUM	394	MG/KG			0.0802 U	MG/L				591	MG/KG	555	MG/KG					
ALUMINUM - DISS																		
ARSENIC	7.15	MG/KG			0.0021	MG/L				4.32	MG/KG	4.41	MG/KG					
ARSENIC - DISS					0.0019 JF	MG/L												
CADMIUM	0.073 J	MG/KG			0.00099 U	MG/L				0.0534 J	MG/KG	0.0409 U	MG/KG					
CADMIUM - DISS					0.00099 UF	MG/L												
CALCIUM	3020	MG/KG			19.2	MG/L				12800	MG/KG	10600	MG/KG					
CALCIUM - DISS					20.2 F	MG/L												
CHROMIUM	10.1	MG/KG			0.0011 J	MG/L				8.07	MG/KG	7.78	MG/KG					
CHROMIUM - DISS					0.0084 JF	MG/L												
COPPER	2.34	MG/KG			0.0023	MG/L				5.85	MG/KG	3	MG/KG					
COPPER - DISS					0.0026 F	MG/L												
IRON	310000	MG/KG			0.642	MG/L				366000	MG/KG	337000	MG/KG					
IRON - DISS					0.0767 JF	MG/L												
LEAD	0.96 J	MG/KG			0.00022 J	MG/L				6.69	MG/KG	0.946 J	MG/KG					
LEAD - DISS					0.00008 JF	MG/L												
MAGNESIUM	1120	MG/KG			4.89	MG/L				3340	MG/KG	2840	MG/KG					
MAGNESIUM - DISS					5.17 F	MG/L												
NICKEL	1.36 J	MG/KG			0.0013 J	MG/L				3.21	MG/KG	2.72	MG/KG					
NICKEL - DISS					0.0013 JF	MG/L												
SELENIUM	0.359 U	MG/KG			0.0005 U	MG/L				0.392 U	MG/KG	0.398 U	MG/KG					
SELENIUM - DISS					0.0005 UF	MG/L												
SILVER	0.833 U	MG/KG			0.0016 U	MG/L				0.9 U	MG/KG	0.923 U	MG/KG					
SILVER - DISS					0.0016 UF	MG/L												
ZINC	4.81 J	MG/KG			0.0081 U	MG/L				8.24 J	MG/KG	12	MG/KG					
ZINC - DISS					0.0081 UF	MG/L												
TOTAL SUSPENDED SOLIDS					9.2 J	MG/L												
MOISTURE	0.5 U	%								8.3	%	9.7	%					
ANTHRAZENE																		
BENZO(A)ANTHRAZENE																		
BENZO(A)PYRENE																		
CHRYSENE																		
DIBENZ(A,H)ANTHRAZENE																		
FLUORANTHENE																		
FLUORENE																		
NAPHTHALENE																		
PHENANTHRENE																		
PYRENE																		

Flags: U = Not Detected
J or B = Estimated Below Reporting Limit
F = Filtered

Great Lakes Cargo Sweepings Characterization

Analytical Data Summary

Vessel: Pathfinder
Cargo: Limestone

Analyte	CLELV1-DS-1 Deck Sweepings			CLELV1-DS-1-D Deck Sweepings			CLELV1-LS-1 Liquid Sump Sample			CLELV1-LS-1-D Liquid Sump Sample			CLELV1-SS-1 Solid Sump Sample			CLELV1-SS-1-D Solid Sump Sample		
	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units
BIOCHEMICAL OXYGEN DEMAND							3.9 U	MG/L		3.4 U	MG/L							
CHEMICAL OXYGEN DEMAND							28.1 J	MG/L		25.7 J	MG/L							
TOTAL ORGANIC CARBON							5.1 J	MG/L		3.8	MG/L							
DISSOLVED ORGANIC CARBON							7.8 J	MG/L			MG/L							
SPECIFIC GRAVITY							1	NONE		1	NONE							
Phosphate, Total as P	0.924	MG/KG	1.02	MG/KG	0.0535	MG/L	0.0828	MG/L										
Phosphate, Ortho as P	0.0488 U	MG/KG	0.0366 U	MG/KG	0.121	MG/L	0.0775	MG/L										
Total Kjeldahl Nitrogen as N	65 B	MG/KG	42.2 B	MG/KG	1.38 B	MG/L	1.6 B	MG/L										
Nitrate/Nitrite-N	4.22	MG/KG	2.71	MG/KG	1.13	MG/L	1.27	MG/L										
Ammonia-N	2.18 B	MG/KG	3.49	MG/KG	0.14	MG/L	0.143	MG/L										
Chloride	34	MG/KG	25.9	MG/KG	40.5	MG/L	44.4	MG/L										
TOTAL HARDNESS							484.2	MG/L		732.2	MG/L							
DISSOLVED HARDNESS							126.6	MG/L		135.0	MG/L							
BULK DENSITY	1.07	G/CC	1.19	G/CC						0.99	G/CC	1.94	G/CC					
0.001 MM	2	% PASSING	1	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.002 MM	3	% PASSING	2	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.005 MM	5.5	% PASSING	4	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.02 MM	14	% PASSING	15	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.05 MM	25	% PASSING	20	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.064 MM	29	% PASSING	26	% PASSING						0.5 U	% PASSING	0.5 U	% PASSING					
0.075 MM	31.2	% PASSING	28.5	% PASSING						61.6	% PASSING	62.3	% PASSING					
0.15 MM	39.9	% PASSING	39.4	% PASSING						74.4	% PASSING	76.2	% PASSING					
0.3 MM	48	% PASSING	51	% PASSING						76.8	% PASSING	80.7	% PASSING					
0.6 MM	55.4	% PASSING	64	% PASSING						78.6	% PASSING	84.2	% PASSING					
1.18 MM	61.8	% PASSING	74.1	% PASSING						82.3	% PASSING	89.3	% PASSING					
2.36 MM	65.7	% PASSING	77.9	% PASSING						85	% PASSING	92.2	% PASSING					
3.35 MM	70.5	% PASSING	84.5	% PASSING						91.9	% PASSING	98	% PASSING					
4.75 MM	79.5	% PASSING	93.9	% PASSING						97.1	% PASSING	99.5	% PASSING					
19 MM	100	% PASSING	100	% PASSING						100	% PASSING	100	% PASSING					
37.5 MM	100	% PASSING	100	% PASSING						100	% PASSING	100	% PASSING					
75 MM	100	% PASSING	100	% PASSING						100	% PASSING	100	% PASSING					
TOTAL CYANIDE	0.19 U	MG/KG	0.18 U	MG/KG	0.005 U	MG/L	0.005 U	MG/L		0.2 U	MG/KG	0.23 U	MG/KG					
CYANIDE - DISS					0.005 UF	MG/L	0.005 UF	MG/L										
MERCURY - DISS	0.0118 J	MG/KG	0.0105 U	MG/KG	0.000056 U	MG/L	0.000056 U	MG/L		0.012 U	MG/KG	0.0135 U	MG/KG					
MERCURY - DISS					0.00028 UF	MG/L	0.000056 UF	MG/L										
ALUMINUM	1250	MG/KG	1360	MG/KG	0.951	MG/L	0.588	MG/L		1090	MG/KG	1070	MG/KG					
ALUMINUM - DISS					0.0802 UF	MG/L	0.0802 UF	MG/L										
ARSENIC	1.22 J	MG/KG	1.13 J	MG/KG	0.0228	MG/L	0.0229	MG/L		1.02 J	MG/KG	1.11 J	MG/KG					
ARSENIC - DISS					0.0015 JF	MG/L	0.0016 JF	MG/L										
CADMIUM	0.288	MG/KG	0.281	MG/KG	0.00015 J	MG/L	0.00017 J	MG/L		0.244 J	MG/KG	0.267 J	MG/KG					
CADMIUM - DISS					0.000099 UF	MG/L	0.000099 UF	MG/L										
CALCIUM	264000	MG/KG	256000	MG/KG	124	MG/L	189	MG/L		263000	MG/KG	260000	MG/KG					
CALCIUM - DISS					34.9 F	MG/L	37.4 F	MG/L										
CHROMIUM	4.78	MG/KG	4.61	MG/KG	0.0336	MG/L	0.0038	MG/L		4.33	MG/KG	4.66	MG/KG					
CHROMIUM - DISS					0.00078 JF	MG/L	0.00073 JF	MG/L										
COPPER	1.99	MG/KG	1.82	MG/KG	0.0058	MG/L	0.0057	MG/L		1.22	MG/KG	1.29	MG/KG					
COPPER - DISS					0.0043 F	MG/L	0.013 F	MG/L										
IRON	2740	MG/KG	1520	MG/KG	1.8	MG/L	1.52	MG/L		1700	MG/KG	1900	MG/KG					
IRON - DISS					0.0522 UF	MG/L	0.0522 UF	MG/L										
LEAD	3.35	MG/KG	7.7	MG/KG	0.0026	MG/L	0.0029	MG/L		1.89	MG/KG	2.15	MG/KG					
LEAD - DISS					0.000073 JF	MG/L	0.000068 JF	MG/L										
MAGNESIUM	97300	MG/KG	86400	MG/KG	42.4	MG/L	63.2	MG/L		97800	MG/KG	100000	MG/KG					
MAGNESIUM - DISS					9.58 F	MG/L	10.1 F	MG/L										
NICKEL	5.33	MG/KG	4.88	MG/KG	0.0057	MG/L	0.0062	MG/L		4.54	MG/KG	4.44	MG/KG					
NICKEL - DISS					0.0023 F	MG/L	0.0026 F	MG/L										
SELENIUM	0.959 J	MG/KG	0.822 J	MG/KG	0.0025	MG/L	0.0029	MG/L		0.866 J	MG/KG	0.842 J	MG/KG					
SELENIUM - DISS					0.00076 JF	MG/L	0.00085 JF	MG/L										
SILVER	0.18 U	MG/KG	0.168 U	MG/KG	0.0016 U	MG/L	0.0016 U	MG/L		0.198 U	MG/KG	0.215 U	MG/KG					
ZINC	6.73	MG/KG	6.53	MG/KG	0.0247	MG/L	0.0186 J	MG/L		9.32	MG/KG	9.9	MG/KG					
ZINC - DISS					0.0081 UF	MG/L	0.0081 UF	MG/L										
TOTAL SUSPENDED SOLIDS					406	MG/L	MG/L											
MOISTURE	5.4	%	2.7	%						14	%	22.3	%					
ANTHRAZENE																		
BENZO(A)ANTHRAZENE																		
BENZO(A)PYRENE																		
CHRYSENE																		
DIBENZ(A,H)ANTHRAZENE																		
FLUORANTHENE																		
FLUORENE																		
NAPHTHALENE																		
PHENANTHRENE																		
PYRENE																		

Flags: U = Not Detected
J or B = Estimated. Below Reporting Limit
F = Filtered

Great Lakes Cargo Sweepings Characterization

Analytical Data Summary

Vessel: Earl W. Oglebay
Cargo: Limestone

Analyte	CLELV2-DS-1 Deck Sweepings			CLELV2-DS-1-D Deck Sweepings			CLELV2-LS-1 Liquid Sump Sample			CLELV2-LS-1-D Liquid Sump Sample			CLELV2-SS-1 Solid Sump Sample			CLELV2-SS-2 Solid Sump Sample			
	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	Result	Flag	Units	
BIOCHEMICAL OXYGEN DEMAND							17.6		MG/L	18.1		MG/L							
CHEMICAL OXYGEN DEMAND							84.2		MG/L	95.8		MG/L							
TOTAL ORGANIC CARBON							10.5		MG/L	12.5		MG/L							
DISSOLVED ORGANIC CARBON																			
SPECIFIC GRAVITY							1		NONE	1.01		NONE							
Phosphate, Total as P																			
Phosphate, Ortho as P																			
Total Kjeldahl Nitrogen as N																			
Nitrate/Nitrite-N																			
Ammonia-N																			
Chloride	77.1		MG/KG							421.1		MG/L							
TOTAL HARDNESS										289.8		MG/L							
DISSOLVED HARDNESS																			
BULK DENSITY	1.17		G/CC	1.27		G/CC							1.34		G/CC	1.28		G/CC	
0.001 MM	1	% PASSING		4	% PASSING								0.5 U	% PASSING	0.5 U	% PASSING			
0.002 MM	6			7		% PASSING							0.5 U		% PASSING	0.5 U		% PASSING	
0.005 MM	13		% PASSING	9		% PASSING							0.5 U		% PASSING	0.5 J		% PASSING	
0.02 MM	26.5		% PASSING	23		% PASSING							0.5 U		% PASSING	1.5		% PASSING	
0.05 MM	38		% PASSING	38.5		% PASSING							0.5 J		% PASSING	2		% PASSING	
0.064 MM	42		% PASSING	50		% PASSING							0.5 J		% PASSING	2		% PASSING	
0.075 MM	45.1		% PASSING	55.8		% PASSING							0.5 U		% PASSING	2		% PASSING	
0.15 MM	52.8		% PASSING	62.9		% PASSING							0.5 U		% PASSING	2.2		% PASSING	
0.3 MM	62.3		% PASSING	72.5		% PASSING							0.5 U		% PASSING	2.7		% PASSING	
0.6 MM	73.1		% PASSING	83.5		% PASSING							0.56 J		% PASSING	3.7		% PASSING	
1.18 MM	88.4		% PASSING	86.1		% PASSING							1.9		% PASSING	6.2		% PASSING	
2.36 MM	99.5		% PASSING	99.4		% PASSING							4.6		% PASSING	12.8		% PASSING	
3.35 MM	99.8		% PASSING	99.8		% PASSING							7.5		% PASSING	16.9		% PASSING	
4.75 MM	99.9		% PASSING	99.8		% PASSING							11.9		% PASSING	21		% PASSING	
19 MM	100		% PASSING	100		% PASSING							51.9		% PASSING	43.7		% PASSING	
37.5 MM	100		% PASSING	100		% PASSING							91.1		% PASSING	100		% PASSING	
75 MM	100		% PASSING	100		% PASSING							100		% PASSING	100		% PASSING	
TOTAL CYANIDE	0.18 U		MG/KG										0.18 U		U	0.2 U			
CYANIDE - DISS							0.005 UF		MG/L										
MERCURY - DISS	0.0105 U		MG/KG				0.000095 J		MG/L				0.0107 U		MG/KG	0.0111 U		MG/KG	
MERCURY - DISS							0.000081 JF		MG/L										
ALUMINUM	226		MG/KG				0.297		MG/L				97.4		MG/KG	416		MG/KG	
ALUMINUM - DISS							0.0802 UF		MG/L										
ARSENIC	0.515 J		MG/KG				0.0023		MG/L				2.63		MG/KG	0.4 J		MG/KG	
ARSENIC - DISS							0.0034 UF		MG/L										
CADMIUM	0.223 J		MG/KG				0.0022		MG/L				0.257 J		MG/KG	0.095 J		MG/KG	
CADMIUM - DISS							0.0015 F		MG/L										
CALCIUM	350000		MG/KG				135		MG/L				139000		MG/KG	390000		MG/KG	
CALCIUM - DISS							84.9 F		MG/L										
CHROMIUM	1.88 J		MG/KG				0.026		MG/L				10.3		MG/KG	2.45		MG/KG	
CHROMIUM - DISS							0.0031 JF		MG/L										
COPPER	3.74		MG/KG				0.0139		MG/L				11.2		MG/KG	0.531 J		MG/KG	
COPPER - DISS							0.0084 F		MG/L										
IRON	861		MG/KG				1.49		MG/L				293000		MG/KG	3130		MG/KG	
IRON - DISS							0.101 JF		MG/L										
LEAD	12.2		MG/KG				0.0079		MG/L				0.859 J		MG/KG	0.613 J		MG/KG	
LEAD - DISS							0.003 F		MG/L										
MAGNESIUM	23100		MG/KG				20.4		MG/L				33800		MG/KG	13600		MG/KG	
MAGNESIUM - DISS							18.9 F		MG/L										
NICKEL	4.9		MG/KG				0.0123		MG/L				21.9		MG/KG	2.75		MG/KG	
NICKEL - DISS							0.0082 JF		MG/L										
SELENIUM	0.48 J		MG/KG				0.0093		MG/L				0.486 J		MG/KG	0.714 J		MG/KG	
SELENIUM - DISS							0.0109 F		MG/L										
SILVER	0.17 U		MG/KG				0.0016 U		MG/L				0.373 J		MG/KG	0.183 U		MG/KG	
SILVER - DISS							0.0016 UF		MG/L										
ZINC	10.9		MG/KG				0.191		MG/L				55.9		MG/KG	4.92		MG/KG	
ZINC - DISS							0.11 F		MG/L										
TOTAL SUSPENDED SOLIDS							174		MG/L										
MOISTURE	2.1	%											4.4	%		8.1	%		
ANTHRAZENE																			
BENZO(A)ANTHRAZENE																			
BENZO(A)PYRENE																			
CHRYSENE																			
DIBENZ(A,H)ANTHRAZENE																			
FLUORANTHENE																			
FLUORENE																			
NAPHTHALENE																			
PHENANTHRENE																			
PYRENE																			

Flags: U = Not Detected
J or B = Estimated. Below Reporting Limit
F = Filtered

Great Lakes Biological Characterization

Analytical Data Summary - Deck Sweepings Slurries

Flags: U = Not Detected
J or B = Estimated. Below Reporting Limit
F = Filtered

330

331

Attachment 4
Laboratory Data Packages



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1011929. Samples arrived at the laboratory on Saturday, October 28, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLELV2-DS-1 Composite Solid Sample	4902189
CLELV2-DS-1-D Composite Solid Sample	4902190
CLELV2-SS-1 Grab Solid Sample	4902191
CLELV2-SS-2 Grab Solid Sample	4902192
CLELV2-LS-1 Grab Water Sample	4902193
CLELV2-LS-1 Filtered Grab Water Sample	4902194
CLELV2-LS-1-D Grab Water Sample	4902195
CLELV2-LS-1-BK Filtered Grab Water Sample	4902196

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
ELECTRONIC COPY TO	CH2M HILL	Attn: James Maugahn
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4902189
**CLELV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 10:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2DS1- SDG#: SWE17-01

CAT No.	Analysis Name	CAS Number	Dry	Method	Dilution Factor
			Result	Detection Limit	
00159	Mercury	7439-97-6	0.0105 U	0.0105	mg/kg
01643	Aluminum	7429-90-5	226.	3.35	mg/kg
01650	Calcium	7440-70-2	350,000.	127.	mg/kg
01654	Iron	7439-89-6	861.	4.72	mg/kg
01657	Magnesium	7439-95-4	23,100.	1.90	mg/kg
06125	Arsenic	7440-38-2	0.515 J	0.174	mg/kg
06128	Cadmium	7440-43-9	0.223 J	0.0388	mg/kg
06131	Chromium	7440-47-3	1.88 J	0.317	mg/kg
06133	Copper	7440-50-8	3.74	0.358	mg/kg
06135	Lead	7439-92-1	12.2	0.153	mg/kg
06139	Nickel	7440-02-0	4.90	0.511	mg/kg
06141	Selenium	7782-49-2	0.480 J	0.378	mg/kg
06966	Silver	7440-22-4	0.170 U	0.170	mg/kg
06972	Zinc	7440-66-6	10.9	0.656	mg/kg
00111	Moisture	n.a.	2.1	0.50	%
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg
06569	Bulk Density	n.a.	1.17	0.080	g/cc

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.9	0.50	% Passing	1
07139	3.35 mm	n.a.	99.8	0.50	% Passing	1
07140	2.36 mm	n.a.	99.5	0.50	% Passing	1
07141	1.18 mm	n.a.	88.4	0.50	% Passing	1
07142	0.6 mm	n.a.	73.1	0.50	% Passing	1
07143	0.3 mm	n.a.	62.3	0.50	% Passing	1
07144	0.15 mm	n.a.	52.8	0.50	% Passing	1
07145	0.075 mm	n.a.	45.1	0.50	% Passing	1
07146	0.064 mm	n.a.	42.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4902189
**CLELV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 10:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2DS1- SDG#: SWE17-01

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07147	0.05 mm	n.a.	38.0	0.50	%	1
07148	0.02 mm	n.a.	26.5	0.50	%	1
07149	0.005 mm	n.a.	13.0	0.50	%	1
07150	0.002 mm	n.a.	6.0	0.50	%	1
07151	0.001 mm	n.a.	1.0	0.50	%	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	11/03/2006 09:28	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	11/03/2006 23:36	John P Hook	1
01650	Calcium	SW-846 6010B	1	11/04/2006 18:02	Amanda S Bitner	10
01654	Iron	SW-846 6010B	1	11/03/2006 23:36	John P Hook	1
01657	Magnesium	SW-846 6010B	1	11/03/2006 23:36	John P Hook	1
06125	Arsenic	SW-846 6020	1	11/07/2006 12:13	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	11/07/2006 12:13	Parker D Lindstrom	10
06131	Chromium	SW-846 6020	1	11/08/2006 21:01	David K Beck	10
06133	Copper	SW-846 6020	1	11/08/2006 21:01	David K Beck	10
06135	Lead	SW-846 6020	1	11/07/2006 15:26	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	11/08/2006 21:01	David K Beck	10
06141	Selenium	SW-846 6020	1	11/07/2006 12:13	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	11/03/2006 23:36	John P Hook	1
06972	Zinc	SW-846 6010B	1	11/03/2006 23:36	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	11/01/2006 18:29	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	11/08/2006 18:43	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	11/06/2006 22:35	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	11/05/2006 11:45	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	11/02/2006 10:30	Megersa Deyessa	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	11/02/2006 11:50	Megersa Deyessa	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	11/06/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	11/04/2006 12:45	Mirit S Shenouda	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4902189

CLELV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/27/2006 10:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

2DS1- SDG#: SWE17-01

Boston MA 02116

Lancaster Laboratories Sample No. SW 4902190
**CLELV2-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 10:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2DS1D SDG#: SWE17-02FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
06569	Bulk Density	n.a.	1.27	0.080	g/cc	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.8	0.50	% Passing	1
07139	3.35 mm	n.a.	99.8	0.50	% Passing	1
07140	2.36 mm	n.a.	99.4	0.50	% Passing	1
07141	1.18 mm	n.a.	86.1	0.50	% Passing	1
07142	0.6 mm	n.a.	83.5	0.50	% Passing	1
07143	0.3 mm	n.a.	72.5	0.50	% Passing	1
07144	0.15 mm	n.a.	62.9	0.50	% Passing	1
07145	0.075 mm	n.a.	55.8	0.50	% Passing	1
07146	0.064 mm	n.a.	50.0	0.50	% Passing	1
07147	0.05 mm	n.a.	38.5	0.50	% Passing	1
07148	0.02 mm	n.a.	23.0	0.50	% Passing	1
07149	0.005 mm	n.a.	9.0	0.50	% Passing	1
07150	0.002 mm	n.a.	7.0	0.50	% Passing	1
07151	0.001 mm	n.a.	4.0	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis Trial# Date and Time	Analyst	Dilution Factor
------------	---------------	--------	----------------------------------	---------	--------------------

Lancaster Laboratories Sample No. SW 4902190**CLELV2-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected:	10/27/2006 10:00	by RM	Account Number:	12098
Submitted:	10/28/2006 09:50		Parsons Brinkerhoff	
Reported:	12/07/2006 at 10:37		75 Arlington Street	
Discard:	01/07/2007		Ninth Floor	
			Boston MA 02116	
2DS1D SDG#:	SWE17-02FD			
06569 Bulk Density		ASTM E868-82 Sec 9.9	1 11/06/2006 22:35	Daniel S Smith 1
07103 Grain Size to 1 um		modified ASTM D422	1 11/05/2006 11:45	Luz M Groff 1

Lancaster Laboratories Sample No. SW 4902191
**CLELV2-SS-1 Grab Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00

by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2SS1- SDG#: SWE17-03

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result				
00159	Mercury	7439-97-6	0.0107	U	0.0107	mg/kg	1
01643	Aluminum	7429-90-5	97.4		3.40	mg/kg	1
01650	Calcium	7440-70-2	139,000.		129.	mg/kg	10
01654	Iron	7439-89-6	293,000.		95.7	mg/kg	20
01657	Magnesium	7439-95-4	33,800.		1.93	mg/kg	1
06125	Arsenic	7440-38-2	2.63		0.178	mg/kg	10
06128	Cadmium	7440-43-9	0.257	J	0.0397	mg/kg	10
06131	Chromium	7440-47-3	10.3		0.324	mg/kg	10
06133	Copper	7440-50-8	11.2		0.366	mg/kg	10
06135	Lead	7439-92-1	0.859	J	0.157	mg/kg	10
06139	Nickel	7440-02-0	21.9		0.523	mg/kg	10
06141	Selenium	7782-49-2	0.486	J	0.387	mg/kg	10
06966	Silver	7440-22-4	0.373	J	0.173	mg/kg	1
06972	Zinc	7440-66-6	55.9		0.665	mg/kg	1
00111	Moisture	n.a.	4.4		0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.							
05895	Total Cyanide (solid)	57-12-5	0.18	U	0.18	mg/kg	1
06569	Bulk Density	n.a.	1.34		0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	91.1	0.50	% Passing	1
07137	19 mm	n.a.	51.9	0.50	% Passing	1
07138	4.75 mm	n.a.	11.9	0.50	% Passing	1
07139	3.35 mm	n.a.	7.5	0.50	% Passing	1
07140	2.36 mm	n.a.	4.6	0.50	% Passing	1
07141	1.18 mm	n.a.	1.9	0.50	% Passing	1
07142	0.6 mm	n.a.	0.56	J	0.50 % Passing	1
07143	0.3 mm	n.a.	0.50	U	0.50 % Passing	1
07144	0.15 mm	n.a.	0.50	U	0.50 % Passing	1
07145	0.075 mm	n.a.	0.50	U	0.50 % Passing	1
07146	0.064 mm	n.a.	0.50	J	0.50 % Passing	1

Lancaster Laboratories Sample No. SW 4902191
**CLELV2-SS-1 Grab Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2SS1- SDG#: SWE17-03

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	J	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	11/03/2006 09:29	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	11/03/2006 23:41	John P Hook	1
01650	Calcium	SW-846 6010B	1	11/04/2006 18:07	Amanda S Bitner	10
01654	Iron	SW-846 6010B	1	11/05/2006 14:27	John P Hook	20
01657	Magnesium	SW-846 6010B	1	11/03/2006 23:41	John P Hook	1
06125	Arsenic	SW-846 6020	1	11/07/2006 12:47	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	11/07/2006 12:47	Parker D Lindstrom	10
06131	Chromium	SW-846 6020	1	11/08/2006 21:50	David K Beck	10
06133	Copper	SW-846 6020	1	11/08/2006 21:50	David K Beck	10
06135	Lead	SW-846 6020	1	11/07/2006 16:07	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	11/08/2006 21:50	David K Beck	10
06141	Selenium	SW-846 6020	1	11/07/2006 12:47	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	11/03/2006 23:41	John P Hook	1
06972	Zinc	SW-846 6010B	1	11/03/2006 23:41	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	11/01/2006 18:29	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	11/08/2006 18:46	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	11/06/2006 22:35	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	11/05/2006 11:45	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	11/02/2006 10:30	Megersa Deyessa	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	11/02/2006 11:50	Megersa Deyessa	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	11/06/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	11/04/2006 12:45	Mirit S Shenouda	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4902191

CLELV2-SS-1 Grab Solid Sample
Great Lakes - Sweepings

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

2SS1- SDG#: SWE17-03

Boston MA 02116

Lancaster Laboratories Sample No. SW 4902192
**CLELV2-SS-2 Grab Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2SS2 - SDG#: SWE17-04

CAT No.	Analysis Name	CAS Number	Dry	Method	Dilution Factor
			Result	Detection Limit	
00159	Mercury	7439-97-6	0.0111 U	0.0111	mg/kg
01643	Aluminum	7429-90-5	416.	3.61	mg/kg
01650	Calcium	7440-70-2	390,000.	137.	mg/kg
01654	Iron	7439-89-6	3,130.	5.07	mg/kg
01657	Magnesium	7439-95-4	13,600.	2.05	mg/kg
06125	Arsenic	7440-38-2	0.400 J	0.178	mg/kg
06128	Cadmium	7440-43-9	0.0995 J	0.0398	mg/kg
06131	Chromium	7440-47-3	2.45	0.324	mg/kg
06133	Copper	7440-50-8	0.531 J	0.348	mg/kg
06135	Lead	7439-92-1	0.613 J	0.157	mg/kg
06139	Nickel	7440-02-0	2.75	0.523	mg/kg
06141	Selenium	7782-49-2	0.714 J	0.387	mg/kg
06966	Silver	7440-22-4	0.183 U	0.183	mg/kg
06972	Zinc	7440-66-6	4.92	0.706	mg/kg
00111	Moisture	n.a.	8.1	0.50	%
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					
05895	Total Cyanide (solid)	57-12-5	0.20 U	0.20	mg/kg
06569	Bulk Density	n.a.	1.28	0.080	g/cc

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	43.7	0.50	% Passing	1
07138	4.75 mm	n.a.	21.0	0.50	% Passing	1
07139	3.35 mm	n.a.	16.9	0.50	% Passing	1
07140	2.36 mm	n.a.	12.8	0.50	% Passing	1
07141	1.18 mm	n.a.	6.2	0.50	% Passing	1
07142	0.6 mm	n.a.	3.7	0.50	% Passing	1
07143	0.3 mm	n.a.	2.7	0.50	% Passing	1
07144	0.15 mm	n.a.	2.2	0.50	% Passing	1
07145	0.075 mm	n.a.	2.0	0.50	% Passing	1
07146	0.064 mm	n.a.	2.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4902192
**CLELV2-SS-2 Grab Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2SS2 - SDG#: SWE17-04

CAT	No.	Analysis Name	CAS Number	Dry		Method	Dilution Factor
				Result	Detection Limit		
	07147	0.05 mm	n.a.	2.0	0.50	% Passing	1
	07148	0.02 mm	n.a.	1.5	0.50	% Passing	1
	07149	0.005 mm	n.a.	0.50 J	0.50	% Passing	1
	07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
	07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Analysis			Dilution Factor
				Trial#	Date and Time	Analyst	
	00159	Mercury	SW-846 7471A	1	11/03/2006 09:30	Damary Valentin	1
	01643	Aluminum	SW-846 6010B	1	11/03/2006 23:45	John P Hook	1
	01650	Calcium	SW-846 6010B	1	11/04/2006 18:12	Amanda S Bitner	10
	01654	Iron	SW-846 6010B	1	11/03/2006 23:45	John P Hook	1
	01657	Magnesium	SW-846 6010B	1	11/03/2006 23:45	John P Hook	1
	06125	Arsenic	SW-846 6020	1	11/07/2006 13:02	Parker D Lindstrom	10
	06128	Cadmium	SW-846 6020	1	11/07/2006 13:02	Parker D Lindstrom	10
	06131	Chromium	SW-846 6020	1	11/08/2006 21:55	David K Beck	10
	06133	Copper	SW-846 6020	1	11/13/2006 23:25	David K Beck	10
	06135	Lead	SW-846 6020	1	11/07/2006 16:12	Jayme E Curet	10
	06139	Nickel	SW-846 6020	1	11/08/2006 21:55	David K Beck	10
	06141	Selenium	SW-846 6020	1	11/07/2006 13:02	Parker D Lindstrom	10
	06966	Silver	SW-846 6010B	1	11/03/2006 23:45	John P Hook	1
	06972	Zinc	SW-846 6010B	1	11/03/2006 23:45	John P Hook	1
	00111	Moisture	EPA 160.3 modified	1	11/01/2006 18:29	Scott W Freisher	1
	05895	Total Cyanide (solid)	SW-846 9012A	1	11/08/2006 18:47	Courtney A Shoff	1
	06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	11/06/2006 22:35	Daniel S Smith	1
	07103	Grain Size to 1 um	ASTM D422	1	11/05/2006 11:45	Luz M Groff	1
	05708	SW SW846 ICP Digest	SW-846 3050B	1	11/02/2006 10:30	Megersa Deyessa	1
	05711	SW SW846 Hg Digest	SW-846 7471A modified	1	11/02/2006 11:50	Megersa Deyessa	1
	05896	Cyanide Solid Distillation	SW-846 9012A	1	11/06/2006 10:30	Nancy J Shoop	1
	06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	11/04/2006 12:45	Mirit S Shenouda	1
	06150	ICP/MS SW-846 Solid digest	SW-846 3050B	2	11/10/2006 11:05	Megersa Deyessa	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4902192

CLELV2-SS-2 Grab Solid Sample
Great Lakes - Sweepings

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

2SS2- SDG#: SWE17-04

Boston MA 02116

Lancaster Laboratories Sample No. WW 4902193
**CLELV2-LS-1 Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2LS1- SDG#: SWE17-05

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000095 J	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.297	0.0802	mg/l 1
01750	Calcium	7440-70-2	135.	0.104	mg/l 1
01754	Iron	7439-89-6	1.49	0.0522	mg/l 1
01757	Magnesium	7439-95-4	20.4	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0023	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0022	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0026	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0139	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0079	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0123	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0093	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.191	0.0081	mg/l 1
00206	Total Suspended Solids	n.a.	174.	5.0	mg/l 1
00235	Biochemical Oxygen Demand	n.a.	17.6	0.80	mg/l 1
00273	Total Organic Carbon	n.a.	10.5	1.0	mg/l 1
01443	Specific Gravity	n.a.	1.0	0.0050	1
04001	Chemical Oxygen Demand	n.a.	84.2	12.8	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	11/03/2006 08:18	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	11/02/2006 08:24	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	11/04/2006 01:27	John P Hook	1
01754	Iron	SW-846 6010B	1	11/02/2006 08:24	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	11/02/2006 08:24	Eric L Eby	1
06025	Arsenic	SW-846 6020	1	11/03/2006 14:37	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	11/03/2006 10:10	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	11/03/2006 14:37	Jayme E Curet	1
06033	Copper	SW-846 6020	1	11/03/2006 14:37	Jayme E Curet	1
06035	Lead	SW-846 6020	1	11/03/2006 10:10	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	11/03/2006 14:37	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4902193
**CLELV2-LS-1 Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2LS1- SDG#: SWE17-05

06041	Selenium	SW-846 6020	1	11/03/2006 14:37	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	11/02/2006 08:24	Eric L Eby	1
07072	Zinc	SW-846 6010B	1	11/04/2006 01:27	John P Hook	1
00206	Total Suspended Solids	EPA 160.2	1	10/31/2006 11:26	Christopher M Cunningham	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/28/2006 12:01	Christopher M Cunningham	1
00273	Total Organic Carbon	EPA 415.1	1	11/09/2006 14:30	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	11/02/2006 21:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	11/02/2006 12:00	Susan A Engle	1
08255	Total Cyanide (water)	SW-846 9012A	1	11/01/2006 13:40	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/01/2006 19:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	11/02/2006 19:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	11/03/2006 01:25	Helen L Schaeffer	1
08256	Cyanide Water Distillation	SW-846 9012A	1	11/01/2006 10:30	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4902194**CLELV2-LS-1 Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00

by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

-LS1- SDG#: SWE17-06

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000081 J	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	84.9	0.104	mg/l	1	
01754	Iron	7439-89-6	0.101 J	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	18.9	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0034 U	0.0034	mg/l	5	
06028	Cadmium	7440-43-9	0.0015	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0031 J	0.0013	mg/l	5	
06033	Copper	7440-50-8	0.0084	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.0030	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0082 J	0.0022	mg/l	5	
The quantitation limits for arsenic, chromium, nickel, and selenium were raised due to the nature of the sample matrix.							
06041	Selenium	7782-49-2	0.0109	0.0025	mg/l	5	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.110	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

This sample was filtered in the lab for dissolved cyanide.

This sample was field filtered for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	11/03/2006 08:19	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	11/02/2006 08:29	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	11/04/2006 16:39	Amanda S Bitner	1
01754	Iron	SW-846 6010B	1	11/02/2006 08:29	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	11/02/2006 08:29	Eric L Eby	1
06025	Arsenic	SW-846 6020	1	11/03/2006 14:42	Jayme E Curet	5
06028	Cadmium	SW-846 6020	1	11/03/2006 10:15	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	11/03/2006 14:42	Jayme E Curet	5
06033	Copper	SW-846 6020	1	11/07/2006 00:51	David K Beck	1
06035	Lead	SW-846 6020	1	11/03/2006 10:15	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4902194
**CLELV2-LS-1 Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

-LS1- SDG#: SWE17-06

06039	Nickel	SW-846 6020	1	11/03/2006 14:42	Jayme E Curet	5
06041	Selenium	SW-846 6020	1	11/03/2006 14:42	Jayme E Curet	5
07066	Silver	SW-846 6010B	1	11/02/2006 08:29	Eric L Eby	1
07072	Zinc	SW-846 6010B	1	11/04/2006 16:39	Amanda S Bitner	1
08255	Total Cyanide (water)	SW-846 9012A	1	11/01/2006 13:41	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/01/2006 19:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	11/02/2006 19:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	11/03/2006 01:25	Helen L Schaeffer	1
08256	Cyanide Water Distillation	SW-846 9012A	1	11/01/2006 10:30	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4902195
**CLELV2-LS-1-D Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM Account Number: 12098

 Submitted: 10/28/2006 09:50 Parsons Brinkerhoff
 Reported: 12/07/2006 at 10:37 75 Arlington Street
 Discard: 01/07/2007 Ninth Floor
 Boston MA 02116

2LS1D SDG#: SWE17-07FD

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result				
00235	Biochemical Oxygen Demand	n.a.	18.1		0.80	mg/l	1
00273	Total Organic Carbon	n.a.	12.5		1.0	mg/l	1
01443	Specific Gravity	n.a.	1.01		0.0050		1
04001	Chemical Oxygen Demand	n.a.	95.8		12.8	mg/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/28/2006 12:01	Christopher M Cunningham	1
00273	Total Organic Carbon	EPA 415.1	1	11/09/2006 14:38	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	11/02/2006 21:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	11/02/2006 12:00	Susan A Engle	1

Lancaster Laboratories Sample No. WW 4902196
**CLELV2-LS-1-BK Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/11/2006 08:00

by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:38

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

-LSBK SDG#: SWE17-08BL*

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l
01750	Calcium	7440-70-2	0.104 U	0.104	mg/l
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l
01757	Magnesium	7439-95-4	0.0243 J	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0034 U	0.0034	mg/l
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l
06031	Chromium	7440-47-3	0.0022 J	0.0013	mg/l
06033	Copper	7440-50-8	0.0010 U	0.0010	mg/l
The quantitation limits for arsenic, chromium, copper, nickel, and selenium were raised due to the nature of the sample matrix.					
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l
06039	Nickel	7440-02-0	0.0022 U	0.0022	mg/l
06041	Selenium	7782-49-2	0.0025 U	0.0025	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l

This sample was field filtered for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00259	Mercury	SW-846 7470A	1	11/03/2006 08:21	Damary Valentin
01743	Aluminum	SW-846 6010B	1	11/02/2006 08:34	Eric L Eby
01750	Calcium	SW-846 6010B	1	11/04/2006 16:44	Amanda S Bitner
01754	Iron	SW-846 6010B	1	11/02/2006 08:34	Eric L Eby
01757	Magnesium	SW-846 6010B	1	11/02/2006 08:34	Eric L Eby
06025	Arsenic	SW-846 6020	1	11/03/2006 14:46	Jayme E Curet
06028	Cadmium	SW-846 6020	1	11/03/2006 10:19	Jayme E Curet
06031	Chromium	SW-846 6020	1	11/03/2006 14:46	Jayme E Curet
06033	Copper	SW-846 6020	1	11/07/2006 00:54	David K Beck
06035	Lead	SW-846 6020	1	11/03/2006 10:19	Jayme E Curet
06039	Nickel	SW-846 6020	1	11/03/2006 14:46	Jayme E Curet
06041	Selenium	SW-846 6020	1	11/03/2006 14:46	Jayme E Curet

Lancaster Laboratories Sample No. WW 4902196**CLELV2-LS-1-BK Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/11/2006 08:00

by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:38

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

-LSBK SDG#: SWE17-08BL*

07066	Silver	SW-846 6010B	1	11/02/2006 08:34	Eric L Eby	1
07072	Zinc	SW-846 6010B	1	11/04/2006 16:44	Amanda S Bitner	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/01/2006 19:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	11/02/2006 19:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	11/03/2006 01:25	Helen L Schaeffer	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:38 AM

Group Number: 1011929

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06301023501A Biochemical Oxygen Demand			Sample number(s): 4902193, 4902195	98	97	85-115	2	8
Batch number: 06304020601B Total Suspended Solids		3.0 U	Sample number(s): 4902193 mg/l	94		56-128		
Batch number: 06305117101A Total Cyanide (water)		0.0050 U	Sample number(s): 4902193-4902194 0.0050 mg/l	95		90-110		
Batch number: 063051848002 Aluminum Calcium Iron Magnesium Silver Zinc	0.0802 U 0.104 U 0.0522 U 0.0203 J 0.0016 U 0.0081 U	0.0802 0.104 0.0522 0.0135 0.0016 0.0081	Sample number(s): 4902193-4902194, 4902196 mg/l	98 100 102 102 99 101	98 100 102 102 99 101	90-112 90-112 90-112 89-110 90-118 90-111		
Batch number: 06305820009B Moisture			Sample number(s): 4902189, 4902191-4902192	100		99-101		
Batch number: 06306400101A Chemical Oxygen Demand			Sample number(s): 4902193, 4902195	105		94-110		
Batch number: 063065708002 Aluminum Calcium Iron Magnesium Silver Zinc	3.35 U 12.7 U 4.71 U 1.90 U 0.170 U 0.655 U	3.35 12.7 4.71 1.90 0.170 0.655	Sample number(s): 4902189, 4902191-4902192 mg/kg	123 102 72 105 99 96	123 102 72 105 99 96	61-139 81-119 35-165 78-122 66-134 79-121		
Batch number: 063065711001 Mercury	0.0105 U	0.0105	Sample number(s): 4902189, 4902191-4902192 mg/kg	92	92	66-133		
Batch number: 063065713002 Mercury	U	6	Sample number(s): 4902193-4902194, 4902196 mg/l	104	104	80-120		
Batch number: 063076050002A Arsenic Cadmium Chromium Copper	0.00067 U 0.000099 U 0.00033 J 0.00020 U	0.00067 0.000099 0.00026 0.00020	Sample number(s): 4902193-4902194, 4902196 mg/l	104 102 109 111	104 102 109 111	80-120 80-120 80-120 80-120		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

 Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:38 AM

Group Number: 1011929

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Lead	0.000047	0.00004	mg/l	107		80-120		
	U	7						
Nickel	0.00043	0.00043	mg/l	108		80-120		
	U							
Selenium	0.00050	0.00050	mg/l	105		80-120		
	U							
Batch number: 063086150002A	Sample number(s): 4902189, 4902191-4902192							
Arsenic	0.0170 U	0.0170	mg/kg	86		66-101		
Cadmium	0.0038 U	0.0038	mg/kg	102		81-119		
Chromium	0.0958 J	0.0310	mg/kg	109		73-127		
Copper	0.164	0.0350	mg/kg	110		82-118		
Lead	0.0416 J	0.0150	mg/kg	101		82-118		
Selenium	0.0370 U	0.0370	mg/kg	101		74-126		
Batch number: 063086150002C	Sample number(s): 4902189, 4902191-4902192							
Nickel	0.0500 U	0.0500	mg/kg	111		82-118		
Batch number: 06310102201A	Sample number(s): 4902189, 4902191-4902192							
Total Cyanide (solid)	0.18 U	0.18	mg/kg	99		90-110		
Batch number: 06313049511A	Sample number(s): 4902193, 4902195							
Total Organic Carbon	1.0 U	1.0	mg/l	95		80-120		
Batch number: 063146150001A	Sample number(s): 4902192							
Copper	0.0331 J	0.0320	mg/kg	110		82-118		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06301023501A	Sample number(s): 4902193, 4902195 UNSPK: P901505 BKG: P901505							
Biochemical Oxygen Demand	100	87	67-144	4	9	460.	470.	2
Batch number: 06304020601B	Sample number(s): 4902193 BKG: P901505							
Total Suspended Solids					284.	284.	0 (1)	20
Batch number: 06305117101A	Sample number(s): 4902193-4902194 UNSPK: P899998 BKG: P899998							
Total Cyanide (water)	95	83-111			0.0050 U	0.0050 U	0 (1)	20
Batch number: 063051848002	Sample number(s): 4902193-4902194, 4902196 UNSPK: P903319 BKG: P903319							
Aluminum	116	115	75-125	1	20	0.0802 U	0.0802 U	2 (1)
Calcium	(2)	(2)	75-125	1	20	914.	895.	20
Iron	103	100	75-125	2	20	0.617	0.630	2 (1)
Magnesium	(2)	(2)	75-125	1	20	1,240.	1,210.	20
Silver	126*	122	75-125	3	20	0.0016 U	0.0016 U	-140 (1)
Zinc	109	112	75-125	3	20	0.0081 U	0.0081 U	-12 (1)
Batch number: 06305820009B	Sample number(s): 4902189, 4902191-4902192 BKG: P899341							
Moisture					22.0	22.3	1	15

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

 Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:38 AM

Group Number: 1011929

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06306144301A Specific Gravity			Sample number(s): 4902193, 4902195	BKG: P899232	1.04	1.04	0	2
Batch number: 06306400101A Chemical Oxygen Demand	91		Sample number(s): 4902193, 4902195 UNSPK: 4902195	BKG: 4902195	95.8	91.2	5 (1)	5
90-110			90-110					
Batch number: 063065708002 Aluminum	(2)	(2)	75-125	10	20	9,100.	11,300.	21*
Calcium	135*	131*	75-125	2	20	250.	398.	46*
Iron	(2)	(2)	75-125	8	20	24,400.	33,300.	31*
Magnesium	(2)	(2)	75-125	35*	20	3,030.	3,680.	19
Silver	101	103	75-125	1	20	0.168 U	0.165 U	42* (1)
Zinc	83	146*	75-125	24*	20	69.3	82.1	17
Batch number: 063065711001 Mercury	102	100	80-120	2	20	0.0472 J	0.0436 J	8 (1)
Batch number: 063065713002 Mercury	109	110	80-120	1	20	0.000056 U	0.000056 U	7 (1)
Batch number: 063076050002A Arsenic	(2)	(2)	75-125	2	20	0.0583	0.0627	7 (1)
Cadmium	(2)	(2)	75-125	3	20	0.129	0.135	4
Chromium	110	106	75-125	3	20	0.010 J	0.0109 J	9 (1)
Copper	107	104	75-125	1	20	0.121	0.119	1
Lead	106	105	75-125	1	20	0.00050	0.00050	0 (1)
Nickel	(2)	(2)	75-125	4	20	1.82	1.80	1
Selenium	(2)	(2)	75-125	13	20	0.0809	0.0841	4 (1)
Batch number: 063086150002A Arsenic	105	107	70-130	1	20	0.505 J	0.298 J	52* (1)
Cadmium	80	98	75-125	13	20	0.218 J	0.124 J	55* (1)
Chromium	95	105	75-125	7	20	1.84 J	1.57 J	16 (1)
Copper	69*	70*	75-125	1	20	3.66	2.06	56* (1)
Lead	(2)	(2)	75-125	10	20	11.9	1.19	164* (1)
Selenium	119	149*	75-130	16	20	0.470 J	0.572 J	20 (1)
Batch number: 063086150002C Nickel	100	111	75-125	6	20	4.80	4.60	4 (1)
Batch number: 06309710301A 75 mm			Sample number(s): 4902189-4902192	BKG: P901605	100.	100.	0	20
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					100.	100.	0	20
3.35 mm					99.9	99.9	0	20
2.36 mm					99.8	99.8	0	20
1.18 mm					99.7	99.7	0	20
0.6 mm					99.4	99.4	0	20
0.3 mm					97.6	97.5	0	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:38 AM

Group Number: 1011929

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
0.15 mm					29.1	27.8	4	20
0.075 mm					13.6	16.9	21*	20
0.064 mm					12.0	14.5	19	20
0.05 mm					10.0	11.5	14	20
0.02 mm					6.5	6.5	0	20
0.005 mm					3.5	3.5	0 (1)	20
0.002 mm					2.0	2.0	0 (1)	20
0.001 mm					2.0	2.0	0 (1)	20
Batch number: 06310102201A Total Cyanide (solid)			Sample number(s): 4902189, 4902191-4902192 UNSPK: 4902189 BKG: 4902189 53* 59-124 0.17 U 0.18 U 0 (1)					17
Batch number: 06310656901A Bulk Density			Sample number(s): 4902189-4902192 BKG: 4902189		1.17	1.15	1 (1)	20
Batch number: 06313049511A Total Organic Carbon			Sample number(s): 4902193, 4902195 UNSPK: P901836 BKG: P901836 97 62-148 1.9 J 1.9 J 1 (1)					2
Batch number: 063146150001A Copper			Sample number(s): 4902192 UNSPK: P907397 BKG: P907397 (2) (2) 75-125 1 20 204. 147.				33*	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Analysis Request/ Environmental Services Chain of Custody

For Lancaster Laboratories use only

Acct. # 12098 Group# 1011929 Sample # 4962188-96

COC # 0130303

Please print. Instructions on reverse side correspond with circled numbers.

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1009259. Samples arrived at the laboratory on Wednesday, October 11, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLELV1-LS-1 Unspiked Grab Water Sample	4886189
CLELV1-LS-1 Matrix Spike Grab Water Sample	4886190
CLELV1-LS-1 Unspiked Filtered Grab Water	4886191
CLELV1-LS-1 Matrix Spike Filtered Grab Water	4886192
CLELV1-LS-1-D Grab Water Sample	4886193
CLELV1-LS-1-D Filtered Grab Water	4886194

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4886189
**CLELV1-LS-1 Unspiked Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1-LS1 SDG#: SWE10-01BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l
01743	Aluminum	7429-90-5	0.951	0.0802	mg/l
01750	Calcium	7440-70-2	124.	0.104	mg/l
01754	Iron	7439-89-6	1.60	0.0522	mg/l
01757	Magnesium	7439-95-4	42.4	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0028	0.00067	mg/l
06028	Cadmium	7440-43-9	0.00015 J	0.000099	mg/l
06031	Chromium	7440-47-3	0.0036	0.00026	mg/l
06033	Copper	7440-50-8	0.0058	0.00020	mg/l
06035	Lead	7439-92-1	0.0026	0.000047	mg/l
06039	Nickel	7440-02-0	0.0057	0.00043	mg/l
06041	Selenium	7782-49-2	0.0025	0.00050	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0247	0.0081	mg/l
00206	Total Suspended Solids	n.a.	406.	3.0	mg/l
00235	Biochemical Oxygen Demand	n.a.	3.9 U	3.9	mg/l
This sample was analyzed 1 hour past the 48-hour hold time for BOD.					
00273	Total Organic Carbon	n.a.	5.1 J	5.0	mg/l
The reporting limit for TOC was increased due to insufficient sample volume.					
01443	Specific Gravity	n.a.	1.00	0.0050	1
04001	Chemical Oxygen Demand	n.a.	28.1 J	12.8	mg/l
07547	Dissolved Organic Carbon	n.a.	7.8 J	5.0	mg/l
The reporting limit for DOC was increased due to insufficient sample volume.					
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l

The sample received for the COD, TOC and cyanide analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. WW 4886189**CLELV1-LS-1 Unspiked Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1-LS1 SDG#: SWE10-01BKG

No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/16/2006 07:38	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
01754	Iron	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06028	Cadmium	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
07066	Silver	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
00206	Total Suspended Solids	EPA 160.2	1	10/13/2006 08:47	Maria O Gittens	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/12/2006 07:48	Christopher M Cunningham	1
00273	Total Organic Carbon	EPA 415.1	1	10/16/2006 15:11	James S Mathiot	5
01443	Specific Gravity	SM18 2710 F	1	10/18/2006 19:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/17/2006 09:00	Susan A Engle	1
07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/18/2006 10:42	James S Mathiot	5
08255	Total Cyanide (water)	SW-846 9012A	1	10/17/2006 12:54	Tonya M Beck	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/12/2006 19:35	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/13/2006 18:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/17/2006 09:00	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/16/2006 17:50	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4886190
**CLELV1-LS-1 Matrix Spike Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1-LS1 SDG#: SWE10-01MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0012	0.000056	mg/l
01743	Aluminum	7429-90-5	3.25	0.0802	mg/l
01750	Calcium	7440-70-2	129.	0.104	mg/l
01754	Iron	7439-89-6	2.57	0.0522	mg/l
01757	Magnesium	7439-95-4	44.6	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0134	0.00067	mg/l
06028	Cadmium	7440-43-9	0.0055	0.000099	mg/l
06031	Chromium	7440-47-3	0.0555	0.00026	mg/l
06033	Copper	7440-50-8	0.0568	0.00020	mg/l
06035	Lead	7439-92-1	0.0180	0.000047	mg/l
06039	Nickel	7440-02-0	0.0564	0.00043	mg/l
06041	Selenium	7782-49-2	0.0128	0.00050	mg/l
07066	Silver	7440-22-4	0.0507	0.0016	mg/l
07072	Zinc	7440-66-6	0.526	0.0081	mg/l
08255	Total Cyanide (water)	57-12-5	0.19	0.0050	mg/l

The sample received for the COD, TOC and cyanide analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/16/2006 07:40	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1
01754	Iron	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06028	Cadmium	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1

Lancaster Laboratories Sample No. WW 4886190
**CLELV1-LS-1 Matrix Spike Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1-LS1 SDG#: SWE10-01MS								
07066	Silver	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1		
07072	Zinc	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1		
08255	Total Cyanide (water)	SW-846 9012A	1	10/17/2006 12:55	Tonya M Beck	1		
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/12/2006 19:35	James L Mertz	1		
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/13/2006 18:45	Nelli S Markaryan	1		
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/17/2006 09:00	Megersa Deyessa	1		
08256	Cyanide Water Distillation	SW-846 9012A	1	10/16/2006 17:50	Carolyn M Mastropietro	1		

Lancaster Laboratories Sample No. WW 4886191**CLELV1-LS-1 Unspiked Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11F SDG#: SWE10-02BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.00028 U	0.00028	mg/l
The quantitation limit for mercury was raised due to limited sample volume.					
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l
01750	Calcium	7440-70-2	34.9	0.104	mg/l
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l
01757	Magnesium	7439-95-4	9.58	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0015 J	0.00067	mg/l
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l
06031	Chromium	7440-47-3	0.00078 J	0.00026	mg/l
06033	Copper	7440-50-8	0.0043	0.00020	mg/l
06035	Lead	7439-92-1	0.000073 J	0.000047	mg/l
06039	Nickel	7440-02-0	0.0023	0.00043	mg/l
06041	Selenium	7782-49-2	0.00076 J	0.00050	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l

This sample was field filtered for dissolved metals and lab filtered for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:12	Damary Valentin	5
01743	Aluminum	SW-846 6010B	1	10/17/2006 10:48	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/17/2006 10:48	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/17/2006 10:48	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/17/2006 10:48	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/17/2006 23:52	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/17/2006 23:52	David K Beck	1
06031	Chromium	SW-846 6020	1	10/17/2006 23:52	David K Beck	1
06033	Copper	SW-846 6020	1	10/23/2006 13:00	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/17/2006 23:52	David K Beck	1

Lancaster Laboratories Sample No. WW 4886191
**CLELV1-LS-1 Unspiked Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11F SDG#: SWE10-02BKG

06039	Nickel	SW-846 6020	1	10/17/2006 23:52	David K Beck	1
06041	Selenium	SW-846 6020	1	10/17/2006 23:52	David K Beck	1
07066	Silver	SW-846 6010B	1	10/16/2006 16:28	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/17/2006 10:48	Joanne M Gates	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/18/2006 18:30	Venia B McFadden	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/14/2006 00:35	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/16/2006 01:00	Helen L Schaeffer	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	2	10/20/2006 10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/17/2006 18:00	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4886192**CLELV1-LS-1 Matrix Spike Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11F SDG#: SWE10-02MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0054	0.00028	mg/l 5
01743	Aluminum	7429-90-5	1.92	0.0802	mg/l 1
01750	Calcium	7440-70-2	40.2	0.104	mg/l 1
01754	Iron	7439-89-6	1.01	0.0522	mg/l 1
01757	Magnesium	7439-95-4	11.9	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0121	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0053	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0535	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0567	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0155	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0541	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0118	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0501	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.497	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.19	0.0050	mg/l 1

This sample was field filtered for dissolved metals and lab filtered for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:15	Damary Valentin	5
01743	Aluminum	SW-846 6010B	1	10/17/2006 10:59	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/17/2006 10:59	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/17/2006 10:59	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/17/2006 10:59	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/18/2006 00:04	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/18/2006 00:04	David K Beck	1
06031	Chromium	SW-846 6020	1	10/18/2006 00:04	David K Beck	1
06033	Copper	SW-846 6020	2	10/23/2006 13:11	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/18/2006 00:04	David K Beck	1
06039	Nickel	SW-846 6020	1	10/18/2006 00:04	David K Beck	1
06041	Selenium	SW-846 6020	1	10/18/2006 00:04	David K Beck	1

Lancaster Laboratories Sample No. WW 4886192
**CLELV1-LS-1 Matrix Spike Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11F	SDG#:	SWE10-02MS						
07066	Silver	SW-846 6010B	1	10/16/2006 02:59	Suzette L Lehman	1		
07072	Zinc	SW-846 6010B	1	10/17/2006 10:59	Joanne M Gates	1		
08255	Total Cyanide (water)	SW-846 9012A	1	10/18/2006 18:32	Venia B McFadden	1		
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/14/2006 00:35	Helen L Schaeffer	1		
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1		
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/16/2006 01:00	Helen L Schaeffer	1		
06050	ICP/MS SW-846 Water	SW-846 3010A modified	2	10/20/2006 10:15	Megersa Deyessa	1		
08256	Cyanide Water Distillation	SW-846 9012A	1	10/17/2006 18:00	Carolyn M Mastropietro	1		

Lancaster Laboratories Sample No. WW 4886193**CLELV1-LS-1-D Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11D SDG#: SWE10-03FD

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.588	0.0802	mg/l	1	
01750	Calcium	7440-70-2	189.	0.104	mg/l	1	
01754	Iron	7439-89-6	1.52	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	63.2	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0029	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.00017 J	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0038	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0057	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.0029	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0062	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.0029	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0186 J	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	3.4 U	3.4	mg/l	1	
	This sample was analyzed 1 hour past the 48-hour hold time for BOD.						
00273	Total Organic Carbon	n.a.	3.8	1.0	mg/l	1	
01443	Specific Gravity	n.a.	1.0	0.0050		1	
04001	Chemical Oxygen Demand	n.a.	25.7 J	12.8	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

The sample received for the COD, TOC and cyanide analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/16/2006 07:43	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/16/2006 03:42	Suzette L Lehman	1
01750	Calcium	SW-846 6010B	1	10/16/2006 03:42	Suzette L Lehman	1
01754	Iron	SW-846 6010B	1	10/16/2006 03:42	Suzette L Lehman	1
01757	Magnesium	SW-846 6010B	1	10/16/2006 03:42	Suzette L Lehman	1
06025	Arsenic	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1

Lancaster Laboratories Sample No. WW 4886193
**CLELV1-LS-1-D Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11D SDG#: SWE10-03FD

06028	Cadmium	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
07066	Silver	SW-846 6010B	1	10/16/2006 16:50	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/17/2006 12:27	Joanne M Gates	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/12/2006 07:48	Christopher M Cunningham	1
00273	Total Organic Carbon	EPA 415.1	1	10/16/2006 15:35	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	10/18/2006 19:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/17/2006 09:00	Susan A Engle	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/17/2006 12:57	Tonya M Beck	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/14/2006 00:35	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/13/2006 18:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/17/2006 09:00	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/16/2006 17:50	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4886194
**CLELV1-LS-1-D Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

S11DF SDG#: SWE10-04FD*

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	37.4	0.104	mg/l	1	
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	10.1	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0016 J	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00073 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0130	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.000068 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0026	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00085 J	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

This sample was field filtered for dissolved metals and lab filtered for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:20	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/16/2006 16:54	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/16/2006 16:54	John P Hook	1
01754	Iron	SW-846 6010B	1	10/16/2006 16:54	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/16/2006 16:54	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/18/2006 00:17	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/18/2006 00:17	David K Beck	1
06031	Chromium	SW-846 6020	1	10/18/2006 00:17	David K Beck	1
06033	Copper	SW-846 6020	1	10/20/2006 12:13	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/18/2006 00:17	David K Beck	1
06039	Nickel	SW-846 6020	1	10/18/2006 00:17	David K Beck	1
06041	Selenium	SW-846 6020	1	10/18/2006 00:17	David K Beck	1

Lancaster Laboratories Sample No. WW 4886194
**CLELV1-LS-1-D Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

S11DF SDG#: SWE10-04FD*

07066	Silver	SW-846 6010B	1	10/16/2006 16:54	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/17/2006 12:31	Joanne M Gates	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/17/2006 12:58	Tonya M Beck	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/14/2006 00:35	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/16/2006 01:00	Helen L Schaeffer	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/16/2006 17:50	Carolyn M Mastropietro	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:45 AM

Group Number: 1009259

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06285023501A Biochemical Oxygen Demand			Sample number(s): 4886189, 4886193	103	101	85-115	2	8
Batch number: 062851848001 Aluminum Calcium Iron Magnesium Silver Zinc	0.0802 U 0.104 U 0.0522 U 0.0159 J 0.0016 U 0.0109 J	0.0802 0.104 0.0522 0.0135 0.0016 0.0081	mg/l mg/l mg/l mg/l mg/l mg/l	101 100 98 98 99 100		90-112 90-112 90-112 89-110 90-118 90-111		
Batch number: 06286020601B Total Suspended Solids	3.0 U	3.0	mg/l	99		56-128		
Batch number: 062865713002 Mercury	0.000056 U	0.00005 6	mg/l	116		80-120		
Batch number: 062871848002 Aluminum Calcium Iron Magnesium Silver	0.0802 U 0.104 U 0.0522 U 0.0135 U 0.0016 U	0.0802 0.104 0.0522 0.0135 0.0016	mg/l mg/l mg/l mg/l mg/l	102 111 105 108 101		90-112 90-112 90-112 89-110 90-118		
Batch number: 06289049511B Total Organic Carbon	1.0 U	1.0	mg/l	98		80-120		
Batch number: 06289117101B Total Cyanide (water)	0.0050 U	0.0050	mg/l	100		90-110		
Batch number: 062896050002A Arsenic Cadmium Chromium Lead Selenium	0.00067 U 0.000099 U 0.00047 J 0.000047 U 0.00050 U	0.00067 0.000099 0.00026 0.00004 0.00050	mg/l mg/l mg/l mg/l mg/l	102 100 105 105 99		80-120 80-120 80-120 80-120 80-120		
Batch number: 062896050002C Nickel	0.00043 U	0.00043	mg/l	102		80-120		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

 Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:45 AM

Group Number: 1009259

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06290117101A Total Cyanide (water)	Sample number(s): 4886191-4886192 0.0050 U	0.0050	mg/l	97		90-110		
Batch number: 062901848004 Aluminum	Sample number(s): 4886191-4886194 0.0802 U	0.0802	mg/l	92		90-112		
Calcium	0.104 U	0.104	mg/l	97		90-112		
Iron	0.0522 U	0.0522	mg/l	96		90-112		
Magnesium	0.0135 U	0.0135	mg/l	96		89-110		
Zinc	0.0081 U	0.0081	mg/l	96		90-111		
Batch number: 06290400102A Chemical Oxygen Demand	Sample number(s): 4886189, 4886193		107			94-110		
Batch number: 062905713002 Mercury	Sample number(s): 4886191-4886192, 4886194 0.00035	0.00005	mg/l	104		80-120		
		6						
Batch number: 062906050003A Arsenic	Sample number(s): 4886189-4886190, 4886193 0.00067	0.00067	mg/l	102		80-120		
Cadmium	U							
	0.000099	0.00009	mg/l	101		80-120		
Chromium	U	9						
	0.00027	0.00026	mg/l	106		80-120		
Copper	J							
	0.00020	0.00020	mg/l	110		80-120		
Lead	U							
	0.000047	0.00004	mg/l	105		80-120		
Selenium	U	7						
	0.00050	0.00050	mg/l	98		80-120		
Batch number: 062906050003C Nickel	Sample number(s): 4886189-4886190, 4886193 0.00043	0.00043	mg/l	108		80-120		
	U							
Batch number: 06291049512A Dissolved Organic Carbon	Sample number(s): 4886189 1.0 U	1.0	mg/l	103		80-120		
Batch number: 062926050004C Copper	Sample number(s): 4886194 0.20 U	0.20	ug/l	109		80-120		
Batch number: 062936050002A Copper	Sample number(s): 4886191-4886192 0.00020	0.00020	mg/l	111		80-120		
	U							

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06285023501A			Sample number(s): 4886189, 4886193 UNSPK: P887153 BKG: P887130					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:45 AM

Group Number: 1009259

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Biochemical Oxygen Demand	112	110	67-144	1	9	270.	249.	8	9
Batch number: 062851848001									
Aluminum	115	108	75-125	4	20	0.951	0.962	1 (1)	20
Calcium	(2)	(2)	75-125	1	20	124.	125.	0	20
Iron	97	89	75-125	3	20	1.60	1.64	2	20
Magnesium	(2)	(2)	75-125	1	20	42.4	42.6	0	20
Silver	101	101	75-125	1	20	0.0016 U	0.0016 U	-11 (1)	20
Zinc	100	99	75-125	1	20	0.0247	0.0255	3 (1)	20
Batch number: 06286020601B									
Total Suspended Solids	Sample number(s): 4886189 BKG: P887063						4.4 J	5.2 J	17 (1)
Batch number: 062865713002									
Mercury	118	118	80-120	0	20	0.000056 U	0.000056 U	-9 (1)	20
Batch number: 062871848002									
Aluminum	110	105	75-125	5	20	0.0802 U	0.0802 U	98* (1)	20
Calcium	(2)	(2)	75-125	7	20	40.4	38.9	4	20
Iron	118	112	75-125	5	20	0.0522 U	0.0522 U	-95 (1)	20
Magnesium	(2)	(2)	75-125	6	20	11.2	10.7	4	20
Silver	100	102	75-125	1	20	0.0016 U	0.0016 U	-193 (1)	20
Batch number: 06289049511B									
Total Organic Carbon	103	Sample number(s): 4886189, 4886193 UNSPK: 4886189 BKG: 4886189			5.1 J	5.0 U	13* (1)	2	
Batch number: 06289117101B									
Total Cyanide (water)	95	Sample number(s): 4886189-4886190, 4886193-4886194 UNSPK: 4886189 BKG: 4886189			0.0050 U	0.0050 U	0 (1)	20	
Batch number: 062896050002A									
Arsenic	106	104	75-125	2	20	0.0015 J	0.0015 J	3 (1)	20
Cadmium	106	102	75-125	4	20	0.000099 U	0.000099 U	107* (1)	20
Chromium	106	104	75-125	2	20	0.00078 J	0.00079 J	1 (1)	20
Lead	103	102	75-125	1	20	0.000073 J	0.000075 J	2 (1)	20
Selenium	110	106	75-125	3	20	0.00076 J	0.00078 J	1 (1)	20
Batch number: 062896050002C									
Nickel	104	102	75-125	2	20	0.0023 U	0.0024 U	4 (1)	20
Batch number: 06290117101A									
Total Cyanide (water)	97	Sample number(s): 4886191-4886192 UNSPK: 4886191 BKG: 4886191			0.0050 U	0.0050 U	0 (1)	20	
Batch number: 062901848004									
Aluminum	96	91	75-125	5	20	0.0802 U	0.0802 U	-1 (1)	20
Calcium	(2)	(2)	75-125	2	20	34.9	35.6	2	20
Iron	101	97	75-125	4	20	0.0522 U	0.0522 U	19 (1)	20
Magnesium	(2)	(2)	75-125	2	20	9.58	9.76	2	20
Zinc	99	95	75-125	4	20	0.0081 U	0.0081 U	1 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:45 AM

Group Number: 1009259

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06290400102A Chemical Oxygen Demand	90		Sample number(s): 4886189, 4886193 UNSPK: P887151 BKG: P888274 90-110		70.1	67.8	3 (1)	5
Batch number: 062905713002 Mercury	107	108	Sample number(s): 4886191-4886192, 4886194 UNSPK: 4886191 BKG: 4886191 80-120	1 20	0.00028 U	0.00028 U	200* (1)	20
Batch number: 062906050003A Arsenic	106	106	Sample number(s): 4886189-4886190, 4886193 UNSPK: 4886189 BKG: 4886189 75-125	0 20	0.0028	0.0031	10 (1)	20
Cadmium	106	100	75-125	6 20	0.00015	0.00014	4 (1)	20
J			J		J			
Chromium	104	103	75-125	0 20	0.0036	0.0035	2 (1)	20
Copper	102	100	75-125	2 20	0.0058	0.0055	5	20
Lead	103	102	75-125	0 20	0.0026	0.0027	4 (1)	20
Selenium	103	104	75-125	1 20	0.0025	0.0026	4 (1)	20
Nickel	101	100	Sample number(s): 4886189-4886190, 4886193 UNSPK: 4886189 BKG: 4886189 75-125	1 20	0.0057	0.0057	1 (1)	20
Dissolved Organic Carbon	103		Sample number(s): 4886189 UNSPK: 4886189 BKG: 4886189 66-137		7.8 J	7.5 J	5* (1)	4
Batch number: 06291144301A Specific Gravity			Sample number(s): 4886189, 4886193 BKG: P889868		1.00	1.00	0	2
Batch number: 062926050004C Copper	101	101	Sample number(s): 4886194 UNSPK: P891579 BKG: P891579 75-125	0 20	26.5	29.1	9	20
Copper	105	106	Sample number(s): 4886191-4886192 UNSPK: 4886191 BKG: 4886191 75-125	1 20	0.0043	0.0042	3 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # 12098 Group# 1009259 Sample # 4886189-94

COC # 0130307

Please print. Instructions on reverse side correspond with circled numbers

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008588. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHCV1-LS-1 Unspiked Composite Water Sample	4882510
DLHCV1-LS-1 Matrix Spike Composite Water Sample	4882511
DLHCV1-LS-1 Unspiked Filtered Composite Water	4882512
DLHCV1-LS-1 Matrix Spike Filtered Composite Water	4882513
DLHCV1-LS-1-D Composite Water Sample	4882514

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	3CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
1 COPY TO	Data Package Group	
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4882510
**DLHCV1-LS-1 Unspiked Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V1LS1 SDG#: SWE08-01BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l
01750	Calcium	7440-70-2	15.4	0.104	mg/l
01754	Iron	7439-89-6	0.689	0.0522	mg/l
01757	Magnesium	7439-95-4	4.18	0.0135	mg/l
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l
06031	Chromium	7440-47-3	0.0012 J	0.00026	mg/l
06033	Copper	7440-50-8	0.0052	0.00020	mg/l
06035	Lead	7439-92-1	0.0011	0.000047	mg/l
06039	Nickel	7440-02-0	0.0015 J	0.00043	mg/l
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l
00206	Total Suspended Solids	n.a.	16.0	3.0	mg/l
00235	Biochemical Oxygen Demand	n.a.	2.8 U	2.8	mg/l
This sample was submitted past the 48-hour holding time for BOD.					
00273	Total Organic Carbon	n.a.	2.9	1.0	mg/l
01443	Specific Gravity	n.a.	1.00	0.0050	1
04001	Chemical Oxygen Demand	n.a.	22.0 J	12.8	mg/l
07547	Dissolved Organic Carbon	n.a.	1.0 U	1.0	mg/l
08255	Total Cyanide (water)	57-12-5	0.0083 U	0.0083	mg/l
08357	Selected SVOAs by 8270 SIM				
08362	Naphthalene	91-20-3	0.093	0.01	ug/l
08368	Fluorene	86-73-7	0.024 J	0.01	ug/l
08369	Phenanthrene	85-01-8	0.062 J	0.01	ug/l
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l
08372	Fluoranthene	206-44-0	0.040 J	0.01	ug/l
08373	Pyrene	129-00-0	0.047 J	0.02	ug/l
08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l
08375	Chrysene	218-01-9	0.02 U	0.02	ug/l
08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l
Trial ID: RE					
08362	Naphthalene	91-20-3	0.013 J	0.01	ug/l
08368	Fluorene	86-73-7	0.01 U	0.01	ug/l
08369	Phenanthrene	85-01-8	0.022 J	0.01	ug/l
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l
08372	Fluoranthene	206-44-0	0.021 J	0.01	ug/l

Lancaster Laboratories Sample No. WW 4882510

**DLHCV1-LS-1 Unspiked Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V1LS1 SDG#: SWE08-01BKG

As Received

CAT	No.	Analysis Name	CAS Number	Result	Method	Dilution Factor
	08373	Pyrene	129-00-0	0.023 J	0.02	ug/l 1
	08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l 1
	08375	Chrysene	218-01-9	0.02 U	0.02	ug/l 1
	08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l 1
	08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l 1

Phenanthrene was detected in the method blank at a concentration of .01 ug/l.

The blank value was not subtracted from the analytical result. This sample was re-extracted, and phenanthrene was again detected in the sample.

Sample from a plastic bottle was used for the re-analysis of this sample.

Due to insufficient sample, the reporting limits for the GC/MS semivolatile compounds were raised.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00259	Mercury	SW-846 7470A	1	10/11/2006 07:58	Damary Valentin	1
	01743	Aluminum	SW-846 6010B	1	10/11/2006 21:03	John P Hook	1
	01750	Calcium	SW-846 6010B	1	10/10/2006 21:46	John P Hook	1
	01754	Iron	SW-846 6010B	1	10/10/2006 21:46	John P Hook	1
	01757	Magnesium	SW-846 6010B	1	10/10/2006 21:46	John P Hook	1
	06025	Arsenic	SW-846 6020	1	10/13/2006 23:00	David K Beck	1
	06028	Cadmium	SW-846 6020	1	10/13/2006 10:34	Jayme E Curet	1
	06031	Chromium	SW-846 6020	1	10/13/2006 10:34	Jayme E Curet	1
	06033	Copper	SW-846 6020	1	10/13/2006 10:34	Jayme E Curet	1
	06035	Lead	SW-846 6020	1	10/13/2006 10:34	Jayme E Curet	1
	06039	Nickel	SW-846 6020	1	10/13/2006 10:34	Jayme E Curet	1
	06041	Selenium	SW-846 6020	1	10/13/2006 23:00	David K Beck	1
	07066	Silver	SW-846 6010B	1	10/10/2006 21:46	John P Hook	1
	07072	Zinc	SW-846 6010B	1	10/10/2006 21:46	John P Hook	1
	00206	Total Suspended Solids	EPA 160.2	1	10/06/2006 10:08	Maria O Gittens	1
	00235	Biochemical Oxygen Demand	EPA 405.1	1	10/05/2006 13:06	Susan A Engle	1
	00273	Total Organic Carbon	EPA 415.1	1	10/12/2006 10:52	James S Mathiot	1
	01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
	04001	Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1

Lancaster Laboratories Sample No. WW 4882510
**DLHCV1-LS-1 Unspiked Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V1LS1	SDG#:	SWE08-01BKG							
07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/11/2006 12:06	James S Mathiot	1			
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:42	Courtney A Shoff	1			
08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/10/2006 22:07	William T Parker	1			
08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	2	10/17/2006 12:15	Timothy J Trees	1			
00813	BNA Water Extraction	SW-846 3510C	1	10/08/2006 22:30	Brian C Veety	1			
00813	BNA Water Extraction	SW-846 3510C	2	10/13/2006 04:15	Sherry L Morrow	1			
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/09/2006 00:35	Helen L Schaeffer	1			
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/10/2006 18:00	Nelli S Markaryan	1			
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/09/2006 11:15	Megersa Deyessa	1			
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1			

Lancaster Laboratories Sample No. WW 4882511
**DLHCV1-LS-1 Matrix Spike Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V1LS1 SDG#: SWE08-01MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0012	0.000056	mg/l 1
01743	Aluminum	7429-90-5	2.09	0.0802	mg/l 1
01750	Calcium	7440-70-2	19.3	0.104	mg/l 1
01754	Iron	7439-89-6	1.66	0.0522	mg/l 1
01757	Magnesium	7439-95-4	6.10	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0113	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0055	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0575	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0623	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0182	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0574	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0103	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0496	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.515	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.27	0.0083	mg/l 1
08357	Selected SVOAs by 8270 SIM				
08362	Naphthalene	91-20-3	0.82	0.01	ug/l 1
08368	Fluorene	86-73-7	0.83	0.01	ug/l 1
08369	Phenanthrene	85-01-8	0.84	0.01	ug/l 1
08370	Anthracene	120-12-7	0.80	0.02	ug/l 1
08372	Fluoranthene	206-44-0	0.83	0.01	ug/l 1
08373	Pyrene	129-00-0	0.87	0.02	ug/l 1
08374	Benzo(a)anthracene	56-55-3	0.78	0.02	ug/l 1
08375	Chrysene	218-01-9	0.76	0.02	ug/l 1
08378	Benzo(a)pyrene	50-32-8	0.59	0.02	ug/l 1
08380	Dibenz(a,h)anthracene	53-70-3	0.50	0.02	ug/l 1

Sample from a plastic bottle was used for the analysis of this sample.

Due to insufficient sample, the reporting limits for the GC/MS semivolatile compounds were raised.

This sample was extracted outside of the method required holding time.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. WW 4882511
**DLHCV1-LS-1 Matrix Spike Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

V1LS1 SDG#: SWE08-01MS

Boston MA 02116

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00259	Mercury	SW-846 7470A	1	10/11/2006 08:00	Damary Valentin	1
	01743	Aluminum	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	01750	Calcium	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	01754	Iron	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	01757	Magnesium	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	06025	Arsenic	SW-846 6020	1	10/13/2006 23:10	David K Beck	1
	06028	Cadmium	SW-846 6020	1	10/13/2006 10:47	Jayme E Curet	1
	06031	Chromium	SW-846 6020	1	10/13/2006 10:47	Jayme E Curet	1
	06033	Copper	SW-846 6020	1	10/13/2006 10:47	Jayme E Curet	1
	06035	Lead	SW-846 6020	1	10/13/2006 10:47	Jayme E Curet	1
	06039	Nickel	SW-846 6020	1	10/13/2006 10:47	Jayme E Curet	1
	06041	Selenium	SW-846 6020	1	10/13/2006 23:10	David K Beck	1
	07066	Silver	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	07072	Zinc	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:43	Courtney A Shoff	1
	08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/17/2006 12:43	Timothy J Trees	1
	00813	BNA Water Extraction	SW-846 3510C	1	10/13/2006 04:15	Sherry L Morrow	1
	01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/09/2006 00:35	Helen L Schaeffer	1
	05713	WW SW846 Hg Digest	SW-846 7470A	1	10/10/2006 18:00	Nelli S Markaryan	1
	06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/09/2006 11:15	Megersa Deyessa	1
	08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4882512
**DLHCV1-LS-1 Unspiked Filtered Composite Water
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1F SDG#: SWE08-02BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	15.7	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	4.39	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00057 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0022	0.00020	mg/l 1
06035	Lead	7439-92-1	0.00011 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0016 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 07:28	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1
01754	Iron	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06041	Selenium	SW-846 6020	2	10/16/2006 17:08	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1

Lancaster Laboratories Sample No. WW 4882512**DLHCV1-LS-1 Unspiked Filtered Composite Water
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1F	SDG#:	SWE08-02BKG						
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:46	Courtney A Shoff	1		
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006 19:55	James L Mertz	1		
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1		
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/09/2006 09:30	Megersa Deyessa	1		
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1		

Lancaster Laboratories Sample No. WW 4882513
**DLHCV1-LS-1 Matrix Spike Filtered Composite Water
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1F SDG#: SWE08-02MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0012	0.000056	mg/l 1
01743	Aluminum	7429-90-5	1.83	0.0802	mg/l 1
01750	Calcium	7440-70-2	19.5	0.104	mg/l 1
01754	Iron	7439-89-6	0.957	0.0522	mg/l 1
01757	Magnesium	7439-95-4	6.30	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0107	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0051	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0542	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0566	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0160	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0547	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0106	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0484	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.469	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.17	0.0050	mg/l 1

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 07:30	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1
01754	Iron	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06041	Selenium	SW-846 6020	2	10/16/2006 17:25	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1

Lancaster Laboratories Sample No. WW 4882513**DLHCV1-LS-1 Matrix Spike Filtered Composite Water
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1F	SDG#:	SWE08-02MS						
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006	21:47	Courtney A Shoff	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006	19:55	James L Mertz	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006	17:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/09/2006	09:30	Megersa Deyessa	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006	11:00	Nancy J Shoop	1	

Lancaster Laboratories Sample No. WW 4882514**DLHCV1-LS-1-D Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1D SDG#: SWE08-03FD

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	14.8	0.104	mg/l	1	
01754	Iron	7439-89-6	0.607	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	4.00	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0011 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0041	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00091 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0014 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	2.6 U	2.6	mg/l	1	
This sample was submitted past the 48-hour holding time for BOD.							
00273	Total Organic Carbon	n.a.	2.5	1.0	mg/l	1	
01443	Specific Gravity	n.a.	1.00	0.0050		1	
04001	Chemical Oxygen Demand	n.a.	19.7 J	12.8	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	
08357	Selected SVOAs by 8270 SIM						
08362	Naphthalene	91-20-3	0.10	0.01	ug/l	1	
08368	Fluorene	86-73-7	0.025 J	0.01	ug/l	1	
08369	Phenanthrene	85-01-8	0.066	0.01	ug/l	1	
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l	1	
08372	Fluoranthene	206-44-0	0.040 J	0.01	ug/l	1	
08373	Pyrene	129-00-0	0.048 J	0.02	ug/l	1	
08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l	1	
08375	Chrysene	218-01-9	0.02 U	0.02	ug/l	1	
08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l	1	
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l	1	

Phenanthrene was detected in the method blank at a concentration of .01 ug/l.

The blank value was not subtracted from the analytical result. Sufficient sample was unavailable to repeat the analysis.

Due to insufficient sample, the reporting limits for the GC/MS semivolatile compounds were raised.

Lancaster Laboratories Sample No. WW 4882514
**DLHCV1-LS-1-D Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1D SDG#: SWE08-03FD

As Received

CAT	No.	Analysis Name	CAS Number	As Received	Method	Dilution Factor
				Result	Detection Limit	Units

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Analysis			Dilution Factor
				Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/11/2006 08:06	Damary Valentin	1	
01743	Aluminum	SW-846 6010B	1	10/11/2006 21:19	John P Hook	1	
01750	Calcium	SW-846 6010B	1	10/10/2006 22:34	John P Hook	1	
01754	Iron	SW-846 6010B	1	10/10/2006 22:34	John P Hook	1	
01757	Magnesium	SW-846 6010B	1	10/10/2006 22:34	John P Hook	1	
06025	Arsenic	SW-846 6020	1	10/16/2006 18:04	Jayme E Curet	1	
06028	Cadmium	SW-846 6020	1	10/16/2006 18:04	Jayme E Curet	1	
06031	Chromium	SW-846 6020	1	10/16/2006 18:04	Jayme E Curet	1	
06033	Copper	SW-846 6020	1	10/16/2006 18:04	Jayme E Curet	1	
06035	Lead	SW-846 6020	1	10/16/2006 18:04	Jayme E Curet	1	
06039	Nickel	SW-846 6020	1	10/16/2006 18:04	Jayme E Curet	1	
06041	Selenium	SW-846 6020	1	10/16/2006 18:04	Jayme E Curet	1	
07066	Silver	SW-846 6010B	1	10/10/2006 22:34	John P Hook	1	
07072	Zinc	SW-846 6010B	1	10/10/2006 22:34	John P Hook	1	
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/05/2006 13:06	Susan A Engle	1	
00273	Total Organic Carbon	EPA 415.1	1	10/12/2006 15:51	James S Mathiot	1	
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1	
04001	Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1	
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:49	Courtney A Shoff	1	
08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/10/2006 22:35	William T Parker	1	
00813	BNA Water Extraction	SW-846 3510C	1	10/08/2006 22:30	Brian C Veety	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/09/2006 00:35	Helen L Schaeffer	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/10/2006 18:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/09/2006 09:30	Megersa Deyessa	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1	

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:46 AM

Group Number: 1008588

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06278023503A Biochemical Oxygen Demand			Sample number(s): 4882510, 4882514	108	107	85-115	1	8
Batch number: 06279020601B Total Suspended Solids	3.0 U	3.0	mg/l	103		56-128		
Batch number: 06279WAH026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	0.01 U 0.01 U 0.012 J 0.02 U 0.01 U 0.02 U 0.02 U 0.02 U 0.02 U 0.02 U	0.01 0.01 0.01 0.02 0.01 0.02 0.02 0.02 0.02	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	92 89 91 87 93 93 89 93 85 84	95 93 95 90 95 95 76-114 76-111 76-112 64-114 60-126	70-111 75-115 76-114 67-113 69-123 76-114 76-111 76-112 64-114 60-126	3 4 4 3 3 3 3 3 3 4	30 30 30 30 30 30 30 30 30 30
Batch number: 062821848001 Aluminum Calcium Iron Magnesium Silver Zinc	0.0802 U 0.104 U 0.0522 U 0.0135 U 0.0016 U 0.0081 U	0.0802 0.104 0.0522 0.0135 0.0016 0.0081	mg/l mg/l mg/l mg/l mg/l mg/l	104 102 98 97 99 101		90-112 90-112 90-112 89-110 90-118 90-111		
Batch number: 062825713003 Mercury	0.000056 U	0.000056	mg/l	117 6		80-120		
Batch number: 062826050001A Arsenic Cadmium Chromium Copper Lead Nickel Selenium	0.00067 U	0.00067	mg/l	105		80-120		
Batch number: 062826050002A Arsenic Cadmium Chromium Copper Lead	0.67 U 0.099 U 0.43 J 0.20 U 0.047 U	0.67 0.099 0.26 0.20 0.047	ug/l ug/l ug/l ug/l ug/l	104 104 111 115 111		80-120 80-120 80-120 80-120 80-120		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:46 AM

Group Number: 1008588

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Nickel	0.43 U	0.43	ug/l	107		80-120		
Batch number: 062826050002B			Sample number(s): 4882512-4882514					
Selenium	0.00050	0.00050	mg/l	98		80-120		
	U							
Batch number: 062831848006			Sample number(s): 4882512-4882513					
Aluminum	80.2 U	80.2	ug/l	93		90-112		
Calcium	104. U	104.	ug/l	96		90-112		
Iron	52.2 U	52.2	ug/l	95		90-112		
Magnesium	13.5 U	13.5	ug/l	98		89-110		
Silver	1.6 U	1.6	ug/l	98		90-118		
Zinc	8.1 U	8.1	ug/l	97		90-111		
Batch number: 06283400102A			Sample number(s): 4882510,4882514					
Chemical Oxygen Demand			99			94-110		
Batch number: 062835713003			Sample number(s): 4882510-4882511,4882514					
Mercury	0.000056	0.00005	mg/l	115		80-120		
	U	6						
Batch number: 06284049511B			Sample number(s): 4882510,4882514					
Total Organic Carbon	1.0 U	1.0	mg/l	100		80-120		
Batch number: 06284049512A			Sample number(s): 4882510					
Dissolved Organic Carbon	1.0 U	1.0	mg/l	107		80-120		
Batch number: 06284117101A			Sample number(s): 4882510-4882511					
Total Cyanide (water)	0.0050 U	0.0050	mg/l	95		90-110		
Batch number: 06284117101B			Sample number(s): 4882512-4882514					
Total Cyanide (water)	0.0050 U	0.0050	mg/l	95		90-110		
Batch number: 06285WAE026			Sample number(s): 4882510-4882511					
Naphthalene	0.005 U	0.005	ug/l	81	81	70-111	0	30
Fluorene	0.005 U	0.005	ug/l	82	83	75-115	0	30
Phenanthrene	0.005 U	0.005	ug/l	82	82	76-114	1	30
Anthracene	0.01 U	0.01	ug/l	81	81	67-113	1	30
Fluoranthene	0.005 U	0.005	ug/l	83	84	69-123	0	30
Pyrene	0.01 U	0.01	ug/l	86	87	76-114	1	30
Benzo(a)anthracene	0.01 U	0.01	ug/l	83	84	76-111	1	30
Chrysene	0.01 U	0.01	ug/l	82	83	76-112	1	30
Benzo(a)pyrene	0.01 U	0.01	ug/l	79	80	64-114	1	30
Dibenz(a,h)anthracene	0.01 U	0.01	ug/l	71	71	60-126	0	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06278023503A			Sample number(s): 4882510,4882514 UNSPK: 4882510 BKG: P881810					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:46 AM

Group Number: 1008588

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max RPD</u>
Biochemical Oxygen Demand	110	124	67-144	12*	9	177.	161.	9	9
Batch number: 06279020601B Total Suspended Solids									
	Sample number(s): 4882510		BKG: P882527						
						197.	205.	4	20
Batch number: 062821848001 Aluminum	104	102	75-125	2	20	0.0802 U	0.0802 U	-7233 (1)	20
Calcium	100	94	75-125	1	20	15.4	14.8	4	20
Iron	97	92	75-125	3	20	0.689	0.627	9 (1)	20
Magnesium	96	92	75-125	1	20	4.18	4.00	4	20
Silver	99	97	75-125	2	20	0.0016 U	0.0016 U	-6 (1)	20
Zinc	103	98	75-125	5	20	0.0081 U	0.0082 J	200* (1)	20
Batch number: 062825713003 Mercury	116	119	80-120	3	20	0.000056 U	0.000056 U	104* (1)	20
Batch number: 062826050001A Arsenic	113	111	75-125	1	20	0.00067 U	0.00067 U	14 (1)	20
Cadmium	109	106	75-125	3	20	0.099 U	0.099 U	46* (1)	20
Chromium	113	109	75-125	3	20	1.2 J	1.2 J	1 (1)	20
Copper	114	111	75-125	3	20	5.2	4.9	4 (1)	20
Lead	114	113	75-125	1	20	1.1	1.1	4 (1)	20
Nickel	112	108	75-125	3	20	1.5 J	1.4 J	6 (1)	20
Selenium	103	102	75-125	0	20	0.00050 U	0.00050 U	-44 (1)	20
Batch number: 062826050002A Arsenic	107	109	75-125	1	20	0.67 U	0.67 U	8 (1)	20
Cadmium	101	102	75-125	1	20	0.099 U	0.099 U	90* (1)	20
Chromium	107	106	75-125	1	20	0.57 J	0.63 J	9 (1)	20
Copper	109	107	75-125	1	20	2.2	2.2	2 (1)	20
Lead	106	106	75-125	0	20	0.11 J	0.10 J	3 (1)	20
Nickel	106	105	75-125	1	20	1.6 J	1.1 J	37* (1)	20
Batch number: 062826050002B Selenium	106	105	75-125	1	20	0.00050 U	0.50 U	200* (1)	20
Batch number: 06283144301A Specific Gravity									
	Sample number(s): 4882510, 4882514		BKG: P883056						
			1.0			1.0	0		2
Batch number: 062831848006									
	Sample number(s): 4882512-4882513 UNSPK: 4882512		BKG: 4882512						
Aluminum	92	92	75-125	0	20	0.0802 U	0.0802 U	-2 (1)	20
Calcium	94	90	75-125	1	20	15.7	14.7	7	20
Iron	96	95	75-125	1	20	0.0522 U	0.0522 U	-6 (1)	20
Magnesium	95	94	75-125	0	20	4.39	4.12	6	20
Silver	97	97	75-125	0	20	1.6 U	1.6 U	93* (1)	20
Zinc	94	95	75-125	1	20	8.1 U	8.1 U	61* (1)	20
Batch number: 06283400102A									
	Sample number(s): 4882510, 4882514 UNSPK: P881814		BKG: P883056						

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:46 AM

Group Number: 1008588

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Chemical Oxygen Demand	95		90-110		420.	409.	3	5
Batch number: 062835713003 Mercury			Sample number(s): 4882510-4882511, 4882514 UNSPK: 4882510 BKG: 4882510 119 118 80-120 1 20 0.000056 0.000056 143* (1) U U 20					
Batch number: 06284049511B Total Organic Carbon			Sample number(s): 4882510, 4882514 UNSPK: 4882510 BKG: 4882510 92 62-148 2.9 3.0 2 (1) 2					
Batch number: 06284049512A Dissolved Organic Carbon			Sample number(s): 4882510 UNSPK: 4882510 BKG: 4882510 114 66-137 1.0 U 1.0 U 200* (1) 4					
Batch number: 06284117101A Total Cyanide (water)			Sample number(s): 4882510-4882511 UNSPK: 4882510 BKG: 4882510 80* 83-111 0.0083 U 0.0083 U 0 (1) 20					
Batch number: 06284117101B Total Cyanide (water)			Sample number(s): 4882512-4882514 UNSPK: 4882512 BKG: 4882512 83 83-111 0.0050 U 0.0050 U 0 (1) 20					

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06279WAH026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4882510	94	92	99
4882514	95	92	100
Blank	99	97	109
LCS	91	90	97
LCSD	95	94	101
Limits:	57-137	60-115	64-123

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06285WAE026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4882510RE	92	90	95
4882511	85	83	88
Blank	90	86	92
LCS	86	84	89
LCSD	85	82	89
Limits:	57-137	60-115	64-123

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # 12098 Group# 1008588 Sample # 4882510-14

COC # 0132126

1 of 2

Please print. Instructions on reverse side correspond with circled numbers.

1 Client:	<u>CH2M Hill</u>	Acct. #:	
Project Name/##:	<u>GREAT LAKES</u>	PWSID #:	
Project Manager:	<u>E. Mosley</u>	P.O.#:	
Sampler:	<u>J. Coffey (571-274-6105)</u>	Quote #:	
Name of state where samples were collected:	<u>MN</u>		

2	Date Collected	Time Collected	3	Matrix	4	5	Preservation Codes						6	
				BOTTLED GROUT SI 302		SPECIFIC GRAVITY	TOT. METALS, CN	Hg, % Moist (SOL) Diss. Metals, Cd, Hg	SVOCs, Pesticides	TOC	DOC	BOD/COD	TSS	

<u>DLHCV1-DS-1</u>	<u>10-3-06</u>	<u>1020</u>	X	X	3	X	X		X	X				<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg</u>
<u>DLHCV1-DS-1-D</u>	<u>10-3-06</u>	<u>1020</u>	X	X	3	X	X		X	X				
<u>DLHCV1-DS-1-Ba</u>	<u>10-3-06</u>	<u>1020</u>	X	X	2									<u>HOLD</u>
<u>DLHCV1-SS-1</u>	<u>10-3-06</u>	<u>0820</u>	X	X	2	X		X		X	X			<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg</u>
<u>DLHCV1-SS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	X	X	3	X		X		X	X			
<u>DLHCV1-SS-1-Ba</u>	<u>10-3-06</u>	<u>0900</u>	X	X	3	X		X		X	X			
<u>DLHCV1-SS-2-Ba</u>			X	X	3									<u>HOLD</u>
<u>DLHCV1-SS-1-LS-1</u>	<u>10-3-06</u>	<u>0820</u>	X	X	5		X	X	X	X	X	X	X	<u>X. MATRIX SPIKE FOR SVOCs, METALS, CN, Hg (TOT, P, D, B, C, S)</u>
<u>DLHCV1-LS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	X	X	4		X	X	X	X	X	X	X	
<u>DLHCV1-LS-1-Ba</u>	<u>10-3-06</u>	<u>0820</u>	X	X	4									<u>HOLD</u>

7 Turnaround Time Requested (TAT) (please circle): Normal Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed:

Rush results requested by (please circle): Phone Fax E-mail

Phone #: _____ Fax #: _____

E-mail address: _____

8 Data Package Options (please circle if required)

Type I (validation/NJ Reg)

TX TRRP-13

SDG Complete?

Type II (Tier II)

MA MCP

Type III (Reduced NJ)

CT RCP

Type IV (CLP SOW)

Site-specific QC (MS/MSD/Dup)? Yes No

Type VI (Raw Data Only)

If yes, indicate QC sample and submit triplicate volume.)

Internal COC Required? Yes / No _____

Relinquished by: <u>Robert Morris, Lab. Mgr.</u>	Date <u>10-3-06</u>	Time <u>1700</u>	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

10/5/06 0925

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1009271. Samples arrived at the laboratory on Wednesday, October 11, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLELV1-DS-1 Unspiked Composite Solid Sample	4886256
CLELV1-DS-1 Matrix Spike Composite Solid Sample	4886257
CLELV1-DS-1-D Composite Solid Sample	4886258
CLECV4-DS-1 Composite Solid Sample	4886259
CLECV4-DS-1-D Composite Solid Sample	4886260

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4886256
**CLELV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1DS1 SDG#: SWE11-01BKG

CAT No.	Analysis Name	CAS Number	Dry	Method	Dilution Factor
			Result	Detection Limit	
00159	Mercury	7439-97-6	0.0118 J	0.0107	mg/kg
01643	Aluminum	7429-90-5	1,250.	3.54	mg/kg
01650	Calcium	7440-70-2	264,000.	67.1	mg/kg
01654	Iron	7439-89-6	2,740.	4.98	mg/kg
01657	Magnesium	7439-95-4	97,300.	10.0	mg/kg
06125	Arsenic	7440-38-2	1.22 J	0.180	mg/kg
06128	Cadmium	7440-43-9	0.288	0.0402	mg/kg
06131	Chromium	7440-47-3	4.78	0.328	mg/kg
06133	Copper	7440-50-8	1.99	0.338	mg/kg
06135	Lead	7439-92-1	3.35	0.159	mg/kg
06139	Nickel	7440-02-0	5.33	0.529	mg/kg
06141	Selenium	7782-49-2	0.959 J	0.391	mg/kg
06966	Silver	7440-22-4	0.180 U	0.180	mg/kg
06972	Zinc	7440-66-6	6.73	0.692	mg/kg
00111	Moisture	n.a.	5.4	0.50	%
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					
05895	Total Cyanide (solid)	57-12-5	0.19 U	0.19	mg/kg
06569	Bulk Density	n.a.	1.07	0.080	g/cc

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	79.5	0.50	% Passing	1
07139	3.35 mm	n.a.	70.5	0.50	% Passing	1
07140	2.36 mm	n.a.	65.7	0.50	% Passing	1
07141	1.18 mm	n.a.	61.8	0.50	% Passing	1
07142	0.6 mm	n.a.	55.4	0.50	% Passing	1
07143	0.3 mm	n.a.	48.0	0.50	% Passing	1
07144	0.15 mm	n.a.	39.9	0.50	% Passing	1
07145	0.075 mm	n.a.	31.2	0.50	% Passing	1
07146	0.064 mm	n.a.	29.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4886256
**CLELV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1DS1 SDG#: SWE11-01BKG

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07147	0.05 mm	n.a.	25.0	0.50	%	1
07148	0.02 mm	n.a.	14.0	0.50	%	1
07149	0.005 mm	n.a.	5.5	0.50	%	1
07150	0.002 mm	n.a.	3.0	0.50	%	1
07151	0.001 mm	n.a.	2.0	0.50	%	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/16/2006 12:07	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/16/2006 20:27	John P Hook	1
01650	Calcium	SW-846 6010B	1	10/18/2006 18:37	John P Hook	5
01654	Iron	SW-846 6010B	1	10/16/2006 20:27	John P Hook	1
01657	Magnesium	SW-846 6010B	1	10/18/2006 18:37	John P Hook	5
06125	Arsenic	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06131	Chromium	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06133	Copper	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06135	Lead	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06139	Nickel	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06141	Selenium	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	10/16/2006 20:27	John P Hook	1
06972	Zinc	SW-846 6010B	1	10/16/2006 20:27	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:02	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:45	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/17/2006 19:50	Annamaria Stipkovits	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4886256

CLELV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

E1DS1 SDG#: SWE11-01BKG

Boston MA 02116

Lancaster Laboratories Sample No. SW 4886257
**CLELV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1DS1 SDG#: SWE11-01MS

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
00159	Mercury	7439-97-6	0.181	0.0107	mg/kg	1
01643	Aluminum	7429-90-5	1,650.	3.54	mg/kg	1
01650	Calcium	7440-70-2	274,000.	67.1	mg/kg	5
01654	Iron	7439-89-6	1,590.	4.98	mg/kg	1
01657	Magnesium	7439-95-4	81,200.	10.0	mg/kg	5
06125	Arsenic	7440-38-2	2.40	0.180	mg/kg	10
06128	Cadmium	7440-43-9	0.864	0.0402	mg/kg	10
06131	Chromium	7440-47-3	10.9	0.328	mg/kg	10
06133	Copper	7440-50-8	6.70	0.338	mg/kg	10
06135	Lead	7439-92-1	7.85	0.159	mg/kg	10
06139	Nickel	7440-02-0	10.5	0.529	mg/kg	10
06141	Selenium	7782-49-2	2.07 J	0.391	mg/kg	10
06966	Silver	7440-22-4	5.96	0.180	mg/kg	1
06972	Zinc	7440-66-6	67.3	0.692	mg/kg	1
00118	Moisture	n.a.	5.4	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	1.9	0.18	mg/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00159	Mercury	SW-846 7471A	1	10/16/2006 12:17	Damary Valentin 1
01643	Aluminum	SW-846 6010B	1	10/16/2006 20:41	John P Hook 1
01650	Calcium	SW-846 6010B	1	10/18/2006 18:51	John P Hook 5
01654	Iron	SW-846 6010B	1	10/16/2006 20:41	John P Hook 1
01657	Magnesium	SW-846 6010B	1	10/18/2006 18:51	John P Hook 5
06125	Arsenic	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06128	Cadmium	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06131	Chromium	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06133	Copper	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06135	Lead	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06139	Nickel	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06141	Selenium	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06966	Silver	SW-846 6010B	1	10/16/2006 20:41	John P Hook 1
06972	Zinc	SW-846 6010B	1	10/16/2006 20:41	John P Hook 1
00118	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher 1

Lancaster Laboratories Sample No. SW 4886257**CLELV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1DS1	SDG#:	SWE11-01MS						
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 16:08	Courtney A Shoff	1		
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:45	Annamaria Stipkovits	1		
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1		
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1		
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/17/2006 19:50	Annamaria Stipkovits	1		

Lancaster Laboratories Sample No. SW 4886258
**CLELV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1D1D SDG#: SWE11-02FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0105 U	0.0105	mg/kg	1
01643	Aluminum	7429-90-5	1,360.	3.31	mg/kg	1
01650	Calcium	7440-70-2	256,000.	62.8	mg/kg	5
01654	Iron	7439-89-6	1,520.	4.65	mg/kg	1
01657	Magnesium	7439-95-4	86,400.	9.39	mg/kg	5
06125	Arsenic	7440-38-2	1.13 J	0.175	mg/kg	10
06128	Cadmium	7440-43-9	0.281	0.0391	mg/kg	10
06131	Chromium	7440-47-3	4.61	0.319	mg/kg	10
06133	Copper	7440-50-8	1.82	0.329	mg/kg	10
06135	Lead	7439-92-1	7.70	0.154	mg/kg	10
06139	Nickel	7440-02-0	4.88	0.514	mg/kg	10
06141	Selenium	7782-49-2	0.822 J	0.380	mg/kg	10
06966	Silver	7440-22-4	0.168 U	0.168	mg/kg	1
06972	Zinc	7440-66-6	6.53	0.647	mg/kg	1
00111	Moisture	n.a.	2.7	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	1.19	0.080	g/cc	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	93.9	0.50	% Passing	1
07139	3.35 mm	n.a.	84.5	0.50	% Passing	1
07140	2.36 mm	n.a.	77.9	0.50	% Passing	1
07141	1.18 mm	n.a.	74.1	0.50	% Passing	1
07142	0.6 mm	n.a.	64.0	0.50	% Passing	1
07143	0.3 mm	n.a.	51.0	0.50	% Passing	1
07144	0.15 mm	n.a.	39.4	0.50	% Passing	1
07145	0.075 mm	n.a.	28.5	0.50	% Passing	1
07146	0.064 mm	n.a.	26.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4886258
**CLELV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1D1D SDG#: SWE11-02FD

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07147	0.05 mm	n.a.	20.0	0.50	% Passing	1
07148	0.02 mm	n.a.	15.0	0.50	% Passing	1
07149	0.005 mm	n.a.	4.0	0.50	% Passing	1
07150	0.002 mm	n.a.	2.0	0.50	% Passing	1
07151	0.001 mm	n.a.	1.0	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/16/2006 12:19	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/16/2006 20:55	John P Hook	1
01650	Calcium	SW-846 6010B	1	10/18/2006 19:05	John P Hook	5
01654	Iron	SW-846 6010B	1	10/16/2006 20:55	John P Hook	1
01657	Magnesium	SW-846 6010B	1	10/18/2006 19:05	John P Hook	5
06125	Arsenic	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06131	Chromium	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06133	Copper	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06135	Lead	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06139	Nickel	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06141	Selenium	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	10/16/2006 20:55	John P Hook	1
06972	Zinc	SW-846 6010B	1	10/16/2006 20:55	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:06	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:45	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/17/2006 19:50	Annamaria Stipkovits	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4886258

CLELV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

E1D1D SDG#: SWE11-02FD

Boston MA 02116

Lancaster Laboratories Sample No. SW 4886259
CLECV4-DS-1 Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/09/2006 16:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E4DS1 SDG#: SWE11-03

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
00159	Mercury	7439-97-6	0.0162 J	0.0105	mg/kg	1
01643	Aluminum	7429-90-5	1,600.	3.39	mg/kg	1
01650	Calcium	7440-70-2	1,950.	12.9	mg/kg	1
01654	Iron	7439-89-6	5,770.	4.77	mg/kg	1
01657	Magnesium	7439-95-4	245.	1.92	mg/kg	1
06125	Arsenic	7440-38-2	6.59	0.174	mg/kg	10
06128	Cadmium	7440-43-9	0.390	0.0389	mg/kg	10
06131	Chromium	7440-47-3	17.0	0.317	mg/kg	10
06133	Copper	7440-50-8	24.2	0.327	mg/kg	10
06135	Lead	7439-92-1	9.99	0.153	mg/kg	10
06139	Nickel	7440-02-0	12.6	0.511	mg/kg	10
06141	Selenium	7782-49-2	5.99	0.378	mg/kg	10
06966	Silver	7440-22-4	0.184 J	0.172	mg/kg	1
06972	Zinc	7440-66-6	11.2	0.663	mg/kg	1
00111	Moisture	n.a.	2.2	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	0.78	0.080	g/cc	1

02858 Selected SVOA's in soil by SIM

02863	Naphthalene	91-20-3	3,100.	10.	ug/kg	10
02870	Fluorene	86-73-7	180.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	930.	7.	ug/kg	10
02872	Anthracene	120-12-7	35.	0.3	ug/kg	1
02874	Fluoranthene	206-44-0	220.	0.7	ug/kg	1
02875	Pyrene	129-00-0	280.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	150.	0.7	ug/kg	1
02877	Chrysene	218-01-9	180.	0.3	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	120.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	17.	1.	ug/kg	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	95.3	0.50	% Passing	1
07138	4.75 mm	n.a.	81.1	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4886259
CLECV4-DS-1 Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/09/2006 16:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E4DS1 SDG#: SWE11-03

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07139	3.35 mm	n.a.	78.2	0.50	% Passing	1
07140	2.36 mm	n.a.	74.9	0.50	% Passing	1
07141	1.18 mm	n.a.	69.0	0.50	% Passing	1
07142	0.6 mm	n.a.	47.8	0.50	% Passing	1
07143	0.3 mm	n.a.	22.5	0.50	% Passing	1
07144	0.15 mm	n.a.	10.1	0.50	% Passing	1
07145	0.075 mm	n.a.	6.2	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1
07147	0.05 mm	n.a.	0.50 U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50 U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50 U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00159	Mercury	SW-846 7471A	1	10/16/2006 12:20	Damary Valentin 1
01643	Aluminum	SW-846 6010B	1	10/16/2006 21:00	John P Hook 1
01650	Calcium	SW-846 6010B	1	10/16/2006 21:00	John P Hook 1
01654	Iron	SW-846 6010B	1	10/16/2006 21:00	John P Hook 1
01657	Magnesium	SW-846 6010B	1	10/16/2006 21:00	John P Hook 1
06125	Arsenic	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom 10
06128	Cadmium	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom 10

Lancaster Laboratories Sample No. SW 4886259
CLECV4-DS-1 Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/09/2006 16:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E4DS1 SDG#: SWE11-03

06131	Chromium	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06133	Copper	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06135	Lead	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06139	Nickel	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06141	Selenium	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	10/16/2006 21:00	John P Hook	1
06972	Zinc	SW-846 6010B	1	10/16/2006 21:00	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:09	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/18/2006 06:19	Brian K Graham	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/18/2006 08:12	Brian K Graham	10
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff	1
00381	BNA Soil Extraction	SW-846 3550B	2	10/17/2006 18:00	Sally L Appleyard	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:45	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/17/2006 19:50	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4886260
CLECV4-DS-1-D Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/09/2006 16:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E4D1D SDG#: SWE11-04FD*

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result				
06569	Bulk Density	n.a.	0.81		0.080	g/cc	1
07103	Grain Size to 1 um						
07135	75 mm	n.a.	100.	0.50	%	Passing	1
07136	37.5 mm	n.a.	92.4	0.50	%	Passing	1
07137	19 mm	n.a.	86.1	0.50	%	Passing	1
07138	4.75 mm	n.a.	73.7	0.50	%	Passing	1
07139	3.35 mm	n.a.	71.0	0.50	%	Passing	1
07140	2.36 mm	n.a.	68.0	0.50	%	Passing	1
07141	1.18 mm	n.a.	60.4	0.50	%	Passing	1
07142	0.6 mm	n.a.	40.0	0.50	%	Passing	1
07143	0.3 mm	n.a.	17.7	0.50	%	Passing	1
07144	0.15 mm	n.a.	7.7	0.50	%	Passing	1
07145	0.075 mm	n.a.	5.1	0.50	%	Passing	1
07146	0.064 mm	n.a.	0.50	U	0.50	%	Passing
07147	0.05 mm	n.a.	0.50	U	0.50	%	Passing
07148	0.02 mm	n.a.	0.50	U	0.50	%	Passing
07149	0.005 mm	n.a.	0.50	U	0.50	%	Passing
07150	0.002 mm	n.a.	0.50	U	0.50	%	Passing
07151	0.001 mm	n.a.	0.50	U	0.50	%	Passing

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 2 of 2

Lancaster Laboratories Sample No. SW 4886260

CLECV4-DS-1-D Composite Solid Sample

Great Lakes - Sweepings

Collected: 10/09/2006 16:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Reported: 10/28/2006 at 21:28

Discard: 11/28/2006

Parsons Brinkerhoff

75 Arlington Street

Ninth Floor

Boston MA 02116

E4D1D SDG#: SWE11-04FD*

Laboratory Chronicle

CAT	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/17/2006 04:25	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:29 PM

Group Number: 1009271

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06285102201A Total Cyanide (solid)			Sample number(s): 4886256-4886259 0.18 U	mg/kg 100		90-110		
Batch number: 06285820004A Moisture Moisture			Sample number(s): 4886256-4886259 100 100			99-101 99-101		
Batch number: 062885708003 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4886256-4886259 11.3 J 25.6 4.71 U 3.19 J 0.170 U 0.655 U	3.35 12.7 4.71 1.90 0.170 0.655	mg/kg 102 74 105 109 96	121 102 105 109 109 96	91-151 89-121 68-158 90-120 90-126 85-110	
Batch number: 062885711003 Mercury			Sample number(s): 4886256-4886259 0.0105 U	0.0105	mg/kg	94	66-133	
Batch number: 062906150001A Arsenic Cadmium Chromium Copper Lead Nickel Selenium			Sample number(s): 4886256-4886259 0.0170 U 0.0038 U 0.201 0.0388 J 0.0492 J 0.0500 U 0.0370 U	0.0170 0.0038 0.0310 0.0320 0.0150 0.0500 0.0370	mg/kg 112 107 113 112 112 110	109 112 107 113 112 112 110	77-123 79-121 78-122 81-119 79-121 81-119 74-126	
Batch number: 062906150001C Nickel			Sample number(s): 4886256-4886258 0.0500 U	0.0500	mg/kg	114	81-119	
Batch number: 06290SLD026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene			Sample number(s): 4886259 1. U 0.7 U 0.7 U 0.3 U 0.7 U 0.7 U 0.7 U 0.3 U 0.7 U 1. U	1. 0.7 0.7 0.3 0.7 0.7 0.7 0.3 0.7 1.	ug/kg 77 79 79 75 83 84 83 82 74 65	71-105 70-115 64-118 60-111 57-128 71-117 71-114 69-114 59-118 56-130		

Sample Matrix Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff

Group Number: 1009271

Reported: 10/28/06 at 09:29 PM

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>RPD Max</u>
Batch number: 06285102201A Total Cyanide (solid)			Sample number(s): 4886256-4886259 UNSPK: 4886256 BKG: 4886256 38* 59-124 0.18 U 0.18 U 0 (1) 17						
Batch number: 06285820004A Moisture Moisture			Sample number(s): 4886256-4886259 BKG: 4886256 5.4 5.4 5.8 5.8 6 15						
Batch number: 06286656901A Bulk Density			Sample number(s): 4886256, 4886258-4886259 BKG: 4886259 0.78 0.77 1 (1) 20						
Batch number: 062885708003 Aluminum Calcium Iron Magnesium Silver Zinc	(2) 113 115	(2) 113 105	Sample number(s): 4886256-4886259 UNSPK: 4886256 BKG: 4886256 75-125 10 20 1,180. 1,240. 5 20 75-125 5 20 250,000. 251,000. 1 20 75-125 13 20 2,590. 1,730. 40* 20 75-125 19 20 92,100. 88,000. 5 20 75-125 0 20 0.170 U 0.170 U 69* (1) 20 75-125 8 20 6.37 6.47 2 (1) 20						
Batch number: 062885711003 Mercury	100	101	Sample number(s): 4886256-4886259 UNSPK: 4886256 BKG: 4886256 80-120 1 20 0.0111 J 0.0100 U 200* (1) 20						
Batch number: 062906150001A Arsenic Cadmium Chromium Copper Lead Nickel Selenium	112 89 284* 98 105	108 84 189* 96 110	Sample number(s): 4886256-4886259 UNSPK: 4886256 BKG: 4886256 70-130 2 20 1.16 J 1.10 J 5 (1) 20 75-125 1 20 0.273 0.325 18 (1) 20 75-125 4 20 4.52 4.25 6 (1) 20 75-125 4 20 1.89 1.05 57* (1) 20 75-125 21* 20 3.16 5.02 45* (1) 20 75-125 1 20 5.05 4.86 4 (1) 20 75-130 2 20 0.908 J 0.963 J 6 (1) 20						
Batch number: 062906150001C Nickel	98	96	Sample number(s): 4886256-4886258 UNSPK: 4886256 BKG: 4886256 75-125 1 20 5.05 4.86 4 (1) 20						
Batch number: 06290656901A Bulk Density			Sample number(s): 4886260 BKG: 4886260 0.81 0.81 1 (1) 20						
Batch number: 06290SLD026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	75 73 74 87 106 98 84 91 73 66	73 73 78 82 94 91 82 85 75 66	Sample number(s): 4886259 UNSPK: P886381 54-121 2 30 62-119 1 30 31-160 6 30 55-118 6 30 49-125 11 30 58-137 7 30 69-118 2 30 70-107 6 30 69-106 2 30 40-126 0 30						

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 10/28/06 at 09:29 PM

Group Number: 1009271

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM
Batch number: 06290SLD026

Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14

4886259	116	63	96
Blank	88	83	95
LCS	79	76	89
MS	80	74	88
MSD	80	76	92

Limits: 42-142 48-122 65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # 12098 Group# 1009271 Sample # 4886256-60

COC # 0130307

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>CHAM HILL</u>	Acct. #: _____
Project Name#: <u>GREAT LAKES</u>	PWSID #: _____
Project Manager: <u>ERIN MOSLEY</u>	P.O.#: _____
Sampler: <u>REGAN McMAHIS</u>	Quote #: _____
Name of state where samples were collected: <u>OH</u>	

Matrix	5 Analyses Requested										For Lab Use Only FSC: _____ SCR#: _____			
	Preservation Codes													
	<input type="checkbox"/> Possible	<input type="checkbox"/> Direct	<input type="checkbox"/> Application	<input type="checkbox"/> NPDES	<input type="checkbox"/> Water	<input type="checkbox"/> Sediment	<input type="checkbox"/> Soil	<input type="checkbox"/> Fish	<input type="checkbox"/> Tissue	<input type="checkbox"/> Plant	<input type="checkbox"/> TDS	<input type="checkbox"/> DOC	<input type="checkbox"/> BOD/COD	<input type="checkbox"/> TSS
	PH/TDS	TOT NITROUS, CN	TOT HG, % Sulfate	DIS METALS, CR	BULK DENSITY	CATION SIZE	SPECIFIC GRAVITY							

6

Temperature of samples (in degrees)

Sample Identification	Date Collected	Time Collected	Comments	Water	Sediment	Soil	Fish	Tissue	Plant	TDS	DOC	BOD/COD	TSS	Remarks
<u>D¹³C CLELV1 - DS-1</u>	<u>10-10-06</u>	<u>0900</u>		X	X	2		X	X					MATRIX SPIKE FOR METALS, CN, HG
<u>CLELV1 - DS-1-D</u>			↓	X	X	2		X	X					
<u>CLELV1 - DS-1-BU</u>				X	X	2								
<u>CLELV1 - SS-1</u>		<u>0700</u>		X	X	2		X	X					
<u>CLELV1 - SS-1-D</u>			↓	X	X	2		X	X					
<u>CLELV1 - SS-1-BU</u>				X	X	2 ^{ext}		X	X					
<u>CLELV1 - SS-2-D</u>				X	X	+		X						RM
<u>CLELV1 - LS-1</u>		<u>0700</u>		X			X ^{ext}	X	X	X	X	X	X	MATRIX SPIKE FOR METALS, CN, HG
<u>CLELV1 - LS-1-D</u>			↓	X			X ^{ext}	X	X	X	X	X		
<u>CLELV1 - LS-1-BU</u>				X			X ^{ext}							HOLD

7 Turnaround Time Requested (TAT) (please circle): Normal Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed:

Rush results requested by (please circle): Phone Fax E-mail

Phone #: _____ Fax #: _____

E-mail address: _____

8 Data Package Options (please circle if required)

Type I (validation/NJ Reg)

TX TRRP-13

SDG Complete?

Yes No

Type II (Tier II)

MA MCP CT RCP

Type III (Reduced NJ)

Site-specific QC (MS/MSD/Dup)? Yes No

Type IV (CLP SOW)

(If yes, indicate QC sample and submit triplicate volume.)

Type VI (Raw Data Only)

Internal COC Required? Yes / No

Relinquished by: <i>Regan McMahis</i>	Date <u>10-10-06</u>	Time <u>1405</u>	Received by:	Date <u>10/11/06</u>	Time <u>0915</u>
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 1009271 Sample # 4886256-60

COC # 0130305

Please print. Instructions on reverse side correspond with circled numbers.

1	Client: <u>CHAM HILL</u> Acct. #: _____				Project Name#: <u>GREAT LAKES</u> PWSID #: _____				Project Manager: <u>ERIN MOSLEY</u> P.O.#: _____				Sampler: <u>Reagan Morris</u> Quote #: _____				For Lab Use Only FSC: _____ SCR#: _____					
2	Name of state where samples were collected: <u>OH</u>				Matrix: <input checked="" type="checkbox"/> Potable Water <input type="checkbox"/> Industrial Applicable <input type="checkbox"/> NPDES				4				5 Analyses Requested				Preservation Codes					
3	Sample Identification				Date Collected	Time Collected	Site	Composite	Total # of Samples	Path	TOT. METALS/CN Hg, % Solids	Pb, METALS/Hg	Bulk Density Grain Size	Specific Gravity	TOC	DOC	BOD/COD	TSS	Preservation Codes H=HCl T=Thiosulfate N=NHO ₃ B=NaOH S=H ₂ SO ₄ O=Other			
4										X	X	X										
5																						
6																						
7	Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by: <u>Jean Morris</u>				Date <u>10-10-06</u>	Time <u>14:50</u>	Received by: _____				Date <u>10-10-06</u>	Time <u>09:15</u>						
8	Date results are needed: _____				Relinquished by: _____				Date	Time	Received by: _____				Date	Time						
9	Rush results requested by (please circle): Phone <input type="checkbox"/> Fax <input type="checkbox"/> E-mail <input type="checkbox"/>				Relinquished by: _____				Date	Time	Received by: _____				Date	Time						
10	Phone #: _____ Fax #: _____ E-mail address: _____				Relinquished by: _____				Date	Time	Received by: _____				Date	Time						
11	Data Package Options (please circle if required)				SDG Complete? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
12	Type I (validation/NJ Reg) TX TRRP-13 Type II (Tier II) MA MCP CT RCP <u>Type III (Reduced NJ)</u> Type IV (CLP SOW) Type VI (Raw Data Only)				Site-specific QC (MS/MSD/Dup)? Yes <input checked="" type="checkbox"/> (If yes, indicate QC sample and submit triplicate volume.) Internal COC Required? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
13									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
14									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
15									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
16									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
17									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
18									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
19									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
20									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
21									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
22									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
23									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
24									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
25									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
26									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
27									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
28									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
29									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
30									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
31									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
32									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
33									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
34									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
35									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
36									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
37									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
38									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
39									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
40									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
41									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
42									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
43									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
44									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
45									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
46									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
47									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
48									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
49									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
50									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
51									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
52									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
53									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
54									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
55									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
56									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
57									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
58									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
59									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
60									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
61									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
62									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
63									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
64									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
65									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
66									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
67									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
68									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
69									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
70									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
71									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
72									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
73									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
74									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
75									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
76									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
77									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
78									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
79									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
80									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
81									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
82									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
83									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
84									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
85									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
86									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
87									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
88									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
89									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
90									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
91									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
92									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
93									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
94									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
95									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
96									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
97									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
98									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
99									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
100									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
101									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
102									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
103									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
104									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
105									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
106									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
107									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
108									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
109									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
110									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
111									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
112									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
113									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
114									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
115									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
116									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
117									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
118									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
119									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
120									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
121									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
122									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
123									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
124									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
125									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
126									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
127									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
128									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
129									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
130									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
131									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
132									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
133									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
134									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
135									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
136									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
137									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
138									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
139									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
140									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
141									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
142									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
143									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
144									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
145									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
146									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
147									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
148									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
149									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
150									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
151									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
152									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
153									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
154									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
155									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
156									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
157									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
158									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
159									Relinquished by: _____				Date	Time	Received by: _____				Date	Time		
160									Relinquished by: _____				Date</td									

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1009070. Samples arrived at the laboratory on Saturday, October 07, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLECV3-DS-1 Matrix Spike Duplicate Composite Solid	4885287

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4885287

**CLECV3-DS-1 Matrix Spike Duplicate Composite Solid
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/17/2006 at 13:51

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00118	Moisture	n.a.	3.0	0.50	%	1
00121	Moisture Duplicate	n.a.	3.1	0.50	%	1
The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.						
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	410. E	1.	ug/kg	1
02870	Fluorene	86-73-7	88.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	620. E	0.7	ug/kg	1
02872	Anthracene	120-12-7	61.	0.3	ug/kg	1
02874	Fluoranthene	206-44-0	110.	0.7	ug/kg	1
02875	Pyrene	129-00-0	270.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	120.	0.7	ug/kg	1
02877	Chrysene	218-01-9	330.	0.3	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	61.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	39.	1.	ug/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00118	Moisture	EPA 160.3 modified	1	10/10/2006 16:00	Scott W Freisher	1
00121	Moisture Duplicate	EPA 160.3 modified	1	10/10/2006 16:00	Scott W Freisher	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 00:19	William T Parker	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/12/2006 10:30	Amanda W Herr	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 01:51 PM

Group Number: 1009070

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06283820003B			Sample number(s): 4885287					
Moisture				100		99-101		
Moisture Duplicate				100		99-101		
Batch number: 06284SLI026			Sample number(s): 4885287					
Naphthalene	1. U	1.	ug/kg	84		71-105		
Fluorene	0.7 U	0.7	ug/kg	84		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	90		64-118		
Anthracene	0.3 U	0.3	ug/kg	76		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	86		57-128		
Pyrene	0.7 U	0.7	ug/kg	87		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	83		71-114		
Chrysene	0.3 U	0.3	ug/kg	87		69-114		
Benzo(a)pyrene	0.7 U	0.7	ug/kg	84		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	83		56-130		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06283820003B			Sample number(s): 4885287 BKG: P884379					
Moisture				3.0		3.1	3	15
Moisture Duplicate				3.0		3.1	3	15
Batch number: 06284SLI026			Sample number(s): 4885287 UNSPK: P884379					
Naphthalene	(2)	(2)	54-121	46*	30			
Fluorene	7*	77	62-119	31*	30			
Phenanthrene	(2)	(2)	31-160	47*	30			
Anthracene	91	109	55-118	10	30			
Fluoranthene	-9*	69	49-125	29	30			
Pyrene	(2)	(2)	58-137	54*	30			
Benzo(a)anthracene	5*	143*	69-118	52*	30			
Chrysene	(2)	(2)	70-107	46*	30			
Benzo(a)pyrene	41*	85	69-106	28	30			
Dibenz(a,h)anthracene	59	58	40-126	1	30			

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 10/17/06 at 01:51 PM

Group Number: 1009070

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM
Batch number: 06284SLI026

Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14

4885287	117	82	115
Blank	87	84	89
LCS	97	88	90
MS	112	79	98
MSD	117	82	115

Limits: 42-142 48-122 65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



12098 For Lancaster Laboratories use
Acct. # 12098 Group# 12098 Sample # 12098

Att. 10/10/06

Acct. # Group# Samp

Sample #

COC # 0132132

Please print. Instructions on reverse side correspond with circled numbers.

SWEDC

1 Client: <u>CHAM HILL</u> Acct. #:			5 Analyses Requested			For Lab Use Only												
Project Name/#: <u>GREAT LAKES</u> PWSID #:			Preservation Codes			FSC: _____ SCR#:												
Project Manager: <u>Erin Mosley</u> P.O.#:																		
Sampler: <u>Brian McMorris</u> Quote #:																		
Name of state where samples were collected: <u>MN</u>																		
2 Sample Identification		Date Collected	Time Collected	Grab Composite	Matrix	4			6 Preservation Codes									
					Soil	<input type="checkbox"/> Portable <input type="checkbox"/> Non-DES	<input type="checkbox"/> Check if Applicable	Total # of Containers	<input type="checkbox"/> Subpart 705m	<input type="checkbox"/> PAHs	<input type="checkbox"/> TOT METALS	<input type="checkbox"/> CH ₄	<input type="checkbox"/> H ₂ O	<input type="checkbox"/> TIC	<input type="checkbox"/> Grain Size	<input type="checkbox"/> Bulk Density	<input type="checkbox"/> Other	Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other
<u>CLECV3-DS-1</u>		<u>10/6/06</u>	<u>1300</u>	X X				2	X	X	X	X	X					<u>MATRIX SPIKE FOR PAHs, TOT METALS CH₄, H₂O</u>
<u>CLECV3-DS-1-D</u>		<u>↓</u>	<u>↓</u>	X X				2	XX	XX	XX	XX						<u>H₂O</u>
<u>CLECV3-DS-1-BUL</u>				X X				1										
7 Turnaround Time Requested (TAT) (please circle): Normal Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)									Relinquished by: <u>Erin McMorris</u>			Date <u>9/6/06</u>	Time <u>16:20</u>	Received by: _____	Date _____	Time _____		
Date results are needed: _____									Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
Rush results requested by (please circle): Phone Fax E-mail									Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
Phone #: _____ Fax #: _____									Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
E-mail address: _____									Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
Data Package Options (please circle if required)				SDG Complete?					Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
Type I (validation/NJ Reg)	TX TRRP-13			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
Type II (Tier II)	MA MCP CT RCP								Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
Type III (Reduced NJ)									Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
Type IV (CLP SOW)									Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
Type VI (Raw Data Only)									Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
(If yes, indicate QC sample and submit triplicate volume.)									Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
Internal COC Required? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									Relinquished by: _____			Date _____	Time _____	Received by: _____	Date _____	Time _____		
									Remarks									
									Temperature of samples upon receipt (if requested)									

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the customer.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1009277. Samples arrived at the laboratory on Wednesday, October 11, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLELV1-SS-1 Unspiked Composite Solid Sample	4886323
CLELV1-SS-1 Matrix Spike Composite Solid Sample	4886324
CLELV1-SS-1-D Composite Solid Sample	4886325

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4886323
**CLELV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1SS1 SDG#: SWE12-01BKG

CAT No.	Analysis Name	CAS Number	Dry	Method	Dilution Factor
			Result	Detection Limit	
00159	Mercury	7439-97-6	0.0120 U	0.0120	mg/kg
01643	Aluminum	7429-90-5	1,090.	3.90	mg/kg
01650	Calcium	7440-70-2	263,000.	148.	mg/kg
01654	Iron	7439-89-6	1,700.	5.48	mg/kg
01657	Magnesium	7439-95-4	97,800.	22.1	mg/kg
06125	Arsenic	7440-38-2	1.02 J	0.198	mg/kg
06128	Cadmium	7440-43-9	0.244 J	0.0442	mg/kg
06131	Chromium	7440-47-3	4.33	0.360	mg/kg
06133	Copper	7440-50-8	1.22	0.372	mg/kg
06135	Lead	7439-92-1	1.89	0.174	mg/kg
06139	Nickel	7440-02-0	4.54	0.581	mg/kg
06141	Selenium	7782-49-2	0.866 J	0.430	mg/kg
06966	Silver	7440-22-4	0.198 U	0.198	mg/kg
06972	Zinc	7440-66-6	9.32	0.762	mg/kg
00111	Moisture	n.a.	14.0	0.50	%
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					
05895	Total Cyanide (solid)	57-12-5	0.20 U	0.20	mg/kg
06569	Bulk Density	n.a.	0.99	0.080	g/cc

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	97.1	0.50	% Passing	1
07139	3.35 mm	n.a.	91.9	0.50	% Passing	1
07140	2.36 mm	n.a.	85.0	0.50	% Passing	1
07141	1.18 mm	n.a.	82.3	0.50	% Passing	1
07142	0.6 mm	n.a.	78.6	0.50	% Passing	1
07143	0.3 mm	n.a.	76.8	0.50	% Passing	1
07144	0.15 mm	n.a.	74.4	0.50	% Passing	1
07145	0.075 mm	n.a.	61.6	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4886323
**CLELV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1SS1 SDG#: SWE12-01BKG

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Analysis		Dilution Factor
00159	Mercury	SW-846 7471A	1	10/17/2006 10:21	Damary Valentin			1
01643	Aluminum	SW-846 6010B	1	10/17/2006 04:10	Suzette L Lehman			1
01650	Calcium	SW-846 6010B	1	10/18/2006 08:24	Joanne M Gates			10
01654	Iron	SW-846 6010B	1	10/17/2006 04:10	Suzette L Lehman			1
01657	Magnesium	SW-846 6010B	1	10/18/2006 08:24	Joanne M Gates			10
06125	Arsenic	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom			10
06128	Cadmium	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom			10
06131	Chromium	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom			10
06133	Copper	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom			10
06135	Lead	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom			10
06139	Nickel	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom			10
06141	Selenium	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom			10
06966	Silver	SW-846 6010B	1	10/17/2006 04:10	Suzette L Lehman			1
06972	Zinc	SW-846 6010B	1	10/17/2006 04:10	Suzette L Lehman			1
00111	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher			1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:11	Courtney A Shoff			1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith			1
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff			1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/16/2006 18:45	Annamaria Stipkovits			1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/16/2006 22:10	Annamaria Stipkovits			1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop			1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4886323

CLELV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1SS1 SDG#: SWE12-01BKG
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1 10/16/2006 20:20 Annamaria Stipkovits 1

Lancaster Laboratories Sample No. SW 4886324
**CLELV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1SS1 SDG#: SWE12-01MS

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
00159	Mercury	7439-97-6	0.187	0.0115	mg/kg	1
01643	Aluminum	7429-90-5	1,450.	3.90	mg/kg	1
01650	Calcium	7440-70-2	260,000.	148.	mg/kg	10
01654	Iron	7439-89-6	1,960.	5.48	mg/kg	1
01657	Magnesium	7439-95-4	100,000.	22.1	mg/kg	10
06125	Arsenic	7440-38-2	2.18 J	0.198	mg/kg	10
06128	Cadmium	7440-43-9	0.785	0.0442	mg/kg	10
06131	Chromium	7440-47-3	10.4	0.360	mg/kg	10
06133	Copper	7440-50-8	6.98	0.372	mg/kg	10
06135	Lead	7439-92-1	3.65	0.174	mg/kg	10
06139	Nickel	7440-02-0	9.73	0.581	mg/kg	10
06141	Selenium	7782-49-2	2.15 J	0.430	mg/kg	10
06966	Silver	7440-22-4	6.49	0.198	mg/kg	1
06972	Zinc	7440-66-6	70.5	0.762	mg/kg	1
00118	Moisture	n.a.	14.0	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	1.6	0.21	mg/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00159	Mercury	SW-846 7471A	1	10/17/2006 10:27	Damary Valentin 1
01643	Aluminum	SW-846 6010B	1	10/17/2006 04:26	Suzette L Lehman 1
01650	Calcium	SW-846 6010B	1	10/18/2006 08:35	Joanne M Gates 10
01654	Iron	SW-846 6010B	1	10/17/2006 04:26	Suzette L Lehman 1
01657	Magnesium	SW-846 6010B	1	10/18/2006 08:35	Joanne M Gates 10
06125	Arsenic	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom 10
06128	Cadmium	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom 10
06131	Chromium	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom 10
06133	Copper	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom 10
06135	Lead	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom 10
06139	Nickel	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom 10
06141	Selenium	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom 10
06966	Silver	SW-846 6010B	1	10/17/2006 04:26	Suzette L Lehman 1
06972	Zinc	SW-846 6010B	1	10/17/2006 04:26	Suzette L Lehman 1
00118	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher 1

Lancaster Laboratories Sample No. SW 4886324**CLELV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1SS1	SDG#:	SWE12-01MS						
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:12	Courtney A Shoff	1		
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/16/2006 18:45	Annamaria Stipkovits	1		
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/16/2006 22:10	Annamaria Stipkovits	1		
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1		
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/16/2006 20:20	Annamaria Stipkovits	1		

Lancaster Laboratories Sample No. SW 4886325
**CLELV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1S1D SDG#: SWE12-02FD*

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
00159	Mercury	7439-97-6	0.0135 U	0.0135	mg/kg	1
01643	Aluminum	7429-90-5	1,070.	4.23	mg/kg	1
01650	Calcium	7440-70-2	260,000.	160.	mg/kg	10
01654	Iron	7439-89-6	1,900.	5.94	mg/kg	1
01657	Magnesium	7439-95-4	100,000.	24.0	mg/kg	10
06125	Arsenic	7440-38-2	1.11 J	0.212	mg/kg	10
06128	Cadmium	7440-43-9	0.267 J	0.0475	mg/kg	10
06131	Chromium	7440-47-3	4.66	0.387	mg/kg	10
06133	Copper	7440-50-8	1.29	0.400	mg/kg	10
06135	Lead	7439-92-1	2.15	0.187	mg/kg	10
06139	Nickel	7440-02-0	4.44	0.625	mg/kg	10
06141	Selenium	7782-49-2	0.842 J	0.462	mg/kg	10
06966	Silver	7440-22-4	0.215 U	0.215	mg/kg	1
06972	Zinc	7440-66-6	9.90	0.826	mg/kg	1
00111	Moisture	n.a.	22.3	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.23 U	0.23	mg/kg	1
06569	Bulk Density	n.a.	1.94	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.5	0.50	% Passing	1
07139	3.35 mm	n.a.	98.0	0.50	% Passing	1
07140	2.36 mm	n.a.	92.2	0.50	% Passing	1
07141	1.18 mm	n.a.	89.3	0.50	% Passing	1
07142	0.6 mm	n.a.	84.2	0.50	% Passing	1
07143	0.3 mm	n.a.	80.7	0.50	% Passing	1
07144	0.15 mm	n.a.	76.2	0.50	% Passing	1
07145	0.075 mm	n.a.	62.3	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4886325

**CLELV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1S1D SDG#: SWE12-02FD*

CAT	No.	Analysis Name	CAS Number	Dry		Method	Dilution Factor
				Dry Result	Detection Limit		
	07147	0.05 mm	n.a.	0.50	U	0.50	%
	07148	0.02 mm	n.a.	0.50	U	0.50	%
	07149	0.005 mm	n.a.	0.50	U	0.50	%
	07150	0.002 mm	n.a.	0.50	U	0.50	%
	07151	0.001 mm	n.a.	0.50	U	0.50	%

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor	Analysis
	00159	Mercury	SW-846 7471A	1	10/17/2006 10:30	Damary Valentin	1	
	01643	Aluminum	SW-846 6010B	1	10/17/2006 04:41	Suzette L Lehman	1	
	01650	Calcium	SW-846 6010B	1	10/18/2006 08:46	Joanne M Gates	10	
	01654	Iron	SW-846 6010B	1	10/17/2006 04:41	Suzette L Lehman	1	
	01657	Magnesium	SW-846 6010B	1	10/18/2006 08:46	Joanne M Gates	10	
	06125	Arsenic	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06128	Cadmium	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06131	Chromium	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06133	Copper	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06135	Lead	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06139	Nickel	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06141	Selenium	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06966	Silver	SW-846 6010B	1	10/17/2006 04:41	Suzette L Lehman	1	
	06972	Zinc	SW-846 6010B	1	10/17/2006 04:41	Suzette L Lehman	1	
	00111	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher	1	
	05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:14	Courtney A Shoff	1	
	06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith	1	
	07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff	1	
	05708	SW SW846 ICP Digest	SW-846 3050B	1	10/16/2006 18:45	Annamaria Stipkovits	1	
	05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/16/2006 22:10	Annamaria Stipkovits	1	
	05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1	



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4886325

CLELV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1S1D SDG#: SWE12-02FD*
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1 10/16/2006 20:20 Annamaria Stipkovits 1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:39 PM

Group Number: 1009277

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06285102201B Total Cyanide (solid)			Sample number(s): 4886323-4886325 0.18 U 0.18 mg/kg	100		90-110		
Batch number: 06285820004B Moisture Moisture			Sample number(s): 4886323-4886325 100 100			99-101 99-101		
Batch number: 062895708001 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4886323-4886325 3.35 U 3.35 mg/kg 12.7 U 12.7 mg/kg 4.71 U 4.71 mg/kg 1.90 U 1.90 mg/kg 0.170 U 0.170 mg/kg 0.655 U 0.655 mg/kg	130 107 130 107 107 98		91-151 89-121 68-158 90-120 90-126 85-110		
Batch number: 062895711001 Mercury			Sample number(s): 4886323-4886325 0.0105 U 0.0105 mg/kg	94		66-133		
Batch number: 062896150001A Arsenic Cadmium Chromium Copper Lead Selenium			Sample number(s): 4886323-4886325 0.0170 U 0.0170 mg/kg 0.0038 U 0.0038 mg/kg 0.178 J 0.0310 mg/kg 0.0540 J 0.0320 mg/kg 0.0497 J 0.0150 mg/kg 0.0370 U 0.0370 mg/kg	108 110 105 110 103 107		77-123 79-121 78-122 81-119 79-121 74-126		
Batch number: 062896150001C Nickel			Sample number(s): 4886323-4886325 0.0500 U 0.0500 mg/kg	115		81-119		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06285102201B Total Cyanide (solid)			Sample number(s): 4886323-4886325 UNSPK: 4886323 BKG: 4886323 28* 59-124		0.17 U	0.18 U	0 (1)	17
Batch number: 06285820004B Moisture Moisture			Sample number(s): 4886323-4886325 BKG: 4886323 14.0 14.0		14.0	14.0	0	15
Batch number: 06286656901A Bulk Density			Sample number(s): 4886323, 4886325 BKG: P886259 0.78		0.77	1 (1)		20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:39 PM

Group Number: 1009277

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max RPD</u>
Batch number: 062895708001			Sample number(s): 4886323-4886325 UNSPK: 4886323 BKG: 4886323					
Aluminum	(2)	(2)	75-125	1 20	935. 933.	0		20
Calcium	(2)	(2)	75-125	2 20	226,000. 218,000.	3		20
Iron	(2)	(2)	75-125	2 20	1,460. 1,540.	5		20
Magnesium	(2)	(2)	75-125	0 20	84,100. 85,400.	2		20
Silver	112	112	75-125	0 20	0.170 U 0.170 U	15 (1)		20
Zinc	105	106	75-125	1 20	8.02 8.92	11 (1)		20
Batch number: 062895711001			Sample number(s): 4886323-4886325 UNSPK: 4886323 BKG: 4886323					
Mercury	103	107	80-120	4 20	0.0103 U 0.0103 U	110* (1)		20
Batch number: 062896150001A			Sample number(s): 4886323-4886325 UNSPK: 4886323 BKG: 4886323					
Arsenic	100	112	70-130	6 20	0.875 J 0.886 J	1 (1)		20
Cadmium	93	102	75-125	7 20	0.210 J 0.208 J	1 (1)		20
Chromium	105	121	75-125	9 20	3.72 3.79	2 (1)		20
Copper	99	107	75-125	6 20	1.04 1.14	9 (1)		20
Lead	101	112	75-125	5 20	1.62 1.60	2 (1)		20
Selenium	110	123	75-130	7 20	0.745 J 0.775 J	4 (1)		20
Batch number: 062896150001C			Sample number(s): 4886323-4886325 UNSPK: 4886323 BKG: 4886323					
Nickel	89	99	75-125	6 20	3.91 3.69	6 (1)		20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 1009277 Sample # 4886323-25

COC # 0130307

Please print. Instructions on reverse side correspond with circled numbers

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1010910. Samples arrived at the laboratory on Saturday, October 21, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
WCOALLKS Water Sample	4896155
WCOALLKS Filtered Water Sample	4896156
ECOALLKS Water Sample	4896157
ECOALLKS Filtered Water Sample	4896158
LIME_LKS Water Sample	4896159
LIME_LKS Filtered Water Sample	4896160
IRON_LKS Water Sample	4896161
IRON_LKS Filtered Water Sample	4896162

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



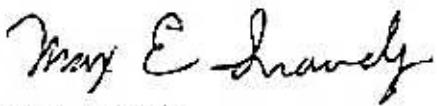
2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,



Max E. Snavely
Max E. Snavely
Senior Specialist

Lancaster Laboratories Sample No. WW 4896155
**WCOALLKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

COALT SDG#: SWE16-01

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.542	0.0802	mg/l	1	
01750	Calcium	7440-70-2	13.6	0.104	mg/l	1	
01754	Iron	7439-89-6	0.246	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	3.09	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00088 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0022	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00034 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0014 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	1.3 U	1.3	mg/l	1	
00273	Total Organic Carbon	n.a.	5.3	1.0	mg/l	1	
04001	Chemical Oxygen Demand	n.a.	30.4 J	12.8	mg/l	1	
07547	Dissolved Organic Carbon	n.a.	2.1	1.0	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	
08357	Selected SVOAs by 8270 SIM						
08362	Naphthalene	91-20-3	0.030 J	0.01	ug/l	1	
08368	Fluorene	86-73-7	0.01 U	0.01	ug/l	1	
08369	Phenanthrene	85-01-8	0.026 J	0.01	ug/l	1	
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l	1	
08372	Fluoranthene	206-44-0	0.045 J	0.01	ug/l	1	
08373	Pyrene	129-00-0	0.054	0.02	ug/l	1	
08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l	1	
08375	Chrysene	218-01-9	0.02 U	0.02	ug/l	1	
08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l	1	
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l	1	

The recovery of dibenz(a,h)anthracene was outside QC limits in the LCSD associated with this sample. Sufficient sample was unavailable to repeat the analysis.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. WW 4896155
**WCOALLKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

COALT SDG#: SWE16-01

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Analysis	Dilution Factor
				Trial# Date and Time	Analyst
	00259	Mercury	SW-846 7470A	1 10/31/2006 08:02	Damary Valentin 1
	01743	Aluminum	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	01750	Calcium	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	01754	Iron	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	01757	Magnesium	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	06025	Arsenic	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06028	Cadmium	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06031	Chromium	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06033	Copper	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06035	Lead	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06039	Nickel	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06041	Selenium	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	07066	Silver	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	07072	Zinc	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	00235	Biochemical Oxygen Demand	EPA 405.1	1 10/21/2006 12:40	Christopher M Cunningham 1
	00273	Total Organic Carbon	EPA 415.1	1 10/26/2006 17:13	James S Mathiot 1
	04001	Chemical Oxygen Demand	EPA 410.4	1 10/23/2006 10:10	Susan A Engle 1
	07547	Dissolved Organic Carbon	EPA 415.1 modified	1 10/24/2006 15:14	James S Mathiot 1
	08255	Total Cyanide (water)	SW-846 9012A	1 10/31/2006 14:05	Nicole M Kepley 1
	08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1 10/25/2006 14:25	Brian K Graham 1
	00813	BNA Water Extraction	SW-846 3510C	1 10/24/2006 16:45	Desiree J Wann 1
	01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1 10/31/2006 01:00	Helen L Schaeffer 1
	05713	WW SW846 Hg Digest	SW-846 7470A	1 10/30/2006 16:00	Nelli S Markaryan 1
	06050	ICP/MS SW-846 Water	SW-846 3010A modified	1 10/30/2006 19:05	James L Mertz 1
	08256	Cyanide Water Distillation	SW-846 9012A	1 10/30/2006 18:00	Carolyn M Mastropietro 1

Lancaster Laboratories Sample No. WW 4896156
**WCOALLKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

COALF SDG#: SWE16-02

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	12.0	0.104	mg/l	1	
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	2.75	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00049 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.00044 J	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.00089 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:04	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
07066	Silver	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1

Lancaster Laboratories Sample No. WW 4896156**WCOALLKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

COALF	SDG#:	SWE16-02					
08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006 14:06	Nicole M Kepley	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006 01:00	Helen L Schaeffer	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006 16:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006 19:05	James L Mertz	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/30/2006 18:00	Carolyn M Mastropietro	1	

Lancaster Laboratories Sample No. WW 4896157
**ECOALLKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

ECOAT SDG#: SWE16-03

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.641	0.0802	mg/l	1	
01750	Calcium	7440-70-2	14.1	0.104	mg/l	1	
01754	Iron	7439-89-6	0.890	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	3.10	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0015 J	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00097 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0023	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00087 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0033	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	1.3 U	1.3	mg/l	1	
00273	Total Organic Carbon	n.a.	2.3	1.0	mg/l	1	
04001	Chemical Oxygen Demand	n.a.	23.4 J	12.8	mg/l	1	
07547	Dissolved Organic Carbon	n.a.	1.7 J	1.0	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.010 U	0.010	mg/l	1	

The reporting limit for total cyanide was increased due to insufficient sample volume.

08357 Selected SVOAs by 8270 SIM

08362	Naphthalene	91-20-3	0.26	0.01	ug/l	1
08368	Fluorene	86-73-7	0.025 J	0.01	ug/l	1
08369	Phenanthrene	85-01-8	0.14	0.01	ug/l	1
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l	1
08372	Fluoranthene	206-44-0	0.030 J	0.01	ug/l	1
08373	Pyrene	129-00-0	0.040 J	0.02	ug/l	1
08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l	1
08375	Chrysene	218-01-9	0.050	0.02	ug/l	1
08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l	1
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l	1
Trial ID: RE						
08362	Naphthalene	91-20-3	0.26	0.01	ug/l	1
08368	Fluorene	86-73-7	0.027 J	0.01	ug/l	1
08369	Phenanthrene	85-01-8	0.15	0.01	ug/l	1
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l	1
08372	Fluoranthene	206-44-0	0.033 J	0.01	ug/l	1
08373	Pyrene	129-00-0	0.041 J	0.02	ug/l	1

Lancaster Laboratories Sample No. WW 4896157
**ECOALLKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

ECOAT SDG#: SWE16-03

CAT	No.	Analysis Name	CAS Number	As Received			Dilution Factor
				Result	Method	Detection Limit	
	08374	Benzo(a)anthracene	56-55-3	0.021 J		0.02	ug/l 1
	08375	Chrysene	218-01-9	0.048 J		0.02	ug/l 1
	08378	Benzo(a)pyrene	50-32-8	0.02 U		0.02	ug/l 1
	08380	Dibenz(a,h)anthracene	53-70-3	0.02 U		0.02	ug/l 1

The recovery of dibenz(a,h)anthracene was outside of QC limits in the LCSD associated with this sample. The analysis was repeated outside the method required hold time and dibenz(a,h)anthracene was within QC limits.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Analysis			Dilution Factor
				Trial#	Date and Time	Analyst	
	00259	Mercury	SW-846 7470A	1	10/31/2006 08:05	Damary Valentin	1
	01743	Aluminum	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	01750	Calcium	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	01754	Iron	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	01757	Magnesium	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	06025	Arsenic	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06028	Cadmium	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06031	Chromium	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06033	Copper	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06035	Lead	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06039	Nickel	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06041	Selenium	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	07066	Silver	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	07072	Zinc	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	00235	Biochemical Oxygen Demand	EPA 405.1	1	10/21/2006 12:40	Christopher M Cunningham	1
	00273	Total Organic Carbon	EPA 415.1	1	10/26/2006 17:37	James S Mathiot	1
	04001	Chemical Oxygen Demand	EPA 410.4	1	10/23/2006 10:10	Susan A Engle	1
	07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/24/2006 15:48	James S Mathiot	1
	08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006 14:07	Nicole M Kepley	1
	08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/25/2006 14:53	Brian K Graham	1
	08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	2	10/29/2006 09:39	Timothy J Trees	1
	00813	BNA Water Extraction	SW-846 3510C	1	10/24/2006 16:45	Desiree J Wann	1
	01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006 01:00	Helen L Schaeffer	1
	05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006 16:00	Nelli S Markaryan	1
	06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006 19:05	James L Mertz	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. WW 4896157

ECOALLKS Water Sample
Great Lakes - Sweepings

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

ECOAT SDG#: SWE16-03

08256 Cyanide Water Distillation SW-846 9012A

1 10/30/2006 18:00

Carolyn M
Mastropietro

1

Lancaster Laboratories Sample No. WW 4896158
**ECOALLKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

ECOAF SDG#: SWE16-04

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	13.3	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	2.93	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00043 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.00049 J	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0018 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:06	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
07066	Silver	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1

Lancaster Laboratories Sample No. WW 4896158**ECOALLKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

ECOAF	SDG#:	SWE16-04					
08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006	14:13	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006	01:00	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006	16:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006	19:05	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/30/2006	18:00	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4896159
**LIME_LKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMET SDG#: SWE16-05

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	16.1	0.104	mg/l	1	
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	3.45	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00047 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0010	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0014 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

The sample received for the cyanide and metals analysis was subsampled from unpreserved containers.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:08	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 22:45	David K Beck	1

Lancaster Laboratories Sample No. WW 4896159
**LIME_LKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMET SDG#: SWE16-05

07066	Silver	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006 14:01	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006 01:00	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006 16:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006 19:05	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/30/2006 18:00	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4896160
**LIME_LKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMEF SDG#: SWE16-06

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	14.2	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	3.04	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00053 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0010	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0014 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:09	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
07066	Silver	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1

Lancaster Laboratories Sample No. WW 4896160**LIME_LKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMEF SDG#: SWE16-06

08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006 14:16	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006 01:00	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006 16:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006 19:05	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/30/2006 18:00	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4896161
**IRON_LKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

IRONT SDG#: SWE16-07

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	14.3	0.104	mg/l	1	
01754	Iron	7439-89-6	0.150 J	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	2.88	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0015 J	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00054 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0010	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.000081 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0012 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

The sample received for the metals and cyanide analysis was subsampled from unpreserved containers.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:14	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 22:55	David K Beck	1

Lancaster Laboratories Sample No. WW 4896161
**IRON_LKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

IRONT SDG#: SWE16-07

07066	Silver	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006 14:18	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006 01:00	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006 16:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006 19:05	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/30/2006 18:00	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4896162
**IRON_LKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

IRONF SDG#: SWE16-08*

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	13.4	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	2.69	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0013 J	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00055 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.00098 J	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000066 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0012 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:15	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
07066	Silver	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1

Lancaster Laboratories Sample No. WW 4896162**IRON_LKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 10:39

Discard: 01/07/2007

IRONF	SDG#:	SWE16-08*						
08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006	14:19	Nicole M Kepley	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006	01:00	Helen L Schaeffer	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006	16:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006	19:05	James L Mertz	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/30/2006	18:00	Carolyn M Mastropietro	1	

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:39 AM

Group Number: 1010910

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06294023502A Biochemical Oxygen Demand			Sample number(s): 4896155, 4896157	103	102	85-115	1	8
Batch number: 06296400102B Chemical Oxygen Demand			Sample number(s): 4896155, 4896157	105		94-110		
Batch number: 06297049512B Dissolved Organic Carbon			Sample number(s): 4896155, 4896157	1.0 U	1.0 mg/l	100	80-120	
Batch number: 06297WAD026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	0.01 U 0.01 U 0.01 U 0.02 U 0.01 U 0.02 U 0.02 U 0.02 U 0.02 U 0.02 U	0.01 0.01 0.01 0.02 0.01 0.02 0.02 0.02 0.02 0.02	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	82 88 84 78 87 87 87 86 77 62	78 85 82 77 86 85 84 83 77 58*	70-111 75-115 76-114 67-113 69-123 76-114 76-111 76-112 64-114 60-126	5 3 2 1 2 3 3 3 0 7	30 30 30 30 30 30 30 30 30 30
Batch number: 06299049511B Total Organic Carbon	1.0 U	1.0	mg/l	97		80-120		
Batch number: 06300WAG026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	0.01 U 0.01 U 0.01 U 0.02 U 0.01 U 0.02 U 0.02 U 0.02 U 0.02 U 0.02 U	0.01 0.01 0.01 0.02 0.01 0.02 0.02 0.02 0.02 0.02	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	87 100 98 98 103 107 102 101 95 89	86 99 97 98 102 105 101 100 94 89	70-111 75-115 76-114 67-113 69-123 76-114 76-111 76-112 64-114 60-126	1 0 1 1 0 1 1 1 1 0	30 30 30 30 30 30 30 30 30 30
Batch number: 06303117102A Total Cyanide (water)	0.0050 U	0.0050	mg/l	90		90-110		
Batch number: 06303117102B Total Cyanide (water)	0.0050 U	0.0050	mg/l	90		90-110		
Batch number: 063035713005 Mercury	U	6	mg/l	99		80-120		
Batch number: 063036050005A			Sample number(s): 4896155-4896162					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:39 AM

Group Number: 1010910

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Arsenic	0.00067	0.00067	mg/l	100		80-120		
	U							
Cadmium	0.000099	0.00009	mg/l	101		80-120		
	U	9						
Chromium	0.00029	0.00026	mg/l	104		80-120		
	J							
Copper	0.00020	0.00020	mg/l	106		80-120		
	U							
Lead	0.000047	0.00004	mg/l	104		80-120		
	U	7						
Nickel	0.00043	0.00043	mg/l	103		80-120		
	U							
Selenium	0.00050	0.00050	mg/l	100		80-120		
	U							
Batch number: 063041848002			Sample number(s): 4896155-4896162					
Aluminum	0.0802	U	0.0802	mg/l	104			
Calcium	0.104	U	0.104	mg/l	101			
Iron	0.0522	U	0.0522	mg/l	101			
Magnesium	0.0135	U	0.0135	mg/l	101			
Silver	0.0016	U	0.0016	mg/l	104			
Zinc	0.0081	U	0.0081	mg/l	103			
						90-112		
						90-112		
						90-112		
						89-110		
						90-118		
						90-111		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06294023502A			Sample number(s): 4896155, 4896157 UNSPK: P896096			BKG: P896100			
Biochemical Oxygen Demand	103	107	67-144	3	9	40.4	42.7	5	9
Batch number: 06296400102B			Sample number(s): 4896155, 4896157 UNSPK: P893387			BKG: P893387			
Chemical Oxygen Demand	91		90-110			4,250.	4,210.	1 (1)	5
Batch number: 06297049512B			Sample number(s): 4896155, 4896157 UNSPK: P893500			BKG: P893500			
Dissolved Organic Carbon	105		66-137			12.6	12.8	1	4
Batch number: 06299049511B			Sample number(s): 4896155, 4896157 UNSPK: P897653			BKG: P897653			
Total Organic Carbon	100		62-148			11.2	11.3	0	2
Batch number: 06303117102A			Sample number(s): 4896155-4896157, 4896159 UNSPK:			4896157 BKG: 4896157			
Total Cyanide (water)	83		83-111			0.010 U	0.010 U	200* (1)	20
Batch number: 06303117102B			Sample number(s): 4896158, 4896160-4896162 UNSPK:			4896158 BKG: 4896158			
Total Cyanide (water)	91		83-111			0.0050 U	0.0050 U	0 (1)	20
Batch number: 063035713005			Sample number(s): 4896155-4896162 UNSPK: P894622			BKG: P894622			
Mercury	102	108	80-120	6	20	0.000056	0.000056	-8 (1)	20
Batch number: 063036050005A			Sample number(s): 4896155-4896162 UNSPK: P894622			BKG: P894622			

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

 Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:39 AM

Group Number: 1010910

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD 0</u>	<u>RPD MAX 20</u>	<u>BKG Conc 0.00067</u>	<u>DUP Conc 0.00067</u>	<u>DUP RPD 0 (1)</u>	<u>Dup Max 20</u>
Arsenic	102	102	75-125	0	20	U	U		
Cadmium	94	97	75-125	3	20	0.0018	0.0017	1	20
Chromium	104	105	75-125	0	20	0.00042	0.00047	12 (1)	20
Copper	103	104	75-125	1	20	0.0013	0.0013	3 (1)	20
Lead	99	101	75-125	2	20	0.00014	0.00017	18 (1)	20
Nickel	102	102	75-125	0	20	0.0027	0.0028	5 (1)	20
Selenium	103	98	75-125	4	20	0.00059	0.00066	11 (1)	20
						J	J		

Batch number: 063041848002

Sample number(s): 4896155-4896162 UNSPK: P893381 BKG: P893381

Aluminum	109	105	75-125	3	20	0.0802	U	0.0802	U	8 (1)	20
Calcium	106	99	75-125	4	20	3.32		3.29		1	20
Iron	(2)	(2)	75-125	4	20	6.46		6.44		0	20
Magnesium	107	97	75-125	4	20	3.44		3.44		0	20
Silver	106	104	75-125	2	20	0.0016	U	0.0016	U	107* (1)	20
Zinc	105	102	75-125	3	20	0.0116	J	0.0103	J	12 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06297WAD026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4896155	89	84	91
4896157	90	86	92
Blank	84	84	95
LCS	83	83	91
LCSD	80	80	89
Limits:	57-137	60-115	64-123

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06300WAG026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4896157RE	101	94	90
Blank	90	82	101
LCS	99	91	108
LCSD	95	90	105
Limits:	57-137	60-115	64-123

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control SummaryClient Name: Parsons Brinkerhoff
Reported: 12/07/06 at 10:39 AM

Group Number: 1010910

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

CH2MH Applied Sciences Lab
 CHAIN OF CUSTODY RECORD
 AND AGREEMENT TO PERFORM SERVICES

CVD 2300 NW Walnut Boulevard
 Corvallis, OR 97330-3538
 (541) 752-4271 FAX (541) 752-0276

12098/1010910/4896155-62

COC #

Project #			Purchase Order #			TOTAL # OF CONTAINERS TRA-H Doc / TOC BOD / COD TOTAL & D�SSOLVED METALS (TAL + Hg) TOTAL & DISSOLVED OTHER & DISCHARGE	Requested Analytical Method #						THIS AREA FOR LAB USE ONLY		
Project Name <i>GREAT LAKES</i>												Lab #	Page	of	
Company Name <i>City Hill</i>												<i>To: LANCASTER</i>			
Report to: <i>RYAN LAWRENCE / Boston</i>			Phone No: <i>(617) 523-2002 x 239</i>												
Requested Completion Date:							Sample Disposal:								
							Dispose <input type="checkbox"/> Return <input type="checkbox"/> Preservative								
Sampling		Type	Matrix		CLIENT SAMPLE ID (8 CHARACTERS)			LAB QC	none	none	none	none	none		
Date	Time	COMP	GRAB	WATER	SOIL		AIR	Other							
10/20/06	130								WC O A L K S	2	X				EPA Tier QC Level
									WC O A L K S	4		X			1 (Screening) 2 3 4
								WC O A L K S	2			X X X			
								EC O A L K S	2	X				Alternate Description	
								EC O A L K S	4		X			Lab ID	
								EC O A L K S	2			X X X			
								L I M E L K S	2			X X			
								I R O N L K S	2			X X			

10/20/06

Relinquished By <i>Troy Pittenger</i>	Date/Time 130 10/20/06	Received By	Date/Time
Sampled By and Time (Please sign and print name) <i>Troy Pittenger</i>	Date/Time 130 10/20/06	Relinquished By (Please sign and print name)	Date/Time
Received By <i>John Lang</i>	Date/Time 10/20 0950	Relinquished By (Please sign and print name)	Date/Time
Received By <i>John Lang</i>	Date/Time 10/20 0950	Shipped Via UPS FedEx Other _____	Shipping #
Special Instructions:			

Instructions and Agreement Provisions on Reverse Side

DISTRIBUTION: Original - LAB, Yellow - LAB, Pink - Client
 Rev 2/01 Lab form 340

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008920. Samples arrived at the laboratory on Saturday, October 07, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLECV3-DS-1 Unspiked Composite Solid Sample	4884379
CLECV3-DS-1 Matrix Spike Composite Solid Sample	4884380
CLECV3-DS-1-D Composite Solid Sample	4884381

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4884379
**CLECV3-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.146	0.0107	mg/kg	1
01643	Aluminum	7429-90-5	2,730.	3.45	mg/kg	1
01650	Calcium	7440-70-2	4,740.	13.1	mg/kg	1
01654	Iron	7439-89-6	16,900.	4.86	mg/kg	1
01657	Magnesium	7439-95-4	1,170.	1.96	mg/kg	1
06125	Arsenic	7440-38-2	11.3	0.175	mg/kg	10
06128	Cadmium	7440-43-9	0.456	0.0392	mg/kg	10
06131	Chromium	7440-47-3	9.84	0.320	mg/kg	10
06133	Copper	7440-50-8	13.9	0.361	mg/kg	10
06135	Lead	7439-92-1	6.54	0.155	mg/kg	10
06139	Nickel	7440-02-0	21.7	0.515	mg/kg	10
06141	Selenium	7782-49-2	3.20	0.381	mg/kg	10
06966	Silver	7440-22-4	0.175 U	0.175	mg/kg	1
06972	Zinc	7440-66-6	41.2	0.675	mg/kg	1
00111	Moisture	n.a.	3.0	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	525,000.	12,400.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	0.83	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	400. E	1.	ug/kg	1
02870	Fluorene	86-73-7	62.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	580. E	0.7	ug/kg	1
02872	Anthracene	120-12-7	23.	0.3	ug/kg	1
02874	Fluoranthene	206-44-0	83.	0.7	ug/kg	1
02875	Pyrene	129-00-0	190.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	67.	0.7	ug/kg	1
02877	Chrysene	218-01-9	290.	0.3	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	32.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	19.	1.	ug/kg	1
Trial ID: DL						
02863	Naphthalene	91-20-3	270.	10.	ug/kg	10
02870	Fluorene	86-73-7	52.	7.	ug/kg	10
02871	Phenanthrene	85-01-8	420.	7.	ug/kg	10
02872	Anthracene	120-12-7	13. J	3.	ug/kg	10
02874	Fluoranthene	206-44-0	59.	7.	ug/kg	10
02875	Pyrene	129-00-0	310.	7.	ug/kg	10
02876	Benzo(a)anthracene	56-55-3	33.	7.	ug/kg	10

Lancaster Laboratories Sample No. SW 4884379
**CLECV3-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00

by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01BKG

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	U			
02877	Chrysene	218-01-9	170.		3.	ug/kg	10
02880	Benzo(a)pyrene	50-32-8	20.		7.	ug/kg	10
02882	Dibenz(a,h)anthracene	53-70-3	10.	U	10.	ug/kg	10
07103	Grain Size to 1 um						
07135	75 mm	n.a.	100.		0.50	% Passing	1
07136	37.5 mm	n.a.	100.		0.50	% Passing	1
07137	19 mm	n.a.	100.		0.50	% Passing	1
07138	4.75 mm	n.a.	90.8		0.50	% Passing	1
07139	3.35 mm	n.a.	82.0		0.50	% Passing	1
07140	2.36 mm	n.a.	73.3		0.50	% Passing	1
07141	1.18 mm	n.a.	68.0		0.50	% Passing	1
07142	0.6 mm	n.a.	54.2		0.50	% Passing	1
07143	0.3 mm	n.a.	36.2		0.50	% Passing	1
07144	0.15 mm	n.a.	24.8		0.50	% Passing	1
07145	0.075 mm	n.a.	16.7		0.50	% Passing	1
07146	0.064 mm	n.a.	0.50	U	0.50	% Passing	1
07147	0.05 mm	n.a.	0.50	U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. SW 4884379
**CLECV3-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01BKG

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00159	Mercury	SW-846 7471A	1	10/16/2006 11:29	Damary Valentin	1
	01643	Aluminum	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	01650	Calcium	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	01654	Iron	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	01657	Magnesium	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	06125	Arsenic	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06128	Cadmium	SW-846 6020	2	10/17/2006 12:24	Jayme E Curet	10
	06131	Chromium	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06133	Copper	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06135	Lead	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06139	Nickel	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06141	Selenium	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06966	Silver	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	06972	Zinc	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	00111	Moisture	EPA 160.3 modified	1	10/10/2006 12:00	Scott W Freisher	1
	02079	TOC Solids/Sludges	SM20 5310 B modified	1	10/17/2006 12:54	James S Mathiot	1
	05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:35	Nicole M Kepley	1
	06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
	02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/12/2006 22:59	William T Parker	1
	02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	2	10/13/2006 16:47	Joseph M Gambler	10
	07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 13:00	Luz M Groff	1
	00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 10:30	Amanda W Herr	1
	05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:20	Annamaria Stipkovits	1
	05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1
	05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1
	06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/16/2006 19:50	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4884380
**CLECV3-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.318	0.0108	mg/kg	1
01643	Aluminum	7429-90-5	5,520.	3.45	mg/kg	1
01650	Calcium	7440-70-2	6,910.	13.1	mg/kg	1
01654	Iron	7439-89-6	12,700.	4.86	mg/kg	1
01657	Magnesium	7439-95-4	2,750.	1.96	mg/kg	1
06125	Arsenic	7440-38-2	10.8	0.175	mg/kg	10
06128	Cadmium	7440-43-9	0.862	0.0392	mg/kg	10
06131	Chromium	7440-47-3	16.0	0.320	mg/kg	10
06133	Copper	7440-50-8	22.2	0.361	mg/kg	10
06135	Lead	7439-92-1	8.38	0.155	mg/kg	10
06139	Nickel	7440-02-0	28.0	0.515	mg/kg	10
06141	Selenium	7782-49-2	4.12	0.381	mg/kg	10
06966	Silver	7440-22-4	5.01	0.175	mg/kg	1
06972	Zinc	7440-66-6	85.2	0.675	mg/kg	1
00118	Moisture	n.a.	3.0	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	4.4	0.19	mg/kg	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	260.	1.	ug/kg	1
02870	Fluorene	86-73-7	64.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	380. E	0.7	ug/kg	1
02872	Anthracene	120-12-7	55.	0.3	ug/kg	1
02874	Fluoranthene	206-44-0	80.	0.7	ug/kg	1
02875	Pyrene	129-00-0	160.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	68.	0.7	ug/kg	1
02877	Chrysene	218-01-9	200.	0.3	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	46.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	39.	1.	ug/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471A	1	10/16/2006 11:34	Damary Valentin	1

Lancaster Laboratories Sample No. SW 4884380
**CLECV3-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3D1	SDG#:	SWE09-01MS						
01643	Aluminum	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1		
01650	Calcium	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1		
01654	Iron	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1		
01657	Magnesium	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1		
06125	Arsenic	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10		
06128	Cadmium	SW-846 6020	2	10/17/2006 12:40	Jayme E Curet	10		
06131	Chromium	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10		
06133	Copper	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10		
06135	Lead	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10		
06139	Nickel	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10		
06141	Selenium	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10		
06966	Silver	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1		
06972	Zinc	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1		
00118	Moisture	EPA 160.3 modified	1	10/10/2006 12:00	Scott W Freisher	1		
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:39	Nicole M Kepley	1		
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/12/2006 23:39	William T Parker	1		
00381	BNA Soil Extraction	SW-846 3550B	1	10/10/2006 03:15	David V Hershey Jr	1		
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:20	Annamaria Stipkovits	1		
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1		
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1		
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/16/2006 19:50	Annamaria Stipkovits	1		

Lancaster Laboratories Sample No. SW 4884381

**CLECV3-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3FD SDG#: SWE09-02FD*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.146	0.0107	mg/kg	1
01643	Aluminum	7429-90-5	2,550.	3.33	mg/kg	1
01650	Calcium	7440-70-2	6,120.	12.6	mg/kg	1
01654	Iron	7439-89-6	14,200.	4.68	mg/kg	1
01657	Magnesium	7439-95-4	1,570.	1.89	mg/kg	1
06125	Arsenic	7440-38-2	12.4	0.176	mg/kg	10
06128	Cadmium	7440-43-9	0.376	0.0393	mg/kg	10
06131	Chromium	7440-47-3	10.0	0.320	mg/kg	10
06133	Copper	7440-50-8	15.6	0.362	mg/kg	10
06135	Lead	7439-92-1	8.96	0.155	mg/kg	10
06139	Nickel	7440-02-0	23.2	0.517	mg/kg	10
06141	Selenium	7782-49-2	3.46	0.382	mg/kg	10
06966	Silver	7440-22-4	0.169 U	0.169	mg/kg	1
06972	Zinc	7440-66-6	295.	0.651	mg/kg	1
00111	Moisture	n.a.	3.2	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	462,000.	14,800.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.19 U	0.19	mg/kg	1
06569	Bulk Density	n.a.	0.79	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	430.	10.	ug/kg	10
02870	Fluorene	86-73-7	54.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	630.	7.	ug/kg	10
02872	Anthracene	120-12-7	22.	0.3	ug/kg	1
02874	Fluoranthene	206-44-0	83.	0.7	ug/kg	1
02875	Pyrene	129-00-0	200.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	53.	0.7	ug/kg	1
02877	Chrysene	218-01-9	240.	0.3	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	30.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	11.	1.	ug/kg	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4884381
**CLECV3-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3FD SDG#: SWE09-02FD*

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07138	4.75 mm	n.a.	89.0	0.50	%	1
07139	3.35 mm	n.a.	83.9	0.50	%	1
07140	2.36 mm	n.a.	77.6	0.50	%	1
07141	1.18 mm	n.a.	71.5	0.50	%	1
07142	0.6 mm	n.a.	56.6	0.50	%	1
07143	0.3 mm	n.a.	38.8	0.50	%	1
07144	0.15 mm	n.a.	26.9	0.50	%	1
07145	0.075 mm	n.a.	19.1	0.50	%	1
07146	0.064 mm	n.a.	16.5	0.50	%	1
07147	0.05 mm	n.a.	11.0	0.50	%	1
07148	0.02 mm	n.a.	7.0	0.50	%	1
07149	0.005 mm	n.a.	5.0	0.50	%	1
07150	0.002 mm	n.a.	2.5	0.50	%	1
07151	0.001 mm	n.a.	1.0	0.50	%	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00159	Mercury	SW-846 7471A	1	10/16/2006 11:39	Damary Valentin 1
01643	Aluminum	SW-846 6010B	1	10/16/2006 11:48	Deborah A Kraday 1
01650	Calcium	SW-846 6010B	1	10/16/2006 11:48	Deborah A Kraday 1
01654	Iron	SW-846 6010B	1	10/16/2006 11:48	Deborah A Kraday 1
01657	Magnesium	SW-846 6010B	1	10/16/2006 11:48	Deborah A Kraday 1
06125	Arsenic	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet 10
06128	Cadmium	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet 10
06131	Chromium	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet 10
06133	Copper	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet 10
06135	Lead	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet 10

Lancaster Laboratories Sample No. SW 4884381
**CLECV3-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3FD	SDG#:	SWE09-02FD*					
06139	Nickel	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet	10	
06141	Selenium	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet	10	
06966	Silver	SW-846 6010B	1	10/16/2006 11:48	Deborah A Krady	1	
06972	Zinc	SW-846 6010B	1	10/16/2006 11:48	Deborah A Krady	1	
00111	Moisture	EPA 160.3 modified	1	10/10/2006 12:00	Scott W Freisher	1	
02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	10/17/2006 13:16	James S Mathiot	1	
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:41	Nicole M Kepley	1	
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1	
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/11/2006 13:31	Joseph M Gambler	1	
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/11/2006 17:35	Joseph M Gambler	10	
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 13:00	Luz M Groff	1	
00381	BNA Soil Extraction	SW-846 3550B	1	10/10/2006 03:15	David V Hershey Jr	1	
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:20	Annamaria Stipkovits	1	
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1	
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1	
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/16/2006 19:50	Annamaria Stipkovits	1	

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:24 PM

Group Number: 1008920

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	LCS %REC	LCSD %REC	LCS/LCSD Limits	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06282SLC026			Sample number(s): 4884381					
Naphthalene	1. U	1.	ug/kg	92	91	71-105	1	30
Fluorene	0.7 U	0.7	ug/kg	91	91	70-115	0	30
Phenanthrene	0.7 U	0.7	ug/kg	95	93	64-118	1	30
Anthracene	0.3 U	0.3	ug/kg	87	84	60-111	4	30
Fluoranthene	0.7 U	0.7	ug/kg	88	87	57-128	2	30
Pyrene	0.7 U	0.7	ug/kg	91	91	71-117	0	30
Benzo(a)anthracene	0.7 U	0.7	ug/kg	89	88	71-114	1	30
Chrysene	0.3 U	0.3	ug/kg	93	91	69-114	1	30
Benzo(a)pyrene	0.7 U	0.7	ug/kg	96	86	59-118	11	30
Dibenz(a,h)anthracene	1. U	1.	ug/kg	107	96	56-130	12	30
Batch number: 06283102201B			Sample number(s): 4884379-4884381					
Total Cyanide (solid)	0.18 U	0.18	mg/kg	96		90-110		
Batch number: 06283820003B			Sample number(s): 4884379-4884381					
Moisture				100		99-101		
Moisture				100		99-101		
Batch number: 06284SLI026			Sample number(s): 4884379-4884380					
Naphthalene	1. U	1.	ug/kg	84		71-105		
Fluorene	0.7 U	0.7	ug/kg	84		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	90		64-118		
Anthracene	0.3 U	0.3	ug/kg	76		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	86		57-128		
Pyrene	0.7 U	0.7	ug/kg	87		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	83		71-114		
Chrysene	0.3 U	0.3	ug/kg	87		69-114		
Benzo(a)pyrene	0.7 U	0.7	ug/kg	84		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	83		56-130		
Batch number: 062885708002			Sample number(s): 4884379-4884381					
Aluminum	8.02 J	3.35	mg/kg	124		91-151		
Calcium	14.2 J	12.7	mg/kg	103		89-121		
Iron	4.71 U	4.71	mg/kg	80		68-158		
Magnesium	3.61 J	1.90	mg/kg	109		90-120		
Silver	0.170 U	0.170	mg/kg	104		90-126		
Zinc	0.655 U	0.655	mg/kg	94		85-110		
Batch number: 062885711002			Sample number(s): 4884379-4884381					
Mercury	0.0105 U	0.0105	mg/kg	96		66-133		
Batch number: 062896150002A			Sample number(s): 4884379-4884381					
Arsenic	0.0170 U	0.0170	mg/kg	106		77-123		
Cadmium	0.0038 U	0.0038	mg/kg	108		79-121		
Chromium	0.141 J	0.0310	mg/kg	103		78-122		
Copper	0.0435 J	0.0350	mg/kg	109		81-119		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:24 PM

Group Number: 1008920

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Lead	0.0423 J	0.0150	mg/kg	105		79-121		
Nickel	0.0500 U	0.0500	mg/kg	107		81-119		
Selenium	0.0370 U	0.0370	mg/kg	105		74-126		
Batch number: 062896150002C			Sample number(s): 4884379-4884380					
Cadmium	0.0038 U	0.0038	mg/kg	107		79-121		
Batch number: 06290049531A			Sample number(s): 4884379, 4884381					
TOC Solids/Sludges Combustion	60.0 U	60.0	mg/kg	71		40-148		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06283102201B			Sample number(s): 4884379-4884381 UNSPK: 4884379					
Total Cyanide (solid)	86		59-124		0.17 U	0.18 U	25* (1)	17
Batch number: 06283820003B			Sample number(s): 4884379-4884381		BKG: 4884379			
Moisture					3.0	3.1	3	15
Moisture					3.0	3.1	3	15
Batch number: 06284656901B			Sample number(s): 4884379, 4884381		BKG: 4884379			
Bulk Density					0.83	0.83	1 (1)	20
Batch number: 06284SLI026			Sample number(s): 4884379-4884380 UNSPK: 4884379					
Naphthalene	(2)	(2)	54-121	46*	30			
Fluorene	7*	77	62-119	31*	30			
Phenanthrene	(2)	(2)	31-160	47*	30			
Anthracene	91	109	55-118	10	30			
Fluoranthene	-9*	69	49-125	29	30			
Pyrene	(2)	(2)	58-137	54*	30			
Benzo(a)anthracene	5*	143*	69-118	52*	30			
Chrysene	(2)	(2)	70-107	46*	30			
Benzo(a)pyrene	41*	85	69-106	28	30			
Dibenz(a,h)anthracene	59	58	40-126	1	30			
Batch number: 062885708002			Sample number(s): 4884379-4884381 UNSPK: 4884379		BKG: 4884379			
Aluminum	(2)	(2)	75-125	1	20	2,650.	2,570.	3
Calcium	(2)	(2)	75-125	47*	20	4,600.	12,100.	90*
Iron	(2)	(2)	75-125	20	20	16,400.	13,100.	23*
Magnesium	(2)	(2)	75-125	67*	20	1,140.	1,100.	3
Silver	97	98	75-125	1	20	0.170 U	0.170 U	17 (1)
Zinc	85	86	75-125	1	20	40.0	39.3	2
Batch number: 062885711002			Sample number(s): 4884379-4884381 UNSPK: 4884379		BKG: 4884379			
Mercury	100	100	80-120	0	20	0.142	0.136	4 (1)
Batch number: 062896150002A			Sample number(s): 4884379-4884381 UNSPK: 4884379		BKG: 4884379			
Arsenic	(2)	(2)	70-130	16	20	10.9	10.8	1
Cadmium	79	76	75-125	2	20	0.443	0.301	38* (1)

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:24 PM

Group Number: 1008920

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u>	<u>MSD</u>	<u>MS/MSD</u>	<u>RPD</u>	<u>BKG</u>	<u>DUP</u>	<u>DUP</u>	<u>Dup RPD</u>
	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>MAX</u>	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>	<u>Max</u>
Chromium	119	122	75-125	1	20	9.54	9.45	1 (1)
Copper	160*	111	75-125	12	20	13.5	13.4	1
Lead	(2)	(2)	75-125	8	20	6.34	6.20	2
Nickel	(2)	(2)	75-125	5	20	21.0	21.1	0
Selenium	90	66*	75-130	6	20	3.10	3.15	1 (1)
Batch number: 062896150002C	Sample number(s): 4884379-4884380 UNSPK: 4884379 BKG: 4884379							
Cadmium	79	76	75-125	2	20	0.443	0.301	38* (1)
Batch number: 06290049531A	Sample number(s): 4884379, 4884381 UNSPK: 4884379 BKG: 4884379							
TOC Solids/Sludges Combustion	76	51-115		509,000.		613,000.	19	19

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06282SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4884381	72	54	79
Blank	106	93	96
LCS	94	88	84
LCSD	94	91	87
Limits:	42-142	48-122	65-125

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06284SLI026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4884379	111	77	93
4884379DL	73	51	88
4884380	112	79	98
Blank	87	84	89
LCS	97	88	90
MS	112	79	98
MSD	117	82	115
Limits:	42-142	48-122	65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 1008920 Sample # 4884379-81

COC # 0132132

Please print. Instructions on reverse side correspond with circled numbers.

1	Client: <u>Cham Hill</u> Acct. #: _____				Project Name/#: <u>GREAT LAKES</u> PWSID #: _____				5 Analyses Requested				For Lab Use Only			
	Project Manager: <u>Ben Mosley</u> P.O.#: _____				Sampler: <u>Brian McMorris</u> Quote #: _____				Preservation Codes				FSC: _____			
	Name of state where samples were collected: <u>MN</u>												SCR#: _____			
2	Sample Identification		Date Collected	Time Collected	Grab	Composite	Soil	<input type="checkbox"/> NPDES Applicable	Total # of Containers	Sugars	TSP	TOC	Grain Size	Bulk Density	Preservation Codes	
	<u>CLECV3-DS-1</u>		<u>10/6/06</u>	<u>1300</u>	X	X			2	X	X	X	X	X	H=HCl	T=Thiosulfate
	<u>CLECV3-DS-1-D</u>		<u>↓</u>	<u>↓</u>	X	X			2	X	X	X	X	X	N=HNO ₃	B=NaOH
	<u>CLECV3-DS-1-BUL</u>				X	X			1						S=H ₂ SO ₄	O=Other
															Remarks	
															<u>MAPS SPICE FOR PATHS, TOT METALS C1, Hg HOLD</u>	
3	Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by: <u>Brian McMorris</u>				Date <u>10/6/06</u>	Time <u>16:20</u>	Received by:				Date	Time
	Date results are needed: _____				Relinquished by:				Date	Time	Received by:				Date	Time
	Rush results requested by (please circle): Phone <input checked="" type="checkbox"/> Fax <input type="checkbox"/> E-mail <input type="checkbox"/>				Relinquished by:				Date	Time	Received by:				Date	Time
	Phone #: _____ Fax #: _____				Relinquished by:				Date	Time	Received by:				Date	Time
	E-mail address: _____				Relinquished by:				Date	Time	Received by:				Date	Time
4	Data Package Options (please circle if required)				SDG Complete?				Relinquished by:				Date	Time		
	Type I (validation/NJ Reg)		TX TRRP-13		Yes		No		Relinquished by:				Date	Time		
	Type II (Tier II)		MA MCP		CT RCP				Relinquished by:				Date	Time		
	Type III (Reduced NJ)		Site-specific QC (MS/MSD/Dup)? <input checked="" type="checkbox"/>		Yes		No		Relinquished by:				Date	Time		
	Type IV (CLP SOW)								Relinquished by:				Date	Time		
	Type VI (Raw Data Only)		Internal COC Required? Yes <input checked="" type="checkbox"/>		No				Relinquished by:				Date	Time		
	If yes, indicate QC sample and submit triplicate volume.															

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008768. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHCV1-LS-1-D Filtered Composite Water Sample	4883449

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4883449
**DLHCV1-LS-1-D Filtered Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:19

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

LS1DF SDG#: SWE08-09FD*

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	16.5	0.104	mg/l	1	
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	4.69	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0011 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0026	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00011 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0019 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

This sample was field filtered for dissolved metals.

This sample was filtered in the lab for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 07:34	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/12/2006 20:05	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/12/2006 20:05	John P Hook	1
01754	Iron	SW-846 6010B	1	10/12/2006 20:05	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/12/2006 20:05	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06028	Cadmium	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1

Lancaster Laboratories Sample No. WW 4883449
**DLHCV1-LS-1-D Filtered Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:19

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

LS1DF	SDG#:	SWE08-09FD*						
07066	Silver	SW-846 6010B	1	10/12/2006 20:05	John P Hook			1
07072	Zinc	SW-846 6010B	1	10/12/2006 20:05	John P Hook			1
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:56	Courtney A Shoff			1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006 19:55	James L Mertz			1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan			1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/10/2006 19:38	James L Mertz			1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop			1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 12:19 PM

Group Number: 1008768

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 062825713003			Sample number(s): 4883449					
Mercury	0.000056	0.00005	mg/l	117		80-120		
	U	6						
Batch number: 062831848006			Sample number(s): 4883449					
Aluminum	0.0802	U	0.0802	mg/l	93	90-112		
Calcium	0.104	U	0.104	mg/l	96	90-112		
Iron	0.0522	U	0.0522	mg/l	95	90-112		
Magnesium	0.0135	U	0.0135	mg/l	98	89-110		
Silver	0.0016	U	0.0016	mg/l	98	90-118		
Zinc	0.0081	U	0.0081	mg/l	97	90-111		
Batch number: 062836050004A			Sample number(s): 4883449					
Arsenic	0.00067	0.00067	mg/l	99		80-120		
	U							
Cadmium	0.000099	0.00009	mg/l	101		80-120		
	U	9						
Chromium	0.00076	0.00026	mg/l	108		80-120		
	J							
Copper	0.00020	0.00020	mg/l	111		80-120		
	U							
Lead	0.000047	0.00004	mg/l	104		80-120		
	U	7						
Nickel	0.00043	0.00043	mg/l	106		80-120		
	U							
Selenium	0.00050	0.00050	mg/l	98		80-120		
	U							
Batch number: 06284117101B			Sample number(s): 4883449					
Total Cyanide (water)	0.0050	U	0.0050	mg/l	95	90-110		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 062825713003			Sample number(s): 4883449 UNSPK: P882512 BKG: P882512						
Mercury	116	119	80-120	3	20	0.000056	0.000056	104* (1)	20
					U		U		
Batch number: 062831848006			Sample number(s): 4883449 UNSPK: P882512 BKG: P882512						
Aluminum	92	92	75-125	0	20	0.0802	U	0.0802	20
Calcium	94	90	75-125	1	20	15.7	14.7	-2 (1)	7

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 12:19 PM

Group Number: 1008768

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max</u>	<u>RPD Max</u>
Iron	96	95	75-125	1	20	0.0522 U	0.0522 U	-6 (1)	20	20
Magnesium	95	94	75-125	0	20	4.39	4.12	6	20	20
Silver	97	97	75-125	0	20	0.0016 U	0.0016 U	93* (1)	20	20
Zinc	94	95	75-125	1	20	0.0081 U	0.0081 U	61* (1)	20	20
Batch number: 062836050004A			Sample number(s): 4883449 UNSPK: P883569 BKG: P883569							
Arsenic	95	95	75-125	0	20	0.0083	0.0081	3 (1)	20	20
Cadmium	104	104	75-125	0	20	0.0035	0.0034	3	20	20
Chromium	89	88	75-125	0	20	0.0374	0.0367	2	20	20
Copper	89	77	75-125	3	20	0.172	0.172	0	20	20
Lead	(2)	(2)	75-125	2	20	0.0785	0.0780	1	20	20
Nickel	92	91	75-125	1	20	0.0324	0.0318	2	20	20
Selenium	98	102	75-125	3	20	0.0016 J	0.0015 J	5 (1)	20	20
Batch number: 06284117101B			Sample number(s): 4883449 UNSPK: P882512 BKG: P882512							
Total Cyanide (water)			83-111			0.0050 U	0.0050 U	0 (1)	20	

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
 Acct. # 12098 Group# 48834492-95 Sample # 1008584
1008768 4883449

A/H 10/6/06

COC # 0132126

1 of 2

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: CH2M Hill Acct. #: _____
 Project Name/ #: GREAT LAKES PWSID #: _____
 Project Manager: E. Mosley P.O.#: _____
 Sampler: J. Coffey (571-274-6105) Quote #: _____
 Name of state where samples were collected: MN

5									
Preservation Codes									
4	BOTTLE DENSITY, GROSS NET SIZE	SPECIFIC GRAVITY NET: MORSE, CN Hg, % MOIST (100%) DLS, MGRMS, CDR, Hg							
			TOC	SYDNC, PATT	DOL	BOD/COD	TSS	Remarks	
			X	X	X	X	X	X	MATRIX SPIKE FOR SVOCs, METALS, CN, Hg
			X	X	X	X	X	X	HOLD
			X	X	X	X	X	X	MATRIX SPIKE FOR SVOCs, METALS, CN, Hg
			X	X	X	X	X	X	HOLD
			X	X	X	X	X	X	HOLD
			X	X	X	X	X	X	MATRIX SPIKE FOR SVOCs, METALS, CN, Hg (10% & 1%)
			X	X	X	X	X	X	HOLD

<u>DLHCV1-DS-1</u>	<u>10-3-06</u>	<u>1020</u>	<u>XX</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg</u>
<u>DLHCV1-DS-1-D</u>	<u>10-3-06</u>	<u>1020</u>	<u>XX</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>DLHCV1-DS-1-BU</u>	<u>10-3-06</u>	<u>1020</u>	<u>XX</u>	<u>2</u>					
<u>DLHCV1-SS-1</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>DLHCV1-SS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>DLHCV1-SS-1-M 2</u>	<u>10-3-06</u>	<u>0900</u>	<u>XX</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>DLHCV1-SS-2-BU</u>			<u>XX</u>	<u>3</u>					<u>HOLD</u>
<u>DLACV1-SS-1-LS-1</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>5</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg (10% & 1%)</u>
<u>DLACV1-LS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>DLACV1-LS-1-BU</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>4</u>					<u>HOLD</u>

7 Turnaround Time Requested (TAT) (please circle): Normal Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: _____

Rush results requested by (please circle): Phone Fax E-mail

Phone #: _____ Fax #: _____

E-mail address: _____

8 Data Package Options (please circle if required)

Type I (validation/NJ Reg)

TX TRRP-13

SDG Complete?

Yes No

Type II (Tier II)

MA MCP CT RCP

Type III (Reduced NJ)

Site-specific QC (MS/MSD/Dup)? Yes No

Type IV (CLP SOW)

If yes, indicate QC sample and submit triplicate volume.

Type VI (Raw Data Only)

Internal COC Required? Yes / No _____

Relinquished by: <u>Ronni McMorris, Lab. Mgr.</u>	Date <u>10-3-06</u>	Time <u>1700</u>	Received by: _____	Date <u>10-3-06</u>	Time <u>1700</u>
Relinquished by: _____	Date _____	Time _____	Received by: _____	Date _____	Time _____
Relinquished by: _____	Date _____	Time _____	Received by: _____	Date _____	Time _____
Relinquished by: _____	Date _____	Time _____	Received by: _____	Date _____	Time _____
Relinquished by: _____	Date _____	Time _____	Received by: _____	Date <u>10-5-06</u>	Time <u>0925</u>

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

Sample Reprint

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008728. Samples arrived at the laboratory on Friday, October 06, 2006. The PO# for this group is 18957F_T0003_TM1.

Client Description
DLHCV2-LS-1 Grab Water Sample

Lancaster Labs Number
4883054

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4883054

**DLHCV2-LS-1 Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:10 by RM Account Number: 12098

 Submitted: 10/06/2006 09:40 Parsons Brinkerhoff
 Reported: 10/18/2006 at 08:40 75 Arlington Street
 Discard: 11/18/2006 Ninth Floor
 Boston MA 02116

C2LS1 SDG#: SWE08-04

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.00028 U	0.00028	mg/l
	The quantitation limit for mercury was raised due to the nature of the sample matrix.				5
01743	Aluminum	7429-90-5	0.955	0.0802	mg/l
01750	Calcium	7440-70-2	6.28	0.104	mg/l
01754	Iron	7439-89-6	9.79	0.0522	mg/l
01757	Magnesium	7439-95-4	2.21	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0011 J	0.00067	mg/l
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l
06031	Chromium	7440-47-3	0.0028	0.00026	mg/l
06033	Copper	7440-50-8	0.0056	0.00020	mg/l
06035	Lead	7439-92-1	0.0013	0.000047	mg/l
06039	Nickel	7440-02-0	0.0033	0.00043	mg/l
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0696	0.0081	mg/l
00206	Total Suspended Solids	n.a.	232.	15.0	mg/l
00235	Biochemical Oxygen Demand	n.a.	5.9 U	5.9	mg/l
00273	Total Organic Carbon	n.a.	4.8	1.0	mg/l
01443	Specific Gravity	n.a.	0.99	0.0050	1
04001	Chemical Oxygen Demand	n.a.	354.	12.8	mg/l
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l
08357	Selected SVOAs by 8270 SIM				
08362	Naphthalene	91-20-3	0.29	0.01	ug/l
08368	Fluorene	86-73-7	0.078	0.01	ug/l
08369	Phenanthrene	85-01-8	0.32	0.01	ug/l
08370	Anthracene	120-12-7	0.038 J	0.02	ug/l
08372	Fluoranthene	206-44-0	0.33	0.01	ug/l
08373	Pyrene	129-00-0	0.44	0.02	ug/l
08374	Benzo(a)anthracene	56-55-3	0.091	0.02	ug/l
08375	Chrysene	218-01-9	0.10	0.02	ug/l
08378	Benzo(a)pyrene	50-32-8	0.037 J	0.02	ug/l
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l

Phenanthrene was detected in the method blank at a concentration of .01 ug/l.
 The blank value was not subtracted from the analytical result.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. WW 4883054
**DLHCV2-LS-1 Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:10

by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/18/2006 at 08:40

75 Arlington Street

Discard: 11/18/2006

Ninth Floor

Boston MA 02116

C2LS1 SDG#: SWE08-04

As Received

CAT	No.	Analysis Name	CAS Number	As Received	Method	Dilution Factor
				Result	Detection Limit	Units

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00259		Mercury	SW-846 7470A	1	10/11/2006 08:08	Damary Valentin	5
01743		Aluminum	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
01750		Calcium	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
01754		Iron	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
01757		Magnesium	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
06025		Arsenic	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06028		Cadmium	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06031		Chromium	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06033		Copper	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06035		Lead	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06039		Nickel	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06041		Selenium	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
07066		Silver	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
07072		Zinc	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
00206		Total Suspended Solids	EPA 160.2	1	10/10/2006 09:14	Christopher M Cunningham	1
00235		Biochemical Oxygen Demand	EPA 405.1	1	10/06/2006 13:39	Susan A Engle	1
00273		Total Organic Carbon	EPA 415.1	1	10/13/2006 12:33	James S Mathiot	1
01443		Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
04001		Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1
08255		Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:54	Courtney A Shoff	1
08357		Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/10/2006 23:04	William T Parker	1
00813		BNA Water Extraction	SW-846 3510C	1	10/08/2006 22:30	Brian C Veety	1
01848		WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006 19:55	James L Mertz	1
05713		WW SW846 Hg Digest	SW-846 7470A	1	10/10/2006 18:00	Nelli S Markaryan	1
06050		ICP/MS SW-846 Water	SW-846 3010A modified	1	10/10/2006 19:38	James L Mertz	1
08256		Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4883055
**DLHCV2-LS-1 Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:18

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

2LS1F SDG#: SWE08-05

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	5.96	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	1.98	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00083 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0015	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000054 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0011 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/11/2006 08:10	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1
01754	Iron	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06028	Cadmium	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
07066	Silver	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1

Lancaster Laboratories Sample No. WW 4883055**DLHCV2-LS-1 Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:18

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

2LS1F	SDG#:	SWE08-05					
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:55	Courtney A Shoff	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006 19:55	James L Mertz	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/10/2006 18:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/10/2006 19:38	James L Mertz	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Lancaster Laboratories Sample No. WW 4883056

DLHCV2-LS-1-D Grab Water Sample
Great Lakes - Sweepings

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:18

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

2LS1D SDG#: SWE08-06FD

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method			
00235	Biochemical Oxygen Demand	n.a.	6.2	U	6.2	mg/l	1
00273	Total Organic Carbon	n.a.	4.3		1.0	mg/l	1
01443	Specific Gravity	n.a.	1.0		0.0050		1
04001	Chemical Oxygen Demand	n.a.	420.		12.8	mg/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/06/2006 13:39	Susan A Engle	1
00273	Total Organic Carbon	EPA 415.1	1	10/13/2006 12:41	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1

Lancaster Laboratories Sample No. WW 4883058
**DLHCV2-LS-1-BK Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:18

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

LS1BF SDG#: SWE08-08BL

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	0.104 U	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	0.0135 U	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00085 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.00020 U	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.00043 U	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1

This sample was field filtered for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 07:33	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1
01754	Iron	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06028	Cadmium	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
07066	Silver	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 2 of 2

Lancaster Laboratories Sample No. WW 4883058

DLHCV2-LS-1-BK Filtered Grab Water Sample
Great Lakes - Sweepings

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:18

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

LS1BF	SDG#:	SWE08-08BL					
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006 19:55	James L Mertz	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/10/2006 19:38	James L Mertz	1	

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 12:18 PM

Group Number: 1008728

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279023502A Biochemical Oxygen Demand			Sample number(s): 4883054, 4883056					
				106	111	85-115	5	8
Batch number: 06279WAH026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	0.01 U 0.01 U 0.012 J 0.02 U 0.01 U 0.02 U 0.02 U 0.02 U 0.02 U	0.01 0.01 0.01 0.02 0.01 0.02 0.02 0.02 0.02	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	92 89 91 87 93 93 89 90 85	95 93 95 90 95 96 93 94 87	70-111 75-115 76-114 67-113 69-123 76-114 76-111 76-112 64-114	3 4 4 3 3 3 3 4 3	30 30 30 30 30 30 30 30 30
Batch number: 062825713003 Mercury	0.000056 U	0.00005 6	Sample number(s): 4883058				80-120	
Batch number: 06283020601B Total Suspended Solids	3.0 U	3.0	mg/l	117				
Batch number: 062831848006 Aluminum Calcium Iron Magnesium Silver Zinc	0.0802 U 0.104 U 0.0522 U 0.0135 U 0.0016 U 0.0081 U	0.0802 0.104 0.0522 0.0135 0.0016 0.0081	mg/l mg/l mg/l mg/l mg/l mg/l	93 96 95 98 98 97		90-112 90-112 90-112 89-110 90-118 90-111		
Batch number: 06283400102B Chemical Oxygen Demand			Sample number(s): 4883054, 4883056	99			94-110	
Batch number: 062835713003 Mercury	0.000056 U	0.00005 6	Sample number(s): 4883054-4883055	115			80-120	
Batch number: 062836050004A Arsenic Cadmium Chromium Copper Lead	0.00067 U 0.000099 0.00076 0.00020 0.000047	0.00067 9 0.00009 0.00026 0.00020 0.00004	mg/l mg/l mg/l mg/l mg/l mg/l	99 101 108 111 104		80-120 80-120 80-120 80-120 80-120		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 12:18 PM

Group Number: 1008728

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Nickel	U	7						
	0.00043	0.00043	mg/l	106		80-120		
Selenium	U							
	0.00050	0.00050	mg/l	98		80-120		
	U							
Batch number: 06284117101B			Sample number(s): 4883054-4883055					
Total Cyanide (water)	0.0050	U	0.0050 mg/l	95		90-110		
Batch number: 06286049511A			Sample number(s): 4883054, 4883056					
Total Organic Carbon	1.0	U	1.0 mg/l	98		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279023502A			Sample number(s): 4883054, 4883056 UNSPK: P882925			BKG: P882651			
Biochemical Oxygen Demand	122	120	67-144	1	9	80.0	83.3	4	9
Batch number: 062825713003			Sample number(s): 4883058 UNSPK: P882512			BKG: P882512			
Mercury	116	119	80-120	3	20	0.000056	0.000056	104* (1)	20
			U			U			
Batch number: 06283020601B			Sample number(s): 4883054 BKG: 4883054						
Total Suspended Solids						232.	232.	0 (1)	20
Batch number: 06283144301A			Sample number(s): 4883054, 4883056 BKG: 4883056						
Specific Gravity						1.0	1.0	0	2
Batch number: 062831848006			Sample number(s): 4883054-4883055, 4883058 UNSPK: P882512			BKG: P882512			
Aluminum	92	92	75-125	0	20	0.0802 U	0.0802 U	-2 (1)	20
Calcium	94	90	75-125	1	20	15.7	14.7	7	20
Iron	96	95	75-125	1	20	0.0522 U	0.0522 U	-6 (1)	20
Magnesium	95	94	75-125	0	20	4.39	4.12	6	20
Silver	97	97	75-125	0	20	0.0016 U	0.0016 U	93* (1)	20
Zinc	94	95	75-125	1	20	0.0081 U	0.0081 U	61* (1)	20
Batch number: 06283400102B			Sample number(s): 4883054, 4883056 UNSPK: 4883056			BKG: 4883056			
Chemical Oxygen Demand	118*		90-110			420.	409.	3	5
Batch number: 062835713003			Sample number(s): 4883054-4883055 UNSPK: P882510			BKG: P882510			
Mercury	119	118	80-120	1	20	0.000056	0.000056	143* (1)	20
			U			U			
Batch number: 062836050004A			Sample number(s): 4883054-4883055, 4883058 UNSPK: P883569			BKG: P883569			
Arsenic	95	95	75-125	0	20	0.0083	0.0081	3 (1)	20
Cadmium	104	104	75-125	0	20	0.0035	0.0034	3	20
Chromium	89	88	75-125	0	20	0.0374	0.0367	2	20
Copper	89	77	75-125	3	20	0.172	0.172	0	20
Lead	(2)	(2)	75-125	2	20	0.0785	0.0780	1	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 12:18 PM

Group Number: 1008728

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max</u>	<u>RPD Max</u>
Nickel	92	91	75-125	1	20	0.0324	0.0318	2	20	20
Selenium	98	102	75-125	3	20	0.0016 J	0.0015 J	5 (1)	20	20
Batch number: 06284117101B			Sample number(s): 4883054-4883055 UNSPK: P882512 BKG: P882512							
Total Cyanide (water)	83		83-111		0.0050 U	0.0050 U	0 (1)		20	
Batch number: 06286049511A			Sample number(s): 4883054, 4883056 UNSPK: P885109 BKG: P885109							
Total Organic Carbon	97		62-148		14.6	14.5	0		2	

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06279WAH026

Nitrobenzene-d5

2-Fluorobiphenyl

Terphenyl-d14

4883054	91	80	93
Blank	99	97	109
LCS	91	90	97
LCSD	95	94	101
Limits:	57-137	60-115	64-123

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
 Acct. # 12098 Group# 1008728 Sample # 4883054-58

2 of 2

COC # 0132131

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>CHAM HILL</u> Acct. #: _____		2 Project Name#: <u>GREAT LAKES</u> PWSID #: _____		3 Project Manager: <u>ERIN MOSLEY</u> P.O.#: _____		4 Sampler: <u>REGAN M'MORRIS</u> Quote #: _____		5 Analyses Requested		6 For Lab Use Only FSC: _____ SCR#: _____	
								Preservation Codes			
								<input type="checkbox"/> Potable	<input type="checkbox"/> Check if APPLICABLE	<input type="checkbox"/> NAPDES	<input type="checkbox"/> Applicable
								1	2	3	4
								5	6	7	8
								9	10	11	12
								13	14	15	16
								17	18	19	20
								21	22	23	24
								25	26	27	28
								29	30	31	32
								33	34	35	36
								37	38	39	40
								41	42	43	44
								45	46	47	48
								49	50	51	52
								53	54	55	56
								57	58	59	60
								61	62	63	64
								65	66	67	68
								69	70	71	72
								73	74	75	76
								77	78	79	80
								81	82	83	84
								85	86	87	88
								89	90	91	92
								93	94	95	96
								97	98	99	100
								101	102	103	104
								105	106	107	108
								109	110	111	112
								113	114	115	116
								117	118	119	120
								121	122	123	124
								125	126	127	128
								129	130	131	132
								133	134	135	136
								137	138	139	140
								141	142	143	144
								145	146	147	148
								149	150	151	152
								153	154	155	156
								157	158	159	160
								161	162	163	164
								165	166	167	168
								169	170	171	172
								173	174	175	176
								177	178	179	180
								181	182	183	184
								185	186	187	188
								189	190	191	192
								193	194	195	196
								197	198	199	200
								201	202	203	204
								205	206	207	208
								209	210	211	212
								213	214	215	216
								217	218	219	220
								221	222	223	224
								225	226	227	228
								229	230	231	232
								233	234	235	236
								237	238	239	240
								241	242	243	244
								245	246	247	248
								249	250	251	252
								253	254	255	256
								257	258	259	260
								261	262	263	264
								265	266	267	268
								269	270	271	272
								273	274	275	276
								277	278	279	280
								281	282	283	284
								285	286	287	288
								289	290	291	292
								293	294	295	296
								297	298	299	300
								301	302	303	304
								305	306	307	308
								309	310	311	312
								313	314	315	316
								317	318	319	320
								321	322	323	324
								325	326	327	328
								329	330	331	332
								333	334	335	336
								337	338	339	340
								341	342	343	344
								345	346	347	348
								349	350	351	352
								353	354	355	356
								357	358	359	360
								361	362	363	364
								365	366	367	368
								369	370	371	372
								373	374	375	376
								377	378		

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1010298. Samples arrived at the laboratory on Wednesday, October 18, 2006. The PO# for this group is 18957F_T0003_TM1.

Client Description

ECOALLKE Water Sample

Lancaster Labs Number

4892317

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Lancaster Laboratories Sample No. WW 4892317

ECOALLKE Water Sample
Great Lakes - Sweepings

Collected: 10/16/2006 16:00

Account Number: 12098

Submitted: 10/18/2006 09:05
Reported: 10/23/2006 at 18:46
Discard: 11/23/2006

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

ECOLL SDG#: SWE14-01*

CAT No.	Analysis Name	CAS Number	As Received		Units	Dilution Factor
			Method	Result		
08357	Selected SVOAs by 8270 SIM					
08362	Naphthalene	91-20-3		0.29	0.01	ug/l
08368	Fluorene	86-73-7		0.030 J	0.01	ug/l
08369	Phenanthrene	85-01-8		0.16	0.01	ug/l
08370	Anthracene	120-12-7		0.02 U	0.02	ug/l
08372	Fluoranthene	206-44-0		0.038 J	0.01	ug/l
08373	Pyrene	129-00-0		0.045 J	0.02	ug/l
08374	Benzo(a)anthracene	56-55-3		0.022 J	0.02	ug/l
08375	Chrysene	218-01-9		0.045 J	0.02	ug/l
08378	Benzo(a)pyrene	50-32-8		0.02 U	0.02	ug/l
08380	Dibenz(a,h)anthracene	53-70-3		0.02 U	0.02	ug/l

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/22/2006 08:40	Timothy J Trees	1
00813	BNA Water Extraction	SW-846 3510C	1	10/21/2006 01:15	Karen L Beyer	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/23/06 at 06:46 PM

Group Number: 1010298

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06292WAG026			Sample number(s): 4892317					
Naphthalene	0.01 U	0.01	ug/l	86	87	70-111	2	30
Fluorene	0.01 U	0.01	ug/l	95	98	75-115	3	30
Phenanthrene	0.01 U	0.01	ug/l	94	96	76-114	3	30
Anthracene	0.02 U	0.02	ug/l	94	97	67-113	3	30
Fluoranthene	0.01 U	0.01	ug/l	97	100	69-123	3	30
Pyrene	0.02 U	0.02	ug/l	99	101	76-114	2	30
Benzo(a)anthracene	0.02 U	0.02	ug/l	97	100	76-111	3	30
Chrysene	0.02 U	0.02	ug/l	96	99	76-112	4	30
Benzo(a)pyrene	0.02 U	0.02	ug/l	92	95	64-114	3	30
Dibenz(a,h)anthracene	0.02 U	0.02	ug/l	86	89	60-126	3	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06292WAG026

Nitrobenzene-d5

2-Fluorobiphenyl

Terphenyl-d14

4892317	96	91	92
Blank	96	87	108
LCS	97	88	101
LCSD	97	93	102

Limits: 57-137 60-115 64-123

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

CH2MHILL Applied Sciences Lab

CHAIN OF CUSTODY RECORD
AND AGREEMENT TO PERFORM SERVICESCVO 2300 NW Walnut Boulevard
Corvallis, OR 97330-3538
(541) 752-4271 FAX (541) 752-0276

Act 12098-1010298

4892317

COC #

Project # <i>349871.TP.01.04</i>		Purchase Order #		TOTAL # OF CONTAINERS PAK H Preservative None	Requested Analytical Method #							THIS AREA FOR LAB USE ONLY									
Project Name <i>Great Lakes Project</i>												Lab #	Page	of							
Company Name <i>CH2M HILL INC</i>												<i>To: Lancaster</i>									
Report to: <i>Ryan Loveridge / CH2M Hill Boston</i>		Phone No: <i>(617) 523-2002 x239</i>																			
Requested Completion Date:					Sample Disposal:		Dispose	<input type="checkbox"/>	Return	<input type="checkbox"/>											
Sampling		Type	Matrix		CLIENT SAMPLE ID (8 CHARACTERS)		LAB QC								EPA Tier QC Level						
Date	Time	C O M P R A B E R	G R A T E R		W A T E R	S O I L	A I R	Other								1 (Screening)	2	3	4		
10/16/06	1600	X			E	C	O	A	L	L	K	E	2	X							
																	Alternate Description			Lab ID	
																	<i>IL Glass, not preserved</i>				
Relinquished By						Date/Time	Received By							Date/Time							
<i>Troy P. Heugler CH2M Hill</i>						10/16/06 1600	<i>Brett Mackey CIRW</i>							10/17/06 0845							
Received By						Date/Time	Relinquished By							Date/Time							
						10/16/06															
Received By						Date/Time	Shipped Via							Shipping #							
<i>J. J. O'Dell</i>						10/16/06	UPS Fed-Ex Other _____														
Special Instructions						0905															

Instructions and Agreement Provisions on Reverse Side

DISTRIBUTION: Original - LAB, Yellow - LAB, Pink - Client
Rev 2/01 Lab form 340

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

Sample Reprint

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008732. Samples arrived at the laboratory on Friday, October 06, 2006. The PO# for this group is 18957F_T0003_TM1.

Client Description
DLHCV2-DS-1 Composite Solid Sample

Lancaster Labs Number
4883068

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4883068
**DLHCV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 22:30 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 11/01/2006 at 08:20

75 Arlington Street

Discard: 12/02/2006

Ninth Floor

Boston MA 02116

C2DS1 SDG#: SWE06-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0394 J	0.0135	mg/kg	1
01643	Aluminum	7429-90-5	3,470.	4.43	mg/kg	1
01650	Calcium	7440-70-2	9,060.	16.8	mg/kg	1
01654	Iron	7439-89-6	5,460.	6.22	mg/kg	1
01657	Magnesium	7439-95-4	1,800.	2.51	mg/kg	1
06125	Arsenic	7440-38-2	1.27 J	0.225	mg/kg	10
06128	Cadmium	7440-43-9	0.425	0.0502	mg/kg	10
06131	Chromium	7440-47-3	7.94	0.410	mg/kg	10
06133	Copper	7440-50-8	19.0	0.423	mg/kg	10
06135	Lead	7439-92-1	5.48	0.198	mg/kg	10
06139	Nickel	7440-02-0	4.72	0.661	mg/kg	10
06141	Selenium	7782-49-2	0.489 U	0.489	mg/kg	10
06966	Silver	7440-22-4	0.225 U	0.225	mg/kg	1
06972	Zinc	7440-66-6	47.1	0.865	mg/kg	1
00111	Moisture	n.a.	24.3	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.27 J	0.24	mg/kg	1
06569	Bulk Density	n.a.	0.71	0.080	g/cc	1

02858 Selected SVOA's in soil by SIM

02863	Naphthalene	91-20-3	360.	13.	ug/kg	10
02870	Fluorene	86-73-7	71.	9.	ug/kg	10
02871	Phenanthrene	85-01-8	220.	9.	ug/kg	10
02872	Anthracene	120-12-7	88.	4.	ug/kg	10
02874	Fluoranthene	206-44-0	480.	9.	ug/kg	10
02875	Pyrene	129-00-0	720.	9.	ug/kg	10
02876	Benzo(a)anthracene	56-55-3	110.	9.	ug/kg	10
02877	Chrysene	218-01-9	75.	4.	ug/kg	10
02880	Benzo(a)pyrene	50-32-8	35.	9.	ug/kg	10
02882	Dibenz(a,h)anthracene	53-70-3	13. U	13.	ug/kg	10

The GC/MS semivolatile internal standard peak areas were outside of QC limits. The matrix spike and matrix spike duplicate samples were analyzed and internal standard peak areas were again outside of QC limits, indicating a matrix effect.

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
-------	-------	------	------	------	--------------	---

Lancaster Laboratories Sample No. SW 4883068
**DLHCV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 22:30 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 11/01/2006 at 08:20

75 Arlington Street

Discard: 12/02/2006

Ninth Floor

Boston MA 02116

C2DS1 SDG#: SWE06-03

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07136	37.5 mm	n.a.	100.	0.50	%	Passing	1
07137	19 mm	n.a.	93.2	0.50	%	Passing	1
07138	4.75 mm	n.a.	56.3	0.50	%	Passing	1
07139	3.35 mm	n.a.	47.7	0.50	%	Passing	1
07140	2.36 mm	n.a.	40.4	0.50	%	Passing	1
07141	1.18 mm	n.a.	39.7	0.50	%	Passing	1
07142	0.6 mm	n.a.	37.5	0.50	%	Passing	1
07143	0.3 mm	n.a.	32.9	0.50	%	Passing	1
07144	0.15 mm	n.a.	28.2	0.50	%	Passing	1
07145	0.075 mm	n.a.	24.5	0.50	%	Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	%	Passing	1
07147	0.05 mm	n.a.	0.50 U	0.50	%	Passing	1
07148	0.02 mm	n.a.	0.50 U	0.50	%	Passing	1
07149	0.005 mm	n.a.	0.50 U	0.50	%	Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	%	Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	%	Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/09/2006 11:00	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1

Lancaster Laboratories Sample No. SW 4883068
**DLHCV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 22:30 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 11/01/2006 at 08:20

75 Arlington Street

Discard: 12/02/2006

Ninth Floor

Boston MA 02116

C2DS1 SDG#: SWE06-03							
01654	Iron	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1	
01657	Magnesium	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1	
06125	Arsenic	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10	
06128	Cadmium	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10	
06131	Chromium	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10	
06133	Copper	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10	
06135	Lead	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10	
06139	Nickel	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10	
06141	Selenium	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10	
06966	Silver	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1	
06972	Zinc	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1	
00111	Moisture	EPA 160.3 modified	1	10/09/2006 14:21	Scott W Freisher	1	
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:33	Nicole M Kepley	1	
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1	
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/16/2006 01:56	William T Parker	10	
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 13:00	Luz M Groff	1	
00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 21:00	Sally L Appleyard	1	
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1	
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/08/2006 21:15	Annamaria Stipkovits	1	
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1	
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1	

Lancaster Laboratories Sample No. SW 4883069
**DLHCV2-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 22:30 by RM Account Number: 12098

 Submitted: 10/06/2006 09:40 Parsons Brinkerhoff
 Reported: 10/28/2006 at 22:45 75 Arlington Street
 Discard: 11/28/2006 Ninth Floor
 Boston MA 02116

2DS1D SDG#: SWE06-04FD

CAT No.	Analysis Name	CAS Number	As Received		Units	Dilution Factor
			Result	Method Detection Limit		
06569	Bulk Density	n.a.	0.59	0.080	g/cc	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	98.2	0.50	% Passing	1
07138	4.75 mm	n.a.	83.0	0.50	% Passing	1
07139	3.35 mm	n.a.	78.2	0.50	% Passing	1
07140	2.36 mm	n.a.	73.4	0.50	% Passing	1
07141	1.18 mm	n.a.	71.5	0.50	% Passing	1
07142	0.6 mm	n.a.	62.2	0.50	% Passing	1
07143	0.3 mm	n.a.	43.6	0.50	% Passing	1
07144	0.15 mm	n.a.	26.5	0.50	% Passing	1
07145	0.075 mm	n.a.	16.3	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1
07147	0.05 mm	n.a.	0.50 U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50 U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50 U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 2 of 2

Lancaster Laboratories Sample No. SW 4883069

DLHCV2-DS-1-D Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/04/2006 22:30 by RM Account Number: 12098

Submitted: 10/06/2006 09:40 Parsons Brinkerhoff
Reported: 10/28/2006 at 22:45 75 Arlington Street
Discard: 11/28/2006 Ninth Floor
Boston MA 02116

2DS1D SDG#: SWE06-04FD

Laboratory Chronicle

CAT	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 13:00	Luz M Groff	1

Lancaster Laboratories Sample No. SW 4883070
**DLHCV2-SS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:20 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/28/2006 at 22:45

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

C2SS1 SDG#: SWE06-05*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0167 U	0.0167	mg/kg	1
01643	Aluminum	7429-90-5	3,340.	5.38	mg/kg	1
01650	Calcium	7440-70-2	7,800.	20.4	mg/kg	1
01654	Iron	7439-89-6	2,880.	7.56	mg/kg	1
01657	Magnesium	7439-95-4	1,580.	3.05	mg/kg	1
06125	Arsenic	7440-38-2	1.70 J	0.273	mg/kg	10
06128	Cadmium	7440-43-9	0.0610 U	0.0610	mg/kg	10
06131	Chromium	7440-47-3	9.90	0.498	mg/kg	10
06133	Copper	7440-50-8	14.8	0.514	mg/kg	10
06135	Lead	7439-92-1	2.67	0.241	mg/kg	10
06139	Nickel	7440-02-0	4.56	0.803	mg/kg	10
06141	Selenium	7782-49-2	0.594 U	0.594	mg/kg	10
06966	Silver	7440-22-4	0.273 U	0.273	mg/kg	1
06972	Zinc	7440-66-6	15.8	1.05	mg/kg	1
00111	Moisture	n.a.	37.7	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.28 U	0.28	mg/kg	1
06569	Bulk Density	n.a.	0.68	0.080	g/cc	1

02858 Selected SVOA's in soil by SIM

02863	Naphthalene	91-20-3	94.	8.	ug/kg	5
02870	Fluorene	86-73-7	22.	5.	ug/kg	5
02871	Phenanthrene	85-01-8	90.	5.	ug/kg	5
02872	Anthracene	120-12-7	27.	3.	ug/kg	5
02874	Fluoranthene	206-44-0	120.	5.	ug/kg	5
02875	Pyrene	129-00-0	150.	5.	ug/kg	5
02876	Benzo(a)anthracene	56-55-3	36.	5.	ug/kg	5
02877	Chrysene	218-01-9	29.	3.	ug/kg	5
02880	Benzo(a)pyrene	50-32-8	9.4 J	5.	ug/kg	5
02882	Dibenz(a,h)anthracene	53-70-3	8. U	8.	ug/kg	5

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	98.9	0.50	% Passing	1
07137	19 mm	n.a.	84.8	0.50	% Passing	1
07138	4.75 mm	n.a.	27.9	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4883070
**DLHCV2-SS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:20 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/28/2006 at 22:45

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

C2SS1 SDG#: SWE06-05*

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07139	3.35 mm	n.a.	20.7		0.50	% Passing	1
07140	2.36 mm	n.a.	15.5		0.50	% Passing	1
07141	1.18 mm	n.a.	0.50	U	0.50	% Passing	1
07142	0.6 mm	n.a.	0.50	U	0.50	% Passing	1
07143	0.3 mm	n.a.	0.50	U	0.50	% Passing	1
07144	0.15 mm	n.a.	0.50	U	0.50	% Passing	1
07145	0.075 mm	n.a.	0.50	U	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50	U	0.50	% Passing	1
07147	0.05 mm	n.a.	0.50	U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 2.36 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/09/2006 11:02	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
01657	Magnesium	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10

Lancaster Laboratories Sample No. SW 4883070
**DLHCV2-SS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:20 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/28/2006 at 22:45

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

C2SS1 SDG#: SWE06-05*

06131	Chromium	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
00111	Moisture	EPA 160.3 modified	1	10/09/2006 14:21	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:34	Nicole M Kepley	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/11/2006 12:51	Joseph M Gambler	5
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 13:00	Luz M Groff	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/10/2006 03:15	David V Hershey Jr	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/08/2006 21:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	2	10/10/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 10:45 PM

Group Number: 1008732

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 062815708002								
Aluminum	3.35 U	3.35	mg/kg	125		91-151		
Calcium	12.7 U	12.7	mg/kg	107		89-121		
Iron	4.71 U	4.71	mg/kg	119		68-158		
Magnesium	1.90 U	1.90	mg/kg	109		90-120		
Silver	0.170 U	0.170	mg/kg	104		90-126		
Zinc	0.655 U	0.655	mg/kg	95		85-110		
Batch number: 062815711001								
Mercury	0.0105 U	0.0105	mg/kg	93		66-133		
Batch number: 062816150001A								
Arsenic	0.0170 U	0.0170	mg/kg	110		77-123		
Cadmium	0.0038 U	0.0038	mg/kg	109		79-121		
Chromium	0.209	0.0310	mg/kg	106		78-122		
Copper	0.0546 J	0.0320	mg/kg	112		81-119		
Lead	0.0614 J	0.0150	mg/kg	109		79-121		
Nickel	0.0500 U	0.0500	mg/kg	110		81-119		
Selenium	0.0370 U	0.0370	mg/kg	106		74-126		
Batch number: 06282820004B								
Moisture				Sample number(s): 4883068, 4883070	100	99-101		
Batch number: 06282SLC026								
Naphthalene	1. U	1.	ug/kg	92	91	71-105	1	30
Fluorene	0.7 U	0.7	ug/kg	91	91	70-115	0	30
Phenanthrene	0.7 U	0.7	ug/kg	95	93	64-118	1	30
Anthracene	0.3 U	0.3	ug/kg	87	84	60-111	4	30
Fluoranthene	0.7 U	0.7	ug/kg	88	87	57-128	2	30
Pyrene	0.7 U	0.7	ug/kg	91	91	71-117	0	30
Benzo(a)anthracene	0.7 U	0.7	ug/kg	89	88	71-114	1	30
Chrysene	0.3 U	0.3	ug/kg	93	91	69-114	1	30
Benzo(a)pyrene	0.7 U	0.7	ug/kg	96	86	59-118	11	30
Dibenz(a,h)anthracene	1. U	1.	ug/kg	107	96	56-130	12	30
Batch number: 06283102201A								
Total Cyanide (solid)	0.18 U	0.18	mg/kg	96		90-110		
Batch number: 06285SLC026								
Naphthalene	1. U	1.	ug/kg	87		71-105		
Fluorene	0.7 U	0.7	ug/kg	88		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	93		64-118		
Anthracene	0.3 U	0.3	ug/kg	82		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	84		57-128		
Pyrene	0.7 U	0.7	ug/kg	90		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	82		71-114		
Chrysene	0.3 U	0.3	ug/kg	83		69-114		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 10:45 PM

Group Number: 1008732

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Benzo(a)pyrene	0.7 U	0.7	ug/kg	82		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	74		56-130		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06280710301A			Sample number(s): 4883070 BKG: P881932					
75 mm					100.	100.	0	20
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					99.6	99.5	0	20
3.35 mm					99.5	99.2	0	20
2.36 mm					99.2	98.3	1	20
1.18 mm					91.9	91.9	0	20
0.6 mm					72.8	71.5	2	20
0.3 mm					57.7	56.7	2	20
0.15 mm					49.2	48.6	1	20
0.075 mm					42.3	41.8	1	20
0.064 mm					37.0	35.0	6	20
0.05 mm					22.0	20.0	10	20
0.02 mm					6.0	4.0	40* (1)	20
0.005 mm					3.0	3.5	15 (1)	20
0.002 mm					0.50 J	0.50 J	0 (1)	20
0.001 mm					0.50 U	0.50 U	0 (1)	20
Batch number: 062815708002			Sample number(s): 4883068, 4883070 UNSPK: P882485 BKG: P882485					
Aluminum	(2)	(2)	75-125	1	20	2,080.	2,060.	1
Calcium	(2)	(2)	75-125	0	20	4,780.	4,720.	1
Iron	(2)	(2)	75-125	17	20	2,730.	2,580.	6
Magnesium	(2)	(2)	75-125	0	20	1,730.	1,690.	2
Silver	94	96	75-125	1	20	0.170 U	0.170 U	-56 (1)
Zinc	84	86	75-125	1	20	12.6	9.73	25* (1)
Batch number: 062815711001			Sample number(s): 4883068, 4883070 UNSPK: P882485 BKG: P882485					
Mercury	98	109	80-120	11	20	0.0105 U	0.0153 J	200* (1)
Batch number: 062816150001A			Sample number(s): 4883068, 4883070 UNSPK: P882485 BKG: P882485					
Arsenic	147*	91	70-130	24*	20	1.14 J	1.26 J	9 (1)
Cadmium	91	83	75-125	5	20	0.336	0.314	7 (1)
Chromium	99	94	75-125	2	20	6.14	6.15	0 (1)
Copper	153*	95	75-125	19	20	8.98	8.51	5
Lead	91	95	75-125	2	20	1.49	1.41	6 (1)
Nickel	104	110	75-125	4	20	2.18	2.20	1 (1)
Selenium	180*	141*	75-130	24*	20	0.370 U	0.471 J	200* (1)
Batch number: 06282820004B			Sample number(s): 4883068, 4883070 BKG: P884171					
Moisture						31.1	31.3	1
Batch number: 06283102201A			Sample number(s): 4883068, 4883070 UNSPK: P882485 BKG: P882485					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 10:45 PM

Group Number: 1008732

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG Conc 0.18</u>	<u>DUP Conc 0.18</u>	<u>DUP RPD 63*</u>	<u>Dup RPD Max 17 (1)</u>
Total Cyanide (solid)	90		59-124		U	U	(1)	17
Batch number: 06284656901B			Sample number(s): 4883068, 4883070	BKG: P884379				
Bulk Density				0.83		0.83	1 (1)	20
Batch number: 06285SLC026			Sample number(s): 4883068 UNSPK: 4883068					
Naphthalene	(2)	(2)	54-121	8	30			
Fluorene	43*	52*	62-119	4	30			
Phenanthrene	(2)	(2)	31-160	5	30			
Anthracene	77	79	55-118	1	30			
Fluoranthene	(2)	(2)	49-125	1	30			
Pyrene	(2)	(2)	58-137	12	30			
Benzo(a)anthracene	82	93	69-118	3	30			
Chrysene	74	51*	70-107	10	30			
Benzo(a)pyrene	10*	-3*	69-106	15	30			
Dibenz(a,h)anthracene	0*	36*	40-126	200*	30			
Batch number: 06286656901A			Sample number(s): 4883069 BKG: P886259					
Bulk Density				0.78		0.77	1 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06282SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4883070	97	81	78
Blank	106	93	96
LCS	94	88	84
LCSD	94	91	87
Limits:	42-142	48-122	65-125

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06285SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4883068	98	67	100
Blank	105	85	86
LCS	98	86	81
MS	85	67	117
MSD	97	57	94
Limits:	42-142	48-122	65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 4 of 4

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 10/28/06 at 10:45 PM

Group Number: 1008732

- *- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



Acct. # 12098 Group# 1068732 Sample # 4883068-70

of 2

COC # 0132130

Please print. Instructions on reverse side correspond with circled numbers

<p>1 Client: <u>CH2M Hill</u> Acct. #: _____</p> <p>Project Name/#: <u>GRANT LAKES</u> PWSID #: _____</p> <p>Project Manager: <u>ERIN MOSLEY</u> P.O.#: _____</p> <p>Sampler: <u>Ragan McMorris</u> Quote #: _____</p> <p>Name of state where samples were collected: <u>MN</u></p>				<p>5 Analyses Requested</p> <table border="1"> <thead> <tr> <th rowspan="2">Matrix</th> <th colspan="10">Preservation Codes</th> </tr> <tr> <th><input type="checkbox"/> Portable</th> <th><input type="checkbox"/> Check if Analyzed</th> <th><input type="checkbox"/> NPDOS</th> <th><input type="checkbox"/> Other</th> <th>Total # of Containers</th> <th>BENT DENSITY, Grain Size</th> <th>SPECIFIC Gravity</th> <th>TOTAL METALS, Cu Hg % MOIST (3000)</th> <th>Hg METALS, Cu</th> <th>SVOCs, PAHs</th> <th>TOC</th> <th>DOC</th> <th>BOD/DO</th> <th>TG</th> </tr> </thead> <tbody> <tr> <td></td> </tr> </tbody> </table>										Matrix	Preservation Codes										<input type="checkbox"/> Portable	<input type="checkbox"/> Check if Analyzed	<input type="checkbox"/> NPDOS	<input type="checkbox"/> Other	Total # of Containers	BENT DENSITY, Grain Size	SPECIFIC Gravity	TOTAL METALS, Cu Hg % MOIST (3000)	Hg METALS, Cu	SVOCs, PAHs	TOC	DOC	BOD/DO	TG																<p>For Lab Use Only FSC: _____ SCR#: _____</p> <p>6 Preservation Codes H=HCl T=Thiosulfate N=NHO₃ B=NaOH S=H₂SO₄ O=Other</p>																																																																																																																																																		
Matrix	Preservation Codes																																																																																																																																																																																																							
	<input type="checkbox"/> Portable	<input type="checkbox"/> Check if Analyzed	<input type="checkbox"/> NPDOS	<input type="checkbox"/> Other	Total # of Containers	BENT DENSITY, Grain Size	SPECIFIC Gravity	TOTAL METALS, Cu Hg % MOIST (3000)	Hg METALS, Cu	SVOCs, PAHs	TOC	DOC	BOD/DO	TG																																																																																																																																																																																										
														<p>2 Sample Identification</p> <table border="1"> <thead> <tr> <th></th> <th>Date Collected</th> <th>Time Collected</th> <th>Grab Composite</th> <th>Soil</th> <th>Water</th> <th>Other</th> <th>Total # of Containers</th> <th>BENT DENSITY, Grain Size</th> <th>SPECIFIC Gravity</th> <th>TOTAL METALS, Cu Hg % MOIST (3000)</th> <th>Hg METALS, Cu</th> <th>SVOCs, PAHs</th> <th>TOC</th> <th>DOC</th> <th>BOD/DO</th> <th>TG</th> </tr> </thead> <tbody> <tr> <td><u>DLHCV2-DS-1</u></td> <td><u>10-4-06</u></td> <td><u>2230</u></td> <td>X X</td> <td></td> <td></td> <td></td> <td><u>3</u></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>DLHCV2-DS-1-D</u></td> <td><u>10-4-06</u></td> <td><u>2230</u></td> <td>X X</td> <td></td> <td></td> <td></td> <td><u>1</u></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>DLHCV2-DS-1-BU</u></td> <td><u>10-4-06</u></td> <td><u>2230</u></td> <td>X X</td> <td></td> <td></td> <td></td> <td><u>1</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>DLHCV2-SS-1</u> + <u>DLHCV2-SS-1</u></td> <td><u>10-4-06</u></td> <td><u>2120</u></td> <td>X X</td> <td></td> <td></td> <td></td> <td><u>3</u></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>DLHCV2-SS-1-D</u></td> <td><u>10-4-06</u></td> <td><u>2120</u></td> <td>X X</td> <td></td> <td></td> <td></td> <td><u>0</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>DLHCV2-SS-2</u></td> <td><u>10-4-06</u></td> <td><u>2100</u></td> <td>X X</td> <td></td> <td></td> <td></td> <td><u>3</u></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>DLHCV2-SS-2-BU</u></td> <td></td> <td></td> <td>X X</td> <td></td> <td></td> <td></td> <td><u>2</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>DLHCV2-SS-1-BU</u></td> <td><u>10-4-06</u></td> <td><u>2120</u></td> <td>X X</td> <td></td> <td></td> <td></td> <td><u>2</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Date Collected	Time Collected	Grab Composite	Soil	Water	Other	Total # of Containers	BENT DENSITY, Grain Size	SPECIFIC Gravity	TOTAL METALS, Cu Hg % MOIST (3000)	Hg METALS, Cu	SVOCs, PAHs	TOC	DOC	BOD/DO	TG	<u>DLHCV2-DS-1</u>	<u>10-4-06</u>	<u>2230</u>	X X				<u>3</u>	X	X	X		X					<u>DLHCV2-DS-1-D</u>	<u>10-4-06</u>	<u>2230</u>	X X				<u>1</u>	X									<u>DLHCV2-DS-1-BU</u>	<u>10-4-06</u>	<u>2230</u>	X X				<u>1</u>										<u>DLHCV2-SS-1</u> + <u>DLHCV2-SS-1</u>	<u>10-4-06</u>	<u>2120</u>	X X				<u>3</u>	X	X	X							<u>DLHCV2-SS-1-D</u>	<u>10-4-06</u>	<u>2120</u>	X X				<u>0</u>										<u>DLHCV2-SS-2</u>	<u>10-4-06</u>	<u>2100</u>	X X				<u>3</u>	X	X	X							<u>DLHCV2-SS-2-BU</u>			X X				<u>2</u>										<u>DLHCV2-SS-1-BU</u>	<u>10-4-06</u>	<u>2120</u>	X X				<u>2</u>										<p>7 Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)</p> <p>Date results are needed: _____</p> <p>Rush results requested by (please circle): Phone Fax E-mail Phone #: _____ Fax #: _____</p> <p>E-mail address: _____</p> <p>8 Data Package Options (please circle if required)</p> <table border="1"> <tr> <td>Type I (validation/NJ Reg)</td> <td>TX TRRP-13</td> <td colspan="2">SDG Complete?</td> </tr> <tr> <td>Type II (Tier II)</td> <td>MA MCP CT RCP</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Type III (Reduced NJ)</td> <td colspan="3">Site-specific QC (MS/MSD/Dup)? <u>Yes</u> No</td> </tr> <tr> <td>Type IV (CLP SOW)</td> <td colspan="3">(If yes, indicate QC sample and submit triplicate volume.)</td> </tr> <tr> <td>Type VI (Raw Data Only)</td> <td colspan="3">Internal COC Required? Yes <u>NO</u></td> </tr> </table>		Type I (validation/NJ Reg)	TX TRRP-13	SDG Complete?		Type II (Tier II)	MA MCP CT RCP	Yes	No	Type III (Reduced NJ)	Site-specific QC (MS/MSD/Dup)? <u>Yes</u> No			Type IV (CLP SOW)	(If yes, indicate QC sample and submit triplicate volume.)			Type VI (Raw Data Only)	Internal COC Required? Yes <u>NO</u>			<p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p> <p>101</p> <p>102</p> <p>103</p> <p>104</p> <p>105</p> <p>106</p> <p>107</p> <p>108</p> <p>109</p> <p>110</p> <p>111</p> <p>112</p> <p>113</p> <p>114</p> <p>115</p> <p>116</p> <p>117</p> <p>118</p> <p>119</p> <p>120</p> <p>121</p> <p>122</p> <p>123</p> <p>124</p> <p>125</p> <p>126</p> <p>127</p> <p>128</p> <p>129</p> <p>130</p> <p>131</p> <p>132</p> <p>133</p> <p>134</p> <p>135</p> <p>136</p> <p>137</p> <p>138</p> <p>139</p> <p>140</p> <p>141</p> <p>142</p> <p>143</p> <p>144</p> <p>145</p> <p>146</p> <p>147</p> <p>148</p> <p>149</p> <p>150</p> <p>151</p> <p>152</p> <p>153</p> <p>154</p> <p>155</p> <p>156</p> <p>157</p> <p>158</p> <p>159</p> <p>160</p> <p>161</p> <p>162</p> <p>163</p> <p>164</p> <p>165</p> <p>166</p> <p>167</p> <p>168</p> <p>169</p> <p>170</p> <p>171</p> <p>172</p> <p>173</p> <p>174</p> <p>175</p> <p>176</p> <p>177</p> <p>178</p> <p>179</p> <p>180</p> <p>181</p> <p>182</p> <p>183</p> <p>184</p> <p>185</p> <p>186</p> <p>187</p> <p>188</p> <p>189</p> <p>190</p> <p>191</p> <p>192</p> <p>193</p> <p>194</p> <p>195</p> <p>196</p> <p>197</p> <p>198</p> <p>199</p> <p>200</p> <p>201</p> <p>202</p> <p>203</p> <p>204</p> <p>205</p> <p>206</p> <p>207</p> <p>208</p> <p>209</p> <p>210</p> <p>211</p> <p>212</p> <p>213</p> <p>214</p> <p>215</p> <p>216</p> <p>217</p> <p>218</p> <p>219</p> <p>220</p> <p>221</p> <p>222</p> <p>223</p> <p>224</p> <p>225</p> <p>226</p> <p>227</p> <p>228</p> <p>229</p> <p>230</p> <p>231</p> <p>232</p> <p>233</p> <p>234</p> <p>235</p> <p>236</p> <p>237</p> <p>238</p> <p>239</p> <p>240</p> <p>241</p> <p>242</p> <p>243</p> <p>244</p> <p>245</p> <p>246</p> <p>247</p> <p>248</p> <p>249</p> <p>250</p> <p>251</p> <p>252</p> <p>253</p> <p>254</p> <p>255</p> <p>256</p> <p>257</p> <p>258</p> <p>259</p> <p>260</p> <p>261</p> <p>262</p> <p>263</p> <p>264</p> <p>265</p> <p>266</p> <p>267</p> <p>268</p> <p>269</p> <p>270</p> <p>271</p> <p>272</p> <p>273</p> <p>274</p> <p>275</p> <p>276</p> <p>277</p> <p>278</p> <p>279</p> <p>280</p> <p>281</p> <p>282</p> <p>283</p> <p>284</p> <p>285</p> <p>286</p> <p>287</p> <p>288</p> <p>289</p> <p>290</p> <p>291</p> <p>292</p> <p>293</p> <p>294</p> <p>295</p> <p>296</p> <p>297</p> <p>298</p> <p>299</p> <p>300</p> <p>301</p> <p>302</p> <p>303</p> <p>304</p> <p>305</p> <p>306</p> <p>307</p> <p>308</p> <p>309</p> <p>310</p> <p>311</p> <p>312</p> <p>313</p> <p>314</p> <p>315</p> <p>316</p> <p>317</p> <p>318</p> <p>319</p> <p>320</p> <p>321</p> <p>322</p> <p>323</p> <p>324</p> <p>325</p> <p>326</p> <p>327</p> <p>328</p> <p>329</p> <p>330</p> <p>331</p> <p>332</p> <p>333</p> <p>334</p> <p>335</p> <p>336</p> <p>337</p> <p>338</p> <p>339</p> <p>340</p> <p>341</p> <p>342</p> <p>343</p> <p>344</p> <p>345</p> <p>346</p> <p>347</p> <p>348</p> <p>349</p> <p>350</p> <p>351</p> <p>352</p> <p>353</p> <p>354</p> <p>355</p> <p>356</p> <p>357</p> <p>358</p> <p>359</p> <p>360</p> <p>361</p> <p>362</p> <p>363</p> <p>364</p> <p>365</p> <p>366</p> <p>367</p> <p>368</p> <p>369</p> <p>370</p> <p>371</p> <p>372</p> <p>373</p> <p>374</p> <p>375</p> <p>376</p> <p>377</p> <p>378</p> <p>379</p> <p>380</p> <p>381</p> <p>382</p> <p>383</p> <p>384</p> <p>385</p> <p>386</p> <p>387</p> <p>388</p> <p>389</p> <p>390</p> <p>391</p> <p>392</p> <p>393</p> <p>394</p> <p>395</p> <p>396</p> <p>397</p> <p>398</p> <p>399</p> <p>400</p> <p>401</p> <p>402</p> <p>403</p> <p>404</p> <p>405</p> <p>406</p> <p>407</p> <p>408</p> <p>409</p> <p>410</p> <p>411</p> <p>412</p> <p>413</p> <p>414</p> <p>415</p> <p>416</p> <p>417</p> <p>418</p> <p>419</p> <p>420</p> <p>421</p> <p>422</p> <p>423</p> <p>424</p> <p>425</p> <p>426</p> <p>427</p> <p>428</p> <p>429</p> <p>430</p> <p>431</p> <p>432</p> <p>433</p> <p>434</p> <p>435</p> <p>436</p> <p>437</p> <p>438</p> <p>439</p> <p>440</p> <p>441</p> <p>442</p> <p>443</p> <p>444</p> <p>445</p> <p>446</p> <p>447</p> <p>448</p> <p>449</p> <p>450</p> <p>451</p> <p>452</p> <p>453</p> <p>454</p> <p>455</p> <p>456</p> <p>457</p> <p>458</p> <p>459</p> <p>460</p> <p>461</p> <p>462</p> <p>463</p> <p>464</p> <p>465</p> <p>466</p> <p>467</p> <p>468</p> <p>469</p> <p>470</p> <p>471</p> <p>472</p> <p>473</p> <p>474</p> <p>475</p> <p>476</p> <p>477</p> <p>478</p> <p>479</p> <p>480</p> <p>481</p> <p>482</p> <p>483</p> <p>484</p> <p>485</p> <p>486</p> <p>487</p> <p>488</p> <p>489</p> <p>490</p> <p>491</p> <p>492</p> <p>493</p> <p>494</p> <p>495</p> <p>496</p> <p>497</p> <p>498</p> <p>499</p> <p>500</p> <p>501</p> <p>502</p> <p>503</p> <p>504</p> <p>505</p> <p>506</p> <p>507</p> <p>508</p> <p>509</p> <p>510</p> <p>511</p> <p>512</p> <p>513</p> <p>514</p> <p>515</p> <p>516</p> <p>517</p> <p>518</p> <p>519</p> <p>520</p> <p>521</p> <p>522</p> <p>523</p> <p>524</p> <p>525</p> <p>526</p> <p>527</p> <p>528</p> <p>529</p> <p>530</p> <p>531</p> <p>532</p> <p>533</p> <p>534</p> <p>535</p> <p>536</p> <p>537</p> <p>538</p> <p>539</p> <p>540</p> <p>541</p> <p>542</p> <p>543</p> <p>544</p> <p>545</p> <p>546</p> <p>547</p> <p>548</p> <p>549</p> <p>550</p> <p>551</p> <p>552</p> <p>553</p> <p>554</p> <p>555</p> <p>556</p> <p>557</p> <p>558</p> <p>559</p> <p>560</p> <p>561</p> <p>562</p> <p>563</p> <p>564</p> <p>565</p> <p>566</p> <p>567</p> <p>568</p> <p>569</p> <p>570</p> <p>571</p> <p>572</p> <p>573</p> <p>574</p> <p>575</p> <p>576</p> <p>577</p> <p>578</p> <p>579</p> <p>580</p> <p>581</p> <p>582</p> <p>583</p> <p>584</p> <p>585</p> <p>586</p> <p>587</p> <p>588</p> <p>589</p> <p>590</p> <p>591</p> <p>592</p> <p>593</p> <p>594</p> <p>595</p> <p>596</p> <p>597</p> <p>598</p> <p>599</p> <p>600</p> <p>601</p> <p>602</p> <p>603</p> <p>604</p> <p>605</p> <p>606</p> <p>607</p> <p>608</p> <p>609</p> <p>610</p> <p>611</p> <p>612</p> <p>613</p> <p>614</p> <p>615</p> <p>616</p> <p>617</p> <p>618</p> <p>619</p> <p>620</p> <p>621</p> <p>622</p> <p>623</p> <p>624</p> <p>625</p> <p>626</p> <p>627</p> <p>628</p> <p>629</p> <p>630</p> <p>631</p> <p>632</p> <p>633</p> <p>634</p> <p>635</p> <p>636</p> <p>637</p> <p>638</p> <p>639</p> <p>640</p> <p>641</p> <p>642</p> <p>643</p> <p>644</p> <p>645</p> <p>646</p> <p>647</p> <p>648</p> <p>649</p> <p>650</p> <p>651</p> <p>652</p> <p>653</p> <p>654</p> <p>655</p> <p>656</p> <p>657</p> <p>658</p> <p>659</p> <p>660</p> <p>661</p> <p>662</p> <p>663</p> <p>664</p> <p>665</p> <p>666</p> <p>667</p> <p>668</p> <p>669</p> <p>670</p> <p>671</p> <p>672</p> <p>673</p> <p>674</p> <p>675</p> <p>676</p> <p>677</p> <p>678</p> <p>679</p> <p>680</p> <p>681</p> <p>682</p> <p>683</p> <p>684</p> <p>685</p> <p>686</p> <p>687</p> <p>688</p> <p>689</p> <p>690</p> <p>691</p> <p>692</p> <p>693</p> <p>694</p> <p>695</p> <p>696</p> <p>697</p> <p>698</p> <p>699</p> <p>700</p> <p>701</p> <p>702</p> <p>703</p> <p>704</p> <p>705</p> <p>706</p> <p>707</p> <p>708</p> <p>709</p> <p>710</p> <p>711</p> <p>712</p> <p>713</p> <p>714</p> <p>715</p> <p>716</p> <p>717</p> <p>718</p> <p>719</p> <p>720</p> <p>721</p> <p>722</p> <p>723</p> <p>724</p> <p>725</p> <p>726</p> <p>727</p> <p>728</p> <p>729</p> <p>730</p> <p>731</p> <p>732</p> <p>733</p> <p>734</p> <p>735</p> <p>736</p> <p>737</p> <p>738</p> <p>739</p> <p>740</p> <p>741</p> <p>742</p> <p>743</p> <p>744</p> <p>745</p> <p>746</p> <p>747</p> <p>748</p> <p>749</p> <p>750</p> <p>751</p> <p>752</p> <p>753</p> <p>754</p> <p>755</p> <p>756</p> <p>757</p> <p>758</p> <p>759</p> <p>760</p> <p>761</p> <p>762</p> <p>763</p> <p>764</p> <p>765</p> <p>766</p> <p>767</p> <p>768</p> <p>769</p> <p>770</p> <p>771</p> <p>772</p> <p>773</p> <p>774</p> <p>775</p> <p>776</p> <p>777</p> <p>778</p> <p>779</p> <p>780</p> <p>781</p> <p>782</p> <p>783</p> <p>784</p> <p>785</p> <p>786</p> <p>787</p> <p>788</p> <p>789</p> <p>790</p> <p>791</p> <p>792</p> <p>793</p> <p>794</p> <p>795</p> <p>796</p> <p>797</p> <p>798</p> <p>799</p> <p>800</p> <p>801</p> <p>802</p> <p>803</p> <p>804</p> <p>805</p> <p>806</p> <p>807</p> <p>808</p> <p>809</p> <p>810</p> <p>811</p> <p>812</p> <p>813</p> <p>814</p> <p>815</p> <p>816</p> <p>817</p> <p>818</p> <p>819</p> <p>820</p> <p>821</p> <p>822</p> <p>823</p> <p>824</p> <p>825</p> <p>826</p> <p>827</p> <p>828</p> <p>829</p> <p>830</p> <p>831</p> <p>832</p> <p>833</p> <p>834</p> <p>835</p> <p>836</p> <p>837</p> <p>838</p> <p>839</p> <p>840</p> <p>841</p> <p>842</p> <p>843</p> <p>844</p> <p>845</p> <p>846</p> <p>847</p> <p>848</p> <p>849</p> <p>850</p> <p>851</p> <p>852</p> <p>853</p> <p>854</p> <p>855</p> <p>856</p> <p>857</p> <p>858</p> <p>859</p> <p>860</p> <p>861</p> <p>862</p> <p>863</p> <p>864</p> <p>865</p> <p>866</p> <p>867</p> <p>868</p> <p>869</p> <p>870</p> <p>871</p> <p>872</p> <p>873</p> <p>874</p> <p>875</p> <p>876</p> <p									
	Date Collected	Time Collected	Grab Composite	Soil	Water	Other	Total # of Containers	BENT DENSITY, Grain Size	SPECIFIC Gravity	TOTAL METALS, Cu Hg % MOIST (3000)	Hg METALS, Cu	SVOCs, PAHs	TOC	DOC	BOD/DO	TG																																																																																																																																																																																								
<u>DLHCV2-DS-1</u>	<u>10-4-06</u>	<u>2230</u>	X X				<u>3</u>	X	X	X		X																																																																																																																																																																																												
<u>DLHCV2-DS-1-D</u>	<u>10-4-06</u>	<u>2230</u>	X X				<u>1</u>	X																																																																																																																																																																																																
<u>DLHCV2-DS-1-BU</u>	<u>10-4-06</u>	<u>2230</u>	X X				<u>1</u>																																																																																																																																																																																																	
<u>DLHCV2-SS-1</u> + <u>DLHCV2-SS-1</u>	<u>10-4-06</u>	<u>2120</u>	X X				<u>3</u>	X	X	X																																																																																																																																																																																														
<u>DLHCV2-SS-1-D</u>	<u>10-4-06</u>	<u>2120</u>	X X				<u>0</u>																																																																																																																																																																																																	
<u>DLHCV2-SS-2</u>	<u>10-4-06</u>	<u>2100</u>	X X				<u>3</u>	X	X	X																																																																																																																																																																																														
<u>DLHCV2-SS-2-BU</u>			X X				<u>2</u>																																																																																																																																																																																																	
<u>DLHCV2-SS-1-BU</u>	<u>10-4-06</u>	<u>2120</u>	X X				<u>2</u>																																																																																																																																																																																																	
Type I (validation/NJ Reg)	TX TRRP-13	SDG Complete?																																																																																																																																																																																																						
Type II (Tier II)	MA MCP CT RCP	Yes	No																																																																																																																																																																																																					
Type III (Reduced NJ)	Site-specific QC (MS/MSD/Dup)? <u>Yes</u> No																																																																																																																																																																																																							
Type IV (CLP SOW)	(If yes, indicate QC sample and submit triplicate volume.)																																																																																																																																																																																																							
Type VI (Raw Data Only)	Internal COC Required? Yes <u>NO</u>																																																																																																																																																																																																							

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1010834. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

Client Description
DLHCV1-SS-2 Composite Solid Sample

Lancaster Labs Number
4895678

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

A handwritten signature in black ink that reads "Rachel R. Cochis".

Rachel R. Cochis
Group Leader

Lancaster Laboratories Sample No. SW 4895678
**DLHCV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 09:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 11/08/2006 at 15:31

75 Arlington Street

Discard: 12/09/2006

Ninth Floor

Boston MA 02116

V1SS2 SDG#: SWE15-01*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0177 J	0.0114	mg/kg	1
01643	Aluminum	7429-90-5	1,470.	3.71	mg/kg	1
01650	Calcium	7440-70-2	5,040.	14.1	mg/kg	1
01654	Iron	7439-89-6	470,000.	266.	mg/kg	50
01657	Magnesium	7439-95-4	796.	2.10	mg/kg	1
06125	Arsenic	7440-38-2	28.9 J	4.90	mg/kg	250
06128	Cadmium	7440-43-9	0.563	0.0438	mg/kg	10
06131	Chromium	7440-47-3	144.	8.93	mg/kg	250
06133	Copper	7440-50-8	1,940.	10.1	mg/kg	250
06135	Lead	7439-92-1	91.6	0.173	mg/kg	10
06139	Nickel	7440-02-0	119.	14.4	mg/kg	250
06141	Selenium	7782-49-2	10.7 U	10.7	mg/kg	250
06966	Silver	7440-22-4	2.44	0.188	mg/kg	1
06972	Zinc	7440-66-6	72.5	0.726	mg/kg	1
00111	Moisture	n.a.	13.2	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	14,400.	200.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.20 U	0.20	mg/kg	1
06569	Bulk Density	n.a.	1.71	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	13.	1.	ug/kg	1
02870	Fluorene	86-73-7	3.3	0.8	ug/kg	1
02871	Phenanthrene	85-01-8	15.	0.8	ug/kg	1
02872	Anthracene	120-12-7	2.7	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	12.	0.8	ug/kg	1
02875	Pyrene	129-00-0	15.	0.8	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	4.2	0.8	ug/kg	1
02877	Chrysene	218-01-9	6.9	0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	2.9	0.8	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	1. U	1.	ug/kg	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	98.8	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4895678
**DLHCV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 09:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 11/08/2006 at 15:31

75 Arlington Street

Discard: 12/09/2006

Ninth Floor

Boston MA 02116

V1SS2 SDG#: SWE15-01*

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result				
07138	4.75 mm	n.a.	59.1		0.50	%	1
07139	3.35 mm	n.a.	56.8		0.50	%	1
07140	2.36 mm	n.a.	56.6		0.50	%	1
07141	1.18 mm	n.a.	0.50	U	0.50	%	1
07142	0.6 mm	n.a.	0.50	U	0.50	%	1
07143	0.3 mm	n.a.	0.50	U	0.50	%	1
07144	0.15 mm	n.a.	0.50	U	0.50	%	1
07145	0.075 mm	n.a.	0.50	U	0.50	%	1
07146	0.064 mm	n.a.	0.50	U	0.50	%	1
07147	0.05 mm	n.a.	0.50	U	0.50	%	1
07148	0.02 mm	n.a.	0.50	U	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 2.36 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/24/2006 19:42	Nelli S Markaryan	1
01643	Aluminum	SW-846 6010B	1	10/24/2006 21:50	John P Hook	1
01650	Calcium	SW-846 6010B	1	10/24/2006 21:50	John P Hook	1
01654	Iron	SW-846 6010B	1	10/27/2006 18:53	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/24/2006 21:50	John P Hook	1
06125	Arsenic	SW-846 6020	1	10/26/2006 16:08	Jayme E Curet	250
06128	Cadmium	SW-846 6020	1	10/25/2006 13:02	Jayme E Curet	10

Lancaster Laboratories Sample No. SW 4895678
**DLHCV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 09:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 11/08/2006 at 15:31

75 Arlington Street

Discard: 12/09/2006

Ninth Floor

Boston MA 02116

V1SS2 SDG#: SWE15-01*

06131	Chromium	SW-846 6020	1	10/26/2006 16:08	Jayme E Curet	250
06133	Copper	SW-846 6020	1	10/30/2006 13:24	Jayme E Curet	250
06135	Lead	SW-846 6020	1	10/25/2006 13:02	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/30/2006 13:24	Jayme E Curet	250
06141	Selenium	SW-846 6020	1	10/26/2006 16:08	Jayme E Curet	250
06966	Silver	SW-846 6010B	1	10/24/2006 21:50	John P Hook	1
06972	Zinc	SW-846 6010B	1	10/24/2006 21:50	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	10/23/2006 12:19	William C Schwebel	1
02079	TOC Solids/Sludges	SM20 5310 B modified	1	10/24/2006 12:17	James S Mathiot	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/25/2006 17:57	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/23/2006 23:55	Daniel S Smith	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/25/2006 08:44	Brian K Graham	1
07103	Grain Size to 1 um	ASTM D422	1	11/06/2006 12:00	Luz M Groff	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/24/2006 18:30	Sally L Appleyard	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/24/2006 08:35	Megersa Deyessa	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	10/26/2006 20:45	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/24/2006 10:30	Megersa Deyessa	1
05896	Cyanide Solid Distillation	SW-846 9012A	2	10/25/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/24/2006 20:20	Annamaria Stipkovits	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 11/08/06 at 03:31 PM

Group Number: 1010834

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06296820002A Moisture			Sample number(s): 4895678		100	99-101		
Batch number: 06297113031A TOC Solids/Sludges Combustion	60.0 U	60.0	mg/kg	40		40-148		
Batch number: 062975708001 Aluminum Calcium Magnesium Silver Zinc	3.35 U 12.7 U 1.90 U 0.170 U 0.655 U	3.35 12.7 1.90 0.170 0.655	mg/kg	132 100 105 101 98		61-139 81-119 78-122 66-134 79-121		
Batch number: 062975711001 Mercury	0.0105 U	0.0105	mg/kg	96		66-133		
Batch number: 062976150001A Arsenic Chromium Copper Lead Nickel Selenium	0.0170 U 0.179 J 0.459 0.0464 J 0.0500 U 0.0370 U	0.0170 0.0310 0.0350 0.0150 0.0500 0.0370	mg/kg	94 114 115 109 113 104		66-101 73-127 82-118 82-118 82-118 74-126		
Batch number: 062976150001C Cadmium	0.0038 U	0.0038	mg/kg	112		81-119		
Batch number: 06297SLA026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	1. U 0.7 U 0.7 U 0.3 U 0.7 U 0.7 U 0.7 U 0.3 U 0.7 U 1. U	1. 0.7 0.7 0.3 0.7 0.7 0.7 0.3 0.7 1.	ug/kg	82 89 86 82 89 91 90 89 83 82		71-105 70-115 64-118 60-111 57-128 71-117 71-114 69-114 59-118 56-130		
Batch number: 06298102201B Total Cyanide (solid)	0.18 U	0.18	mg/kg	105		90-110		
Batch number: 062995708006 Iron	4.71 U	4.71	mg/kg	110		76-124		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 11/08/06 at 03:31 PM

Group Number: 1010834

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06296656901A Bulk Density			Sample number(s): 4895678 BKG: 4895678			1.71	1.68	2	20
Batch number: 06296820002A Moisture			Sample number(s): 4895678 BKG: 4895678			13.2	13.3	1	15
Batch number: 06297113031A TOC Solids/Sludges Combustion	96		Sample number(s): 4895678 UNSPK: P893173 BKG: P893173 51-115			11,900.	7,850.	41*	19
Batch number: 062975708001 Aluminum	(2)	(2)	Sample number(s): 4895678 UNSPK: P896143 BKG: P896143 75-125	6	20	16,000.	15,600.	3	20
Calcium	(2)	(2)		17	20	11,700.	9,950.	16	20
Magnesium	(2)	(2)		15	20	5,180.	4,430.	16	20
Silver	99	98		1	20	0.374 J	0.319 J	16 (1)	20
Zinc	1594*	95		146*	20	90.0	77.3	15	20
Batch number: 062975711001 Mercury	69*	74*	Sample number(s): 4895678 UNSPK: P896338 BKG: P896338 80-120	2	20	0.216	0.356	49* (1)	20
Batch number: 062976150001A Arsenic	236*	143*	Sample number(s): 4895678 UNSPK: P892227 BKG: P892227 70-130	19	20	3.02	6.42	72* (1)	20
Chromium	111	72*		11	20	13.3	13.1	2	20
Copper	173*	342*		30*	20	15.5	22.9	38*	20
Lead	(2)	(2)		12	20	53.5	110.	69*	20
Nickel	78	71*		2	20	9.85	9.13	8 (1)	20
Selenium	123	105		16	20	0.370 U	0.375 J	200* (1)	20
Batch number: 062976150001C Cadmium	123	126*	Sample number(s): 4895678 UNSPK: P892227 BKG: P892227 75-125	1	20	0.277	0.392	34* (1)	20
Batch number: 06297SLA026 Naphthalene	185*	113	Sample number(s): 4895678 UNSPK: P893686 54-121	19	30				
Fluorene	(2)	(2)		23	30				
Phenanthrene	(2)	(2)		24	30				
Anthracene	(2)	(2)		22	30				
Fluoranthene	(2)	(2)		21	30				
Pyrene	(2)	(2)		20	30				
Benzo(a)anthracene	(2)	(2)		18	30				
Chrysene	(2)	(2)		18	30				
Benzo(a)pyrene	(2)	(2)		22	30				
Dibenz(a,h)anthracene	(2)	(2)		9	30				
Batch number: 06298102201B Total Cyanide (solid)	102		Sample number(s): 4895678 UNSPK: P894629 BKG: P894629 59-124			0.18 U	0.18 U	2 (1)	17
Batch number: 062995708006 Iron	(2)	(2)	Sample number(s): 4895678 UNSPK: P899642 BKG: P899642 75-125	2	20	38,500.	32,700.	16	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 11/08/06 at 03:31 PM

Group Number: 1010834

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM
Batch number: 06297SLA026

Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14

4895678	83	71	85
Blank	95	90	104
LCS	88	83	95
MS	49	46*	73
MSD	67	65	97

Limits: 42-142 48-122 65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Reprint

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008584. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHCV1-SS-1 Matrix Spike Composite Solid Sample	4882493

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
1 COPY TO	Data Package Group	
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4882492
**DLHCV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0110 U	0.0110	mg/kg	1
01643	Aluminum	7429-90-5	204.	3.68	mg/kg	1
01650	Calcium	7440-70-2	2,470.	13.9	mg/kg	1
01654	Iron	7439-89-6	286,000.	103.	mg/kg	20
01657	Magnesium	7439-95-4	706.	2.09	mg/kg	1
06125	Arsenic	7440-38-2	19.0	0.373	mg/kg	20
06128	Cadmium	7440-43-9	0.291 J	0.0834	mg/kg	20
06131	Chromium	7440-47-3	206.	0.681	mg/kg	20
06133	Copper	7440-50-8	135.	0.703	mg/kg	20
06135	Lead	7439-92-1	11.4	0.329	mg/kg	20
06139	Nickel	7440-02-0	94.5	1.10	mg/kg	20
06141	Selenium	7782-49-2	0.812 U	0.812	mg/kg	20
06966	Silver	7440-22-4	0.562	0.187	mg/kg	1
06972	Zinc	7440-66-6	54.7	0.719	mg/kg	1
00111	Moisture	n.a.	8.9	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	19,400.	1,030.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.20 U	0.20	mg/kg	1
06569	Bulk Density	n.a.	1.79	0.080	g/cc	1

02858 Selected SVOA's in soil by SIM

02863	Naphthalene	91-20-3	1.2 J	1.	ug/kg	1
02870	Fluorene	86-73-7	0.7 U	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	2.0	0.7	ug/kg	1
02872	Anthracene	120-12-7	0.38 J	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	1.9	0.7	ug/kg	1
02875	Pyrene	129-00-0	8.2	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	0.7 U	0.7	ug/kg	1
02877	Chrysene	218-01-9	0.72 J	0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	0.91 J	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	1. U	1.	ug/kg	1
Trial ID: RE						
02863	Naphthalene	91-20-3	1.7 J	1.	ug/kg	1
02870	Fluorene	86-73-7	0.7 U	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	0.77 J	0.7	ug/kg	1
02872	Anthracene	120-12-7	0.4 U	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	1.1 J	0.7	ug/kg	1
02875	Pyrene	129-00-0	3.6	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	0.7 U	0.7	ug/kg	1

Lancaster Laboratories Sample No. SW 4882492
**DLHCV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01BKG

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
02877	Chrysene	218-01-9	1.8		0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	0.7	U	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	1.	U	1.	ug/kg	1

The GC/MS semivolatile internal standard peak areas were outside of QC limits. The matrix spike and matrix spike duplicate samples were analyzed and internal standard peak areas were again outside of QC limits, indicating a matrix effect.

Surrogate recoveries were outside of QC limits for the GC/MS semivolatile compounds. The analysis was repeated and surrogates met requirements.

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	29.4	0.50	% Passing	1
07139	3.35 mm	n.a.	21.4	0.50	% Passing	1
07140	2.36 mm	n.a.	17.0	0.50	% Passing	1
07141	1.18 mm	n.a.	8.8	0.50	% Passing	1
07142	0.6 mm	n.a.	3.5	0.50	% Passing	1
07143	0.3 mm	n.a.	1.2	0.50	% Passing	1
07144	0.15 mm	n.a.	0.56 J	0.50	% Passing	1
07145	0.075 mm	n.a.	0.50 U	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1
07147	0.05 mm	n.a.	0.50 U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50 U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50 U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality

Lancaster Laboratories Sample No. SW 4882492
**DLHCV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01BKG

Dry

CAT	No.	Analysis Name	CAS Number	Dry Result	Method Detection Limit	Units	Dilution Factor
-----	-----	---------------	------------	------------	------------------------	-------	-----------------

Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Analysis			Dilution Factor
				Trial#	Date and Time	Analyst	
	00159	Mercury	SW-846 7471A	1	10/11/2006 08:58	Damary Valentin	1
	01643	Aluminum	SW-846 6010B	1	10/11/2006 16:51	John P Hook	1
	01650	Calcium	SW-846 6010B	1	10/11/2006 16:51	John P Hook	1
	01654	Iron	SW-846 6010B	1	10/12/2006 10:19	Amanda S Bitner	20
	01657	Magnesium	SW-846 6010B	1	10/11/2006 16:51	John P Hook	1
	06125	Arsenic	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
	06128	Cadmium	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
	06131	Chromium	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
	06133	Copper	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
	06135	Lead	SW-846 6020	2	10/16/2006 13:56	Jayme E Curet	20
	06139	Nickel	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
	06141	Selenium	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
	06966	Silver	SW-846 6010B	1	10/11/2006 16:51	John P Hook	1
	06972	Zinc	SW-846 6010B	1	10/11/2006 16:51	John P Hook	1
	00111	Moisture	EPA 160.3 modified	1	10/06/2006 15:51	Scott W Freisher	1
	02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	10/11/2006 09:27	James S Mathiot	1
	05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 09:52	Nicole M Kepley	1
	06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
	02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 14:07	Joseph M Gambler	1
	02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	2	10/10/2006 01:17	William T Parker	1
	07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
	00381	BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
	00381	BNA Soil Extraction	SW-846 3550B	2	10/07/2006 09:15	Mark P Mastropietro	1
	00381	BNA Soil Extraction	SW-846 3550B	3	10/12/2006 11:00	Olivia Arosemena	1
	05708	SW SW846 ICP Digest	SW-846 3050B	1	10/10/2006 20:05	Annamaria Stipkovits	1
	05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/10/2006 22:30	Annamaria Stipkovits	1
	05896	Cyanide Solid Distillation	SW-846 9012A	1	10/09/2006 10:20	Nancy J Shoop	1
	06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/11/2006 19:50	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882493
**DLHCV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/20/2006 at 13:21

75 Arlington Street

Discard: 11/20/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.190	0.0109	mg/kg	1
01643	Aluminum	7429-90-5	1,380.	3.68	mg/kg	1
01650	Calcium	7440-70-2	8,660.	13.9	mg/kg	1
01654	Iron	7439-89-6	467,000.	103.	mg/kg	20
01657	Magnesium	7439-95-4	1,280.	2.09	mg/kg	1
06125	Arsenic	7440-38-2	21.0	0.373	mg/kg	20
06128	Cadmium	7440-43-9	0.869	0.0834	mg/kg	20
06131	Chromium	7440-47-3	177.	0.681	mg/kg	20
06133	Copper	7440-50-8	123.	0.703	mg/kg	20
06135	Lead	7439-92-1	223.	3.29	mg/kg	200
06139	Nickel	7440-02-0	78.7	1.10	mg/kg	20
06141	Selenium	7782-49-2	1.19 J	0.812	mg/kg	20
06966	Silver	7440-22-4	6.70	0.187	mg/kg	1
06972	Zinc	7440-66-6	435.	0.719	mg/kg	1
00118	Moisture	n.a.	8.9	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	5.3	0.19	mg/kg	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	28.	1.	ug/kg	1
02870	Fluorene	86-73-7	29.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	30.	0.7	ug/kg	1
02872	Anthracene	120-12-7	31.	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	31.	0.7	ug/kg	1
02875	Pyrene	129-00-0	79.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	30.	0.7	ug/kg	1
02877	Chrysene	218-01-9	29.	0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	28.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	9.9	1.	ug/kg	1

The GC/MS semivolatile internal standard peak areas were outside of QC limits. The background and matrix spike duplicate samples were analyzed and internal standard peak areas were again outside of QC limits, indicating a matrix effect.

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. SW 4882493

**DLHCV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/20/2006 at 13:21

75 Arlington Street

Discard: 11/20/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01MS

CAT	No.	Analysis Name	CAS Number	Dry Result	Method Detection Limit	Units	Dilution Factor
-----	-----	---------------	------------	------------	------------------------	-------	-----------------

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00159		Mercury	SW-846 7471A	1	10/11/2006 09:05	Damary Valentin	1
01643		Aluminum	SW-846 6010B	1	10/11/2006 17:05	John P Hook	1
01650		Calcium	SW-846 6010B	1	10/11/2006 17:05	John P Hook	1
01654		Iron	SW-846 6010B	1	10/12/2006 10:30	Amanda S Bitner	20
01657		Magnesium	SW-846 6010B	1	10/11/2006 17:05	John P Hook	1
06125		Arsenic	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06128		Cadmium	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06131		Chromium	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06133		Copper	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06135		Lead	SW-846 6020	2	10/17/2006 12:01	Jayme E Curet	200
06139		Nickel	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06141		Selenium	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06966		Silver	SW-846 6010B	1	10/11/2006 17:05	John P Hook	1
06972		Zinc	SW-846 6010B	1	10/11/2006 17:05	John P Hook	1
00118		Moisture	EPA 160.3 modified	1	10/06/2006 15:51	Scott W Freisher	1
05895		Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 09:54	Nicole M Kepley	1
02858		Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 14:47	Joseph M Gambler	1
00381		BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381		BNA Soil Extraction	SW-846 3550B	2	10/12/2006 11:00	Olivia Arosemena	1
05708		SW SW846 ICP Digest	SW-846 3050B	1	10/10/2006 20:05	Annamaria Stipkovits	1
05711		SW SW846 Hg Digest	SW-846 7471A modified	1	10/10/2006 22:30	Annamaria Stipkovits	1
05896		Cyanide Solid Distillation	SW-846 9012A	1	10/09/2006 10:20	Nancy J Shoop	1
06150		ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/11/2006 19:50	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882494

**DLHCV1-SS-1 Matrix Spiked Dup. Composite Solid
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00118	Moisture	n.a.	8.9	0.50	%	1
00121	Moisture Duplicate	n.a.	9.1	0.50	%	1

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

02858 Selected SVOA's in soil by SIM

02863	Naphthalene	91-20-3	33.	1.	ug/kg	1
02870	Fluorene	86-73-7	27.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	30.	0.7	ug/kg	1
02872	Anthracene	120-12-7	29.	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	22.	0.7	ug/kg	1
02875	Pyrene	129-00-0	57.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	28.	0.7	ug/kg	1
02877	Chrysene	218-01-9	28.	0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	28.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	10.	1.	ug/kg	1

The GC/MS semivolatile internal standard peak areas were outside of QC limits. The background and matrix spike samples were analyzed and internal standard peak areas were again outside of QC limits, indicating a matrix effect.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00118	Moisture	EPA 160.3 modified	1	10/06/2006 15:51	Scott W Freisher	1
00121	Moisture Duplicate	EPA 160.3 modified	1	10/06/2006 15:51	Scott W Freisher	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 15:27	Joseph M Gambler	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 11:00	Olivia Arosemena	1

Lancaster Laboratories Sample No. SW 4882495
**DLHCV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

ISS1D SDG#: SWE07-02FD*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0118 U	0.0118	mg/kg	1
01643	Aluminum	7429-90-5	2,650.	3.81	mg/kg	1
01650	Calcium	7440-70-2	9,460.	14.4	mg/kg	1
01654	Iron	7439-89-6	480,000.	268.	mg/kg	50
01657	Magnesium	7439-95-4	1,190.	2.16	mg/kg	1
06125	Arsenic	7440-38-2	23.5	0.197	mg/kg	10
06128	Cadmium	7440-43-9	1.11	0.0441	mg/kg	10
06131	Chromium	7440-47-3	213.	0.899	mg/kg	25
06133	Copper	7440-50-8	1,540.	8.12	mg/kg	200
06135	Lead	7439-92-1	237.	0.435	mg/kg	25
06139	Nickel	7440-02-0	111.	0.580	mg/kg	10
06141	Selenium	7782-49-2	0.444 J	0.429	mg/kg	10
06966	Silver	7440-22-4	1.22	0.193	mg/kg	1
06972	Zinc	7440-66-6	201.	0.745	mg/kg	1
00111	Moisture	n.a.	13.8	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	29,800.	1,070.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.24 J	0.20	mg/kg	1
06569	Bulk Density	n.a.	1.68	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	44.	1.	ug/kg	1
02870	Fluorene	86-73-7	2.9	0.8	ug/kg	1
02871	Phenanthrene	85-01-8	10.	0.8	ug/kg	1
02872	Anthracene	120-12-7	3.4	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	4.1	0.8	ug/kg	1
02875	Pyrene	129-00-0	14.	0.8	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	2.8	0.8	ug/kg	1
02877	Chrysene	218-01-9	3.8	0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	0.8 U	0.8	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	1. U	1.	ug/kg	1
Trial ID: RE						
02863	Naphthalene	91-20-3	45.	1.	ug/kg	1
02870	Fluorene	86-73-7	3.0	0.8	ug/kg	1
02871	Phenanthrene	85-01-8	10.	0.8	ug/kg	1
02872	Anthracene	120-12-7	3.3	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	6.0	0.8	ug/kg	1
02875	Pyrene	129-00-0	14.	0.8	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	2.3	0.8	ug/kg	1

Lancaster Laboratories Sample No. SW 4882495

**DLHCV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

ISS1D SDG#: SWE07-02FD*

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
02877	Chrysene	218-01-9	4.0		0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	0.8	U	0.8	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	1.	U	1.	ug/kg	1

The GC/MS semivolatile internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection.

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	94.5	0.50	% Passing	1
07138	4.75 mm	n.a.	26.5	0.50	% Passing	1
07139	3.35 mm	n.a.	20.8	0.50	% Passing	1
07140	2.36 mm	n.a.	15.2	0.50	% Passing	1
07141	1.18 mm	n.a.	8.4	0.50	% Passing	1
07142	0.6 mm	n.a.	3.6	0.50	% Passing	1
07143	0.3 mm	n.a.	1.4	0.50	% Passing	1
07144	0.15 mm	n.a.	0.74	J	0.50 % Passing	1
07145	0.075 mm	n.a.	0.56	J	0.50 % Passing	1
07146	0.064 mm	n.a.	0.50	J	0.50 % Passing	1
07147	0.05 mm	n.a.	0.50	J	0.50 % Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50 % Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50 % Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50 % Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50 % Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. SW 4882495
**DLHCV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

ISS1D SDG#: SWE07-02FD*

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00159	Mercury	SW-846 7471A	1	10/11/2006 09:08	Damary Valentin	1
	01643	Aluminum	SW-846 6010B	1	10/11/2006 17:20	John P Hook	1
	01650	Calcium	SW-846 6010B	1	10/11/2006 17:20	John P Hook	1
	01654	Iron	SW-846 6010B	1	10/12/2006 10:45	Amanda S Bitner	50
	01657	Magnesium	SW-846 6010B	1	10/11/2006 17:20	John P Hook	1
	06125	Arsenic	SW-846 6020	1	10/16/2006 14:21	Jayme E Curet	10
	06128	Cadmium	SW-846 6020	1	10/16/2006 14:21	Jayme E Curet	10
	06131	Chromium	SW-846 6020	1	10/16/2006 14:25	Jayme E Curet	25
	06133	Copper	SW-846 6020	1	10/17/2006 12:07	Jayme E Curet	200
	06135	Lead	SW-846 6020	1	10/16/2006 14:25	Jayme E Curet	25
	06139	Nickel	SW-846 6020	1	10/16/2006 14:21	Jayme E Curet	10
	06141	Selenium	SW-846 6020	1	10/16/2006 14:21	Jayme E Curet	10
	06966	Silver	SW-846 6010B	1	10/11/2006 17:20	John P Hook	1
	06972	Zinc	SW-846 6010B	1	10/11/2006 17:20	John P Hook	1
	00111	Moisture	EPA 160.3 modified	1	10/06/2006 15:51	Scott W Freisher	1
	02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	10/11/2006 09:55	James S Mathiot	1
	05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 10:35	Nicole M Kepley	1
	06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
	02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 16:07	Joseph M Gambler	1
	02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	2	10/16/2006 00:36	William T Parker	1
	07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
	00381	BNA Soil Extraction	SW-846 3550B	3	10/12/2006 11:00	Olivia Arosemena	1
	05708	SW SW846 ICP Digest	SW-846 3050B	1	10/10/2006 20:05	Annamaria Stipkovits	1
	05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/10/2006 22:30	Annamaria Stipkovits	1
	05896	Cyanide Solid Distillation	SW-846 9012A	1	10/09/2006 10:20	Nancy J Shoop	1
	06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/11/2006 19:50	Annamaria Stipkovits	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008584

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279820005A			Sample number(s): 4882492-4882495					
Moisture				100		99-101		
Moisture				100		99-101		
Moisture Duplicate				100		99-101		
Batch number: 06279SLD026			Sample number(s): 4882492					
Naphthalene	1. U	1.	ug/kg	77		71-105		
Fluorene	0.7 U	0.7	ug/kg	82		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	85		64-118		
Anthracene	0.3 U	0.3	ug/kg	77		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	88		57-128		
Pyrene	0.7 U	0.7	ug/kg	88		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	84		71-114		
Chrysene	0.3 U	0.3	ug/kg	86		69-114		
Benzo(a)pyrene	0.7 U	0.7	ug/kg	77		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	80		56-130		
Batch number: 06282102201B			Sample number(s): 4882492-4882493, 4882495					
Total Cyanide (solid)	0.18 U	0.18	mg/kg	98		90-110		
Batch number: 06282113031B			Sample number(s): 4882492, 4882495					
TOC Solids/Sludges Combustion	60.0 U	60.0	mg/kg	49		40-148		
Batch number: 062835708003			Sample number(s): 4882492-4882493, 4882495					
Aluminum	13.9 J	3.35	mg/kg	125		91-151		
Calcium	12.7 U	12.7	mg/kg	107		89-121		
Iron	4.71 U	4.71	mg/kg	130		68-158		
Magnesium	3.44 J	1.90	mg/kg	109		90-120		
Silver	0.170 U	0.170	mg/kg	113		90-126		
Zinc	0.655 U	0.655	mg/kg	100		85-110		
Batch number: 062835711003			Sample number(s): 4882492-4882493, 4882495					
Mercury	0.0105 U	0.0105	mg/kg	95		66-133		
Batch number: 062846150001A			Sample number(s): 4882492-4882493, 4882495					
Arsenic	0.0170 U	0.0170	mg/kg	101		77-123		
Cadmium	0.0065 J	0.0038	mg/kg	109		79-121		
Chromium	0.108 J	0.0310	mg/kg	101		78-122		
Copper	0.0350 U	0.0350	mg/kg	105		81-119		
Lead	0.0597 J	0.0150	mg/kg	99		79-121		
Nickel	0.0500 U	0.0500	mg/kg	101		81-119		
Selenium	0.0370 U	0.0370	mg/kg	99		74-126		
Batch number: 062846150001C			Sample number(s): 4882495					
Cadmium	0.0038 U	0.0038	mg/kg	108		79-121		
Batch number: 06284SLD026			Sample number(s): 4882492-4882495					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008584

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Naphthalene	1. U	1.	ug/kg	78		71-105		
Fluorene	0.7 U	0.7	ug/kg	84		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	81		64-118		
Anthracene	0.3 U	0.3	ug/kg	76		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	78		57-128		
Pyrene	0.7 U	0.7	ug/kg	87		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	79		71-114		
Chrysene	0.3 U	0.3	ug/kg	82		69-114		
Benzo(a)pyrene	0.7 U	0.7	ug/kg	86		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	81		56-130		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279820005A			Sample number(s): 4882492-4882495		BKG: 4882492			
Moisture					8.9	9.1	2	15
Moisture					8.9	9.1	2	15
Moisture Duplicate					8.9	9.1	2	15
Batch number: 06279SLD026			Sample number(s): 4882492 UNSPK: P79LDUS					
Naphthalene	118	53*	54-121	14	30			
Fluorene	89	80	62-119	6	30			
Phenanthrene	(2)	(2)	31-160	24	30			
Anthracene	139*	78	55-118	21	30			
Fluoranthene	(2)	(2)	49-125	32*	30			
Pyrene	(2)	(2)	58-137	26	30			
Benzo(a)anthracene	94	0*	69-118	24	30			
Chrysene	91	1*	70-107	25	30			
Benzo(a)pyrene	81	39*	69-106	27	30			
Dibenz(a,h)anthracene	62	26*	40-126	25	30			
Batch number: 06280710301A			Sample number(s): 4882492, 4882495		BKG: P881932			
75 mm					100.	100.	0	20
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					99.6	99.5	0	20
3.35 mm					99.5	99.2	0	20
2.36 mm					99.2	98.3	1	20
1.18 mm					91.9	91.9	0	20
0.6 mm					72.8	71.5	2	20
0.3 mm					57.7	56.7	2	20
0.15 mm					49.2	48.6	1	20
0.075 mm					42.3	41.8	1	20
0.064 mm					37.0	35.0	6	20
0.05 mm					22.0	20.0	10	20
0.02 mm					6.0	4.0	40* (1)	20
0.005 mm					3.0	3.5	15 (1)	20
0.002 mm					0.50 J	0.50 J	0 (1)	20
0.001 mm					0.50 U	0.50 U	0 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008584

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>	
Batch number: 06282102201B Total Cyanide (solid)	99		59-124		0.18 U	0.21 J	200* (1)	17	
Batch number: 06282113031B TOC Solids/Sludges Combustion	94		51-115		17,600.	25,700.	37*	19	
Batch number: 062835708003 Aluminum Calcium Iron Magnesium Silver Zinc	534* (2) (2) 264* 112 694*	460* (2) (2) 252* 107 17263	75-125 75-125 75-125 75-125 75-125 75-125	12 46* 18 2 4 183*	20 20 20 20 20 20	186. 2,250. 260,000. 644. 0.512 49.8	654. 5,340. 432,000. 1,670. 0.896 87.9	112* 81* 50* 89* 55* (1) 55*	20 20 20 20 20 20
*									
Batch number: 062835711003 Mercury	110	111	80-120	1	20	0.010 U	0.0104 U	-107 (1)	
Batch number: 062846150001A Arsenic Cadmium Chromium Copper Lead Nickel Selenium	(2) 105 (2) (2) (2) (2) 109	(2) 94 (2) (2) (2) (2) 120	70-130 75-125 75-125 75-125 75-125 75-125 75-130	14 8 35* 2 53* 11 10	20 20 20 20 20 20 20	17.3 0.265 J 187. 123. 10.3 86.1 0.740 U	16.8 0.199 J 125. 88.2 423. 69.5 0.740 U	3 (1) 28* (1) 40* 33* 190* (1) 21* 14 (1)	20 20 20 20 20 20 20
Batch number: 062846150001C Cadmium	105	94	75-125	8	20	0.265 J	0.199 J	28* (1)	
Batch number: 06284656901A Bulk Density						2.08	2.09	1	
Batch number: 06284SLD026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	72 79 77 83 80 193* 81 77 73 27*	87 73 77 79 56 134 77 74 73 27*	54-121 62-119 31-160 55-118 49-125 58-137 69-118 70-107 69-106 40-126	18 7 0 6 33* 32* 5 3 0 2	30 30 30 30 30 30 30 30 30 30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008584

Surrogate Quality Control

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06279SLD026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4882492RE	76	75	93
Blank	41*	47*	92
LCS	72	78	91
MS	97	56	112
MSD	93	62	110
Limits:	42-142	48-122	65-125

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06284SLD026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4882492	49	47*	108
4882493	84	79	139*
4882494	88	79	98
4882495	78	73	74
4882495RE	86	69	77
Blank	85	79	79
LCS	89	84	75
MS	84	79	139*
MSD	88	79	98
Limits:	42-142	48-122	65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 4882492-95 Sample # 1008584

COC # 0132126

1 of 2

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>CH2M HILL</u> Acct. #: _____				Matrix	4		5 Analyses Requested										6				
Project Name#: <u>GREAT LAKES</u> PWSID #: _____		Project Manager: <u>E. MOSLEY</u> P.O.#: _____					Preservation Codes														
Sampler: <u>J. Coffey (571-274-6105)</u> Quote #: _____		Name of state where samples were collected: <u>MN</u>		Total # of Containers	5 Bulk Density, Grain Si/SZ	Specific Gravity	Tot. Metals, CN, Hg, % moist (sampled)	DOC	BOD/COD	TDS	Remarks	Preservation Codes									
												<input type="checkbox"/> Possible Check if NFTS Samples	<input type="checkbox"/> Water	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Grab	<input checked="" type="checkbox"/> Composite	<input type="checkbox"/> Soil	<input type="checkbox"/> Sediment	<input type="checkbox"/> Diss. Metals, Cd, Hg	<input type="checkbox"/> Cyanox, Paths	<input type="checkbox"/> TOC	☐ TDS	☐ Matrix Spike	☐ SVOCs, Metals, CN, Hg	☐ B=NaOH	☐ O=Other
2 Sample Identification		Date Collected	Time Collected	3																Temperature of Sample at Collection	
<u>DLHCV1-DS-1</u>		<u>10-3-06</u>	<u>1020</u>		X	X														<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg</u>	
<u>DLHCV1-DS-1-D</u>		<u>10-3-06</u>	<u>1020</u>		X	X														<u>HOLD</u>	
<u>DLHCV1-DS-1-BU</u>		<u>10-3-06</u>	<u>1020</u>		X	X														<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg</u>	
<u>DLHCV1-SS-1</u>		<u>10-3-06</u>	<u>0820</u>		X	X														<u>HOLD</u>	
<u>DLHCV1-SS-1-D</u>		<u>10-3-06</u>	<u>0820</u>		X	X														<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg</u>	
<u>DLHCV1-SS-1-D2</u>		<u>10-3-06</u>	<u>0900</u>		X	X														<u>HOLD</u>	
<u>DLHCV1-SS-2-BU</u>					X	X														<u>HOLD</u>	
<u>DLHCV1-SS-1-LS-1</u>		<u>10-3-06</u>	<u>0820</u>		X	X	X													<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg (tot. & det.)</u>	
<u>DLHCV1-LS-1-D</u>		<u>10-3-06</u>	<u>0820</u>		X	X	X													<u>HOLD</u>	
<u>DLHCV1-LS-1-BU</u>		<u>10-3-06</u>	<u>0820</u>		X	X	X													<u>HOLD</u>	
7 Turnaround Time Requested (TAT) (please circle): <input checked="" type="radio"/> Normal <input type="radio"/> Rush				Relinquished by: <u>Randy Morris R. Morris</u> Date <u>10-3-06</u> Time <u>1700</u>										Received by:		Date	Time				
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by:										Received by:		Date	Time				
Date results are needed:				Relinquished by:										Received by:		Date	Time				
Rush results requested by (please circle): Phone <input type="radio"/> Fax <input type="radio"/> E-mail <input type="radio"/>				Relinquished by:										Received by:		Date	Time				
Phone #: _____ Fax #: _____				Relinquished by:										Received by:		Date	Time				
E-mail address: _____				Relinquished by:										Received by:		Date	Time				
8 Data Package Options (please circle if required)				SDG Complete?		Relinquished by:										Received by:		Date	Time		
Type I (validation/NJ Reg)		TX TRRP-13		Yes <input type="radio"/> No <input checked="" type="radio"/>		Relinquished by:										Received by:		Date	Time		
Type II (Tier II)		MA MCP		CT RCP		Relinquished by:										Received by:		Date	Time		
Type III (Reduced NJ)		Site-specific QC (MS/MSD/Dup)? Yes <input type="radio"/> No <input checked="" type="radio"/>										Received by:		Date	Time						
Type IV (CLP SOW)		(If yes, indicate QC sample and submit triplicate volume.)										Received by:		Date	Time						
Type VI (Raw Data Only)		Internal COC Required? Yes / No _____										Received by:		Date	Time						

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2800 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008466. Samples arrived at the laboratory on Tuesday, October 03, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHTV1-SS-1 Unspiked Composite Solid Sample	4881932
DLHTV1-SS-1 Matrix Spike Composite Solid Sample	4881933
DLHTV1-SS-1-D Composite Solid Sample	4881934
DLHTV1-SS-2 Composite Solid Sample	4881935

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
1 COPY TO	Data Package Group	
ELECTRONIC COPY TO	CH2M HILL	Attn: James Maugahn



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4881932
**DLHTV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS1-- SDG#: SWE01-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0120 U	0.0120	mg/kg	1
01643	Aluminum	7429-90-5	1,270.	4.01	mg/kg	1
01650	Calcium	7440-70-2	25,400.	15.2	mg/kg	1
01654	Iron	7439-89-6	536,000.	282.	mg/kg	50
01657	Magnesium	7439-95-4	6,830.	2.28	mg/kg	1
06125	Arsenic	7440-38-2	5.31	0.204	mg/kg	10
06128	Cadmium	7440-43-9	0.0547 J	0.0455	mg/kg	10
06131	Chromium	7440-47-3	10.4	0.371	mg/kg	10
06133	Copper	7440-50-8	4.06	0.383	mg/kg	10
06135	Lead	7439-92-1	1.32	0.180	mg/kg	10
06139	Nickel	7440-02-0	4.17	0.599	mg/kg	10
06141	Selenium	7782-49-2	0.443 U	0.443	mg/kg	10
06966	Silver	7440-22-4	0.204 U	0.204	mg/kg	1
06972	Zinc	7440-66-6	17.2	3.92	mg/kg	5

The quantitation limit for zinc was raised due to the nature of the sample matrix.

00111	Moisture	n.a.	16.5	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.21	U	0.21	mg/kg

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.6	0.50	% Passing	1
07139	3.35 mm	n.a.	99.5	0.50	% Passing	1
07140	2.36 mm	n.a.	99.2	0.50	% Passing	1
07141	1.18 mm	n.a.	91.9	0.50	% Passing	1
07142	0.6 mm	n.a.	72.8	0.50	% Passing	1
07143	0.3 mm	n.a.	57.7	0.50	% Passing	1
07144	0.15 mm	n.a.	49.2	0.50	% Passing	1
07145	0.075 mm	n.a.	42.3	0.50	% Passing	1
07146	0.064 mm	n.a.	37.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4881932
**DLHTV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS1-- SDG#: SWE01-01BKG

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07147	0.05 mm	n.a.	22.0	0.50	% Passing	1
07148	0.02 mm	n.a.	6.0	0.50	% Passing	1
07149	0.005 mm	n.a.	3.0	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 J	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Dilution Factor
				Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/09/2006 10:08	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 17:11	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 17:11	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/10/2006 18:52	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/09/2006 17:11	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 17:11	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/10/2006 18:30	John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 15:24	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:35	Venia B McFadden	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/06/2006 19:50	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/06/2006 23:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/06/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4881933
**DLHTV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS1-- SDG#: SWE01-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.202	0.0125	mg/kg	1
01643	Aluminum	7429-90-5	1,570.	4.01	mg/kg	1
01650	Calcium	7440-70-2	26,800.	15.2	mg/kg	1
01654	Iron	7439-89-6	576,000.	282.	mg/kg	50
01657	Magnesium	7439-95-4	7,310.	2.28	mg/kg	1
06125	Arsenic	7440-38-2	6.36	0.204	mg/kg	10
06128	Cadmium	7440-43-9	0.711	0.0455	mg/kg	10
06131	Chromium	7440-47-3	16.8	0.371	mg/kg	10
06133	Copper	7440-50-8	9.67	0.383	mg/kg	10
06135	Lead	7439-92-1	3.48	0.180	mg/kg	10
06139	Nickel	7440-02-0	10.1	0.599	mg/kg	10
06141	Selenium	7782-49-2	0.443 U	0.443	mg/kg	10
06966	Silver	7440-22-4	6.63	0.204	mg/kg	1
06972	Zinc	7440-66-6	80.4	3.92	mg/kg	5
00118	Moisture	n.a.	16.5	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	5.3	0.21	mg/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471A	1	10/09/2006 10:14	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 17:23	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 17:23	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:11	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/09/2006 17:23	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 17:23	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/10/2006 18:41	John P Hook	5
00118	Moisture	EPA 160.3 modified	1	10/06/2006 15:24	Scott W Freisher	1

Lancaster Laboratories Sample No. SW 4881933**DLHTV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS1-- SDG#: SWE01-01MS

05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:36	Venia B McFadden	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/06/2006 19:50	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/06/2006 23:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/06/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4881934
**DLHTV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40

by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS1D- SDG#: SWE01-02FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0124 U	0.0124	mg/kg	1
01643	Aluminum	7429-90-5	1,260.	4.08	mg/kg	1
01650	Calcium	7440-70-2	27,000.	15.5	mg/kg	1
01654	Iron	7439-89-6	602,000.	287.	mg/kg	50
01657	Magnesium	7439-95-4	7,290.	2.32	mg/kg	1
06125	Arsenic	7440-38-2	5.20	0.209	mg/kg	10
06128	Cadmium	7440-43-9	0.0737 J	0.0468	mg/kg	10
06131	Chromium	7440-47-3	10.9	0.382	mg/kg	10
06133	Copper	7440-50-8	6.15	0.394	mg/kg	10
06135	Lead	7439-92-1	3.22	0.185	mg/kg	10
06139	Nickel	7440-02-0	5.01	0.616	mg/kg	10
06141	Selenium	7782-49-2	0.456 U	0.456	mg/kg	10
06966	Silver	7440-22-4	0.207 U	0.207	mg/kg	1
06972	Zinc	7440-66-6	22.4	3.99	mg/kg	5

The quantitation limit for zinc was raised due to the nature of the sample matrix.

00111	Moisture	n.a.	19.6	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.22	U	0.22	mg/kg

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.6	0.50	% Passing	1
07139	3.35 mm	n.a.	99.5	0.50	% Passing	1
07140	2.36 mm	n.a.	99.2	0.50	% Passing	1
07141	1.18 mm	n.a.	88.9	0.50	% Passing	1
07142	0.6 mm	n.a.	71.6	0.50	% Passing	1
07143	0.3 mm	n.a.	56.8	0.50	% Passing	1
07144	0.15 mm	n.a.	47.3	0.50	% Passing	1
07145	0.075 mm	n.a.	41.6	0.50	% Passing	1
07146	0.064 mm	n.a.	38.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4881934
**DLHTV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

 Submitted: 10/03/2006 09:30
 Reported: 10/28/2006 at 21:31
 Discard: 11/28/2006

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

SS1D- SDG#: SWE01-02FD

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07147	0.05 mm	n.a.	30.0	0.50	% Passing	1
07148	0.02 mm	n.a.	6.0	0.50	% Passing	1
07149	0.005 mm	n.a.	1.0	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Dilution Factor
				Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/09/2006 10:16	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 17:35	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 17:35	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:26	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/09/2006 17:35	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 17:35	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/10/2006 19:22	John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 15:24	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:37	Venia B McFadden	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/06/2006 19:50	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/06/2006 23:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/06/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4881935
**DLHTV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS-2- SDG#: SWE01-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0117 U	0.0117	mg/kg	1
01643	Aluminum	7429-90-5	1,000.	3.86	mg/kg	1
01650	Calcium	7440-70-2	21,700.	14.6	mg/kg	1
01654	Iron	7439-89-6	519,000.	271.	mg/kg	50
01657	Magnesium	7439-95-4	5,970.	2.19	mg/kg	1
06125	Arsenic	7440-38-2	5.14	0.198	mg/kg	10
06128	Cadmium	7440-43-9	0.0483 J	0.0442	mg/kg	10
06131	Chromium	7440-47-3	11.1	0.360	mg/kg	10
06133	Copper	7440-50-8	4.22	0.372	mg/kg	10
06135	Lead	7439-92-1	7.49	0.174	mg/kg	10
06139	Nickel	7440-02-0	4.10	0.581	mg/kg	10
06141	Selenium	7782-49-2	0.430 U	0.430	mg/kg	10
06966	Silver	7440-22-4	0.196 U	0.196	mg/kg	1
06972	Zinc	7440-66-6	84.6	3.77	mg/kg	5

The quantitation limit for zinc was raised due to the nature of the sample matrix.

00111	Moisture	n.a.	14.0	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.20	U	0.20	mg/kg

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	99.7	0.50	% Passing	1
07138	4.75 mm	n.a.	62.3	0.50	% Passing	1
07139	3.35 mm	n.a.	58.0	0.50	% Passing	1
07140	2.36 mm	n.a.	55.0	0.50	% Passing	1
07141	1.18 mm	n.a.	51.8	0.50	% Passing	1
07142	0.6 mm	n.a.	46.9	0.50	% Passing	1
07143	0.3 mm	n.a.	43.2	0.50	% Passing	1
07144	0.15 mm	n.a.	38.3	0.50	% Passing	1
07145	0.075 mm	n.a.	31.9	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4881935
**DLHTV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS-2- SDG#: SWE01-03

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Analyst	Dilution Factor
			Trial#	Date and Time			
00159	Mercury	SW-846 7471A	1	10/09/2006 10:21		Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 17:39		Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 17:39		Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:33		John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/09/2006 17:39		Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 17:39		Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/10/2006 19:29		John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 15:24		Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:39		Venia B McFadden	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30		Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/06/2006 19:50		Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/06/2006 23:15		Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50		Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/06/2006 20:00		Annamaria Stipkovits	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4881935

DLHTV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30
Reported: 10/28/2006 at 21:31
Discard: 11/28/2006

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

SS-2 - SDG#: SWE01-03

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:32 PM

Group Number: 1008466

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279102201A Total Cyanide (solid)			Sample number(s): 4881932-4881935 0.36 U 0.36 mg/kg 91			90-110		
Batch number: 062795708006 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4881932-4881935 3.35 U 3.35 mg/kg 127 12.7 U 12.7 mg/kg 102 4.71 U 4.71 mg/kg 127 1.90 U 1.90 mg/kg 110 0.170 U 0.170 mg/kg 100 0.655 U 0.655 mg/kg 89			91-151 89-121 68-158 90-120 90-126 85-110		
Batch number: 062795711002 Mercury			Sample number(s): 4881932-4881935 0.0105 U 0.0105 mg/kg 98			66-133		
Batch number: 062796150001A Arsenic Cadmium Chromium Copper Lead Nickel Selenium			Sample number(s): 4881932-4881935 0.0170 U 0.0170 mg/kg 106 0.0038 U 0.0038 mg/kg 109 0.144 J 0.0310 mg/kg 102 0.0539 J 0.0320 mg/kg 106 0.0596 J 0.0150 mg/kg 106 0.0500 U 0.0500 mg/kg 105 0.0370 U 0.0370 mg/kg 104			77-123 79-121 78-122 81-119 79-121 81-119 74-126		
Batch number: 06279820002A Moisture Moisture			Sample number(s): 4881932-4881935 100 100			99-101 99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MS %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279102201A Total Cyanide (solid)			Sample number(s): 4881932-4881935 UNSPK: 4881932 BKG: 4881932 93 59-124		0.17 U	0.18 U	200* (1)	17
Batch number: 062795708006 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4881932-4881935 UNSPK: 4881932 BKG: 4881932 (2) (2) 75-125 11 20 1,060. 1,090. 2 (2) (2) 75-125 1 20 21,200. 21,600. 2 (2) (2) 75-125 12 20 448,000. 472,000. 5 (2) (2) 75-125 2 20 5,710. 5,840. 2 111 107 75-125 3 20 0.170 U -40 (1) 106 94 75-125 9 20 14.3 14.9 3 (1)					20 20 20 20 20 20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:32 PM

Group Number: 1008466

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 062795711002			Sample number(s): 4881932-4881935 UNSPK: 4881932 BKG: 4881932					
Mercury	102	100	80-120	2	20 0.0100 U	0.0100 U	-6 (1)	20
Batch number: 062796150001A			Sample number(s): 4881932-4881935 UNSPK: 4881932 BKG: 4881932					
Arsenic	(2)	(2)	70-130	3	20 4.43	4.44	0 (1)	20
Cadmium	110	102	75-125	7	20 0.0457 J	0.0729 J	46* (1)	20
Chromium	107	71*	75-125	14	20 8.66	8.97	4 (1)	20
Copper	94	84	75-125	6	20 3.39	11.7	110* (1)	20
Lead	120	106	75-125	8	20 1.10	2.85	88* (1)	20
Nickel	99	103	75-125	3	20 3.48	3.32	5 (1)	20
Selenium	-2*	-17*	75-130	153*	20 0.370 U	0.370 U	-1 (1)	20
Batch number: 06279820002A			Sample number(s): 4881932-4881935 BKG: 4881932					
Moisture					16.5	16.9	2	15
Moisture					16.5	16.9	2	15
Batch number: 06280710301A			Sample number(s): 4881932, 4881934-4881935 BKG: 4881932					
75 mm					100.	100.	0	20
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					99.6	99.5	0	20
3.35 mm					99.5	99.2	0	20
2.36 mm					99.2	98.3	1	20
1.18 mm					91.9	91.9	0	20
0.6 mm					72.8	71.5	2	20
0.3 mm					57.7	56.7	2	20
0.15 mm					49.2	48.6	1	20
0.075 mm					42.3	41.8	1	20
0.064 mm					37.0	35.0	6	20
0.05 mm					22.0	20.0	10	20
0.02 mm					6.0	4.0	40* (1)	20
0.005 mm					3.0	3.5	15 (1)	20
0.002 mm					0.50 J	0.50 J	0 (1)	20
0.001 mm					0.50 U	0.50 U	0 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Analysis Request/ Environmental Services Chain of Custody

For Lancaster Laboratories use only

Lancaster Acct # 12098 Group# 1008469 Sample # 488/440-42

COC # 0132124
8072/433/947-49

Please print. Instructions on reverse side correspond with circled numbers

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 655-2300 Fax: (717) 655-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is <CRDL, but \geq IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike amount not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
J	Estimated value	U	Compound was not detected
N	Presumptive evidence of a compound (TICs only)	W	Post digestion spike out of control limits
P	Concentration difference between primary and confirmation columns $>25\%$	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA <0.995
X,Y,Z	Defined in case narrative		

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008469. Samples arrived at the laboratory on Tuesday, October 03, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHTV1-LS-1 Unspiked Composite Water	4881940
DLHTV1-LS-1 Matrix Spike Composite Water	4881941
DLHTV1-LS-D Composite Water Sample	4881942

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
1 COPY TO ELECTRONIC COPY TO	Data Package Group	Attn: James Maugahn
ELECTRONIC COPY TO	CH2M HILL	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 2

Lancaster Laboratories Sample No. WW 4881940

**DLHTV1-LS-1 Unspiked Composite Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLS1- SDG#: SWE02-01BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l
01743	Aluminum	7429-90-5	0.287	0.0802	mg/l
01750	Calcium	7440-70-2	29.9	0.104	mg/l
01754	Iron	7439-89-6	6.22	0.0522	mg/l
01757	Magnesium	7439-95-4	9.09	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0137	0.00067	mg/l
06028	Cadmium	7440-43-9	0.00059	0.000099	mg/l
06031	Chromium	7440-47-3	0.0026	0.00026	mg/l
06033	Copper	7440-50-8	0.0271	0.00020	mg/l
06035	Lead	7439-92-1	0.0075	0.000047	mg/l
06039	Nickel	7440-02-0	0.0074	0.00043	mg/l
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.143	0.0081	mg/l
00273	Total Organic Carbon	n.a.	67.8	5.0	mg/l
01443	Specific Gravity	n.a.	1.00	0.0050	1
07547	Dissolved Organic Carbon	n.a.	60.2	2.0	mg/l
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l

The sample received for the TOC analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 06:42	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
01754	Iron	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4881940

**DLHTV1-LS-1 Unspiked Composite Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLS1- SDG#: SWE02-01BKG

06033	Copper	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
00273	Total Organic Carbon	EPA 415.1	1	10/09/2006 14:22	Nicole M Kepley	5
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/10/2006 13:42	James S Mathiot	2
08255	Total Cyanide (water)	SW-846 9012A	1	10/06/2006 16:14	Venia B McFadden	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/06/2006 17:00	Mirit S Shenouda	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 18:48	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4881941
**DLHTV1-LS-1 Matrix Spike Composite Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLS1- SDG#: SWE02-01MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0013	0.000056	mg/l 1
01743	Aluminum	7429-90-5	2.04	0.0802	mg/l 1
01750	Calcium	7440-70-2	33.7	0.104	mg/l 1
01754	Iron	7439-89-6	6.71	0.0522	mg/l 1
01757	Magnesium	7439-95-4	11.0	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0240	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0059	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0529	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0790	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0235	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0583	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0099	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0507	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.641	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.18	0.0050	mg/l 1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 06:44	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
01754	Iron	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/06/2006 16:15	Venia B McFadden	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/06/2006 17:00	Mirit S Shenouda	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 2 of 2

Lancaster Laboratories Sample No. WW 4881941

DLHTV1-LS-1 Matrix Spike Composite Water
Great Lakes - Sweepings

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLS1- SDG#: SWE02-01MS

05713 WW SW846 Hg Digest

SW-846 7470A

1 10/09/2006 17:00

Nelli S Markaryan

1

06050 ICP/MS SW-846 Water

SW-846 3010A modified

1 10/08/2006 18:48

James L Mertz

1

08256 Cyanide Water Distillation

SW-846 9012A

1 10/06/2006 10:50

Nancy J Shoop

1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 2

Lancaster Laboratories Sample No. WW 4881942

**DLHTV1-LS-D Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLSD- SDG#: SWE02-02FD

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000079 J	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	29.4	0.104	mg/l 1
01754	Iron	7439-89-6	4.51	0.0522	mg/l 1
01757	Magnesium	7439-95-4	8.92	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0141	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.00067	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0026	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0271	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0077	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0077	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.141	0.0081	mg/l 1
00273	Total Organic Carbon	n.a.	69.0	5.0	mg/l 5
01443	Specific Gravity	n.a.	1.00	0.0050	1
07547	Dissolved Organic Carbon	n.a.	56.0	2.0	mg/l 2
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

The sample received for the TOC analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 06:50	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
01754	Iron	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4881942

**DLHTV1-LS-D Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLSD- SDG#: SWE02-02FD

06033	Copper	SW-846 6020	1	10/11/2006 20:34	David K Beck	1
06035	Lead	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
00273	Total Organic Carbon	EPA 415.1	1	10/09/2006 13:17	Nicole M Kepley	5
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/10/2006 14:15	James S Mathiot	2
08255	Total Cyanide (water)	SW-846 9012A	1	10/06/2006 16:16	Venia B McFadden	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/06/2006 17:00	Mirit S Shenouda	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 18:48	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/12/06 at 09:38 AM

Group Number: 1008469

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279117101C Total Cyanide (water)			Sample number(s): 4881940-4881942 0.0050 U 0.0050 mg/l	99		90-110		
Batch number: 062791848005 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4881940-4881942 0.0802 U 0.0802 mg/l 0.104 U 0.104 mg/l 0.0522 U 0.0522 mg/l 0.0135 U 0.0135 mg/l 0.0016 U 0.0016 mg/l 0.0081 U 0.0081 mg/l	99 102 104 101 102 102		90-112 90-112 90-112 89-110 90-118 90-111		
Batch number: 062816050002A Arsenic Cadmium Chromium Copper Lead Nickel Selenium			Sample number(s): 4881940-4881942 0.00067 0.00067 mg/l U 9 0.000099 0.00009 mg/l U J 0.00045 0.00026 mg/l U J 0.00020 0.00020 mg/l U J 0.000047 0.00004 mg/l U 7 0.00043 0.00043 mg/l U 7 0.00050 0.00050 mg/l U 7	104 103 106 111 109 107 106		80-120 80-120 80-120 80-120 80-120 80-120 80-120		
Batch number: 06282113011A Total Organic Carbon			Sample number(s): 4881940, 4881942 1.0 U 1.0 mg/l	101		80-120		
Batch number: 062825713001 Mercury			Sample number(s): 4881940-4881942 0.000056 0.00005 mg/l	104		80-120		
Batch number: 06283049511A Dissolved Organic Carbon			Sample number(s): 4881940, 4881942 1.0 U 1.0 mg/l	103		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279117101C			Sample number(s): 4881940-4881942 UNSPK: 4881940 BKG: 4881940					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/12/06 at 09:38 AM

Group Number: 1008469

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max RPD</u>
Total Cyanide (water)	91		83-111		0.0050 U	0.0050 U	200* (1)	20
Batch number: 062791848005								
Aluminum	88	86	75-125	1 20	0.287	0.0802 U	200* (1)	20
Calcium	(2)	(2)	75-125	2 20	29.9	29.6	1	20
Iron	(2)	(2)	75-125	8 20	6.22	5.51	12	20
Magnesium	(2)	(2)	75-125	2 20	9.09	8.94	2	20
Silver	101	100	75-125	1 20	0.0016 U	0.0016 U	61* (1)	20
Zinc	100	98	75-125	1 20	0.143	0.142	1	20
Batch number: 062816050002A								
Arsenic	103	106	75-125	1 20	0.0137	0.0136	1	20
Cadmium	105	106	75-125	1 20	0.00059	0.00065	10 (1)	20
Chromium	101	104	75-125	3 20	0.0026	0.0027	4 (1)	20
Copper	104	136*	75-125	19 20	0.0271	0.0280	3	20
Lead	107	109	75-125	1 20	0.0075	0.0079	6	20
Nickel	102	102	75-125	1 20	0.0074	0.0076	3 (1)	20
Selenium	99	99	75-125	0 20	0.00050	0.00050	-469 (1)	20
Batch number: 06282113011A								
Total Organic Carbon	106		62-148		67.8	68.8	1	2
Batch number: 062825713001								
Mercury	127*	127*	80-120	0 20	0.000056	0.000076	200* (1)	20
Batch number: 06283049511A								
Dissolved Organic Carbon	94		66-137		60.2	57.5	5*	4
Batch number: 06283144301A								
Specific Gravity					1.0	1.0	0	2

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Analysis Request/ Environmental Services Chain of Custody

Acct. # 12098
1008466 / 488932
Please print

For Lancaster Laboratories use only
1008469 Sample # 414
1008470 433,154
ions on reverse side correspond with

C #0132124
983/97-49

1 Client: <u>C H2M HILL</u>		Acct. #:						
Project Name/ #: <u>Cargo Sweep</u>		PWSID #:						
Project Manager: <u>E. Mosley</u>		P.O. #:						
Sampler: <u>J. Coffey (571-244-6105)</u>		Quote #:						
Name of state where samples were collected: <u>IN</u>								
2 Sample Identification		Date Collected	Time Collected	3 Grab Composite	Soil Water Other	4 Matrix	Preservation Codes	Total # of Containers
DLH TV 1-SS-1		10-1-06	1740	X	X X	GRAIN	N	TOT METS, CN, % MOIST
DLH TV 1-SS-1-D		10-1-06	1740	X	X X		H	Mercury Diss
DLH TV 1-SS-2-Bu		10-1-06	1740	X	X X			TOT METS, CN, % MOIST
DLH TV 1-LS-1		10-1-06	1740	X	X X			DISS METS, Diss
DLH TV 1-LS-D		10-1-06	1740	X	X X			DISS Mercury
DLH TV 1-LS-1-Bu		10-1-06	1740	X	X X			Specific Gravity
DLH TV 1-DS-1		10-1-06	1740	X	X X			BULK Density
DLH TV 1-DS-D		10-1-06	1740	X	X X			TOC (Tot)
DLH TV 1-DS-D		10-1-06	1740	X	X X			DOC (Diss)
DLH TV 1-DS-D		10-1-06	1740	X	X X			DISS METS, CN, Hg
DLH TV 1-DS-D		10-1-06	1740	X	X X			Matrix Spike
DLH TV 1-DS-D		10-1-06	1740	X	X X			SD6: SWED2
DLH TV 1-DS-D		10-1-06	1740	X	X X			Walk 10% slope
7 Turnaround Time Requested (TAT) (please circle) <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)		Date results are needed: _____		Relinquished by: <u>John Coffey</u>	Date Relinquished: <u>10/16/06</u>	Time Received by: <u>1045</u>	Date Received by: <u>10/16/06</u>	Time Received by: <u>1045</u>
Phone #: _____ Fax #: _____ E-mail address: _____		Rush results requested by (please circle): Phone _____ Fax _____ E-mail _____		Relinquished by: _____	Date Relinquished: _____	Time Received by: _____	Date Received by: _____	Time Received by: _____
8 Data Package Options (please circle if required)		SDG Complete? Yes _____ No _____		Relinquished by: _____	Date Relinquished: _____	Time Received by: _____	Date Received by: _____	Time Received by: _____
Type I (Validation/NJ Reg)		TX TRRP-13		Relinquished by: _____	Date Relinquished: _____	Time Received by: _____	Date Received by: _____	Time Received by: _____
Type II (Tier II)		MA MCP CT RCP		Relinquished by: _____	Date Relinquished: _____	Time Received by: _____	Date Received by: _____	Time Received by: _____
Type III (Reduced NJ)		Site-specific QC (MS/MSD/Dup)? Yes _____ No _____		Relinquished by: _____	Date Relinquished: _____	Time Received by: _____	Date Received by: _____	Time Received by: _____
Type IV (CLP SOW)		(Yes, indicate QC sample and substrate replicate value: _____)		Relinquished by: _____	Date Relinquished: _____	Time Received by: _____	Date Received by: _____	Time Received by: _____
Type V (Raw Data Only)		Internal COC Required? Yes / No _____		Relinquished by: _____	Date Relinquished: _____	Time Received by: _____	Date Received by: _____	Time Received by: _____
5 Analyses Requested		Preservation Codes		Remarks		Temperature of samples upon receipt (if requested)		
6		Preservation Codes						
H=HCl		T=Thiosulfate						
N=NHO ₃		B=NaOH						
S=H ₂ SO ₄		O=Other						
FSC: _____		SCR#: <u>33805</u>						
For Lab Use Only								

Lancaster Laboratories, Inc. 2425 New Holland Pike Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008470. Samples arrived at the laboratory on Tuesday, October 03, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHTV1-LS-1 Unspiked Composite Filtered Water	4881943
DLHTV1-LS-1 Matrix Spike Composite Filtered Water	4881944
DLHTV1-LS-D Composite Filtered Water	4881945

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
1 COPY TO ELECTRONIC COPY TO	Data Package Group	Attn: James Maugahn
ELECTRONIC COPY TO	CH2M HILL	



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4881943
**DLHTV1-LS-1 Unspiked Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1-- SDG#: SWE03-01BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000081 J	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	28.5	0.104	mg/l 1
01754	Iron	7439-89-6	0.810	0.0522	mg/l 1
01757	Magnesium	7439-95-4	8.83	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0122	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.00037	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0020	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0198	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0029	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0059	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.109	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was field filtered for dissolved metals.

This sample was filtered in the lab for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00259	Mercury	SW-846 7470A	1	10/09/2006 13:33	Damary Valentin 1
01743	Aluminum	SW-846 6010B	1	10/08/2006 13:54	Deborah A Kraday 1
01750	Calcium	SW-846 6010B	1	10/09/2006 14:37	Jayme E Curet 1
01754	Iron	SW-846 6010B	1	10/10/2006 11:23	Joanne M Gates 1
01757	Magnesium	SW-846 6010B	1	10/09/2006 05:42	Deborah A Kraday 1
06025	Arsenic	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06028	Cadmium	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06031	Chromium	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06033	Copper	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06035	Lead	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06039	Nickel	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06041	Selenium	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1

Lancaster Laboratories Sample No. WW 4881943
**DLHTV1-LS-1 Unspiked Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1-- SDG#: SWE03-01BKG

07066	Silver	SW-846 6010B	1	10/08/2006 13:54	Deborah A Kraday	1
07072	Zinc	SW-846 6010B	1	10/09/2006 05:42	Deborah A Kraday	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/10/2006 12:59	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/07/2006 11:45	Mirit S Shenouda	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/06/2006 18:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 19:00	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4881944
**DLHTV1-LS-1 Matrix Spike Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1-- SDG#: SWE03-01MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0012	0.000056	mg/l 1
01743	Aluminum	7429-90-5	1.98	0.0802	mg/l 1
01750	Calcium	7440-70-2	32.7	0.104	mg/l 1
01754	Iron	7439-89-6	1.75	0.0522	mg/l 1
01757	Magnesium	7439-95-4	10.8	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0225	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0056	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0526	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0717	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0193	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0562	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0098	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0504	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.603	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.17	0.0050	mg/l 1

This sample was field filtered for dissolved metals.

This sample was filtered in the lab for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00259	Mercury	SW-846 7470A	1	10/09/2006 13:40	Damary Valentin 1
01743	Aluminum	SW-846 6010B	1	10/08/2006 14:08	Deborah A Kraday 1
01750	Calcium	SW-846 6010B	1	10/09/2006 14:51	Jayme E Curet 1
01754	Iron	SW-846 6010B	1	10/10/2006 11:38	Joanne M Gates 1
01757	Magnesium	SW-846 6010B	1	10/09/2006 05:56	Deborah A Kraday 1
06025	Arsenic	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06028	Cadmium	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06031	Chromium	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06033	Copper	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06035	Lead	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06039	Nickel	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06041	Selenium	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1

Lancaster Laboratories Sample No. WW 4881944
**DLHTV1-LS-1 Matrix Spike Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1-- SDG#: SWE03-01MS

07066	Silver	SW-846 6010B	1	10/08/2006 14:08	Deborah A Kraday	1
07072	Zinc	SW-846 6010B	1	10/09/2006 05:56	Deborah A Kraday	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/10/2006 13:00	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/07/2006 11:45	Mirit S Shenouda	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/06/2006 18:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 19:00	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4881945**DLHTV1-LS-D Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1D- SDG#: SWE03-02FD

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000081 J	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0851 J	0.0802	mg/l 1
01750	Calcium	7440-70-2	28.0	0.104	mg/l 1
01757	Magnesium	7439-95-4	8.56	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0123	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.00046	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0020	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0197	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0029	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0061	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.109	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was field filtered for dissolved metals.

This sample was filtered in the lab for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/09/2006 13:42	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/08/2006 15:11	Deborah A Kraday	1
01750	Calcium	SW-846 6010B	1	10/09/2006 15:10	Jayme E Curet	1
01757	Magnesium	SW-846 6010B	1	10/09/2006 06:58	Deborah A Kraday	1
06025	Arsenic	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06028	Cadmium	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06031	Chromium	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06033	Copper	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06035	Lead	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06039	Nickel	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06041	Selenium	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
07066	Silver	SW-846 6010B	1	10/08/2006 15:11	Deborah A Kraday	1
07072	Zinc	SW-846 6010B	1	10/09/2006 06:58	Deborah A Kraday	1

Lancaster Laboratories Sample No. WW 4881945
**DLHTV1-LS-D Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1D-	SDG#:	SWE03-02FD						
08255	Total Cyanide (water)	SW-846 9012A	1	10/10/2006 13:02	Nicole M Kepley	1		
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/07/2006 11:45	Mirit S Shenouda	1		
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/06/2006 18:00	Nelli S Markaryan	1		
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 19:00	James L Mertz	1		
08256	Cyanide Water Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1		

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/11/06 at 08:20 AM

Group Number: 1008470

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 062795713003								
Mercury		0.000056	0.00005 mg/l	109		80-120		
	U	6						
Batch number: 062801848001								
Aluminum	0.0802	U	0.0802 mg/l	97		90-112		
Calcium	0.104	U	0.104 mg/l	96		90-112		
Iron	0.0522	U	0.0522 mg/l	97		90-112		
Magnesium	0.0218	J	0.0135 mg/l	98		89-110		
Silver	0.0016	U	0.0016 mg/l	98		90-118		
Zinc	0.010	J	0.0081 mg/l	100		90-111		
Batch number: 062816050003A								
Arsenic	0.00067	0.00067	mg/l	99		80-120		
	U							
Cadmium	0.000099	0.00009	mg/l	100		80-120		
	U	9						
Chromium	0.00053	0.00026	mg/l	105		80-120		
	J							
Copper	0.00020	0.00020	mg/l	108		80-120		
	U							
Lead	0.000047	0.00004	mg/l	106		80-120		
	U	7						
Nickel	0.00043	0.00043	mg/l	103		80-120		
	U							
Selenium	0.00050	0.00050	mg/l	98		80-120		
	U							
Batch number: 06283117101A								
Total Cyanide (water)	0.0050	U	0.0050 mg/l	92		90-110		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 062795713003									
Mercury	112	113	80-120	1	20	0.000081 J	0.000074 J	9 (1)	20
Batch number: 062801848001									
Aluminum	99	102	75-125	3	20	0.0802 U	0.0886 J	200* (1)	20
Calcium	(2)	(2)	75-125	4	20	28.5	28.2	1	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/11/06 at 08:20 AM

Group Number: 1008470

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max</u>	<u>RPD Max</u>
Iron	94	93	75-125	1	20	0.810	0.809	0 (1)	20	
Magnesium	(2)	(2)	75-125	2	20	8.83	8.79	0	20	
Silver	101	103	75-125	2	20	0.0016 U	0.0016 U	129* (1)	20	
Zinc	99	99	75-125	0	20	0.109	0.115	6	20	
Batch number: 062816050003A			Sample number(s): 4881943-4881945 UNSPK: 4881943 BKG: 4881943							
Arsenic	103	107	75-125	2	20	0.0122	0.0124	1	20	
Cadmium	105	106	75-125	1	20	0.00037	0.00040	8 (1)	20	
Chromium	101	104	75-125	2	20	0.0020	0.0020 J	2 (1)	20	
Copper	104	105	75-125	1	20	0.0198	0.0194	2	20	
Lead	110	108	75-125	1	20	0.0029	0.0029	1 (1)	20	
Nickel	101	101	75-125	1	20	0.0059	0.0059	0 (1)	20	
Selenium	98	101	75-125	3	20	0.00050	0.00050	59* (1)	20	
			U			U				
Batch number: 06283117101A			Sample number(s): 4881943-4881945 UNSPK: 4881943 BKG: 4881943							
Total Cyanide (water)	87		83-111			0.0050 U	0.0050 U	21* (1)	20	

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008472. Samples arrived at the laboratory on Tuesday, October 03, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHTV1-DS-1 Unspiked Composite Solid Sample	4881947
DLHTV1-DS-1 Matrix Spike Composite Solid Sample	4881948
DLHTV1-DS-1-D Composite Solid Sample	4881949

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
1 COPY TO	Data Package Group	
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4881947
**DLHTV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1-- SDG#: SWE04-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.010 U	0.010	mg/kg	1
01643	Aluminum	7429-90-5	847.	16.8	mg/kg	5
01650	Calcium	7440-70-2	23,200.	12.7	mg/kg	1
01654	Iron	7439-89-6	515,000.	236.	mg/kg	50
01657	Magnesium	7439-95-4	5,900.	9.50	mg/kg	5
06125	Arsenic	7440-38-2	5.21	0.340	mg/kg	20
06128	Cadmium	7440-43-9	0.0380 U	0.0380	mg/kg	10
06131	Chromium	7440-47-3	10.2	0.620	mg/kg	20
06133	Copper	7440-50-8	3.31	0.700	mg/kg	20
06135	Lead	7439-92-1	0.901 J	0.150	mg/kg	10
06139	Nickel	7440-02-0	4.00 J	1.00	mg/kg	20
06141	Selenium	7782-49-2	0.740 U	0.740	mg/kg	20
06966	Silver	7440-22-4	0.850 U	0.850	mg/kg	5
06972	Zinc	7440-66-6	7.32 J	3.28	mg/kg	5
00111	Moisture	n.a.	0.50 U	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.17 U	0.17	mg/kg	1
06569	Bulk Density	n.a.	2.08	0.080	g/cc	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.9	0.50	% Passing	1
07139	3.35 mm	n.a.	97.2	0.50	% Passing	1
07140	2.36 mm	n.a.	96.9	0.50	% Passing	1
07141	1.18 mm	n.a.	87.6	0.50	% Passing	1
07142	0.6 mm	n.a.	54.2	0.50	% Passing	1
07143	0.3 mm	n.a.	13.2	0.50	% Passing	1
07144	0.15 mm	n.a.	10.4	0.50	% Passing	1
07145	0.075 mm	n.a.	9.6	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4881947

**DLHTV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1-- SDG#: SWE04-01BKG

CAT	No.	Analysis Name	CAS Number	Dry		Method	Dilution Factor
				Result	Detection Limit		
	07147	0.05 mm	n.a.	0.50	U	0.50	%
	07148	0.02 mm	n.a.	0.50	U	0.50	%
	07149	0.005 mm	n.a.	0.50	U	0.50	%
	07150	0.002 mm	n.a.	0.50	U	0.50	%
	07151	0.001 mm	n.a.	0.50	U	0.50	%

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00159	Mercury	SW-846 7471A	1	10/10/2006 10:15	Damary Valentin	1
	01643	Aluminum	SW-846 6010B	1	10/10/2006 18:25	John P Hook	5
	01650	Calcium	SW-846 6010B	1	10/10/2006 17:26	John P Hook	1
	01654	Iron	SW-846 6010B	1	10/10/2006 18:54	John P Hook	50
	01657	Magnesium	SW-846 6010B	1	10/10/2006 18:25	John P Hook	5
	06125	Arsenic	SW-846 6020	1	10/12/2006 17:43	Jayme E Curet	20
	06128	Cadmium	SW-846 6020	1	10/10/2006 16:46	Jayme E Curet	10
	06131	Chromium	SW-846 6020	1	10/12/2006 17:43	Jayme E Curet	20
	06133	Copper	SW-846 6020	1	10/12/2006 17:43	Jayme E Curet	20
	06135	Lead	SW-846 6020	1	10/16/2006 11:12	Jayme E Curet	10
	06139	Nickel	SW-846 6020	1	10/12/2006 17:43	Jayme E Curet	20
	06141	Selenium	SW-846 6020	1	10/12/2006 17:43	Jayme E Curet	20
	06966	Silver	SW-846 6010B	1	10/10/2006 18:25	John P Hook	5
	06972	Zinc	SW-846 6010B	1	10/10/2006 18:25	John P Hook	5
	00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
	05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:44	Venia B McFadden	1
	06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
	07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
	05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40	Annamaria Stipkovits	1
	05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45	Annamaria Stipkovits	1
	05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4881947

DLHTV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 10/28/2006 at 21:56

Discard: 11/28/2006

DS1-- SDG#: SWE04-01BKG

06150 ICP/MS SW-846 Solid digest SW-846 3050B
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1	10/09/2006 20:10	Annamaria Stipkovits	1
2	10/15/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4881948
**DLHTV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1-- SDG#: SWE04-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.169	0.0103	mg/kg	1
01643	Aluminum	7429-90-5	990.	16.8	mg/kg	5
01650	Calcium	7440-70-2	22,900.	12.7	mg/kg	1
01654	Iron	7439-89-6	462,000.	236.	mg/kg	50
01657	Magnesium	7439-95-4	5,900.	9.50	mg/kg	5
06125	Arsenic	7440-38-2	7.50	0.340	mg/kg	20
06128	Cadmium	7440-43-9	0.556	0.0380	mg/kg	10
06131	Chromium	7440-47-3	15.9	0.620	mg/kg	20
06133	Copper	7440-50-8	8.92	0.700	mg/kg	20
06135	Lead	7439-92-1	2.47	0.150	mg/kg	10
06139	Nickel	7440-02-0	9.48	1.00	mg/kg	20
06141	Selenium	7782-49-2	0.740 U	0.740	mg/kg	20
06966	Silver	7440-22-4	5.02	0.850	mg/kg	5
06972	Zinc	7440-66-6	56.3	3.28	mg/kg	5
00118	Moisture	n.a.	0.50 U	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	4.6	0.17	mg/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471A	1	10/10/2006 10:19	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/10/2006 18:40	John P Hook	5
01650	Calcium	SW-846 6010B	1	10/10/2006 17:40	John P Hook	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:18	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/10/2006 18:40	John P Hook	5
06125	Arsenic	SW-846 6020	1	10/13/2006 16:26	Parker D Lindstrom	20
06128	Cadmium	SW-846 6020	1	10/10/2006 17:00	Jayme E Curet	10
06131	Chromium	SW-846 6020	1	10/13/2006 16:26	Parker D Lindstrom	20
06133	Copper	SW-846 6020	1	10/13/2006 16:26	Parker D Lindstrom	20
06135	Lead	SW-846 6020	1	10/16/2006 11:20	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/13/2006 16:26	Parker D Lindstrom	20
06141	Selenium	SW-846 6020	1	10/13/2006 16:26	Parker D Lindstrom	20
06966	Silver	SW-846 6010B	1	10/10/2006 18:40	John P Hook	5
06972	Zinc	SW-846 6010B	1	10/10/2006 18:40	John P Hook	5
00118	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1

Lancaster Laboratories Sample No. SW 4881948**DLHTV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1-- SDG#: SWE04-01MS

05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:48	Venia B McFadden	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/09/2006 20:10	Annamaria Stipkovits	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	2	10/15/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4881949
**DLHTV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1D- SDG#: SWE04-02FD*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0102 U	0.0102	mg/kg	1
01643	Aluminum	7429-90-5	912.	16.3	mg/kg	5
01650	Calcium	7440-70-2	21,600.	12.3	mg/kg	1
01654	Iron	7439-89-6	499,000.	229.	mg/kg	50
01657	Magnesium	7439-95-4	5,560.	9.22	mg/kg	5
06125	Arsenic	7440-38-2	5.82	0.167	mg/kg	10
06128	Cadmium	7440-43-9	0.0543 J	0.0373	mg/kg	10
06131	Chromium	7440-47-3	10.4	0.304	mg/kg	10
06133	Copper	7440-50-8	3.42	0.343	mg/kg	10
06135	Lead	7439-92-1	1.07	0.149	mg/kg	10
06139	Nickel	7440-02-0	3.98	0.490	mg/kg	10
06141	Selenium	7782-49-2	0.363 U	0.363	mg/kg	10
06966	Silver	7440-22-4	0.825 U	0.825	mg/kg	5
06972	Zinc	7440-66-6	6.25 J	3.18	mg/kg	5
00111	Moisture	n.a.	0.50 U	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	2.26	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.9	0.50	% Passing	1
07139	3.35 mm	n.a.	99.9	0.50	% Passing	1
07140	2.36 mm	n.a.	99.5	0.50	% Passing	1
07141	1.18 mm	n.a.	94.7	0.50	% Passing	1
07142	0.6 mm	n.a.	80.0	0.50	% Passing	1
07143	0.3 mm	n.a.	64.6	0.50	% Passing	1
07144	0.15 mm	n.a.	46.4	0.50	% Passing	1
07145	0.075 mm	n.a.	25.7	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4881949
**DLHTV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1D- SDG#: SWE04-02FD*

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	%	1
07148	0.02 mm	n.a.	0.50	U	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Analysis		Dilution Factor
00159	Mercury	SW-846 7471A	1	10/10/2006 10:22	Damary Valentin			1
01643	Aluminum	SW-846 6010B	1	10/10/2006 19:32	John P Hook			5
01650	Calcium	SW-846 6010B	1	10/10/2006 17:54	John P Hook			1
01654	Iron	SW-846 6010B	1	10/10/2006 19:37	John P Hook			50
01657	Magnesium	SW-846 6010B	1	10/10/2006 19:32	John P Hook			5
06125	Arsenic	SW-846 6020	1	10/11/2006 20:07	David K Beck			10
06128	Cadmium	SW-846 6020	1	10/10/2006 17:13	Jayme E Curet			10
06131	Chromium	SW-846 6020	1	10/11/2006 20:07	David K Beck			10
06133	Copper	SW-846 6020	1	10/11/2006 20:07	David K Beck			10
06135	Lead	SW-846 6020	1	10/16/2006 11:29	Jayme E Curet			10
06139	Nickel	SW-846 6020	1	10/11/2006 20:07	David K Beck			10
06141	Selenium	SW-846 6020	1	10/11/2006 20:07	David K Beck			10
06966	Silver	SW-846 6010B	1	10/10/2006 19:32	John P Hook			5
06972	Zinc	SW-846 6010B	1	10/10/2006 19:32	John P Hook			5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher			1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:49	Venia B McFadden			1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith			1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff			1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40	Annamaria Stipkovits			1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45	Annamaria Stipkovits			1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop			1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 3 of 3

Lancaster Laboratories Sample No. SW 4881949

**DLHTV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 10/28/2006 at 21:56

Discard: 11/28/2006

DS1D- SDG#: SWE04-02FD*
06150 ICP/MS SW-846 Solid digest SW-846 3050B
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1	10/09/2006 20:10	Annamaria Stipkovits	1
2	10/15/2006 20:00	Annamaria Stipkovits	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:56 PM

Group Number: 1008472

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279102201B Total Cyanide (solid)			Sample number(s): 4881947-4881949 0.36 U 0.36 mg/kg 91			90-110		
Batch number: 06279820003A Moisture Moisture			Sample number(s): 4881947-4881949 100 100			99-101 99-101		
Batch number: 062825708003 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4881947-4881949 3.35 U 3.35 mg/kg 120 12.7 U 12.7 mg/kg 103 4.71 U 4.71 mg/kg 122 1.90 U 1.90 mg/kg 105 0.170 U 0.170 mg/kg 106 0.655 U 0.655 mg/kg 95			91-151 89-121 68-158 90-120 90-126 85-110		
Batch number: 062825711001 Mercury			Sample number(s): 4881947-4881949 0.0105 U 0.0105 mg/kg 85			66-133		
Batch number: 062826150002A Arsenic Cadmium Chromium Copper Nickel Selenium			Sample number(s): 4881947-4881949 0.0231 J 0.0170 mg/kg 107 0.0056 J 0.0038 mg/kg 108 0.198 J 0.0310 mg/kg 109 0.0418 J 0.0350 mg/kg 110 0.0500 U 0.0500 mg/kg 110 0.0370 U 0.0370 mg/kg 109			77-123 79-121 78-122 81-119 81-119 74-126		
Batch number: 062886150002A Lead			Sample number(s): 4881947-4881949 0.0459 J 0.0150 mg/kg 111			79-121		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279102201B Total Cyanide (solid)	97		Sample number(s): 4881947-4881949 UNSPK: 4881947 BKG: 4881947 59-124 0.17 U 0.18 U 200* (1) 17					
Batch number: 06279820003A Moisture Moisture			Sample number(s): 4881947-4881949 BKG: 4881947 0.50 U 0.50 U 5 (1) 15 0.50 U 0.50 U 5 (1) 15					
Batch number: 06280710301A 75 mm			Sample number(s): 4881947, 4881949 BKG: P881932 100. 100. 0 20					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:56 PM

Group Number: 1008472

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					99.6	99.5	0	20
3.35 mm					99.5	99.2	0	20
2.36 mm					99.2	98.3	1	20
1.18 mm					91.9	91.9	0	20
0.6 mm					72.8	71.5	2	20
0.3 mm					57.7	56.7	2	20
0.15 mm					49.2	48.6	1	20
0.075 mm					42.3	41.8	1	20
0.064 mm					37.0	35.0	6	20
0.05 mm					22.0	20.0	10	20
0.02 mm					6.0	4.0	40* (1)	20
0.005 mm					3.0	3.5	15 (1)	20
0.002 mm					0.50 J	0.50 J	0 (1)	20
0.001 mm					0.50 U	0.50 U	0 (1)	20

Batch number: 062825708003

Sample number(s): 4881947-4881949 UNSPK: 4881947 BKG: 4881947

Aluminum

(2) (2) 75-125 3 20 847. 828. 2 20

Calcium

(2) (2) 75-125 0 20 23,200. 23,100. 1 20

Iron

(2) (2) 75-125 0 20 515,000. 514,000. 0 20

Magnesium

(2) (2) 75-125 1 20 5,900. 6,090. 3 20

Silver

100 98 75-125 3 20 0.850 U 0.850 U 0 (1) 20

Zinc

98 94 75-125 3 20 7.32 J 8.99 J 20 (1) 20

Batch number: 062825711001

Sample number(s): 4881947-4881949 UNSPK: 4881947 BKG: 4881947

Mercury

104 99 80-120 5 20 0.010 U 0.0099 U -69 (1) 20

Batch number: 062826150002A

Sample number(s): 4881947-4881949 UNSPK: 4881947 BKG: 4881947

Arsenic

(2) (2) 70-130 7 20 5.21 5.61 7 (1) 20

Cadmium

111 108 75-125 3 20 0.0380 U 0.0382 J 200* (1) 20

Chromium

114 74* 75-125 13 20 10.2 9.83 3 (1) 20

Copper

112 100 75-125 7 20 3.31 3.37 2 (1) 20

Nickel

110 96 75-125 7 20 4.00 J 4.04 1 (1) 20

Selenium

62* 53* 75-130 16 20 0.740 U 0.740 U -48 (1) 20

Batch number: 06284656901A

Sample number(s): 4881947, 4881949 BKG: 4881947

Bulk Density

2.08 2.09 1 20

Batch number: 062886150002A

Sample number(s): 4881947-4881949 UNSPK: 4881947 BKG: 4881947

Lead 105 104 75-125 1 20 0.901 J 0.978 J 8 (1) 20

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The background result was more than four times the spike added.

Analysis Request/Environmental Services Chain of Custody

For Lancaster Laboratories use only



Acct. # 12098 Group# 1008469 Sample # 4881440-42
1008470/4881443-45

Please print. Instructions on reverse side correspond with circled numbers.

COC # 0132124

For Lab Use Only

SCR#:

33805

1 Client: CH2M HILL Acct. #: _____

Project Name#: Cargo Sweep PWSID #: _____

Project Manager: E. Mosley P.O. #: _____

Sampler: S. Coffey (571-231-6105) Quote #: _____

Name of state where samples were collected: MN

2 Sample Identification Date Collected Time Collected Grab Composite Matrix

4

Total # of Containers

5 Analyses Requested

Preservation Codes

N

Preservation Codes

H=HCl

T=Thiosulfate

N=HNO₃

B=NaOH

S=H₂SO₄

O=Other

6

Temperature of samples upon receipt (if requested)

FSC:

10/5/04

Date Time

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008535. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHTV2-DS-1 Solid Sample	4882249
DLHTV2-DS-1-D Solid Sample	4882250
DLHTV2-SS-1 Solid Sample	4882251
DLHTV2-SS-2 Solid Sample	4882252
DLHTV2-LS-1 Water Sample	4882253
DLHTV2-LS-1 Filtered Water Sample	4882254
DLHTV2-LS-1-D Water Sample	4882255

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
1 COPY TO	Data Package Group	
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4882249
**DLHTV2-DS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:03

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V2DS1 SDG#: SWE01-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0102 U	0.0102	mg/kg	1
01643	Aluminum	7429-90-5	394.	16.4	mg/kg	5
01650	Calcium	7440-70-2	3,020.	12.5	mg/kg	1
01654	Iron	7439-89-6	310,000.	231.	mg/kg	50
01657	Magnesium	7439-95-4	1,120.	9.31	mg/kg	5
06125	Arsenic	7440-38-2	7.15	0.165	mg/kg	10
06128	Cadmium	7440-43-9	0.0730 J	0.0369	mg/kg	10
06131	Chromium	7440-47-3	10.1	0.301	mg/kg	10
06133	Copper	7440-50-8	2.34	0.340	mg/kg	10
06135	Lead	7439-92-1	0.960 J	0.147	mg/kg	10
06139	Nickel	7440-02-0	1.36 J	0.485	mg/kg	10
06141	Selenium	7782-49-2	0.359 U	0.359	mg/kg	10
06966	Silver	7440-22-4	0.833 U	0.833	mg/kg	5
06972	Zinc	7440-66-6	4.81 J	3.21	mg/kg	5
00111	Moisture	n.a.	0.50 U	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	2.03	0.080	g/cc	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.9	0.50	% Passing	1
07139	3.35 mm	n.a.	99.8	0.50	% Passing	1
07140	2.36 mm	n.a.	99.6	0.50	% Passing	1
07141	1.18 mm	n.a.	99.3	0.50	% Passing	1
07142	0.6 mm	n.a.	88.1	0.50	% Passing	1
07143	0.3 mm	n.a.	45.0	0.50	% Passing	1
07144	0.15 mm	n.a.	32.0	0.50	% Passing	1
07145	0.075 mm	n.a.	30.3	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4882249
**DLHTV2-DS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2DS1 SDG#: SWE01-04

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	%	1
07148	0.02 mm	n.a.	0.50	U	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/10/2006 10:23	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/10/2006 19:42	John P Hook	5
01650	Calcium	SW-846 6010B	1	10/10/2006 17:59	John P Hook	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:46	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/10/2006 19:42	John P Hook	5
06125	Arsenic	SW-846 6020	1	10/11/2006 20:10	David K Beck	10
06128	Cadmium	SW-846 6020	1	10/10/2006 17:17	Jayme E Curet	10
06131	Chromium	SW-846 6020	1	10/11/2006 20:10	David K Beck	10
06133	Copper	SW-846 6020	1	10/11/2006 20:10	David K Beck	10
06135	Lead	SW-846 6020	1	10/16/2006 11:32	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/11/2006 20:10	David K Beck	10
06141	Selenium	SW-846 6020	1	10/11/2006 20:10	David K Beck	10
06966	Silver	SW-846 6010B	1	10/10/2006 19:42	John P Hook	5
06972	Zinc	SW-846 6010B	1	10/10/2006 19:42	John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:50	Venia B McFadden	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4882249

**DLHTV2-DS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 12:03

Discard: 01/07/2007

V2DS1 SDG#: SWE01-04
06150 ICP/MS SW-846 Solid digest SW-846 3050B
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1	10/09/2006 20:10	Annamaria Stipkovits	1
2	10/15/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882250
**DLHTV2-DS-1-D Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007
 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

VSS1D SDG#: SWE01-05FD

CAT No.	Analysis Name	CAS Number	As Received		Units	Dilution Factor
			Result	Method Detection Limit		
06569	Bulk Density	n.a.	1.93	0.080	g/cc	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.9	0.50	% Passing	1
07139	3.35 mm	n.a.	99.7	0.50	% Passing	1
07140	2.36 mm	n.a.	99.5	0.50	% Passing	1
07141	1.18 mm	n.a.	99.4	0.50	% Passing	1
07142	0.6 mm	n.a.	94.6	0.50	% Passing	1
07143	0.3 mm	n.a.	52.8	0.50	% Passing	1
07144	0.15 mm	n.a.	40.8	0.50	% Passing	1
07145	0.075 mm	n.a.	38.6	0.50	% Passing	1
07146	0.064 mm	n.a.	37.5	0.50	% Passing	1
07147	0.05 mm	n.a.	34.5	0.50	% Passing	1
07148	0.02 mm	n.a.	13.0	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50 U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Laboratory Chronicle			Dilution Factor
		Method	Analysis Trial#	Date and Time	



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 2 of 2
REVISED

Lancaster Laboratories Sample No. SW 4882250

**DLHTV2-DS-1-D Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC Account Number: 12098

Submitted: 10/05/2006 09:25

Reported: 12/07/2006 at 12:03

Discard: 01/07/2007

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

VSS1D SDG#: SWE01-05FD

06569 Bulk Density

ASTM E868-82 Sec 9.9

1 10/13/2006 04:00

Daniel S Smith

1

07103 Grain Size to 1 um

modified

1 10/07/2006 11:30

Luz M Groff

1

Lancaster Laboratories Sample No. SW 4882251
**DLHTV2-SS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2SS1 SDG#: SWE01-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0113 U	0.0113	mg/kg	1
01643	Aluminum	7429-90-5	591.	17.7	mg/kg	5
01650	Calcium	7440-70-2	12,800.	13.4	mg/kg	1
01654	Iron	7439-89-6	366,000.	249.	mg/kg	50
01657	Magnesium	7439-95-4	3,340.	10.1	mg/kg	5
06125	Arsenic	7440-38-2	4.32	0.180	mg/kg	10
06128	Cadmium	7440-43-9	0.0534 J	0.0402	mg/kg	10
06131	Chromium	7440-47-3	8.07	0.328	mg/kg	10
06133	Copper	7440-50-8	5.85	0.371	mg/kg	10
06135	Lead	7439-92-1	6.69	0.159	mg/kg	10
06139	Nickel	7440-02-0	3.21	0.529	mg/kg	10
06141	Selenium	7782-49-2	0.392 U	0.392	mg/kg	10
06966	Silver	7440-22-4	0.900 U	0.900	mg/kg	5
06972	Zinc	7440-66-6	8.24 J	3.47	mg/kg	5
00111	Moisture	n.a.	8.3	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.19 U	0.19	mg/kg	1
06569	Bulk Density	n.a.	1.75	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	20.7	0.50	% Passing	1
07139	3.35 mm	n.a.	14.5	0.50	% Passing	1
07140	2.36 mm	n.a.	10.4	0.50	% Passing	1
07141	1.18 mm	n.a.	0.50 U	0.50	% Passing	1
07142	0.6 mm	n.a.	0.50 U	0.50	% Passing	1
07143	0.3 mm	n.a.	0.50 U	0.50	% Passing	1
07144	0.15 mm	n.a.	0.50 U	0.50	% Passing	1
07145	0.075 mm	n.a.	0.50 U	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4882251
**DLHTV2-SS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2SS1 SDG#: SWE01-06

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	%	1
07148	0.02 mm	n.a.	0.50	U	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 2.36 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/10/2006 10:27	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/10/2006 19:51	John P Hook	5
01650	Calcium	SW-846 6010B	1	10/10/2006 18:13	John P Hook	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:56	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/10/2006 19:51	John P Hook	5
06125	Arsenic	SW-846 6020	1	10/10/2006 17:30	Jayme E Curet	10
06128	Cadmium	SW-846 6020	1	10/10/2006 17:30	Jayme E Curet	10
06131	Chromium	SW-846 6020	1	10/11/2006 20:22	David K Beck	10
06133	Copper	SW-846 6020	1	10/10/2006 17:30	Jayme E Curet	10
06135	Lead	SW-846 6020	1	10/16/2006 11:40	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/11/2006 20:22	David K Beck	10
06141	Selenium	SW-846 6020	1	10/11/2006 20:22	David K Beck	10
06966	Silver	SW-846 6010B	1	10/10/2006 19:51	John P Hook	5
06972	Zinc	SW-846 6010B	1	10/10/2006 19:51	John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:51	Venia B McFadden	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 13:00	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4882251

**DLHTV2-SS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 12:03

Discard: 01/07/2007

V2SS1 SDG#: SWE01-06
06150 ICP/MS SW-846 Solid digest SW-846 3050B
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1	10/09/2006 20:10	Annamaria Stipkovits	1
2	10/15/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882252
**DLHTV2-SS-2 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2SS2 SDG#: SWE01-07*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0111 U	0.0111	mg/kg	1
01643	Aluminum	7429-90-5	555.	18.2	mg/kg	5
01650	Calcium	7440-70-2	10,600.	13.8	mg/kg	1
01654	Iron	7439-89-6	337,000.	256.	mg/kg	50
01657	Magnesium	7439-95-4	2,840.	10.3	mg/kg	5
06125	Arsenic	7440-38-2	4.41	0.183	mg/kg	10
06128	Cadmium	7440-43-9	0.0409 U	0.0409	mg/kg	10
06131	Chromium	7440-47-3	7.78	0.333	mg/kg	10
06133	Copper	7440-50-8	3.00	0.376	mg/kg	10
06135	Lead	7439-92-1	0.946 J	0.163	mg/kg	10
06139	Nickel	7440-02-0	2.72	0.538	mg/kg	10
06141	Selenium	7782-49-2	0.398 U	0.398	mg/kg	10
06966	Silver	7440-22-4	0.923 U	0.923	mg/kg	5
06972	Zinc	7440-66-6	12.0	3.56	mg/kg	5
00111	Moisture	n.a.	9.7	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.19 U	0.19	mg/kg	1
06569	Bulk Density	n.a.	1.74	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	9.6	0.50	% Passing	1
07139	3.35 mm	n.a.	8.7	0.50	% Passing	1
07140	2.36 mm	n.a.	8.1	0.50	% Passing	1
07141	1.18 mm	n.a.	0.50 U	0.50	% Passing	1
07142	0.6 mm	n.a.	0.50 U	0.50	% Passing	1
07143	0.3 mm	n.a.	0.50 U	0.50	% Passing	1
07144	0.15 mm	n.a.	0.50 U	0.50	% Passing	1
07145	0.075 mm	n.a.	0.50 U	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4882252
**DLHTV2-SS-2 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2SS2 SDG#: SWE01-07*

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	%	1
07148	0.02 mm	n.a.	0.50	U	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 2.36 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Analyst	Dilution Factor
				Date and Time			
00159	Mercury	SW-846 7471A	1	10/10/2006 10:29		Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/10/2006 20:10		John P Hook	5
01650	Calcium	SW-846 6010B	1	10/10/2006 18:18		John P Hook	1
01654	Iron	SW-846 6010B	1	10/10/2006 20:15		John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/10/2006 20:10		John P Hook	5
06125	Arsenic	SW-846 6020	1	10/10/2006 17:35		Jayme E Curet	10
06128	Cadmium	SW-846 6020	1	10/10/2006 17:35		Jayme E Curet	10
06131	Chromium	SW-846 6020	1	10/11/2006 20:26		David K Beck	10
06133	Copper	SW-846 6020	1	10/10/2006 17:35		Jayme E Curet	10
06135	Lead	SW-846 6020	2	10/16/2006 11:43		Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/11/2006 20:26		David K Beck	10
06141	Selenium	SW-846 6020	1	10/11/2006 20:26		David K Beck	10
06966	Silver	SW-846 6010B	1	10/10/2006 20:10		John P Hook	5
06972	Zinc	SW-846 6010B	1	10/10/2006 20:10		John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56		Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:53		Venia B McFadden	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50		Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 13:00		Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40		Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45		Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50		Nancy J Shoop	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4882252

**DLHTV2-SS-2 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 12:03

Discard: 01/07/2007

V2SS2 SDG#: SWE01-07*
06150 ICP/MS SW-846 Solid digest SW-846 3050B
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1	10/09/2006 20:10	Annamaria Stipkovits	1
2	10/15/2006 20:00	Annamaria Stipkovits	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 2
REVISED

Lancaster Laboratories Sample No. WW 4882253

DLHTV2-LS-1 Water Sample
Great Lakes - Sweepings

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25
Reported: 12/07/2006 at 12:03
Discard: 01/07/2007

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

V2LS1 SDG#: SWE02-03*

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	19.2	0.104	mg/l	1	
01754	Iron	7439-89-6	0.642	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	4.89	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0021	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0011 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0023	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00022 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0013 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00206	Total Suspended Solids	n.a.	9.2 J	3.0	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	3.5 U	3.5	mg/l	1	
00273	Total Organic Carbon	n.a.	2.8	1.0	mg/l	1	
01443	Specific Gravity	n.a.	1.00	0.0050		1	
04001	Chemical Oxygen Demand	n.a.	12.8 U	12.8	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 06:51	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/11/2006 21:16	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/10/2006 22:15	John P Hook	1
01754	Iron	SW-846 6010B	1	10/10/2006 22:15	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/10/2006 22:15	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
06028	Cadmium	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
06031	Chromium	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
06033	Copper	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
06035	Lead	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
06039	Nickel	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1

Lancaster Laboratories Sample No. WW 4882253
**DLHTV2-LS-1 Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:03

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V2LS1 SDG#: SWE02-03*

06041	Selenium	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
07066	Silver	SW-846 6010B	1	10/10/2006 22:15	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/10/2006 22:15	John P Hook	1
00206	Total Suspended Solids	EPA 160.2	1	10/06/2006 10:08	Maria O Gittens	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/05/2006 12:21	Susan A Engle	1
00273	Total Organic Carbon	EPA 415.1	1	10/12/2006 14:22	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/10/2006 13:04	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/09/2006 00:35	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 19:00	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4882254
**DLHTV2-LS-1 Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2L1F SDG#: SWE03-03

CAT	No.	Analysis Name	CAS Number	As Received		Dilution Factor	
				Result	Method		
00259	Mercury		7439-97-6	0.000056 U	0.000056	mg/l	1
01750	Calcium		7440-70-2	20.2	0.104	mg/l	1
01754	Iron		7439-89-6	0.0787 J	0.0522	mg/l	1
01757	Magnesium		7439-95-4	5.17	0.0135	mg/l	1
06025	Arsenic		7440-38-2	0.0019 J	0.00067	mg/l	1
06028	Cadmium		7440-43-9	0.000099 U	0.000099	mg/l	1
06031	Chromium		7440-47-3	0.00084 J	0.00026	mg/l	1
06033	Copper		7440-50-8	0.0026	0.00020	mg/l	1
06035	Lead		7439-92-1	0.000080 J	0.000047	mg/l	1
06039	Nickel		7440-02-0	0.0013 J	0.00043	mg/l	1
06041	Selenium		7782-49-2	0.00050 U	0.00050	mg/l	1
07066	Silver		7440-22-4	0.0016 U	0.0016	mg/l	1
07072	Zinc		7440-66-6	0.0081 U	0.0081	mg/l	1
08255	Total Cyanide (water)		57-12-5	0.0050 U	0.0050	mg/l	1

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Analysis			Dilution Factor
				Trial#	Date and Time	Analyst	
00259	Mercury		SW-846 7470A	1	10/10/2006 06:53	Damary Valentin	1
01750	Calcium		SW-846 6010B	1	10/10/2006 22:20	John P Hook	1
01754	Iron		SW-846 6010B	1	10/10/2006 22:20	John P Hook	1
01757	Magnesium		SW-846 6010B	1	10/10/2006 22:20	John P Hook	1
06025	Arsenic		SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
06028	Cadmium		SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
06031	Chromium		SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
06033	Copper		SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
06035	Lead		SW-846 6020	1	10/10/2006 10:00	Jayme E Curet	1
06039	Nickel		SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
06041	Selenium		SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
07066	Silver		SW-846 6010B	1	10/10/2006 22:20	John P Hook	1
07072	Zinc		SW-846 6010B	1	10/10/2006 22:20	John P Hook	1
08255	Total Cyanide (water)		SW-846 9012A	1	10/10/2006 13:05	Nicole M Kepley	1

Lancaster Laboratories Sample No. WW 4882254

**DLHTV2-LS-1 Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:03

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V2L1F	SDG#:	SWE03-03					
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/09/2006 00:35	Helen L Schaeffer	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 19:00	James L Mertz	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1	

Lancaster Laboratories Sample No. WW 4882255
**DLHTV2-LS-1-D Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC Account Number: 12098

 Submitted: 10/05/2006 09:25 Parsons Brinkerhoff
 Reported: 12/07/2006 at 12:03 75 Arlington Street
 Discard: 01/07/2007 Ninth Floor
 Boston MA 02116

V2L1D SDG#: SWE02-04FD*

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result				
00235	Biochemical Oxygen Demand	n.a.	3.3	U	3.3	mg/l	1
00273	Total Organic Carbon	n.a.	2.9		1.0	mg/l	1
01443	Specific Gravity	n.a.	1.00		0.0050		1
04001	Chemical Oxygen Demand	n.a.	12.8	U	12.8	mg/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/05/2006 12:21	Susan A Engle	1
00273	Total Organic Carbon	EPA 415.1	1	10/12/2006 14:30	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 12:03 PM

Group Number: 1008535

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06278023503A Biochemical Oxygen Demand			Sample number(s): 4882253, 4882255	108	107	85-115	1	8
Batch number: 06279020601B Total Suspended Solids	3.0 U	3.0	mg/l	103		56-128		
Batch number: 06279102201B Total Cyanide (solid)	0.36 U	0.36	mg/kg	91		90-110		
Batch number: 06279820003A Moisture			Sample number(s): 4882249, 4882251-4882252	100		99-101		
Batch number: 062816050003A Arsenic	0.00067 U	0.00067	mg/l	99		80-120		
Cadmium	0.000099 U	0.00009	mg/l	100		80-120		
Chromium	0.00053 U	0.00026	mg/l	105		80-120		
Copper	0.00020 U	0.00020	mg/l	108		80-120		
Lead	0.000047 U	0.00004	mg/l	106		80-120		
Nickel	0.00043 U	0.00043	mg/l	103		80-120		
Selenium	0.00050 U	0.00050	mg/l	98		80-120		
Batch number: 062821848001 Aluminum	0.0802 U	0.0802	mg/l	104		90-112		
Calcium	0.104 U	0.104	mg/l	102		90-112		
Iron	0.0522 U	0.0522	mg/l	98		90-112		
Magnesium	0.0135 U	0.0135	mg/l	97		89-110		
Silver	0.0016 U	0.0016	mg/l	99		90-118		
Zinc	0.0081 U	0.0081	mg/l	101		90-111		
Batch number: 062825708003 Aluminum	3.35 U	3.35	mg/kg	120		91-151		
Calcium	12.7 U	12.7	mg/kg	103		89-121		
Iron	4.71 U	4.71	mg/kg	122		68-158		
Magnesium	1.90 U	1.90	mg/kg	105		90-120		
Silver	0.170 U	0.170	mg/kg	106		90-126		
Zinc	0.655 U	0.655	mg/kg	95		85-110		
Batch number: 062825711001 Mercury	0.0105 U	0.0105	mg/kg	85		66-133		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 12:03 PM

Group Number: 1008535

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 062825713001			Sample number(s): 4882253-4882254					
Mercury	0.056 U	0.056	ug/l	104		80-120		
Batch number: 062826150002A			Sample number(s): 4882249, 4882251-4882252					
Arsenic	0.0231 J	0.0170	mg/kg	107		77-123		
Cadmium	0.0056 J	0.0038	mg/kg	108		79-121		
Chromium	0.198 J	0.0310	mg/kg	109		78-122		
Copper	0.0418 J	0.0350	mg/kg	110		81-119		
Nickel	0.0500 U	0.0500	mg/kg	110		81-119		
Selenium	0.0370 U	0.0370	mg/kg	109		74-126		
Batch number: 06283117101A			Sample number(s): 4882253-4882254					
Total Cyanide (water)	0.0050 U	0.0050	mg/l	92		90-110		
Batch number: 06283400102A			Sample number(s): 4882253, 4882255					
Chemical Oxygen Demand				99		94-110		
Batch number: 06285049511B			Sample number(s): 4882253, 4882255					
Total Organic Carbon	1.0 U	1.0	mg/l	97		80-120		
Batch number: 062886150002A			Sample number(s): 4882249, 4882251-4882252					
Lead	0.0459 J	0.0150	mg/kg	111		79-121		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>RPD Max</u>
Batch number: 06278023503A			Sample number(s): 4882253, 4882255 UNSPK: P882510 BKG: P881810						
Biochemical Oxygen Demand	110	124	67-144	12*	9	177.	161.	9	9
Batch number: 06279020601B			Sample number(s): 4882253 BKG: P882527						
Total Suspended Solids						197.	205.	4	20
Batch number: 06279102201B			Sample number(s): 4882249, 4882251-4882252 UNSPK: P881947 BKG: P881947						
Total Cyanide (solid)	97		59-124		0.17 U	0.18 U	200* (1)		17
Batch number: 06279820003A			Sample number(s): 4882249, 4882251-4882252 BKG: P881947						
Moisture					0.50 U	0.50 U	5 (1)		15
Batch number: 06280710301A			Sample number(s): 4882249-4882252 BKG: P881932						
75 mm					100.	100.	0		20
37.5 mm					100.	100.	0		20
19 mm					100.	100.	0		20
4.75 mm					99.6	99.5	0		20
3.35 mm					99.5	99.2	0		20
2.36 mm					99.2	98.3	1		20
1.18 mm					91.9	91.9	0		20
0.6 mm					72.8	71.5	2		20
0.3 mm					57.7	56.7	2		20
0.15 mm					49.2	48.6	1		20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 3 of 4
REVISED

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 12/07/06 at 12:03 PM

Group Number: 1008535

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 12:03 PM

Group Number: 1008535

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Specific Gravity					1.0	1.0	1.0	0	2
Batch number: 06283400102A Chemical Oxygen Demand	95		Sample number(s): 4882253, 4882255 UNSPK: P881814 BKG: P883056 90-110 420. 409.				3		5
Batch number: 06284656901A Bulk Density			Sample number(s): 4882249, 4882251-4882252 BKG: P881947		2.08	2.09	1		20
Batch number: 06285049511B Total Organic Carbon	101		Sample number(s): 4882253, 4882255 UNSPK: P882226 BKG: P882226 62-148 1.5 J 1.6 J			2 (1)		2	
Batch number: 06286656901A Bulk Density			Sample number(s): 4882250 BKG: P886259		0.78	0.77	1 (1)		20
Batch number: 062886150002A Lead	105	104	Sample number(s): 4882249, 4882251-4882252 UNSPK: P881947 BKG: P881947 75-125 1 20 0.901 J 0.978 J 8 (1)					20	

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 1008535 Sample # 4882249-55

COC # 0132127

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>CHAN HILL</u> Acct. #: _____ Project Name#: <u>GREAT LAKES</u> PWSID #: _____ Project Manager: <u>B. Mosley</u> P.O.#: _____ Sampler: <u>J. Coffey (571-274-6105)</u> Quote #: _____ Name of state where samples were collected: <u>NY</u>				5 Analyses Requested <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2"></th> <th colspan="8">Preservation Codes</th> <th colspan="2"></th> </tr> <tr> <th rowspan="2">Matrix</th> <th rowspan="2">Check if applicable</th> <th colspan="2">1</th> <th colspan="2">2</th> <th colspan="2">3</th> <th colspan="2">4</th> <th colspan="2">5</th> </tr> <tr> <th>Portable NIPES</th> <th>Non portable</th> <th>Steel</th> <th>Drum</th> <th>Granular</th> <th>Solid</th> <th>Specific Gravity</th> <th>TOT. METAL/SW HEAT</th> <th>% MOIST (Soil)</th> <th>510C₂, Paths</th> <th>TDC</th> <th>DOC</th> <th>BOD/COD</th> </tr> </thead> <tbody> <tr> <td></td> </tr> </tbody> </table>												Preservation Codes										Matrix	Check if applicable	1		2		3		4		5		Portable NIPES	Non portable	Steel	Drum	Granular	Solid	Specific Gravity	TOT. METAL/SW HEAT	% MOIST (Soil)	510C ₂ , Paths	TDC	DOC	BOD/COD																																																																																																																																																									
		Preservation Codes																																																																																																																																																																																																									
Matrix	Check if applicable	1		2		3		4		5																																																																																																																																																																																																	
		Portable NIPES	Non portable	Steel	Drum	Granular	Solid	Specific Gravity	TOT. METAL/SW HEAT	% MOIST (Soil)	510C ₂ , Paths	TDC	DOC	BOD/COD																																																																																																																																																																																													
2 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sample Identification</th> <th>Date Collected</th> <th>Time Collected</th> <th>Prob</th> <th>Campsite</th> <th>Soil</th> <th>Water</th> <th>Other</th> <th>Containers</th> <th>Delivery</th> <th>Storage</th> <th>Spec Gravity</th> <th>TOT. METAL/SW HEAT</th> <th>% MOIST (Soil)</th> <th>510C₂, Paths</th> <th>TDC</th> <th>DOC</th> <th>BOD/COD</th> </tr> </thead> <tbody> <tr> <td>DLHTV2-DS-1</td> <td>10-3-06</td> <td>1300</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td>X</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DLHTV2-DS-1-D</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DLHTV2-SS-1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td>X</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DLHTV2-SS-2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td>X</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DLHTV2-SS-2-BU</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DLHTV2-LS-1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DLHTV2-LS-1-D</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>4</td> <td>X</td> <td>XX</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DLHTV2-LS-1-BU</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td>X</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DLHTV2-DS-1-BU</td> <td></td> <td></td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td>2</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Sample Identification	Date Collected	Time Collected	Prob	Campsite	Soil	Water	Other	Containers	Delivery	Storage	Spec Gravity	TOT. METAL/SW HEAT	% MOIST (Soil)	510C ₂ , Paths	TDC	DOC	BOD/COD	DLHTV2-DS-1	10-3-06	1300						2	X		X							DLHTV2-DS-1-D								1	X									DLHTV2-SS-1								2	X		X							DLHTV2-SS-2								2	X		X							DLHTV2-SS-2-BU								1	X									DLHTV2-LS-1								2	X									DLHTV2-LS-1-D								4	X	XX	X	X	X					DLHTV2-LS-1-BU								2	X			X	X					DLHTV2-DS-1-BU			2					2	X																	1										3 4 5 6 7 8 9	
Sample Identification	Date Collected	Time Collected	Prob	Campsite	Soil	Water	Other	Containers	Delivery	Storage	Spec Gravity	TOT. METAL/SW HEAT	% MOIST (Soil)	510C ₂ , Paths	TDC	DOC	BOD/COD																																																																																																																																																																																										
DLHTV2-DS-1	10-3-06	1300						2	X		X																																																																																																																																																																																																
DLHTV2-DS-1-D								1	X																																																																																																																																																																																																		
DLHTV2-SS-1								2	X		X																																																																																																																																																																																																
DLHTV2-SS-2								2	X		X																																																																																																																																																																																																
DLHTV2-SS-2-BU								1	X																																																																																																																																																																																																		
DLHTV2-LS-1								2	X																																																																																																																																																																																																		
DLHTV2-LS-1-D								4	X	XX	X	X	X																																																																																																																																																																																														
DLHTV2-LS-1-BU								2	X			X	X																																																																																																																																																																																														
DLHTV2-DS-1-BU			2					2	X																																																																																																																																																																																																		
								1																																																																																																																																																																																																			
7 Turnaround Time Requested (TAT) (please circle): <input checked="" type="radio"/> Normal <input type="radio"/> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone Fax E-mail Phone #: _____ Fax #: _____ E-mail address: _____				Relinquished by: <u>Regan McMorris</u> Date <u>10-3-06</u> Time <u>1600</u> Received by: _____ Date <u></u> Time <u></u> Relinquished by: _____ Date <u></u> Time <u></u> Received by: _____ Date <u></u> Time <u></u> Relinquished by: _____ Date <u></u> Time <u></u> Received by: _____ Date <u></u> Time <u></u> Relinquished by: _____ Date <u></u> Time <u></u> Received by: _____ Date <u></u> Time <u></u> Relinquished by: _____ Date <u></u> Time <u></u> Received by: _____ Date <u></u> Time <u></u> Relinquished by: _____ Date <u></u> Time <u></u> Received by: _____ Date <u></u> Time <u></u>																																																																																																																																																																																																							
8 Data Package Options (please circle if required) Type I (validation/NJ Reg) TX TRRP-13 SDG Complete? Yes No Type II (Tier II) MA MCP CT RCP Type III (Reduced NJ) Type IV (CLP SOW) Type VI (Raw Data Only)				Site-specific QC (MS/MSD/Dup)? Yes No <small>(If yes, indicate QC sample and submit triplicate volume.)</small> Internal COC Required? Yes / No _____																																																																																																																																																																																																							

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008582. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHCV1-DS-1 Unspiked Composite Solid Sample	4882485
DLHCV1-DS-1 Matrix Spike Composite Solid Sample	4882486
DLHCV1-DS-1 Matrix Spike Dup. Composite Solid	4882487
DLHCV1-DS-1-D Composite Solid Sample	4882488

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
1 COPY TO	Data Package Group	
ELECTRONIC COPY TO	CH2M HILL	Attn: James Maugahn



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4882485
**DLHCV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0134 U	0.0134	mg/kg	1
01643	Aluminum	7429-90-5	2,640.	4.27	mg/kg	1
01650	Calcium	7440-70-2	6,090.	16.2	mg/kg	1
01654	Iron	7439-89-6	3,480.	6.00	mg/kg	1
01657	Magnesium	7439-95-4	2,200.	2.42	mg/kg	1
06125	Arsenic	7440-38-2	1.46 J	0.217	mg/kg	10
06128	Cadmium	7440-43-9	0.427	0.0484	mg/kg	10
06131	Chromium	7440-47-3	7.82	0.395	mg/kg	10
06133	Copper	7440-50-8	11.4	0.408	mg/kg	10
06135	Lead	7439-92-1	1.89	0.191	mg/kg	10
06139	Nickel	7440-02-0	2.78	0.637	mg/kg	10
06141	Selenium	7782-49-2	0.471 U	0.471	mg/kg	10
06966	Silver	7440-22-4	0.217 U	0.217	mg/kg	1
06972	Zinc	7440-66-6	16.0	0.834	mg/kg	1
00111	Moisture	n.a.	21.5	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	530,000.	14,400.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.23 U	0.23	mg/kg	1
06569	Bulk Density	n.a.	0.70	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	120.	6.	ug/kg	5
02870	Fluorene	86-73-7	30.	4.	ug/kg	5
02871	Phenanthrene	85-01-8	210.	4.	ug/kg	5
02872	Anthracene	120-12-7	72.	2.	ug/kg	5
02874	Fluoranthene	206-44-0	320.	4.	ug/kg	5
02875	Pyrene	129-00-0	380.	4.	ug/kg	5
02876	Benzo(a)anthracene	56-55-3	100.	4.	ug/kg	5
02877	Chrysene	218-01-9	67.	2.	ug/kg	5
02880	Benzo(a)pyrene	50-32-8	21.	4.	ug/kg	5
02882	Dibenz(a,h)anthracene	53-70-3	13.	6.	ug/kg	5
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4882485
**DLHCV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01BKG

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07138	4.75 mm	n.a.	95.0	0.50	%	1
07139	3.35 mm	n.a.	92.7	0.50	%	1
07140	2.36 mm	n.a.	89.7	0.50	%	1
07141	1.18 mm	n.a.	84.5	0.50	%	1
07142	0.6 mm	n.a.	72.7	0.50	%	1
07143	0.3 mm	n.a.	49.0	0.50	%	1
07144	0.15 mm	n.a.	24.1	0.50	%	1
07145	0.075 mm	n.a.	15.2	0.50	%	1
07146	0.064 mm	n.a.	13.0	0.50	%	1
07147	0.05 mm	n.a.	11.5	0.50	%	1
07148	0.02 mm	n.a.	6.0	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	1
07150	0.002 mm	n.a.	0.50	U	0.50	1
07151	0.001 mm	n.a.	0.50	U	0.50	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00159	Mercury	SW-846 7471A	1	10/09/2006 10:46	Damary Valentin 1
01643	Aluminum	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet 1
01650	Calcium	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet 1
01654	Iron	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet 1
01657	Magnesium	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet 1
06125	Arsenic	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner 10
06128	Cadmium	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner 10
06131	Chromium	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner 10
06133	Copper	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner 10
06135	Lead	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner 10

Lancaster Laboratories Sample No. SW 4882485
**DLHCV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01BKG

06139	Nickel	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet	1
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	10/11/2006 08:35	James S Mathiot	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:20	Nicole M Kepley	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 11:27	Joseph M Gambler	5
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381	BNA Soil Extraction	SW-846 3550B	3	10/12/2006 11:00	Olivia Arosemena	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/08/2006 21:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882486
**DLHCV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.205	0.0132	mg/kg	1
01643	Aluminum	7429-90-5	3,730.	4.27	mg/kg	1
01650	Calcium	7440-70-2	6,460.	16.2	mg/kg	1
01654	Iron	7439-89-6	4,200.	6.00	mg/kg	1
01657	Magnesium	7439-95-4	2,420.	2.42	mg/kg	1
06125	Arsenic	7440-38-2	3.33	0.217	mg/kg	10
06128	Cadmium	7440-43-9	1.00	0.0484	mg/kg	10
06131	Chromium	7440-47-3	14.1	0.395	mg/kg	10
06133	Copper	7440-50-8	21.2	0.408	mg/kg	10
06135	Lead	7439-92-1	3.63	0.191	mg/kg	10
06139	Nickel	7440-02-0	9.41	0.637	mg/kg	10
06141	Selenium	7782-49-2	2.29 J	0.471	mg/kg	10
06966	Silver	7440-22-4	6.02	0.217	mg/kg	1
06972	Zinc	7440-66-6	69.7	0.834	mg/kg	1
00118	Moisture	n.a.	21.5	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	5.8	0.23	mg/kg	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	210.	6.	ug/kg	5
02870	Fluorene	86-73-7	59.	4.	ug/kg	5
02871	Phenanthrene	85-01-8	370.	4.	ug/kg	5
02872	Anthracene	120-12-7	150.	2.	ug/kg	5
02874	Fluoranthene	206-44-0	520.	4.	ug/kg	5
02875	Pyrene	129-00-0	740.	4.	ug/kg	5
02876	Benzo(a)anthracene	56-55-3	190.	4.	ug/kg	5
02877	Chrysene	218-01-9	140.	2.	ug/kg	5
02880	Benzo(a)pyrene	50-32-8	34.	4.	ug/kg	5
02882	Dibenz(a,h)anthracene	53-70-3	25.	6.	ug/kg	5

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471A	1	10/09/2006 10:53	Damary Valentin	1

Lancaster Laboratories Sample No. SW 4882486
**DLHCV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01MS

01643	Aluminum	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
01657	Magnesium	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
00118	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:21	Nicole M Kepley	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 12:07	Joseph M Gambler	5
00381	BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 11:00	Olivia Arosemena	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/08/2006 21:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882487

**DLHCV1-DS-1 Matrix Spike Dup. Composite Solid
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00118	Moisture	n.a.	21.5	0.50	%	1
00121	Moisture Duplicate	n.a.	21.3	0.50	%	1
The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.						
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	190.	6.	ug/kg	5
02870	Fluorene	86-73-7	62.	4.	ug/kg	5
02871	Phenanthrene	85-01-8	340.	4.	ug/kg	5
02872	Anthracene	120-12-7	140.	2.	ug/kg	5
02874	Fluoranthene	206-44-0	470.	4.	ug/kg	5
02875	Pyrene	129-00-0	750.	4.	ug/kg	5
02876	Benzo(a)anthracene	56-55-3	170.	4.	ug/kg	5
02877	Chrysene	218-01-9	130.	2.	ug/kg	5
02880	Benzo(a)pyrene	50-32-8	38.	4.	ug/kg	5
02882	Dibenz(a,h)anthracene	53-70-3	17.	6.	ug/kg	5

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00118	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
00121	Moisture Duplicate	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 12:47	Joseph M Gambler	5
00381	BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 11:00	Olivia Arosemena	1

Lancaster Laboratories Sample No. SW 4882488
**DLHCV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC Account Number: 12098

 Submitted: 10/05/2006 09:25 Parsons Brinkerhoff
 Reported: 10/19/2006 at 15:29 75 Arlington Street
 Discard: 11/19/2006 Ninth Floor
 Boston MA 02116

1DS1D SDG#: SWE06-02FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0154 J	0.0130	mg/kg	1
01643	Aluminum	7429-90-5	2,700.	4.15	mg/kg	1
01650	Calcium	7440-70-2	6,050.	15.7	mg/kg	1
01654	Iron	7439-89-6	9,300.	5.83	mg/kg	1
01657	Magnesium	7439-95-4	2,160.	2.35	mg/kg	1
06125	Arsenic	7440-38-2	1.85 J	0.210	mg/kg	10
06128	Cadmium	7440-43-9	0.362	0.0470	mg/kg	10
06131	Chromium	7440-47-3	10.9	0.384	mg/kg	10
06133	Copper	7440-50-8	12.2	0.396	mg/kg	10
06135	Lead	7439-92-1	2.21	0.186	mg/kg	10
06139	Nickel	7440-02-0	3.11	0.619	mg/kg	10
06141	Selenium	7782-49-2	0.632 J	0.458	mg/kg	10
06966	Silver	7440-22-4	0.210 U	0.210	mg/kg	1
06972	Zinc	7440-66-6	25.5	0.811	mg/kg	1
00111	Moisture	n.a.	19.2	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	680,000.	16,900.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.22 U	0.22	mg/kg	1
06569	Bulk Density	n.a.	0.70	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	150.	6.	ug/kg	5
02870	Fluorene	86-73-7	47.	4.	ug/kg	5
02871	Phenanthrene	85-01-8	280.	4.	ug/kg	5
02872	Anthracene	120-12-7	79.	2.	ug/kg	5
02874	Fluoranthene	206-44-0	320.	4.	ug/kg	5
02875	Pyrene	129-00-0	670.	4.	ug/kg	5
02876	Benzo(a)anthracene	56-55-3	130.	4.	ug/kg	5
02877	Chrysene	218-01-9	89.	2.	ug/kg	5
02880	Benzo(a)pyrene	50-32-8	20.	4.	ug/kg	5
02882	Dibenz(a,h)anthracene	53-70-3	14.	6.	ug/kg	5
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4882488
**DLHCV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

1DS1D SDG#: SWE06-02FD

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07138	4.75 mm	n.a.	92.7	0.50	%	1
07139	3.35 mm	n.a.	88.8	0.50	%	1
07140	2.36 mm	n.a.	84.2	0.50	%	1
07141	1.18 mm	n.a.	77.9	0.50	%	1
07142	0.6 mm	n.a.	65.9	0.50	%	1
07143	0.3 mm	n.a.	48.1	0.50	%	1
07144	0.15 mm	n.a.	28.4	0.50	%	1
07145	0.075 mm	n.a.	17.7	0.50	%	1
07146	0.064 mm	n.a.	16.0	0.50	%	1
07147	0.05 mm	n.a.	13.0	0.50	%	1
07148	0.02 mm	n.a.	5.5	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	1
07150	0.002 mm	n.a.	0.50	U	0.50	1
07151	0.001 mm	n.a.	0.50	U	0.50	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/09/2006 10:59	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1
01657	Magnesium	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10

Lancaster Laboratories Sample No. SW 4882488
**DLHCV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

1DS1D	SDG#:	SWE06-02FD						
06139	Nickel	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10		
06141	Selenium	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10		
06966	Silver	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1		
06972	Zinc	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1		
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1		
02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	10/11/2006 09:00	James S Mathiot	1		
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:26	Nicole M Kepley	1		
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1		
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 13:27	Joseph M Gambler	5		
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1		
00381	BNA Soil Extraction	SW-846 3550B	3	10/12/2006 11:00	Olivia Arosemena	1		
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1		
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/08/2006 21:15	Annamaria Stipkovits	1		
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1		
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1		

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008582

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279820003B			Sample number(s): 4882485-4882488					
Moisture				100		99-101		
Moisture				100		99-101		
Moisture Duplicate				100		99-101		
Batch number: 062815708002			Sample number(s): 4882485-4882486, 4882488					
Aluminum	3.35 U	3.35	mg/kg	125		91-151		
Calcium	12.7 U	12.7	mg/kg	107		89-121		
Iron	4.71 U	4.71	mg/kg	119		68-158		
Magnesium	1.90 U	1.90	mg/kg	109		90-120		
Silver	0.170 U	0.170	mg/kg	104		90-126		
Zinc	0.655 U	0.655	mg/kg	95		85-110		
Batch number: 062815711001			Sample number(s): 4882485-4882486, 4882488					
Mercury	0.0105 U	0.0105	mg/kg	93		66-133		
Batch number: 062816150001A			Sample number(s): 4882485-4882486, 4882488					
Arsenic	0.0170 U	0.0170	mg/kg	110		77-123		
Cadmium	0.0038 U	0.0038	mg/kg	109		79-121		
Chromium	0.209	0.0310	mg/kg	106		78-122		
Copper	0.0546 J	0.0320	mg/kg	112		81-119		
Lead	0.0614 J	0.0150	mg/kg	109		79-121		
Nickel	0.0500 U	0.0500	mg/kg	110		81-119		
Selenium	0.0370 U	0.0370	mg/kg	106		74-126		
Batch number: 06282113031A			Sample number(s): 4882485, 4882488					
TOC Solids/Sludges Combustion	60.0 U	60.0	mg/kg	49		40-148		
Batch number: 06283102201A			Sample number(s): 4882485-4882486, 4882488					
Total Cyanide (solid)	0.18 U	0.18	mg/kg	96		90-110		
Batch number: 06284SLC026			Sample number(s): 4882485-4882488					
Naphthalene	1. U	1.	ug/kg	77		71-105		
Fluorene	0.7 U	0.7	ug/kg	84		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	83		64-118		
Anthracene	0.3 U	0.3	ug/kg	74		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	79		57-128		
Pyrene	0.7 U	0.7	ug/kg	82		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	78		71-114		
Chrysene	0.3 U	0.3	ug/kg	84		69-114		
Benzo(a)pyrene	0.7 U	0.7	ug/kg	82		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	78		56-130		

Sample Matrix Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff

Group Number: 1008582

Reported: 10/19/06 at 03:29 PM

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279820003B			Sample number(s): 4882485-4882488		BKG: 4882485			
Moisture					21.5	21.3	1	15
Moisture					21.5	21.3	1	15
Moisture Duplicate					21.5	21.3	1	15
Batch number: 06280710301A			Sample number(s): 4882485, 4882488		BKG: P881932			
75 mm					100.	100.	0	20
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					99.6	99.5	0	20
3.35 mm					99.5	99.2	0	20
2.36 mm					99.2	98.3	1	20
1.18 mm					91.9	91.9	0	20
0.6 mm					72.8	71.5	2	20
0.3 mm					57.7	56.7	2	20
0.15 mm					49.2	48.6	1	20
0.075 mm					42.3	41.8	1	20
0.064 mm					37.0	35.0	6	20
0.05 mm					22.0	20.0	10	20
0.02 mm					6.0	4.0	40* (1)	20
0.005 mm					3.0	3.5	15 (1)	20
0.002 mm					0.50 J	0.50 J	0 (1)	20
0.001 mm					0.50 U	0.50 U	0 (1)	20
Batch number: 062815708002			Sample number(s): 4882485-4882486, 4882488 UNSPK:		4882485 BKG: 4882485			
Aluminum	(2)	(2)	75-125	1	20,080.	2,060.	1	20
Calcium	(2)	(2)	75-125	0	20	4,720.	1	20
Iron	(2)	(2)	75-125	17	20	2,730.	2,580.	6
Magnesium	(2)	(2)	75-125	0	20	1,730.	1,690.	2
Silver	94	96	75-125	1	20	0.170 U	0.170 U	-56 (1)
Zinc	84	86	75-125	1	20	12.6	9.73	25* (1)
Batch number: 062815711001			Sample number(s): 4882485-4882486, 4882488 UNSPK:		4882485 BKG: 4882485			
Mercury	98	109	80-120	11	20	0.0105 U	0.0153 J	200* (1)
Batch number: 062816150001A			Sample number(s): 4882485-4882486, 4882488 UNSPK:		4882485 BKG: 4882485			
Arsenic	147*	91	70-130	24*	20	1.14 J	1.26 J	9 (1)
Cadmium	91	83	75-125	5	20	0.336	0.314	7 (1)
Chromium	99	94	75-125	2	20	6.14	6.15	0 (1)
Copper	153*	95	75-125	19	20	8.98	8.51	5
Lead	91	95	75-125	2	20	1.49	1.41	6 (1)
Nickel	104	110	75-125	4	20	2.18	2.20	1 (1)
Selenium	180*	141*	75-130	24*	20	0.370 U	0.471 J	200* (1)
Batch number: 06282113031A			Sample number(s): 4882485, 4882488 UNSPK:		4882485 BKG: 4882485			
TOC Solids/Sludges Combustion	78		51-115			416,000.	492,000.	17
Batch number: 06283102201A			Sample number(s): 4882485-4882486, 4882488 UNSPK:		4882485 BKG: 4882485			
Total Cyanide (solid)	90		59-124			0.18 U	0.18 U	63* (1)
Batch number: 06284656901A			Sample number(s): 4882485, 4882488 BKG: P881947					
Bulk Density						2.08	2.09	1
Batch number: 06284SLC026			Sample number(s): 4882485-4882488 UNSPK:		4882485			

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008582

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Naphthalene	222*	173*	54-121	10	30			
Fluorene	70	77	62-119	5	30			
Phenanthrene	(2)	(2)	31-160	9	30			
Anthracene	173*	147*	55-118	8	30			
Fluoranthene	(2)	(2)	49-125	11	30			
Pyrene	(2)	(2)	58-137	2	30			
Benzo(a)anthracene	206*	164*	69-118	10	30			
Chrysene	175*	150*	70-107	8	30			
Benzo(a)pyrene	31*	40*	69-106	11	30			
Dibenz(a,h)anthracene	28*	9*	40-126	39*	30			

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06284SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4882485	88	57	67
4882486	118	48	117
4882487	100	51	99
4882488	96	56	84
Blank	82	80	79
LCS	90	86	77
MS	118	48	117
MSD	100	51	99
Limits:	42-142	48-122	65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 1008582 Sample # 4882485-88

COC # 0132126

1 of 2

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: CHAM HILL Acct. #: _____
Project Name#: GREAT LAKES PWSID #: _____
Project Manager: E. MOSLEY P.O.#: _____
Sampler: J. COFFEY (571-274-6105) Quote #: _____
Name of state where samples were collected: MN

2 Sample Identification	Date Collected	Time Collected	3 Grab	Composite	Soil	Water	Other	4 Total # of Containers	Bulk Density, Grain Size	5 Analyses Requested	Preservation Codes	TDS	TOC	SOC	DOC	BOD/COD	TSS
<u>DLHCV1-DS-1</u>	<u>10-3-06</u>	<u>1020</u>	X	X				<u>3</u>	X	X	X	X	X	X			
<u>DLHCV1-DS-1-D</u>	<u>10-3-06</u>	<u>1020</u>	X	X				<u>3</u>	X	X	X	X	X	X			
<u>DLHCV1-DS-1-BS</u>	<u>10-3-06</u>	<u>1020</u>	X	X				<u>2</u>	.	.	.	.	.	.
<u>DLHCV1-SS-1</u>	<u>10-3-06</u>	<u>0820</u>	X	X				<u>3</u>	X	X	X	X	X	X			
<u>DLHCV1-SS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	X	X				<u>3</u>	X	X	X	X	X	X			
<u>DLHCV1-SS-1-BS</u>	<u>10-3-06</u>	<u>0900</u>	X	X				<u>3</u>	X	X	X	X	X	X			
<u>DLHCV1-SS-2-BS</u>			X	X				<u>3</u>									
<u>DLHCV1-SS-1-LS-1</u>	<u>10-3-06</u>	<u>0820</u>	X	X	X			<u>5</u>	X	X	X	X	X	X	X	X	<u>HOLD</u>
<u>DLHCV1-LS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	X	X	X			<u>4</u>	X	X	X	X	X	X	X	X	
<u>DLHCV1-LS-1-BS</u>	<u>10-3-06</u>	<u>0820</u>	X	X	X			<u>4</u>									<u>HOLD</u>

7 Turnaround Time Requested (TAT) (please circle): Normal Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: _____

Rush results requested by (please circle): Phone Fax E-mail

Phone #: _____ Fax #: _____

E-mail address: _____

8 Data Package Options (please circle if required)

Type I (validation/NJ Reg)

TX TRRP-13

SDG Complete?

Yes No

Type II (Tier II)

MA MCP CT RCP

Type III (Reduced NJ)

Site-specific QC (MS/MSD/Dup)? Yes No

Type IV (CLP SOW)

If yes, indicate QC sample and submit replicate volume.

Type VI (Raw Data Only)

Internal COC Required? Yes / No _____

Matrix	Analyses Requested					
	Preservation Codes					
Water	<input type="checkbox"/> Preservative	<input type="checkbox"/> Check if Applicable	<input type="checkbox"/> NPDG	<input type="checkbox"/> NPDE	<input type="checkbox"/> Other	
Soil						
Other						

For Lab Use Only
FSC: _____
SCR#: _____

Preservation Codes
H=HCl T=Thiosulfate
N=NHO₃ B=NaOH
S=H₂SO₄ O=Other

6

Temperature of samples

Remarks
MATRIX SPIKE FOR SVOCs, METALS, CN, HG

HOLD
MATRIX SPIKE FOR SVOCs, METALS, CN, HG

HOLD
MATRIX SPIKE FOR SVOCs, METALS, CN, HG (TOT + DTS)

HOLD

Relinquished by: <u>Karen Morris, Lab M, phd</u>	Date <u>10-3-06</u>	Time <u>1700</u>	Received by:	Date <u>10-5-06</u>	Time <u>0925</u>
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1009874. Samples arrived at the laboratory on Saturday, October 14, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
WCOALLKE Water Sample	4889617
WCOALLKE Filtered Water Sample	4889618
ECOALLKE Water Sample	4889619
ECOALLKE Filtered Water Sample	4889620
LIME_LKE Water Sample	4889621
LIME_LKE Filtered Water Sample	4889622
IRON_LKE Water Sample	4889623
IRON_LKE Filtered Water Sample	4889624

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
ELECTRONIC COPY TO	CH2M HILL	Attn: James Maugahn
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4889617
**WCOALLKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

WCOAL SDG#: SWE13-01

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.267	0.0802	mg/l	1	
01750	Calcium	7440-70-2	29.3	0.104	mg/l	1	
01754	Iron	7439-89-6	0.204	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	7.85	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0015 J	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0017 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0032	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00071 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0031	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00075 J	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	1.9 U	1.9	mg/l	1	
00273	Total Organic Carbon	n.a.	5.2	1.0	mg/l	1	
04001	Chemical Oxygen Demand	n.a.	35.1 J	12.8	mg/l	1	
07547	Dissolved Organic Carbon	n.a.	5.0	1.0	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	
08357	Selected SVOAs by 8270 SIM						
08362	Naphthalene	91-20-3	0.051	0.01	ug/l	1	
08368	Fluorene	86-73-7	0.014 J	0.01	ug/l	1	
08369	Phenanthrene	85-01-8	0.041 J	0.01	ug/l	1	
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l	1	
08372	Fluoranthene	206-44-0	0.064	0.01	ug/l	1	
08373	Pyrene	129-00-0	0.079	0.02	ug/l	1	
08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l	1	
08375	Chrysene	218-01-9	0.02 U	0.02	ug/l	1	
08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l	1	
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l	1	

The recovery of anthracene was outside of QC limits in the LCSD. Sufficient sample was unavailable to repeat the analysis.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. WW 4889617
**WCOALLKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

WCOAL SDG#: SWE13-01

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00259	Mercury	SW-846 7470A	1	10/18/2006 08:23	Damary Valentin	1
	01743	Aluminum	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	01750	Calcium	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	01754	Iron	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	01757	Magnesium	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	06025	Arsenic	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06028	Cadmium	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06031	Chromium	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06033	Copper	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06035	Lead	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06039	Nickel	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06041	Selenium	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	07066	Silver	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	07072	Zinc	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	00235	Biochemical Oxygen Demand	EPA 405.1	1	10/14/2006 11:21	Christopher M Cunningham	1
	00273	Total Organic Carbon	EPA 415.1	1	10/20/2006 09:55	James S Mathiot	1
	04001	Chemical Oxygen Demand	EPA 410.4	1	10/18/2006 08:45	Susan A Engle	1
	07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/18/2006 11:16	James S Mathiot	1
	08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006 20:56	Courtney A Shoff	1
	08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/18/2006 11:24	Joseph M Gambler	1
	00813	BNA Water Extraction	SW-846 3510C	1	10/17/2006 17:30	JoElla L Rice	1
	01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006 02:10	Helen L Schaeffer	1
	05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
	06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006 19:00	James L Mertz	1
	08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006 10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889618
**WCOALLKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FWCOA SDG#: SWE13-02

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	29.0	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	7.83	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0011 J	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00099 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0011	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0022	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00083 J	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:25	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1

Lancaster Laboratories Sample No. WW 4889618**WCOALLKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FWCOA	SDG#:	SWE13-02					
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006	20:57	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006	02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006	18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006	10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006	10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889619
**ECOALLKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

 Submitted: 10/14/2006 10:10
 Reported: 12/07/2006 at 10:41
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

ECOAL SDG#: SWE13-03

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.439	0.0802	mg/l	1	
01750	Calcium	7440-70-2	31.7	0.104	mg/l	1	
01754	Iron	7439-89-6	0.757	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	8.48	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0035	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0023	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0038	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.0019	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0058	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.0010 J	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	1.9 U	1.9	mg/l	1	
00273	Total Organic Carbon	n.a.	3.7	1.0	mg/l	1	
04001	Chemical Oxygen Demand	n.a.	18.7 J	12.8	mg/l	1	
07547	Dissolved Organic Carbon	n.a.	4.0	1.0	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analysis		Dilution Factor
					Analyst		
00259	Mercury	SW-846 7470A	1	10/18/2006 08:26	Damary Valentin		1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates		1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates		1
01754	Iron	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates		1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates		1
06025	Arsenic	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06028	Cadmium	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06031	Chromium	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06033	Copper	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06035	Lead	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06039	Nickel	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06041	Selenium	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1

Lancaster Laboratories Sample No. WW 4889619
**ECOALLKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

ECOAL SDG#: SWE13-03

07066	Silver	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/14/2006 11:21	Christopher M Cunningham	1
00273	Total Organic Carbon	EPA 415.1	1	10/20/2006 10:03	James S Mathiot	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/18/2006 08:45	Susan A Engle	1
07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/18/2006 11:27	James S Mathiot	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006 19:29	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006 02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006 19:00	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006 10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889620**ECOALLKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FECOA SDG#: SWE13-04

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	27.8	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	7.39	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00097 J	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00087 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0015	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0033	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0011 J	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:27	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1

Lancaster Laboratories Sample No. WW 4889620**ECOALLKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FEKOA	SDG#:	SWE13-04					
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006	19:30	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006	02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006	18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006	10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006	10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889621
**LIME_LKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15

by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMEL SDG#: SWE13-05

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0813 J	0.0802	mg/l	1	
01750	Calcium	7440-70-2	32.3	0.104	mg/l	1	
01754	Iron	7439-89-6	0.109 J	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	8.46	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0015 J	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0017 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0024	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00045 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0029	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00086 J	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

The sample received for the metals analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:28	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4889621
**LIME_LKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMEL SDG#: SWE13-05

07066	Silver	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006 19:31	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006 02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006 10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006 10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889622
**LIME_LKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FLIME SDG#: SWE13-06

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	30.6	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	7.95	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0013 J	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00097 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0016	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000051 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0027	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00081 J	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:31	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1

Lancaster Laboratories Sample No. WW 4889622**LIME_LKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FLIME	SDG#:	SWE13-06					
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006	19:35	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006	02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006	18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006	10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006	10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889623
**IRON_LKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

 Submitted: 10/14/2006 10:10
 Reported: 12/07/2006 at 10:41
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

IRONL SDG#: SWE13-07

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	31.2	0.104	mg/l 1
01754	Iron	7439-89-6	1.25	0.0522	mg/l 1
01757	Magnesium	7439-95-4	8.06	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0028	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00094 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0020	0.00020	mg/l 1
06035	Lead	7439-92-1	0.00038 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0027	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00088 J	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

The sample received for the metals analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:33	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4889623
**IRON_LKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

IRONL SDG#: SWE13-07

07066	Silver	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006 19:36	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006 02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006 10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006 10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889624**IRON_LKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FIRON SDG#: SWE13-08*

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	28.5	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	7.33	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0026	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0013 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0017	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000062 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0026	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0010 J	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:35	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1

Lancaster Laboratories Sample No. WW 4889624**IRON_LKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FIRON SDG#: SWE13-08*

08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006 19:37	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006 02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006 10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006 10:35	Nancy J Shoop	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:41 AM

Group Number: 1009874

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06287023501A Biochemical Oxygen Demand			Sample number(s): 4889617, 4889619					
				101	107	85-115	6	8
Batch number: 062901848005 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4889617-4889624					
	0.0802 U	0.0802	mg/l	100		90-112		
	0.104 U	0.104	mg/l	104		90-112		
	0.0522 U	0.0522	mg/l	103		90-112		
	0.0135 U	0.0135	mg/l	101		89-110		
	0.0016 U	0.0016	mg/l	101		90-118		
	0.0081 U	0.0081	mg/l	103		90-111		
Batch number: 062905713002 Mercury			Sample number(s): 4889617-4889624					
	0.00035	0.00005	mg/l	104		80-120		
		6						
Batch number: 06290WAD026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene			Sample number(s): 4889617					
	0.01 U	0.01	ug/l	82	80	70-111	2	30
	0.01 U	0.01	ug/l	85	78	75-115	8	30
	0.01 U	0.01	ug/l	81	82	76-114	2	30
	0.02 U	0.02	ug/l	68	65*	67-113	5	30
	0.01 U	0.01	ug/l	84	83	69-123	1	30
	0.02 U	0.02	ug/l	83	81	76-114	3	30
	0.02 U	0.02	ug/l	77	81	76-111	5	30
	0.02 U	0.02	ug/l	80	80	76-112	1	30
	0.02 U	0.02	ug/l	64	67	64-114	5	30
	0.02 U	0.02	ug/l	62	64	60-126	3	30
Batch number: 06291049512A Dissolved Organic Carbon			Sample number(s): 4889617, 4889619					
	1.0 U	1.0	mg/l	103		80-120		
Batch number: 06291400102B Chemical Oxygen Demand			Sample number(s): 4889617, 4889619					
				104		94-110		
Batch number: 062916050002A Arsenic			Sample number(s): 4889618, 4889620-4889624					
	0.00067	0.00067	mg/l	106		80-120		
	U							
Cadmium	0.000099	0.00009	mg/l	108		80-120		
	U	9						
Chromium	0.00042	0.00026	mg/l	112		80-120		
	J							
Copper	0.00020	0.00020	mg/l	115		80-120		
	U							
Lead	0.000047	0.00004	mg/l	113		80-120		
	U	7						
Nickel	0.00043	0.00043	mg/l	110		80-120		
	U							
Selenium	0.00050	0.00050	mg/l	109		80-120		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:41 AM

Group Number: 1009874

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 062916050004A Arsenic	U	0.00067	0.00067 mg/l	97		80-120		
Cadmium	U	0.000099	0.00009 mg/l	98		80-120		
Chromium	U	0.00031	0.00026 mg/l	107		80-120		
Lead	J	0.000047	0.00004 mg/l	103		80-120		
Nickel	U	0.00043	0.00043 mg/l	105		80-120		
Selenium	U	0.00050	0.00050 mg/l	93		80-120		
Batch number: 062916050004C Copper	U	0.00020	0.00020 mg/l	107		80-120		
Batch number: 06293049511A Total Organic Carbon	1.0 U	1.0	mg/l	97		80-120		
Batch number: 06293117101A Total Cyanide (water)	0.0050 U	0.0050	mg/l	101		90-110		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06287023501A Biochemical Oxygen Demand	110	115	67-144	3	9 347.	339.	2	9
Batch number: 062901848005 Aluminum	163*	168*	75-125	3 20	0.0992 J 0.0802 U	200* (1)	20	
Calcium	(2)	(2)	75-125	2 20	1,710. 1,680.	1	20	
Iron	88	85	75-125	2 20	0.554 0.577	4 (1)	20	
Magnesium	(2)	(2)	75-125	8 20	2,400. 2,350.	2	20	
Silver	189*	189*	75-125	0 20	0.0016 U 0.0016 U	70* (1)	20	
Zinc	91	83	75-125	9 20	0.0406 U 0.0406 U	-64 (1)	20	
Batch number: 062905713002 Mercury	107	108	80-120	1 20	0.00028 0.00028	200* (1)	20	
Batch number: 06291049512A Dissolved Organic Carbon	103		66-137		7.8 J 7.5 J	5* (1)	4	
Batch number: 06291400102B Chemical Oxygen Demand	98		90-110		21.1 J 18.7 J	12* (1)	5	

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:41 AM

Group Number: 1009874

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 062916050002A			Sample number(s): 4889618, 4889620-4889624 UNSPK:			P888169 BKG: P888169			
Arsenic	108	105	75-125	3	20	0.00067 U	0.00067 U	219* (1)	20
Cadmium	109	105	75-125	4	20	0.00044 J	0.00045 J	3 (1)	20
Chromium	110	107	75-125	3	20	0.00056 J	0.00055 J	4 (1)	20
Copper	117	112	75-125	4	20	0.00060 J	0.00058 J	3 (1)	20
Lead	114	109	75-125	4	20	0.000065 J	0.000061 J	6 (1)	20
Nickel	111	106	75-125	4	20	0.0027 U	0.0027 U	1 (1)	20
Selenium	110	106	75-125	3	20	0.00050 U	0.00050 U	19 (1)	20
Batch number: 062916050004A			Sample number(s): 4889617, 4889619 UNSPK:			P888188 BKG: P888188			
Arsenic	103	100	75-125	4	20	0.00067 U	0.00067 U	109* (1)	20
Cadmium	106	105	75-125	1	20	0.00046 J	0.00047 J	2 (1)	20
Chromium	106	105	75-125	1	20	0.00028 J	0.00031 J	10 (1)	20
Lead	106	103	75-125	3	20	0.000047 U	0.000047 U	81* (1)	20
Nickel	105	104	75-125	1	20	0.0023 U	0.0026 U	10 (1)	20
Selenium	102	103	75-125	1	20	0.00050 U	0.00050 U	25* (1)	20
Batch number: 062916050004C			Sample number(s): 4889617, 4889619 UNSPK:			P888188 BKG: P888188			
Copper	108	106	75-125	2	20	0.0011 U	0.0012 U	6 (1)	20
Batch number: 06293049511A			Sample number(s): 4889617, 4889619 UNSPK:			P891280 BKG: P891280			
Total Organic Carbon	99		62-148			3.3	3.3	0 (1)	2
Batch number: 06293117101A			Sample number(s): 4889617-4889624 UNSPK:			P888345 BKG: P888345			
Total Cyanide (water)	97		83-111			0.0050 U	0.0050 U	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06290WAD026

Nitrobenzene-d5

2-Fluorobiphenyl

Terphenyl-d14

4889617	89	79	77
Blank	88	75	78
LCS	86	79	81
LCSD	87	75	87

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 12/07/06 at 10:41 AM

Group Number: 1009874

Limits: 57-137

60-115

64-123

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

CH2M

Applied Sciences Lab

CHAIN OF CUSTODY RECORD
AND AGREEMENT TO PERFORM SERVICESCVO 2300 NW Walnut Boulevard
Corvallis, OR 97330-3538
(541) 752-4271 FAX (541) 752-0276

12098/1009874/4889617-24

COC #

Project #				Purchase Order #				TOTAL # OF CONTAINERS PAH DOC / TOC ASBESTOS BOD / COD TOTAL AND DISSOLVED METALS (TOTAL + HG) TOTAL AND DISSOLVED CYANIDE	Requested Analytical Method #				THIS AREA FOR LAB USE ONLY				
Project Name													Lab #	Page	of		
GREAT LAKES ASBESTOS PROJECT													TO: LANCASTER				
Company Name																	
CH2M Hill INC.																	
Report to: RYAN COVERIDGE / CH2M BOSTON			Phone No: (617) 523-2002 x 239														
Requested Completion Date:									Sample Disposal:								
									Dispose <input type="checkbox"/>	Return <input type="checkbox"/>							
									Preservative								
Sampling		Type	Matrix			CLIENT SAMPLE ID (8 CHARACTERS)			LAB QC				EPA Tier QC Level				
Date	Time	C O M P A R B	G R A T E R	W A T E R	S O I R	A I R	O t h e r						1 (Screening)	2	3	4	
10/13/06	13:15	X						W COAL LKE		1	X						
		X						W COAL LKE		4	X						
		X						W COAL LKE		2X1		X X X					
		X						ECO AL LKE		1	X						
		X						ECO AL LKE		4	X						
		X						ECO AL LKE		2X1		X X X					
		X						LIME LKE		2		X X					
		X						IRON LKE		2		X X					
Relinquished By <i>Brett McKinley Assoc. Sci. CH2M</i>								Date/Time 10-13-06		Received By				Date/Time			
Sampled By and Title (Please sign and print name)								Date/Time		Relinquished By (Please sign and print name)				Date/Time			
Received By (Please sign and print name)								Date/Time		Relinquished By (Please sign and print name)				Date/Time			
Received By (Please sign and print name)								Date/Time 10/14/06 10:00 10/16/06 10:00 10/16		Shipped Via UPS	Fed-Ex	Other	Shipping #				
Special Instructions: <i>LAKE FREE, OHR 100% TEST CONDITIONS</i>																	

Instructions and Agreement Provisions on Reverse Side

DISTRIBUTION: Original - LAB, Yellow - LAB, Pink - Client
Rev 2/01 Lab form 340

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009259

Samples: 4886189-4886194

Submitted: 10/11/06 09:15

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE10



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009259

Samples: 4886189-4886194

Submitted: 10/11/06 09:1

P.O. Number: 18957E T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWF10



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008584

Samples: 4882492-4882495

Submitted: 10/05/06 09:25

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE07



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008584

Samples: 4882492-4882495

Submitted: 10/05/06 09:25

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWF07

Account: 12098**Client:** Parsons Brinkerhoff**Group Number:** 1011929**Samples:** 4902189-4902196**Submitted:** 10/28/06 09:50**P.O. Number:** 18957F_T0003_TM1**Project:** Great Lakes - Sweeping**Release Number:****Quote Number:** 204158 A**SDG Number:** SWE17

Sample #	Description	Collection Date/Time	00111-Moisture	00159-Mercury	00206-Total Suspended Solids	00235-Biochemical Oxygen Demand	00259-Mercury	00273-Total Organic Carbon	01443-Specific Gravity	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	01743-Aluminum	01750-Calcium	01754-Iron	01757-Magnesium	04001-Chemical Oxygen Demand	05895-Total Cyanide (solid)	06025-Arsenic	06028-Cadmium	06031-Chromium	06033-Copper	06035-Lead	06039-Nickel	
4902189	CLELV2-DS-1 Composite Solid Sample	10/27/06 10:00	X	X						X	X	X	X						X							
4902190	CLELV2-DS-1-D Composite Solid Sample	10/27/06 10:00																								
4902191	CLELV2-SS-1 Grab Solid Sample	10/27/06 07:00	X	X					X	X	X	X								X						
4902192	CLELV2-SS-2 Grab Solid Sample	10/27/06 07:00	X	X					X	X	X	X								X						
4902193	CLELV2-LS-1 Grab Water Sample	10/27/06 07:00			X	X	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X
4902194	CLELV2-LS-1 Filtered Grab Water Sample	10/27/06 07:00				X														X	X	X	X	X	X	
4902195	CLELV2-LS-1-D Grab Water Sample	10/27/06 07:00				X		X	X										X							
4902196	CLELV2-LS-1-BK Filtered Grab Water Sample	10/11/06 08:00				X														X	X	X	X	X	X	



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1011929

Samples: 4902189-4902196

Submitted: 10/28/06 09:50

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE17

Sample	Description	Collection Date/Time	06041-Selenium	06125-Arsenic	06128-Cadmium	06131-Chromium	06133-Copper	06135-Lead	06139-Nickel	06141-Selenium	06569-Bulk Density	06966-Silver	06972-Zinc	07066-Silver	07072-Zinc	07103-Grain Size to 1 um	08255-Total Cyanide (water)
4902189	CLELV2-DS-1 Composite Solid Sample	10/27/06 10:00	X	X	X	X	X	X	X	X	X	X				X	
4902190	CLELV2-DS-1-D Composite Solid Sample	10/27/06 10:00									X					X	
4902191	CLELV2-SS-1 Grab Solid Sample	10/27/06 07:00		X	X	X	X	X	X	X	X	X				X	
4902192	CLELV2-SS-2 Grab Solid Sample	10/27/06 07:00		X	X	X	X	X	X	X	X	X				X	
4902193	CLELV2-LS-1 Grab Water Sample	10/27/06 07:00	X										X	X		X	
4902194	CLELV2-LS-1 Filtered Grab Water Sample	10/27/06 07:00	X										X	X		X	
4902195	CLELV2-LS-1-D Grab Water Sample	10/27/06 07:00															
4902196	CLELV2-LS-1-BK Filtered Grab Water Sample	10/11/06 08:00	X									X	X				



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009259

Samples: 4886189-4886194

Submitted: 10/11/06 09:1

P.O. Number: 18957F_T0003_TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE10



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008584

Samples: 4882492-4882495

Submitted: 10/05/06 09:25

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE07



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008728

Samples: 4883054-4883058

Submitted: 10/06/06 09:40

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008728

Samples: 4883054-4883058

Submitted: 10/06/06 09:40

P.O. Number: 18957F T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008768

Samples: 4883449-4883449

Submitted: 10/05/06 09:25

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE08

Sample #	Description	Collection Date/Time	00259-Mercury	01743-Aluminum	01750-Calcium	01754-Iron	01757-Magnesium	06025-Arsenic	06028-Cadmium	06031-Chromium	06033-Copper	06035-Lead	06039-Nickel	06041-Selenium	07066-Silver	07072-Zinc	08255- Total Cyanide (water)						
4883449	DLHCV1-LS-1-D Filtered Composite Water Sample	10/03/06 08:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008768

Samples: 4883449-4883449

Submitted: 10/05/06 09:25

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009277

Samples: 4886323-4886325

Submitted: 10/11/06 09:15

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE12



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1009277

Samples: 4886323-4886325

Submitted: 10/11/06 09:15

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWF12

Account: 12098**Client:** Parsons Brinkerhoff**Group Number:** 1008535**Samples:** 4882249-4882255**Submitted:** 10/05/06 09:25**P.O. Number:** 18957F_T0003_TM1**Project:** Great Lakes - Sweeping**Release Number:****Quote Number:** 204158 A**SDG Number:** SWE01

Sample #	Description	Collection Date/Time	00111-Moisture	00159-Mercury	00206-Total Suspended Solids	00235-Biochemical Oxygen Demand	00259-Mercury	00273-Total Organic Carbon	01443-Specific Gravity	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	01743-Aluminum	01750-Calcium	01754-Iron	01757-Magnesium	04001-Chemical Oxygen Demand	05895-Total Cyanide (solid)	06025-Arsenic	06028-Cadmium	06031-Chromium	06033-Copper	06035-Lead	06039-Nickel	
4882249	DLHTV2-DS-1 Solid Sample	10/03/06 13:00	X	X						X	X	X	X						X							
4882250	DLHTV2-DS-1-D Solid Sample	10/03/06 13:00																								
4882251	DLHTV2-SS-1 Solid Sample	10/03/06 13:00	X	X					X	X	X	X							X							
4882252	DLHTV2-SS-2 Solid Sample	10/03/06 13:00	X	X					X	X	X	X							X							
4882253	DLHTV2-LS-1 Water Sample	10/03/06 13:00			X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	
4882254	DLHTV2-LS-1 Filtered Water Sample	10/03/06 13:00				X													X	X	X	X	X	X	X	
4882255	DLHTV2-LS-1-D Water Sample	10/03/06 13:00				X		X	X										X							



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008535

Samples: 4882249-4882255

Submitted: 10/05/06 09:25

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE01



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009874

Samples: 4889617-4889624

Submitted: 10/14/06 10:10

P.O. Number: 18957F_T0003_TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE13



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008920

Samples: 4884379-4884381

Submitted: 10/07/06 09:30

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE09



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008920

Samples: 4884379-4884381

Submitted: 10/07/06 09:30

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE09

Account: 12098**Client:** Parsons Brinkerhoff**Group Number:** 1009271**Samples:** 4886256-4886260**Submitted:** 10/11/06 09:15**P.O. Number:** 18957F_T0003_TM1**Project:** Great Lakes - Sweeping**Release Number:****Quote Number:** 204158 A**SDG Number:** SWE11

Sample #	Description	Collection Date/Time	00111-Moisture	00118-Moisture	00159-Mercury	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	02858-Selected SVOA's in soil by SIM	05895-Total Cyanide (solid)	06125-Arsenic	06128-Cadmium	06131-Chromium	06133-Copper	06135-Lead	06139-Nickel	06141-Selenium	06569-Bulk Density	06966-Silver	06972-Zinc	07103-Grain Size to 1 um
4886256	CLELV1-DS-1 Unspiked Composite Solid Sample	10/10/06 09:00	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		
4886257	CLELV1-DS-1 Matrix Spike Composite Solid Sample	10/10/06 09:00		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		
4886258	CLELV1-DS-1-D Composite Solid Sample	10/10/06 09:00	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		
4886259	CLELV4-DS-1 Composite Solid Sample	10/09/06 16:00	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886260	CLELV4-DS-1-D Composite Solid Sample	10/09/06 16:00																X		X		



Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1009271

Samples: 4886256-4886260

Submitted: 10/11/06 09:15

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE11

Sample #	Description	Collection Date/Time	00111-Moisture	00118-Moisture	00159-Mercury	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	02858-Selected SVOA's in soil by SIM	05895-Total Cyanide (solid)	06125-Arsenic	06128-Cadmium	06131-Chromium	06133-Copper	06135-Lead	06139-Nickel	06141-Selenium	06569-Bulk Density	06966-Silver	06972-Zinc	07103-Grain Size to 1 um
4886256	CLELV1-DS-1 Unspiked Composite Solid Sample	10/10/06 09:00	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886257	CLELV1-DS-1 Matrix Spike Composite Solid Sample	10/10/06 09:00		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886258	CLELV1-DS-1-D Composite Solid Sample	10/10/06 09:00	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886259	CLELV4-DS-1 Composite Solid Sample	10/09/06 16:00	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886260	CLELV4-DS-1-D Composite Solid Sample	10/09/06 16:00															X		X			



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009277

Samples: 4886323-4886325

Submitted: 10/11/06 09:15

P.O. Number: 18957F T0003 TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE12



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008920

Samples: 4884379-4884381

Submitted: 10/07/06 09:30

P.O. Number: 18957F_T0003_TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE09



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008588

Samples: 4882510-4882514

Submitted: 10/05/06 09:25

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008588

Samples: 4882510-4882514

Submitted: 10/05/06 09:25

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE08

Account: 12098**Client:** Parsons Brinkerhoff**Group Number:** 1009271**Samples:** 4886256-4886260**Submitted:** 10/11/06 09:15**P.O. Number:** 18957F_T0003_TM1**Project:** Great Lakes - Sweeping**Release Number:****Quote Number:** 204158 A**SDG Number:** SWE11

Sample #	Description	Collection Date/Time	00111-Moisture	00118-Moisture	00159-Mercury	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	02858-Selected SVOA's in soil by SIM	05895-Total Cyanide (solid)	06125-Arsenic	06128-Cadmium	06131-Chromium	06133-Copper	06135-Lead	06139-Nickel	06141-Selenium	06569-Bulk Density	06966-Silver	06972-Zinc	07103-Grain Size to 1 um
4886256	CLELV1-DS-1 Unspiked Composite Solid Sample	10/10/06 09:00	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		
4886257	CLELV1-DS-1 Matrix Spike Composite Solid Sample	10/10/06 09:00		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		
4886258	CLELV1-DS-1-D Composite Solid Sample	10/10/06 09:00	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		
4886259	CLELV4-DS-1 Composite Solid Sample	10/09/06 16:00	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886260	CLELV4-DS-1-D Composite Solid Sample	10/09/06 16:00																X		X		



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1010298

Samples: 4892317-4892317

Submitted: 10/18/06 09:05

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE14



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1010298

Samples: 4892317-4892317

Submitted: 10/18/06 09:05

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE14



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009070

Samples: 4885287-4885287

Submitted: 10/07/06 09:30

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE09



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1009070

Samples: 4885287-4885287

Submitted: 10/07/06 09:30

P.O. Number: 18957F T0003 TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE09



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008768

Samples: 4883449-4883449

Submitted: 10/05/06 09:25

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008732

Samples: 4883068-4883070

Submitted: 10/06/06 09:40

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE06



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008732

Samples: 4883068-4883070

Submitted: 10/06/06 09:40

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWF06



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008582

Samples: 4882485-4882488

Submitted: 10/05/06 09:25

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE06



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008582

Samples: 4882485-4882488

Submitted: 10/05/06 09:25

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE06



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008728

Samples: 4883054-4883058

Submitted: 10/06/06 09:40

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008588

Samples: 4882510-4882514

Submitted: 10/05/06 09:25

P.O. Number: 18957F_T0003_TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE08

Account: 12098**Client:** Parsons Brinkerhoff**Group Number:** 1008535**Samples:** 4882249-4882255**Submitted:** 10/05/06 09:25**P.O. Number:** 18957F_T0003_TM1**Project:** Great Lakes - Sweeping**Release Number:****Quote Number:** 204158 A**SDG Number:** SWE01

Sample #	Description	Collection Date/Time	00111-Moisture	00159-Mercury	00206-Total Suspended Solids	00235-Biochemical Oxygen Demand	00259-Mercury	00273-Total Organic Carbon	01443-Specific Gravity	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	01743-Aluminum	01750-Calcium	01754-Iron	01757-Magnesium	04001-Chemical Oxygen Demand	05895-Total Cyanide (solid)	06025-Arsenic	06028-Cadmium	06031-Chromium	06033-Copper	06035-Lead	06039-Nickel	
4882249	DLHTV2-DS-1 Solid Sample	10/03/06 13:00	X	X						X	X	X	X						X							
4882250	DLHTV2-DS-1-D Solid Sample	10/03/06 13:00																								
4882251	DLHTV2-SS-1 Solid Sample	10/03/06 13:00	X	X					X	X	X	X							X							
4882252	DLHTV2-SS-2 Solid Sample	10/03/06 13:00	X	X					X	X	X	X							X							
4882253	DLHTV2-LS-1 Water Sample	10/03/06 13:00			X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	
4882254	DLHTV2-LS-1 Filtered Water Sample	10/03/06 13:00				X													X	X	X	X	X	X	X	
4882255	DLHTV2-LS-1-D Water Sample	10/03/06 13:00				X		X	X										X							



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008535

Samples: 4882249-4882255

Submitted: 10/05/06 09:25

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE01



Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008535

Samples: 4882249-4882255

Submitted: 10/05/06 09:25

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE01

Sample #	Description	Collection Date/Time	00111-Moisture	00159-Mercury	00206-Total Suspended Solids	00235-Biochemical Oxygen Demand	00259-Mercury	00273-Total Organic Carbon	01443-Specific Gravity	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	01743-Aluminum	01750-Calcium	01754-Iron	01757-Magnesium	04001-Chemical Oxygen Demand	05895- Total Cyanide (solid)	06025-Arsenic	06028-Cadmium	06031-Chromium	06033-Copper	06035-Lead	06039-Nickel	06041-Selenium	06125-Arsenic
4882249	DLHTV2-DS-1 Solid Sample	10/03/06 13:00	X	X															X								
4882250	DLHTV2-DS-1-D Solid Sample	10/03/06 13:00																									
4882251	DLHTV2-SS-1 Solid Sample	10/03/06 13:00	X	X					X	X	X	X							X							X	
4882252	DLHTV2-SS-2 Solid Sample	10/03/06 13:00	X	X					X	X	X	X							X							X	
4882253	DLHTV2-LS-1 Water Sample	10/03/06 13:00			X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X		
4882254	DLHTV2-LS-1 Filtered Water Sample	10/03/06 13:00				X													X	X	X	X	X	X	X		
4882255	DLHTV2-LS-1-D Water Sample	10/03/06 13:00				X		X	X										X								



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1010298

Samples: 4892317-4892317

Submitted: 10/18/06 09:05

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE14



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009070

Samples: 4885287-4885287

Submitted: 10/07/06 09:30

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE09



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009874

Samples: 4889617-4889624

Submitted: 10/14/06 10:10

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE13



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1009874

Samples: 4889617-4889624

Submitted: 10/14/06 10:1

P.O. Number: 18957E T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE13



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008582

Samples: 4882485-4882488

Submitted: 10/05/06 09:25

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE06



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008732

Samples: 4883068-4883070

Submitted: 10/06/06 09:40

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE06

Account: 12098**Client:** Parsons Brinkerhoff**Group Number:** 1011929**Samples:** 4902189-4902196**Submitted:** 10/28/06 09:50**P.O. Number:** 18957F_T0003_TM1**Project:** Great Lakes - Sweeping**Release Number:****Quote Number:** 204158 A**SDG Number:** SWE17

Sample #	Description	Collection Date/Time	00111-Moisture	00159-Mercury	00206-Total Suspended Solids	00235-Biochemical Oxygen Demand	00259-Mercury	00273-Total Organic Carbon	01443-Specific Gravity	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	01743-Aluminum	01750-Calcium	01754-Iron	01757-Magnesium	04001-Chemical Oxygen Demand	05895-Total Cyanide (solid)	06025-Arsenic	06028-Cadmium	06031-Chromium	06033-Copper	06035-Lead	06039-Nickel	
4902189	CLELV2-DS-1 Composite Solid Sample	10/27/06 10:00	X	X															X							
4902190	CLELV2-DS-1-D Composite Solid Sample	10/27/06 10:00																								
4902191	CLELV2-SS-1 Grab Solid Sample	10/27/06 07:00	X	X					X	X	X	X							X							
4902192	CLELV2-SS-2 Grab Solid Sample	10/27/06 07:00	X	X					X	X	X	X							X							
4902193	CLELV2-LS-1 Grab Water Sample	10/27/06 07:00			X	X	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X
4902194	CLELV2-LS-1 Filtered Grab Water Sample	10/27/06 07:00				X														X	X	X	X	X	X	X
4902195	CLELV2-LS-1-D Grab Water Sample	10/27/06 07:00				X		X	X										X							
4902196	CLELV2-LS-1-BK Filtered Grab Water Sample	10/11/06 08:00				X														X	X	X	X	X	X	X



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1011929

Samples: 4902189-4902196

Submitted: 10/28/06 09:50

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE17

Sample	Description	Collection Date/Time	06041-Selenium	06125-Arsenic	06128-Cadmium	06131-Chromium	06133-Copper	06135-Lead	06139-Nickel	06141-Selenium	06569-Bulk Density	06966-Silver	06972-Zinc	07066-Silver	07072-Zinc	07103-Grain Size to 1 um	08255- Total Cyanide (water)
4902189	CLELV2-DS-1 Composite Solid Sample	10/27/06 10:00	X	X	X	X	X	X	X	X	X	X				X	
4902190	CLELV2-DS-1-D Composite Solid Sample	10/27/06 10:00									X					X	
4902191	CLELV2-SS-1 Grab Solid Sample	10/27/06 07:00	X	X	X	X	X	X	X	X	X	X	X			X	
4902192	CLELV2-SS-2 Grab Solid Sample	10/27/06 07:00	X	X	X	X	X	X	X	X	X	X	X			X	
4902193	CLELV2-LS-1 Grab Water Sample	10/27/06 07:00	X											X	X		X
4902194	CLELV2-LS-1 Filtered Grab Water Sample	10/27/06 07:00	X										X	X			X
4902195	CLELV2-LS-1-D Grab Water Sample	10/27/06 07:00															
4902196	CLELV2-LS-1-BK Filtered Grab Water Sample	10/11/06 08:00	X									X	X				



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1011929

Samples: 4902189-4902196

Submitted: 10/28/06 09:50

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE17



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008466

Samples: 4881932-4881935

Submitted: 10/03/06 09:30

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE01



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008469

Samples: 4881940-4881942

Submitted: 10/03/06 09:30

P.O. Number: 18957F_T0003_TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE02



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008470

Samples: 4881943-4881945

Submitted: 10/03/06 09:30

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE03



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008472

Samples: 4881947-4881949

Submitted: 10/03/06 09:30

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE04



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008466. Samples arrived at the laboratory on Tuesday, October 03, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHTV1-SS-1 Unspiked Composite Solid Sample	4881932
DLHTV1-SS-1 Matrix Spike Composite Solid Sample	4881933
DLHTV1-SS-1-D Composite Solid Sample	4881934
DLHTV1-SS-2 Composite Solid Sample	4881935

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
1 COPY TO	Data Package Group	
ELECTRONIC COPY TO	CH2M HILL	Attn: James Maugahn



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4881932
**DLHTV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS1-- SDG#: SWE01-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0120 U	0.0120	mg/kg	1
01643	Aluminum	7429-90-5	1,270.	4.01	mg/kg	1
01650	Calcium	7440-70-2	25,400.	15.2	mg/kg	1
01654	Iron	7439-89-6	536,000.	282.	mg/kg	50
01657	Magnesium	7439-95-4	6,830.	2.28	mg/kg	1
06125	Arsenic	7440-38-2	5.31	0.204	mg/kg	10
06128	Cadmium	7440-43-9	0.0547 J	0.0455	mg/kg	10
06131	Chromium	7440-47-3	10.4	0.371	mg/kg	10
06133	Copper	7440-50-8	4.06	0.383	mg/kg	10
06135	Lead	7439-92-1	1.32	0.180	mg/kg	10
06139	Nickel	7440-02-0	4.17	0.599	mg/kg	10
06141	Selenium	7782-49-2	0.443 U	0.443	mg/kg	10
06966	Silver	7440-22-4	0.204 U	0.204	mg/kg	1
06972	Zinc	7440-66-6	17.2	3.92	mg/kg	5

The quantitation limit for zinc was raised due to the nature of the sample matrix.

00111	Moisture	n.a.	16.5	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.21	U	0.21	mg/kg

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.6	0.50	% Passing	1
07139	3.35 mm	n.a.	99.5	0.50	% Passing	1
07140	2.36 mm	n.a.	99.2	0.50	% Passing	1
07141	1.18 mm	n.a.	91.9	0.50	% Passing	1
07142	0.6 mm	n.a.	72.8	0.50	% Passing	1
07143	0.3 mm	n.a.	57.7	0.50	% Passing	1
07144	0.15 mm	n.a.	49.2	0.50	% Passing	1
07145	0.075 mm	n.a.	42.3	0.50	% Passing	1
07146	0.064 mm	n.a.	37.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4881932
**DLHTV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS1-- SDG#: SWE01-01BKG

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07147	0.05 mm	n.a.	22.0	0.50	% Passing	1
07148	0.02 mm	n.a.	6.0	0.50	% Passing	1
07149	0.005 mm	n.a.	3.0	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 J	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Dilution Factor
				Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/09/2006 10:08	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 17:11	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 17:11	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/10/2006 18:52	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/09/2006 17:11	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 13:35	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 17:11	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/10/2006 18:30	John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 15:24	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:35	Venia B McFadden	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/06/2006 19:50	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/06/2006 23:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/06/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4881933
**DLHTV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS1-- SDG#: SWE01-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.202	0.0125	mg/kg	1
01643	Aluminum	7429-90-5	1,570.	4.01	mg/kg	1
01650	Calcium	7440-70-2	26,800.	15.2	mg/kg	1
01654	Iron	7439-89-6	576,000.	282.	mg/kg	50
01657	Magnesium	7439-95-4	7,310.	2.28	mg/kg	1
06125	Arsenic	7440-38-2	6.36	0.204	mg/kg	10
06128	Cadmium	7440-43-9	0.711	0.0455	mg/kg	10
06131	Chromium	7440-47-3	16.8	0.371	mg/kg	10
06133	Copper	7440-50-8	9.67	0.383	mg/kg	10
06135	Lead	7439-92-1	3.48	0.180	mg/kg	10
06139	Nickel	7440-02-0	10.1	0.599	mg/kg	10
06141	Selenium	7782-49-2	0.443 U	0.443	mg/kg	10
06966	Silver	7440-22-4	6.63	0.204	mg/kg	1
06972	Zinc	7440-66-6	80.4	3.92	mg/kg	5
00118	Moisture	n.a.	16.5	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	5.3	0.21	mg/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471A	1	10/09/2006 10:14	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 17:23	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 17:23	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:11	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/09/2006 17:23	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 13:49	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 17:23	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/10/2006 18:41	John P Hook	5
00118	Moisture	EPA 160.3 modified	1	10/06/2006 15:24	Scott W Freisher	1

Lancaster Laboratories Sample No. SW 4881933**DLHTV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS1-- SDG#: SWE01-01MS

05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:36	Venia B McFadden	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/06/2006 19:50	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/06/2006 23:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/06/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4881934
**DLHTV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40

by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS1D- SDG#: SWE01-02FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0124 U	0.0124	mg/kg	1
01643	Aluminum	7429-90-5	1,260.	4.08	mg/kg	1
01650	Calcium	7440-70-2	27,000.	15.5	mg/kg	1
01654	Iron	7439-89-6	602,000.	287.	mg/kg	50
01657	Magnesium	7439-95-4	7,290.	2.32	mg/kg	1
06125	Arsenic	7440-38-2	5.20	0.209	mg/kg	10
06128	Cadmium	7440-43-9	0.0737 J	0.0468	mg/kg	10
06131	Chromium	7440-47-3	10.9	0.382	mg/kg	10
06133	Copper	7440-50-8	6.15	0.394	mg/kg	10
06135	Lead	7439-92-1	3.22	0.185	mg/kg	10
06139	Nickel	7440-02-0	5.01	0.616	mg/kg	10
06141	Selenium	7782-49-2	0.456 U	0.456	mg/kg	10
06966	Silver	7440-22-4	0.207 U	0.207	mg/kg	1
06972	Zinc	7440-66-6	22.4	3.99	mg/kg	5

The quantitation limit for zinc was raised due to the nature of the sample matrix.

00111	Moisture	n.a.	19.6	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.22	U	0.22	mg/kg

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.6	0.50	% Passing	1
07139	3.35 mm	n.a.	99.5	0.50	% Passing	1
07140	2.36 mm	n.a.	99.2	0.50	% Passing	1
07141	1.18 mm	n.a.	88.9	0.50	% Passing	1
07142	0.6 mm	n.a.	71.6	0.50	% Passing	1
07143	0.3 mm	n.a.	56.8	0.50	% Passing	1
07144	0.15 mm	n.a.	47.3	0.50	% Passing	1
07145	0.075 mm	n.a.	41.6	0.50	% Passing	1
07146	0.064 mm	n.a.	38.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4881934
**DLHTV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

 Submitted: 10/03/2006 09:30
 Reported: 10/28/2006 at 21:31
 Discard: 11/28/2006

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

SS1D- SDG#: SWE01-02FD

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07147	0.05 mm	n.a.	30.0	0.50	% Passing	1
07148	0.02 mm	n.a.	6.0	0.50	% Passing	1
07149	0.005 mm	n.a.	1.0	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Dilution Factor
				Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/09/2006 10:16	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 17:35	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 17:35	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:26	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/09/2006 17:35	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 14:03	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 17:35	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/10/2006 19:22	John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 15:24	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:37	Venia B McFadden	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/06/2006 19:50	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/06/2006 23:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/06/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4881935
**DLHTV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS-2- SDG#: SWE01-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0117 U	0.0117	mg/kg	1
01643	Aluminum	7429-90-5	1,000.	3.86	mg/kg	1
01650	Calcium	7440-70-2	21,700.	14.6	mg/kg	1
01654	Iron	7439-89-6	519,000.	271.	mg/kg	50
01657	Magnesium	7439-95-4	5,970.	2.19	mg/kg	1
06125	Arsenic	7440-38-2	5.14	0.198	mg/kg	10
06128	Cadmium	7440-43-9	0.0483 J	0.0442	mg/kg	10
06131	Chromium	7440-47-3	11.1	0.360	mg/kg	10
06133	Copper	7440-50-8	4.22	0.372	mg/kg	10
06135	Lead	7439-92-1	7.49	0.174	mg/kg	10
06139	Nickel	7440-02-0	4.10	0.581	mg/kg	10
06141	Selenium	7782-49-2	0.430 U	0.430	mg/kg	10
06966	Silver	7440-22-4	0.196 U	0.196	mg/kg	1
06972	Zinc	7440-66-6	84.6	3.77	mg/kg	5

The quantitation limit for zinc was raised due to the nature of the sample matrix.

00111	Moisture	n.a.	14.0	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.20	U	0.20	mg/kg

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	99.7	0.50	% Passing	1
07138	4.75 mm	n.a.	62.3	0.50	% Passing	1
07139	3.35 mm	n.a.	58.0	0.50	% Passing	1
07140	2.36 mm	n.a.	55.0	0.50	% Passing	1
07141	1.18 mm	n.a.	51.8	0.50	% Passing	1
07142	0.6 mm	n.a.	46.9	0.50	% Passing	1
07143	0.3 mm	n.a.	43.2	0.50	% Passing	1
07144	0.15 mm	n.a.	38.3	0.50	% Passing	1
07145	0.075 mm	n.a.	31.9	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4881935
**DLHTV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

SS-2- SDG#: SWE01-03

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Analyst	Dilution Factor
			Trial#	Date and Time			
00159	Mercury	SW-846 7471A	1	10/09/2006 10:21		Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 17:39		Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 17:39		Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:33		John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/09/2006 17:39		Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 14:07		Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 17:39		Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/10/2006 19:29		John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 15:24		Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:39		Venia B McFadden	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30		Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/06/2006 19:50		Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/06/2006 23:15		Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50		Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/06/2006 20:00		Annamaria Stipkovits	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4881935

**DLHTV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:31

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

SS-2 - SDG#: SWE01-03

Boston MA 02116

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:32 PM

Group Number: 1008466

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279102201A Total Cyanide (solid)			Sample number(s): 4881932-4881935 0.36 U 0.36 mg/kg 91			90-110		
Batch number: 062795708006 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4881932-4881935 3.35 U 3.35 mg/kg 127 12.7 U 12.7 mg/kg 102 4.71 U 4.71 mg/kg 127 1.90 U 1.90 mg/kg 110 0.170 U 0.170 mg/kg 100 0.655 U 0.655 mg/kg 89			91-151 89-121 68-158 90-120 90-126 85-110		
Batch number: 062795711002 Mercury			Sample number(s): 4881932-4881935 0.0105 U 0.0105 mg/kg 98			66-133		
Batch number: 062796150001A Arsenic Cadmium Chromium Copper Lead Nickel Selenium			Sample number(s): 4881932-4881935 0.0170 U 0.0170 mg/kg 106 0.0038 U 0.0038 mg/kg 109 0.144 J 0.0310 mg/kg 102 0.0539 J 0.0320 mg/kg 106 0.0596 J 0.0150 mg/kg 106 0.0500 U 0.0500 mg/kg 105 0.0370 U 0.0370 mg/kg 104			77-123 79-121 78-122 81-119 79-121 81-119 74-126		
Batch number: 06279820002A Moisture Moisture			Sample number(s): 4881932-4881935 100 100			99-101 99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MS %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279102201A Total Cyanide (solid)			Sample number(s): 4881932-4881935 UNSPK: 4881932 BKG: 4881932 93 59-124		0.17 U	0.18 U	200* (1)	17
Batch number: 062795708006 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4881932-4881935 UNSPK: 4881932 BKG: 4881932 (2) (2) 75-125 11 20 1,060. 1,090. 2 (2) (2) 75-125 1 20 21,200. 21,600. 2 (2) (2) 75-125 12 20 448,000. 472,000. 5 (2) (2) 75-125 2 20 5,710. 5,840. 2 111 107 75-125 3 20 0.170 U -40 (1) 106 94 75-125 9 20 14.3 14.9 3 (1)					20 20 20 20 20 20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:32 PM

Group Number: 1008466

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 062795711002			Sample number(s): 4881932-4881935 UNSPK: 4881932 BKG: 4881932					
Mercury	102	100	80-120	2	20 0.0100 U	0.0100 U	-6 (1)	20
Batch number: 062796150001A			Sample number(s): 4881932-4881935 UNSPK: 4881932 BKG: 4881932					
Arsenic	(2)	(2)	70-130	3	20 4.43	4.44	0 (1)	20
Cadmium	110	102	75-125	7	20 0.0457 J	0.0729 J	46* (1)	20
Chromium	107	71*	75-125	14	20 8.66	8.97	4 (1)	20
Copper	94	84	75-125	6	20 3.39	11.7	110* (1)	20
Lead	120	106	75-125	8	20 1.10	2.85	88* (1)	20
Nickel	99	103	75-125	3	20 3.48	3.32	5 (1)	20
Selenium	-2*	-17*	75-130	153*	20 0.370 U	0.370 U	-1 (1)	20
Batch number: 06279820002A			Sample number(s): 4881932-4881935 BKG: 4881932					
Moisture					16.5	16.9	2	15
Moisture					16.5	16.9	2	15
Batch number: 06280710301A			Sample number(s): 4881932, 4881934-4881935 BKG: 4881932					
75 mm					100.	100.	0	20
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					99.6	99.5	0	20
3.35 mm					99.5	99.2	0	20
2.36 mm					99.2	98.3	1	20
1.18 mm					91.9	91.9	0	20
0.6 mm					72.8	71.5	2	20
0.3 mm					57.7	56.7	2	20
0.15 mm					49.2	48.6	1	20
0.075 mm					42.3	41.8	1	20
0.064 mm					37.0	35.0	6	20
0.05 mm					22.0	20.0	10	20
0.02 mm					6.0	4.0	40* (1)	20
0.005 mm					3.0	3.5	15 (1)	20
0.002 mm					0.50 J	0.50 J	0 (1)	20
0.001 mm					0.50 U	0.50 U	0 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Analysis Request/ Environmental Services Chain of Custody

For Lancaster Laboratories use only

Lancaster Acct # 12098 Group# 1008469 Sample # 488/440-42

COC # 0132124
8072/433/947-49

Please print. Instructions on reverse side correspond with circled numbers

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 655-2300 Fax: (717) 655-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008469. Samples arrived at the laboratory on Tuesday, October 03, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHTV1-LS-1 Unspiked Composite Water	4881940
DLHTV1-LS-1 Matrix Spike Composite Water	4881941
DLHTV1-LS-D Composite Water Sample	4881942

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
1 COPY TO ELECTRONIC COPY TO	Data Package Group	Attn: James Maugahn
ELECTRONIC COPY TO	CH2M HILL	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 2

Lancaster Laboratories Sample No. WW 4881940

**DLHTV1-LS-1 Unspiked Composite Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLS1- SDG#: SWE02-01BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.287	0.0802	mg/l 1
01750	Calcium	7440-70-2	29.9	0.104	mg/l 1
01754	Iron	7439-89-6	6.22	0.0522	mg/l 1
01757	Magnesium	7439-95-4	9.09	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0137	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.00059	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0026	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0271	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0075	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0074	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.143	0.0081	mg/l 1
00273	Total Organic Carbon	n.a.	67.8	5.0	mg/l 5
01443	Specific Gravity	n.a.	1.00	0.0050	1
07547	Dissolved Organic Carbon	n.a.	60.2	2.0	mg/l 2
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

The sample received for the TOC analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 06:42	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
01754	Iron	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4881940

**DLHTV1-LS-1 Unspiked Composite Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLS1- SDG#: SWE02-01BKG

06033	Copper	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/10/2006 12:35	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/10/2006 17:53	John P Hook	1
00273	Total Organic Carbon	EPA 415.1	1	10/09/2006 14:22	Nicole M Kepley	5
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/10/2006 13:42	James S Mathiot	2
08255	Total Cyanide (water)	SW-846 9012A	1	10/06/2006 16:14	Venia B McFadden	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/06/2006 17:00	Mirit S Shenouda	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 18:48	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4881941
**DLHTV1-LS-1 Matrix Spike Composite Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLS1- SDG#: SWE02-01MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0013	0.000056	mg/l 1
01743	Aluminum	7429-90-5	2.04	0.0802	mg/l 1
01750	Calcium	7440-70-2	33.7	0.104	mg/l 1
01754	Iron	7439-89-6	6.71	0.0522	mg/l 1
01757	Magnesium	7439-95-4	11.0	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0240	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0059	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0529	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0790	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0235	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0583	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0099	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0507	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.641	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.18	0.0050	mg/l 1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 06:44	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
01754	Iron	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/10/2006 12:49	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/10/2006 18:05	John P Hook	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/06/2006 16:15	Venia B McFadden	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/06/2006 17:00	Mirit S Shenouda	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 2 of 2

Lancaster Laboratories Sample No. WW 4881941

DLHTV1-LS-1 Matrix Spike Composite Water
Great Lakes - Sweepings

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLS1- SDG#: SWE02-01MS

05713 WW SW846 Hg Digest

SW-846 7470A

1 10/09/2006 17:00

Nelli S Markaryan

1

06050 ICP/MS SW-846 Water

SW-846 3010A modified

1 10/08/2006 18:48

James L Mertz

1

08256 Cyanide Water Distillation

SW-846 9012A

1 10/06/2006 10:50

Nancy J Shoop

1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 2

Lancaster Laboratories Sample No. WW 4881942

**DLHTV1-LS-D Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLSD- SDG#: SWE02-02FD

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000079 J	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	29.4	0.104	mg/l 1
01754	Iron	7439-89-6	4.51	0.0522	mg/l 1
01757	Magnesium	7439-95-4	8.92	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0141	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.00067	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0026	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0271	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0077	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0077	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.141	0.0081	mg/l 1
00273	Total Organic Carbon	n.a.	69.0	5.0	mg/l 5
01443	Specific Gravity	n.a.	1.00	0.0050	1
07547	Dissolved Organic Carbon	n.a.	56.0	2.0	mg/l 2
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

The sample received for the TOC analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 06:50	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
01754	Iron	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4881942

**DLHTV1-LS-D Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/12/2006 at 09:38

75 Arlington Street

Discard: 11/12/2006

Ninth Floor

Boston MA 02116

TLSD- SDG#: SWE02-02FD

06033	Copper	SW-846 6020	1	10/11/2006 20:34	David K Beck	1
06035	Lead	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/10/2006 13:20	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/10/2006 18:17	John P Hook	1
00273	Total Organic Carbon	EPA 415.1	1	10/09/2006 13:17	Nicole M Kepley	5
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/10/2006 14:15	James S Mathiot	2
08255	Total Cyanide (water)	SW-846 9012A	1	10/06/2006 16:16	Venia B McFadden	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/06/2006 17:00	Mirit S Shenouda	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 18:48	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/12/06 at 09:38 AM

Group Number: 1008469

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279117101C Total Cyanide (water)			Sample number(s): 4881940-4881942 0.0050 U 0.0050 mg/l	99		90-110		
Batch number: 062791848005 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4881940-4881942 0.0802 U 0.0802 mg/l 0.104 U 0.104 mg/l 0.0522 U 0.0522 mg/l 0.0135 U 0.0135 mg/l 0.0016 U 0.0016 mg/l 0.0081 U 0.0081 mg/l	99 102 104 101 102 102		90-112 90-112 90-112 89-110 90-118 90-111		
Batch number: 062816050002A Arsenic Cadmium Chromium Copper Lead Nickel Selenium			Sample number(s): 4881940-4881942 0.00067 0.00067 mg/l U 9 0.000099 0.00009 mg/l U J 0.00045 0.00026 mg/l U J 0.00020 0.00020 mg/l U J 0.000047 0.00004 mg/l U 7 0.00043 0.00043 mg/l U 7 0.00050 0.00050 mg/l U 7	104 103 106 111 109 107 106		80-120 80-120 80-120 80-120 80-120 80-120 80-120		
Batch number: 06282113011A Total Organic Carbon			Sample number(s): 4881940, 4881942 1.0 U 1.0 mg/l	101		80-120		
Batch number: 062825713001 Mercury			Sample number(s): 4881940-4881942 0.000056 0.00005 mg/l	104		80-120		
Batch number: 06283049511A Dissolved Organic Carbon			Sample number(s): 4881940, 4881942 1.0 U 1.0 mg/l	103		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279117101C			Sample number(s): 4881940-4881942 UNSPK: 4881940 BKG: 4881940					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/12/06 at 09:38 AM

Group Number: 1008469

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max RPD</u>
Total Cyanide (water)	91		83-111		0.0050 U	0.0050 U	200* (1)	20
Batch number: 062791848005								
Aluminum	88	86	75-125	1 20	0.287	0.0802 U	200* (1)	20
Calcium	(2)	(2)	75-125	2 20	29.9	29.6	1	20
Iron	(2)	(2)	75-125	8 20	6.22	5.51	12	20
Magnesium	(2)	(2)	75-125	2 20	9.09	8.94	2	20
Silver	101	100	75-125	1 20	0.0016 U	0.0016 U	61* (1)	20
Zinc	100	98	75-125	1 20	0.143	0.142	1	20
Batch number: 062816050002A								
Arsenic	103	106	75-125	1 20	0.0137	0.0136	1	20
Cadmium	105	106	75-125	1 20	0.00059	0.00065	10 (1)	20
Chromium	101	104	75-125	3 20	0.0026	0.0027	4 (1)	20
Copper	104	136*	75-125	19 20	0.0271	0.0280	3	20
Lead	107	109	75-125	1 20	0.0075	0.0079	6	20
Nickel	102	102	75-125	1 20	0.0074	0.0076	3 (1)	20
Selenium	99	99	75-125	0 20	0.00050	0.00050	-469 (1)	20
Batch number: 06282113011A								
Total Organic Carbon	106		62-148		67.8	68.8	1	2
Batch number: 062825713001								
Mercury	127*	127*	80-120	0 20	0.000056	0.000076	200* (1)	20
Batch number: 06283049511A								
Dissolved Organic Carbon	94		66-137		60.2	57.5	5*	4
Batch number: 06283144301A								
Specific Gravity					1.0	1.0	0	2

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/Environmental Services Chain of Custody

Lancaster Laboratories

Acct. # 12098 Group # 1008469 Sample # 4888/940-42, 1008470/4888/943-45
1008472/4888/947-49

For Lancaster Laboratories use only
Please print. Instructions on reverse side correspond with circled numbers.

For Lab Use Only
FSC:
SCR#:

33805

Client: CH2WW:W Acct. #: _____

Project Name#: Cargo Sweep PWSID #: _____

Project Manager: E. Mosley P.O. #: _____

Sampler: S. Coffey (571-274-6105) Quote #: _____

Name of state where samples were collected: MN

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Quote #: _____

Matrix: _____

Date Collected: _____

Time Collected: _____

Grab Composite: _____

Sell Water: _____

Other: _____

Total # of Containers: _____

GRAIN SIZE: _____

TOT METS, CN, Mercury, % MOIST

MATRIX SPILL, Hg, %

DISS METS, CN, Hg, Specific Gravity

BULK DENSITY

TOC (TOT)

DOC (Diss)

DISS METS, CN, Hg, Matrix Spike

Remarks: _____

Temperature of samples upon receipt (if requested): _____

379871, TC, 01, 01

Acct. #: _____

PWSID #: _____

P.O. #: _____

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008470. Samples arrived at the laboratory on Tuesday, October 03, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHTV1-LS-1 Unspiked Composite Filtered Water	4881943
DLHTV1-LS-1 Matrix Spike Composite Filtered Water	4881944
DLHTV1-LS-D Composite Filtered Water	4881945

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
1 COPY TO ELECTRONIC COPY TO	Data Package Group	Attn: James Maugahn
ELECTRONIC COPY TO	CH2M HILL	



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4881943
**DLHTV1-LS-1 Unspiked Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1-- SDG#: SWE03-01BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000081 J	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	28.5	0.104	mg/l 1
01754	Iron	7439-89-6	0.810	0.0522	mg/l 1
01757	Magnesium	7439-95-4	8.83	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0122	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.00037	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0020	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0198	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0029	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0059	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.109	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was field filtered for dissolved metals.

This sample was filtered in the lab for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00259	Mercury	SW-846 7470A	1	10/09/2006 13:33	Damary Valentin 1
01743	Aluminum	SW-846 6010B	1	10/08/2006 13:54	Deborah A Kraday 1
01750	Calcium	SW-846 6010B	1	10/09/2006 14:37	Jayme E Curet 1
01754	Iron	SW-846 6010B	1	10/10/2006 11:23	Joanne M Gates 1
01757	Magnesium	SW-846 6010B	1	10/09/2006 05:42	Deborah A Kraday 1
06025	Arsenic	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06028	Cadmium	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06031	Chromium	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06033	Copper	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06035	Lead	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06039	Nickel	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1
06041	Selenium	SW-846 6020	1	10/09/2006 17:02	Amanda S Bitner 1

Lancaster Laboratories Sample No. WW 4881943
**DLHTV1-LS-1 Unspiked Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1-- SDG#: SWE03-01BKG

07066	Silver	SW-846 6010B	1	10/08/2006 13:54	Deborah A Kraday	1
07072	Zinc	SW-846 6010B	1	10/09/2006 05:42	Deborah A Kraday	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/10/2006 12:59	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/07/2006 11:45	Mirit S Shenouda	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/06/2006 18:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 19:00	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4881944
**DLHTV1-LS-1 Matrix Spike Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1-- SDG#: SWE03-01MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0012	0.000056	mg/l 1
01743	Aluminum	7429-90-5	1.98	0.0802	mg/l 1
01750	Calcium	7440-70-2	32.7	0.104	mg/l 1
01754	Iron	7439-89-6	1.75	0.0522	mg/l 1
01757	Magnesium	7439-95-4	10.8	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0225	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0056	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0526	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0717	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0193	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0562	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0098	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0504	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.603	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.17	0.0050	mg/l 1

This sample was field filtered for dissolved metals.

This sample was filtered in the lab for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00259	Mercury	SW-846 7470A	1	10/09/2006 13:40	Damary Valentin 1
01743	Aluminum	SW-846 6010B	1	10/08/2006 14:08	Deborah A Kraday 1
01750	Calcium	SW-846 6010B	1	10/09/2006 14:51	Jayme E Curet 1
01754	Iron	SW-846 6010B	1	10/10/2006 11:38	Joanne M Gates 1
01757	Magnesium	SW-846 6010B	1	10/09/2006 05:56	Deborah A Kraday 1
06025	Arsenic	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06028	Cadmium	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06031	Chromium	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06033	Copper	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06035	Lead	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06039	Nickel	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1
06041	Selenium	SW-846 6020	1	10/09/2006 17:15	Amanda S Bitner 1

Lancaster Laboratories Sample No. WW 4881944
**DLHTV1-LS-1 Matrix Spike Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1-- SDG#: SWE03-01MS

07066	Silver	SW-846 6010B	1	10/08/2006 14:08	Deborah A Kraday	1
07072	Zinc	SW-846 6010B	1	10/09/2006 05:56	Deborah A Kraday	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/10/2006 13:00	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/07/2006 11:45	Mirit S Shenouda	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/06/2006 18:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 19:00	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4881945**DLHTV1-LS-D Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1D- SDG#: SWE03-02FD

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000081 J	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0851 J	0.0802	mg/l 1
01750	Calcium	7440-70-2	28.0	0.104	mg/l 1
01757	Magnesium	7439-95-4	8.56	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0123	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.00046	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0020	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0197	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0029	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0061	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.109	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was field filtered for dissolved metals.

This sample was filtered in the lab for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/09/2006 13:42	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/08/2006 15:11	Deborah A Kraday	1
01750	Calcium	SW-846 6010B	1	10/09/2006 15:10	Jayme E Curet	1
01757	Magnesium	SW-846 6010B	1	10/09/2006 06:58	Deborah A Kraday	1
06025	Arsenic	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06028	Cadmium	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06031	Chromium	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06033	Copper	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06035	Lead	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06039	Nickel	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
06041	Selenium	SW-846 6020	1	10/09/2006 17:47	Amanda S Bitner	1
07066	Silver	SW-846 6010B	1	10/08/2006 15:11	Deborah A Kraday	1
07072	Zinc	SW-846 6010B	1	10/09/2006 06:58	Deborah A Kraday	1

Lancaster Laboratories Sample No. WW 4881945
**DLHTV1-LS-D Composite Filtered Water
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:06

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS1D-	SDG#:	SWE03-02FD						
08255	Total Cyanide (water)	SW-846 9012A	1	10/10/2006 13:02	Nicole M Kepley	1		
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/07/2006 11:45	Mirit S Shenouda	1		
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/06/2006 18:00	Nelli S Markaryan	1		
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 19:00	James L Mertz	1		
08256	Cyanide Water Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1		

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/11/06 at 08:20 AM

Group Number: 1008470

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 062795713003								
Mercury		0.000056	0.00005 mg/l	109		80-120		
	U	6						
Batch number: 062801848001								
Aluminum	0.0802	U	0.0802 mg/l	97		90-112		
Calcium	0.104	U	0.104 mg/l	96		90-112		
Iron	0.0522	U	0.0522 mg/l	97		90-112		
Magnesium	0.0218	J	0.0135 mg/l	98		89-110		
Silver	0.0016	U	0.0016 mg/l	98		90-118		
Zinc	0.010	J	0.0081 mg/l	100		90-111		
Batch number: 062816050003A								
Arsenic	0.00067	0.00067	mg/l	99		80-120		
	U							
Cadmium	0.000099	0.00009	mg/l	100		80-120		
	U	9						
Chromium	0.00053	0.00026	mg/l	105		80-120		
	J							
Copper	0.00020	0.00020	mg/l	108		80-120		
	U							
Lead	0.000047	0.00004	mg/l	106		80-120		
	U	7						
Nickel	0.00043	0.00043	mg/l	103		80-120		
	U							
Selenium	0.00050	0.00050	mg/l	98		80-120		
	U							
Batch number: 06283117101A								
Total Cyanide (water)	0.0050	U	0.0050 mg/l	92		90-110		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 062795713003									
Mercury	112	113	80-120	1	20	0.000081 J	0.000074 J	9 (1)	20
Batch number: 062801848001									
Aluminum	99	102	75-125	3	20	0.0802 U	0.0886 J	200* (1)	20
Calcium	(2)	(2)	75-125	4	20	28.5	28.2	1	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/11/06 at 08:20 AM

Group Number: 1008470

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max</u>	<u>RPD Max</u>
Iron	94	93	75-125	1	20	0.810	0.809	0 (1)	20	
Magnesium	(2)	(2)	75-125	2	20	8.83	8.79	0	20	
Silver	101	103	75-125	2	20	0.0016 U	0.0016 U	129* (1)	20	
Zinc	99	99	75-125	0	20	0.109	0.115	6	20	
Batch number: 062816050003A			Sample number(s): 4881943-4881945 UNSPK: 4881943 BKG: 4881943							
Arsenic	103	107	75-125	2	20	0.0122	0.0124	1	20	
Cadmium	105	106	75-125	1	20	0.00037	0.00040	8 (1)	20	
Chromium	101	104	75-125	2	20	0.0020	0.0020 J	2 (1)	20	
Copper	104	105	75-125	1	20	0.0198	0.0194	2	20	
Lead	110	108	75-125	1	20	0.0029	0.0029	1 (1)	20	
Nickel	101	101	75-125	1	20	0.0059	0.0059	0 (1)	20	
Selenium	98	101	75-125	3	20	0.00050	0.00050	59* (1)	20	
			U			U				
Batch number: 06283117101A			Sample number(s): 4881943-4881945 UNSPK: 4881943 BKG: 4881943							
Total Cyanide (water)	87		83-111			0.0050 U	0.0050 U	21* (1)	20	

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008472. Samples arrived at the laboratory on Tuesday, October 03, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHTV1-DS-1 Unspiked Composite Solid Sample	4881947
DLHTV1-DS-1 Matrix Spike Composite Solid Sample	4881948
DLHTV1-DS-1-D Composite Solid Sample	4881949

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
1 COPY TO	Data Package Group	
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4881947
**DLHTV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1-- SDG#: SWE04-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.010 U	0.010	mg/kg	1
01643	Aluminum	7429-90-5	847.	16.8	mg/kg	5
01650	Calcium	7440-70-2	23,200.	12.7	mg/kg	1
01654	Iron	7439-89-6	515,000.	236.	mg/kg	50
01657	Magnesium	7439-95-4	5,900.	9.50	mg/kg	5
06125	Arsenic	7440-38-2	5.21	0.340	mg/kg	20
06128	Cadmium	7440-43-9	0.0380 U	0.0380	mg/kg	10
06131	Chromium	7440-47-3	10.2	0.620	mg/kg	20
06133	Copper	7440-50-8	3.31	0.700	mg/kg	20
06135	Lead	7439-92-1	0.901 J	0.150	mg/kg	10
06139	Nickel	7440-02-0	4.00 J	1.00	mg/kg	20
06141	Selenium	7782-49-2	0.740 U	0.740	mg/kg	20
06966	Silver	7440-22-4	0.850 U	0.850	mg/kg	5
06972	Zinc	7440-66-6	7.32 J	3.28	mg/kg	5
00111	Moisture	n.a.	0.50 U	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.17 U	0.17	mg/kg	1
06569	Bulk Density	n.a.	2.08	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.9	0.50	% Passing	1
07139	3.35 mm	n.a.	97.2	0.50	% Passing	1
07140	2.36 mm	n.a.	96.9	0.50	% Passing	1
07141	1.18 mm	n.a.	87.6	0.50	% Passing	1
07142	0.6 mm	n.a.	54.2	0.50	% Passing	1
07143	0.3 mm	n.a.	13.2	0.50	% Passing	1
07144	0.15 mm	n.a.	10.4	0.50	% Passing	1
07145	0.075 mm	n.a.	9.6	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4881947
**DLHTV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1-- SDG#: SWE04-01BKG

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	%	1
07148	0.02 mm	n.a.	0.50	U	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Analysis		Dilution Factor
00159	Mercury	SW-846 7471A	1	10/10/2006 10:15	Damary Valentin			1
01643	Aluminum	SW-846 6010B	1	10/10/2006 18:25	John P Hook			5
01650	Calcium	SW-846 6010B	1	10/10/2006 17:26	John P Hook			1
01654	Iron	SW-846 6010B	1	10/10/2006 18:54	John P Hook			50
01657	Magnesium	SW-846 6010B	1	10/10/2006 18:25	John P Hook			5
06125	Arsenic	SW-846 6020	1	10/12/2006 17:43	Jayme E Curet			20
06128	Cadmium	SW-846 6020	1	10/10/2006 16:46	Jayme E Curet			10
06131	Chromium	SW-846 6020	1	10/12/2006 17:43	Jayme E Curet			20
06133	Copper	SW-846 6020	1	10/12/2006 17:43	Jayme E Curet			20
06135	Lead	SW-846 6020	1	10/16/2006 11:12	Jayme E Curet			10
06139	Nickel	SW-846 6020	1	10/12/2006 17:43	Jayme E Curet			20
06141	Selenium	SW-846 6020	1	10/12/2006 17:43	Jayme E Curet			20
06966	Silver	SW-846 6010B	1	10/10/2006 18:25	John P Hook			5
06972	Zinc	SW-846 6010B	1	10/10/2006 18:25	John P Hook			5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher			1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:44	Venia B McFadden			1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith			1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff			1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40	Annamaria Stipkovits			1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45	Annamaria Stipkovits			1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop			1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4881947

DLHTV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 10/28/2006 at 21:56

Discard: 11/28/2006

DS1-- SDG#: SWE04-01BKG

06150 ICP/MS SW-846 Solid digest SW-846 3050B
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1	10/09/2006 20:10	Annamaria Stipkovits	1
2	10/15/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4881948
**DLHTV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1-- SDG#: SWE04-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.169	0.0103	mg/kg	1
01643	Aluminum	7429-90-5	990.	16.8	mg/kg	5
01650	Calcium	7440-70-2	22,900.	12.7	mg/kg	1
01654	Iron	7439-89-6	462,000.	236.	mg/kg	50
01657	Magnesium	7439-95-4	5,900.	9.50	mg/kg	5
06125	Arsenic	7440-38-2	7.50	0.340	mg/kg	20
06128	Cadmium	7440-43-9	0.556	0.0380	mg/kg	10
06131	Chromium	7440-47-3	15.9	0.620	mg/kg	20
06133	Copper	7440-50-8	8.92	0.700	mg/kg	20
06135	Lead	7439-92-1	2.47	0.150	mg/kg	10
06139	Nickel	7440-02-0	9.48	1.00	mg/kg	20
06141	Selenium	7782-49-2	0.740 U	0.740	mg/kg	20
06966	Silver	7440-22-4	5.02	0.850	mg/kg	5
06972	Zinc	7440-66-6	56.3	3.28	mg/kg	5
00118	Moisture	n.a.	0.50 U	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	4.6	0.17	mg/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471A	1	10/10/2006 10:19	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/10/2006 18:40	John P Hook	5
01650	Calcium	SW-846 6010B	1	10/10/2006 17:40	John P Hook	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:18	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/10/2006 18:40	John P Hook	5
06125	Arsenic	SW-846 6020	1	10/13/2006 16:26	Parker D Lindstrom	20
06128	Cadmium	SW-846 6020	1	10/10/2006 17:00	Jayme E Curet	10
06131	Chromium	SW-846 6020	1	10/13/2006 16:26	Parker D Lindstrom	20
06133	Copper	SW-846 6020	1	10/13/2006 16:26	Parker D Lindstrom	20
06135	Lead	SW-846 6020	1	10/16/2006 11:20	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/13/2006 16:26	Parker D Lindstrom	20
06141	Selenium	SW-846 6020	1	10/13/2006 16:26	Parker D Lindstrom	20
06966	Silver	SW-846 6010B	1	10/10/2006 18:40	John P Hook	5
06972	Zinc	SW-846 6010B	1	10/10/2006 18:40	John P Hook	5
00118	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1

Lancaster Laboratories Sample No. SW 4881948**DLHTV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1-- SDG#: SWE04-01MS

05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:48	Venia B McFadden	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/09/2006 20:10	Annamaria Stipkovits	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	2	10/15/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4881949
**DLHTV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1D- SDG#: SWE04-02FD*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0102 U	0.0102	mg/kg	1
01643	Aluminum	7429-90-5	912.	16.3	mg/kg	5
01650	Calcium	7440-70-2	21,600.	12.3	mg/kg	1
01654	Iron	7439-89-6	499,000.	229.	mg/kg	50
01657	Magnesium	7439-95-4	5,560.	9.22	mg/kg	5
06125	Arsenic	7440-38-2	5.82	0.167	mg/kg	10
06128	Cadmium	7440-43-9	0.0543 J	0.0373	mg/kg	10
06131	Chromium	7440-47-3	10.4	0.304	mg/kg	10
06133	Copper	7440-50-8	3.42	0.343	mg/kg	10
06135	Lead	7439-92-1	1.07	0.149	mg/kg	10
06139	Nickel	7440-02-0	3.98	0.490	mg/kg	10
06141	Selenium	7782-49-2	0.363 U	0.363	mg/kg	10
06966	Silver	7440-22-4	0.825 U	0.825	mg/kg	5
06972	Zinc	7440-66-6	6.25 J	3.18	mg/kg	5
00111	Moisture	n.a.	0.50 U	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	2.26	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.9	0.50	% Passing	1
07139	3.35 mm	n.a.	99.9	0.50	% Passing	1
07140	2.36 mm	n.a.	99.5	0.50	% Passing	1
07141	1.18 mm	n.a.	94.7	0.50	% Passing	1
07142	0.6 mm	n.a.	80.0	0.50	% Passing	1
07143	0.3 mm	n.a.	64.6	0.50	% Passing	1
07144	0.15 mm	n.a.	46.4	0.50	% Passing	1
07145	0.075 mm	n.a.	25.7	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4881949
**DLHTV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:56

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

DS1D- SDG#: SWE04-02FD*

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	%	1
07148	0.02 mm	n.a.	0.50	U	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Analysis		Dilution Factor
00159	Mercury	SW-846 7471A	1	10/10/2006 10:22	Damary Valentin			1
01643	Aluminum	SW-846 6010B	1	10/10/2006 19:32	John P Hook			5
01650	Calcium	SW-846 6010B	1	10/10/2006 17:54	John P Hook			1
01654	Iron	SW-846 6010B	1	10/10/2006 19:37	John P Hook			50
01657	Magnesium	SW-846 6010B	1	10/10/2006 19:32	John P Hook			5
06125	Arsenic	SW-846 6020	1	10/11/2006 20:07	David K Beck			10
06128	Cadmium	SW-846 6020	1	10/10/2006 17:13	Jayme E Curet			10
06131	Chromium	SW-846 6020	1	10/11/2006 20:07	David K Beck			10
06133	Copper	SW-846 6020	1	10/11/2006 20:07	David K Beck			10
06135	Lead	SW-846 6020	1	10/16/2006 11:29	Jayme E Curet			10
06139	Nickel	SW-846 6020	1	10/11/2006 20:07	David K Beck			10
06141	Selenium	SW-846 6020	1	10/11/2006 20:07	David K Beck			10
06966	Silver	SW-846 6010B	1	10/10/2006 19:32	John P Hook			5
06972	Zinc	SW-846 6010B	1	10/10/2006 19:32	John P Hook			5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher			1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:49	Venia B McFadden			1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith			1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff			1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40	Annamaria Stipkovits			1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45	Annamaria Stipkovits			1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop			1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 3 of 3

Lancaster Laboratories Sample No. SW 4881949

**DLHTV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/01/2006 17:40 by JC

Account Number: 12098

Submitted: 10/03/2006 09:30

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 10/28/2006 at 21:56

Discard: 11/28/2006

DS1D- SDG#: SWE04-02FD*
06150 ICP/MS SW-846 Solid digest SW-846 3050B
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1	10/09/2006 20:10	Annamaria Stipkovits	1
2	10/15/2006 20:00	Annamaria Stipkovits	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:56 PM

Group Number: 1008472

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279102201B Total Cyanide (solid)			Sample number(s): 4881947-4881949 0.36 U 0.36 mg/kg 91			90-110		
Batch number: 06279820003A Moisture Moisture			Sample number(s): 4881947-4881949 100 100			99-101 99-101		
Batch number: 062825708003 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4881947-4881949 3.35 U 3.35 mg/kg 120 12.7 U 12.7 mg/kg 103 4.71 U 4.71 mg/kg 122 1.90 U 1.90 mg/kg 105 0.170 U 0.170 mg/kg 106 0.655 U 0.655 mg/kg 95			91-151 89-121 68-158 90-120 90-126 85-110		
Batch number: 062825711001 Mercury			Sample number(s): 4881947-4881949 0.0105 U 0.0105 mg/kg 85			66-133		
Batch number: 062826150002A Arsenic Cadmium Chromium Copper Nickel Selenium			Sample number(s): 4881947-4881949 0.0231 J 0.0170 mg/kg 107 0.0056 J 0.0038 mg/kg 108 0.198 J 0.0310 mg/kg 109 0.0418 J 0.0350 mg/kg 110 0.0500 U 0.0500 mg/kg 110 0.0370 U 0.0370 mg/kg 109			77-123 79-121 78-122 81-119 81-119 74-126		
Batch number: 062886150002A Lead			Sample number(s): 4881947-4881949 0.0459 J 0.0150 mg/kg 111			79-121		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279102201B Total Cyanide (solid)	97		Sample number(s): 4881947-4881949 UNSPK: 4881947 BKG: 4881947 59-124 0.17 U 0.18 U 200* (1) 17					
Batch number: 06279820003A Moisture Moisture			Sample number(s): 4881947-4881949 BKG: 4881947 0.50 U 0.50 U 5 (1) 15 0.50 U 0.50 U 5 (1) 15					
Batch number: 06280710301A 75 mm			Sample number(s): 4881947, 4881949 BKG: P881932 100. 100. 0 20					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:56 PM

Group Number: 1008472

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					99.6	99.5	0	20
3.35 mm					99.5	99.2	0	20
2.36 mm					99.2	98.3	1	20
1.18 mm					91.9	91.9	0	20
0.6 mm					72.8	71.5	2	20
0.3 mm					57.7	56.7	2	20
0.15 mm					49.2	48.6	1	20
0.075 mm					42.3	41.8	1	20
0.064 mm					37.0	35.0	6	20
0.05 mm					22.0	20.0	10	20
0.02 mm					6.0	4.0	40* (1)	20
0.005 mm					3.0	3.5	15 (1)	20
0.002 mm					0.50 J	0.50 J	0 (1)	20
0.001 mm					0.50 U	0.50 U	0 (1)	20

Batch number: 062825708003

Sample number(s): 4881947-4881949 UNSPK: 4881947 BKG: 4881947

Aluminum

(2) (2) 75-125 3 20 847. 828. 2 20

Calcium

(2) (2) 75-125 0 20 23,200. 23,100. 1 20

Iron

(2) (2) 75-125 0 20 515,000. 514,000. 0 20

Magnesium

(2) (2) 75-125 1 20 5,900. 6,090. 3 20

Silver

100 98 75-125 3 20 0.850 U 0.850 U 0 (1) 20

Zinc

98 94 75-125 3 20 7.32 J 8.99 J 20 (1) 20

Batch number: 062825711001

Sample number(s): 4881947-4881949 UNSPK: 4881947 BKG: 4881947

Mercury

104 99 80-120 5 20 0.010 U 0.0099 U -69 (1) 20

Batch number: 062826150002A

Sample number(s): 4881947-4881949 UNSPK: 4881947 BKG: 4881947

Arsenic

(2) (2) 70-130 7 20 5.21 5.61 7 (1) 20

Cadmium

111 108 75-125 3 20 0.0380 U 0.0382 J 200* (1) 20

Chromium

114 74* 75-125 13 20 10.2 9.83 3 (1) 20

Copper

112 100 75-125 7 20 3.31 3.37 2 (1) 20

Nickel

110 96 75-125 7 20 4.00 J 4.04 1 (1) 20

Selenium

62* 53* 75-130 16 20 0.740 U 0.740 U -48 (1) 20

Batch number: 06284656901A

Sample number(s): 4881947, 4881949 BKG: 4881947

Bulk Density

2.08 2.09 1 20

Batch number: 062886150002A

Sample number(s): 4881947-4881949 UNSPK: 4881947 BKG: 4881947

Lead 105 104 75-125 1 20 0.901 J 0.978 J 8 (1) 20

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The background result was more than four times the spike added.

Analysis Request/Environmental Services Chain of Custody

For Lancaster Laboratories use only



Acct. # 12098 Group# 1008469 Sample # 4881440-42
1008470/4881443-45

Please print. Instructions on reverse side correspond with circled numbers.

COC # 0132124

For Lab Use Only

SCR#:

33805

1 Client: C H 2 M H : 11 Acct. #: _____

Project Name#: C a r g o S u e e P PWSID #: _____

Project Manager: E. Mosley P.O.#: _____

Sampler: J. Coffey (571-234-6105) Quote #: _____

Name of state where samples were collected: MW

2 Sample Identification

	Date Collected	Time Collected	Grab Composite	Matrix
DLHTV1-SS-1	10-1-06	1740	X	X
DLHTV1-SS-1-D	10-1-06	1740	X	X
DLHTV1-SS-2	10-1-06	1740	X	X
DLHTV1-SS-2-Bu	10-1-06	1740	X	X
DLHTV1-LS-1	10-1-06	1740	X	X
DLHTV1-LS-D	10-1-06	1740	X	X
DLHTV1-LS-1-Bu	10-1-06	1740	X	X
DLHTV1-DS-1	10-1-06	1740	X	X
DLHTV1-DS-D	10-1-06	1740	X	X
DLHTV1-DS-Bu	10-1-06	1740	X	X

3 Total # of Containers

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008535. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHTV2-DS-1 Solid Sample	4882249
DLHTV2-DS-1-D Solid Sample	4882250
DLHTV2-SS-1 Solid Sample	4882251
DLHTV2-SS-2 Solid Sample	4882252
DLHTV2-LS-1 Water Sample	4882253
DLHTV2-LS-1 Filtered Water Sample	4882254
DLHTV2-LS-1-D Water Sample	4882255

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
1 COPY TO	Data Package Group	
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4882249
**DLHTV2-DS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2DS1 SDG#: SWE01-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0102 U	0.0102	mg/kg	1
01643	Aluminum	7429-90-5	394.	16.4	mg/kg	5
01650	Calcium	7440-70-2	3,020.	12.5	mg/kg	1
01654	Iron	7439-89-6	310,000.	231.	mg/kg	50
01657	Magnesium	7439-95-4	1,120.	9.31	mg/kg	5
06125	Arsenic	7440-38-2	7.15	0.165	mg/kg	10
06128	Cadmium	7440-43-9	0.0730 J	0.0369	mg/kg	10
06131	Chromium	7440-47-3	10.1	0.301	mg/kg	10
06133	Copper	7440-50-8	2.34	0.340	mg/kg	10
06135	Lead	7439-92-1	0.960 J	0.147	mg/kg	10
06139	Nickel	7440-02-0	1.36 J	0.485	mg/kg	10
06141	Selenium	7782-49-2	0.359 U	0.359	mg/kg	10
06966	Silver	7440-22-4	0.833 U	0.833	mg/kg	5
06972	Zinc	7440-66-6	4.81 J	3.21	mg/kg	5
00111	Moisture	n.a.	0.50 U	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	2.03	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.9	0.50	% Passing	1
07139	3.35 mm	n.a.	99.8	0.50	% Passing	1
07140	2.36 mm	n.a.	99.6	0.50	% Passing	1
07141	1.18 mm	n.a.	99.3	0.50	% Passing	1
07142	0.6 mm	n.a.	88.1	0.50	% Passing	1
07143	0.3 mm	n.a.	45.0	0.50	% Passing	1
07144	0.15 mm	n.a.	32.0	0.50	% Passing	1
07145	0.075 mm	n.a.	30.3	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4882249
**DLHTV2-DS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2DS1 SDG#: SWE01-04

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	%	1
07148	0.02 mm	n.a.	0.50	U	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/10/2006 10:23	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/10/2006 19:42	John P Hook	5
01650	Calcium	SW-846 6010B	1	10/10/2006 17:59	John P Hook	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:46	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/10/2006 19:42	John P Hook	5
06125	Arsenic	SW-846 6020	1	10/11/2006 20:10	David K Beck	10
06128	Cadmium	SW-846 6020	1	10/10/2006 17:17	Jayme E Curet	10
06131	Chromium	SW-846 6020	1	10/11/2006 20:10	David K Beck	10
06133	Copper	SW-846 6020	1	10/11/2006 20:10	David K Beck	10
06135	Lead	SW-846 6020	1	10/16/2006 11:32	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/11/2006 20:10	David K Beck	10
06141	Selenium	SW-846 6020	1	10/11/2006 20:10	David K Beck	10
06966	Silver	SW-846 6010B	1	10/10/2006 19:42	John P Hook	5
06972	Zinc	SW-846 6010B	1	10/10/2006 19:42	John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:50	Venia B McFadden	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4882249

**DLHTV2-DS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 12:03

Discard: 01/07/2007

V2DS1 SDG#: SWE01-04

06150 ICP/MS SW-846 Solid digest SW-846 3050B
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1	10/09/2006 20:10	Annamaria Stipkovits	1
2	10/15/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882250
**DLHTV2-DS-1-D Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007
 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

VSS1D SDG#: SWE01-05FD

CAT No.	Analysis Name	CAS Number	As Received		Units	Dilution Factor
			Result	Method Detection Limit		
06569	Bulk Density	n.a.	1.93	0.080	g/cc	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.9	0.50	% Passing	1
07139	3.35 mm	n.a.	99.7	0.50	% Passing	1
07140	2.36 mm	n.a.	99.5	0.50	% Passing	1
07141	1.18 mm	n.a.	99.4	0.50	% Passing	1
07142	0.6 mm	n.a.	94.6	0.50	% Passing	1
07143	0.3 mm	n.a.	52.8	0.50	% Passing	1
07144	0.15 mm	n.a.	40.8	0.50	% Passing	1
07145	0.075 mm	n.a.	38.6	0.50	% Passing	1
07146	0.064 mm	n.a.	37.5	0.50	% Passing	1
07147	0.05 mm	n.a.	34.5	0.50	% Passing	1
07148	0.02 mm	n.a.	13.0	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50 U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Laboratory Chronicle			Dilution Factor
		Method	Analysis Trial#	Date and Time	



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 2 of 2
REVISED

Lancaster Laboratories Sample No. SW 4882250

**DLHTV2-DS-1-D Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC Account Number: 12098

Submitted: 10/05/2006 09:25

Reported: 12/07/2006 at 12:03

Discard: 01/07/2007

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

VSS1D SDG#: SWE01-05FD

06569 Bulk Density

ASTM E868-82 Sec 9.9

1 10/13/2006 04:00

Daniel S Smith

1

07103 Grain Size to 1 um

modified

1 10/07/2006 11:30

Luz M Groff

1

Lancaster Laboratories Sample No. SW 4882251
**DLHTV2-SS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2SS1 SDG#: SWE01-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0113 U	0.0113	mg/kg	1
01643	Aluminum	7429-90-5	591.	17.7	mg/kg	5
01650	Calcium	7440-70-2	12,800.	13.4	mg/kg	1
01654	Iron	7439-89-6	366,000.	249.	mg/kg	50
01657	Magnesium	7439-95-4	3,340.	10.1	mg/kg	5
06125	Arsenic	7440-38-2	4.32	0.180	mg/kg	10
06128	Cadmium	7440-43-9	0.0534 J	0.0402	mg/kg	10
06131	Chromium	7440-47-3	8.07	0.328	mg/kg	10
06133	Copper	7440-50-8	5.85	0.371	mg/kg	10
06135	Lead	7439-92-1	6.69	0.159	mg/kg	10
06139	Nickel	7440-02-0	3.21	0.529	mg/kg	10
06141	Selenium	7782-49-2	0.392 U	0.392	mg/kg	10
06966	Silver	7440-22-4	0.900 U	0.900	mg/kg	5
06972	Zinc	7440-66-6	8.24 J	3.47	mg/kg	5
00111	Moisture	n.a.	8.3	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.19 U	0.19	mg/kg	1
06569	Bulk Density	n.a.	1.75	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	20.7	0.50	% Passing	1
07139	3.35 mm	n.a.	14.5	0.50	% Passing	1
07140	2.36 mm	n.a.	10.4	0.50	% Passing	1
07141	1.18 mm	n.a.	0.50 U	0.50	% Passing	1
07142	0.6 mm	n.a.	0.50 U	0.50	% Passing	1
07143	0.3 mm	n.a.	0.50 U	0.50	% Passing	1
07144	0.15 mm	n.a.	0.50 U	0.50	% Passing	1
07145	0.075 mm	n.a.	0.50 U	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4882251
**DLHTV2-SS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2SS1 SDG#: SWE01-06

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	%	1
07148	0.02 mm	n.a.	0.50	U	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 2.36 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/10/2006 10:27	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/10/2006 19:51	John P Hook	5
01650	Calcium	SW-846 6010B	1	10/10/2006 18:13	John P Hook	1
01654	Iron	SW-846 6010B	1	10/10/2006 19:56	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/10/2006 19:51	John P Hook	5
06125	Arsenic	SW-846 6020	1	10/10/2006 17:30	Jayme E Curet	10
06128	Cadmium	SW-846 6020	1	10/10/2006 17:30	Jayme E Curet	10
06131	Chromium	SW-846 6020	1	10/11/2006 20:22	David K Beck	10
06133	Copper	SW-846 6020	1	10/10/2006 17:30	Jayme E Curet	10
06135	Lead	SW-846 6020	1	10/16/2006 11:40	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/11/2006 20:22	David K Beck	10
06141	Selenium	SW-846 6020	1	10/11/2006 20:22	David K Beck	10
06966	Silver	SW-846 6010B	1	10/10/2006 19:51	John P Hook	5
06972	Zinc	SW-846 6010B	1	10/10/2006 19:51	John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:51	Venia B McFadden	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 13:00	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50	Nancy J Shoop	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4882251

**DLHTV2-SS-1 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 12:03

Discard: 01/07/2007

V2SS1 SDG#: SWE01-06

06150 ICP/MS SW-846 Solid digest SW-846 3050B
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1	10/09/2006 20:10	Annamaria Stipkovits	1
2	10/15/2006 20:00	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882252
**DLHTV2-SS-2 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2SS2 SDG#: SWE01-07*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0111 U	0.0111	mg/kg	1
01643	Aluminum	7429-90-5	555.	18.2	mg/kg	5
01650	Calcium	7440-70-2	10,600.	13.8	mg/kg	1
01654	Iron	7439-89-6	337,000.	256.	mg/kg	50
01657	Magnesium	7439-95-4	2,840.	10.3	mg/kg	5
06125	Arsenic	7440-38-2	4.41	0.183	mg/kg	10
06128	Cadmium	7440-43-9	0.0409 U	0.0409	mg/kg	10
06131	Chromium	7440-47-3	7.78	0.333	mg/kg	10
06133	Copper	7440-50-8	3.00	0.376	mg/kg	10
06135	Lead	7439-92-1	0.946 J	0.163	mg/kg	10
06139	Nickel	7440-02-0	2.72	0.538	mg/kg	10
06141	Selenium	7782-49-2	0.398 U	0.398	mg/kg	10
06966	Silver	7440-22-4	0.923 U	0.923	mg/kg	5
06972	Zinc	7440-66-6	12.0	3.56	mg/kg	5
00111	Moisture	n.a.	9.7	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.19 U	0.19	mg/kg	1
06569	Bulk Density	n.a.	1.74	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	9.6	0.50	% Passing	1
07139	3.35 mm	n.a.	8.7	0.50	% Passing	1
07140	2.36 mm	n.a.	8.1	0.50	% Passing	1
07141	1.18 mm	n.a.	0.50 U	0.50	% Passing	1
07142	0.6 mm	n.a.	0.50 U	0.50	% Passing	1
07143	0.3 mm	n.a.	0.50 U	0.50	% Passing	1
07144	0.15 mm	n.a.	0.50 U	0.50	% Passing	1
07145	0.075 mm	n.a.	0.50 U	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4882252
**DLHTV2-SS-2 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

 Submitted: 10/05/2006 09:25
 Reported: 12/07/2006 at 12:03
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

V2SS2 SDG#: SWE01-07*

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	%	1
07148	0.02 mm	n.a.	0.50	U	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 2.36 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Analyst	Dilution Factor
				Date and Time			
00159	Mercury	SW-846 7471A	1	10/10/2006 10:29		Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/10/2006 20:10		John P Hook	5
01650	Calcium	SW-846 6010B	1	10/10/2006 18:18		John P Hook	1
01654	Iron	SW-846 6010B	1	10/10/2006 20:15		John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/10/2006 20:10		John P Hook	5
06125	Arsenic	SW-846 6020	1	10/10/2006 17:35		Jayme E Curet	10
06128	Cadmium	SW-846 6020	1	10/10/2006 17:35		Jayme E Curet	10
06131	Chromium	SW-846 6020	1	10/11/2006 20:26		David K Beck	10
06133	Copper	SW-846 6020	1	10/10/2006 17:35		Jayme E Curet	10
06135	Lead	SW-846 6020	2	10/16/2006 11:43		Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/11/2006 20:26		David K Beck	10
06141	Selenium	SW-846 6020	1	10/11/2006 20:26		David K Beck	10
06966	Silver	SW-846 6010B	1	10/10/2006 20:10		John P Hook	5
06972	Zinc	SW-846 6010B	1	10/10/2006 20:10		John P Hook	5
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56		Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/06/2006 16:53		Venia B McFadden	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50		Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 13:00		Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/09/2006 19:40		Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/09/2006 21:45		Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/06/2006 10:50		Nancy J Shoop	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4882252

**DLHTV2-SS-2 Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 12:03

Discard: 01/07/2007

V2SS2 SDG#: SWE01-07*
06150 ICP/MS SW-846 Solid digest SW-846 3050B
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1	10/09/2006 20:10	Annamaria Stipkovits	1
2	10/15/2006 20:00	Annamaria Stipkovits	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 2
REVISED

Lancaster Laboratories Sample No. WW 4882253

DLHTV2-LS-1 Water Sample
Great Lakes - Sweepings

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25
Reported: 12/07/2006 at 12:03
Discard: 01/07/2007

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

V2LS1 SDG#: SWE02-03*

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	19.2	0.104	mg/l	1	
01754	Iron	7439-89-6	0.642	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	4.89	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0021	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0011 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0023	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00022 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0013 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00206	Total Suspended Solids	n.a.	9.2 J	3.0	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	3.5 U	3.5	mg/l	1	
00273	Total Organic Carbon	n.a.	2.8	1.0	mg/l	1	
01443	Specific Gravity	n.a.	1.00	0.0050		1	
04001	Chemical Oxygen Demand	n.a.	12.8 U	12.8	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 06:51	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/11/2006 21:16	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/10/2006 22:15	John P Hook	1
01754	Iron	SW-846 6010B	1	10/10/2006 22:15	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/10/2006 22:15	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
06028	Cadmium	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
06031	Chromium	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
06033	Copper	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
06035	Lead	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
06039	Nickel	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1

Lancaster Laboratories Sample No. WW 4882253
**DLHTV2-LS-1 Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:03

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V2LS1 SDG#: SWE02-03*

06041	Selenium	SW-846 6020	1	10/09/2006 17:52	Amanda S Bitner	1
07066	Silver	SW-846 6010B	1	10/10/2006 22:15	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/10/2006 22:15	John P Hook	1
00206	Total Suspended Solids	EPA 160.2	1	10/06/2006 10:08	Maria O Gittens	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/05/2006 12:21	Susan A Engle	1
00273	Total Organic Carbon	EPA 415.1	1	10/12/2006 14:22	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/10/2006 13:04	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/09/2006 00:35	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 19:00	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4882254
**DLHTV2-LS-1 Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:03

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V2L1F SDG#: SWE03-03

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01750	Calcium	7440-70-2	20.2	0.104	mg/l 1
01754	Iron	7439-89-6	0.0787 J	0.0522	mg/l 1
01757	Magnesium	7439-95-4	5.17	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0019 J	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00084 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0026	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000080 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0013 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 06:53	Damary Valentin	1
01750	Calcium	SW-846 6010B	1	10/10/2006 22:20	John P Hook	1
01754	Iron	SW-846 6010B	1	10/10/2006 22:20	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/10/2006 22:20	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
06028	Cadmium	SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
06031	Chromium	SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
06033	Copper	SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
06035	Lead	SW-846 6020	1	10/10/2006 10:00	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
06041	Selenium	SW-846 6020	1	10/09/2006 17:56	Amanda S Bitner	1
07066	Silver	SW-846 6010B	1	10/10/2006 22:20	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/10/2006 22:20	John P Hook	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/10/2006 13:05	Nicole M Kepley	1

Lancaster Laboratories Sample No. WW 4882254

**DLHTV2-LS-1 Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 12:03

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V2L1F	SDG#:	SWE03-03					
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/09/2006 00:35	Helen L Schaeffer	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/08/2006 19:00	James L Mertz	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1	

Lancaster Laboratories Sample No. WW 4882255
**DLHTV2-LS-1-D Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 13:00 by JC Account Number: 12098

 Submitted: 10/05/2006 09:25 Parsons Brinkerhoff
 Reported: 12/07/2006 at 12:03 75 Arlington Street
 Discard: 01/07/2007 Ninth Floor
 Boston MA 02116

V2L1D SDG#: SWE02-04FD*

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result				
00235	Biochemical Oxygen Demand	n.a.	3.3	U	3.3	mg/l	1
00273	Total Organic Carbon	n.a.	2.9		1.0	mg/l	1
01443	Specific Gravity	n.a.	1.00		0.0050		1
04001	Chemical Oxygen Demand	n.a.	12.8	U	12.8	mg/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/05/2006 12:21	Susan A Engle	1
00273	Total Organic Carbon	EPA 415.1	1	10/12/2006 14:30	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 12:03 PM

Group Number: 1008535

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06278023503A Biochemical Oxygen Demand			Sample number(s): 4882253, 4882255	108	107	85-115	1	8
Batch number: 06279020601B Total Suspended Solids	3.0 U	3.0	mg/l	103		56-128		
Batch number: 06279102201B Total Cyanide (solid)	0.36 U	0.36	mg/kg	91		90-110		
Batch number: 06279820003A Moisture			Sample number(s): 4882249, 4882251-4882252	100		99-101		
Batch number: 062816050003A Arsenic	0.00067 U	0.00067	mg/l	99		80-120		
Cadmium	0.000099 U	0.00009	mg/l	100		80-120		
Chromium	0.00053 U	0.00026	mg/l	105		80-120		
Copper	0.00020 U	0.00020	mg/l	108		80-120		
Lead	0.000047 U	0.00004	mg/l	106		80-120		
Nickel	0.00043 U	0.00043	mg/l	103		80-120		
Selenium	0.00050 U	0.00050	mg/l	98		80-120		
Batch number: 062821848001 Aluminum	0.0802 U	0.0802	mg/l	104		90-112		
Calcium	0.104 U	0.104	mg/l	102		90-112		
Iron	0.0522 U	0.0522	mg/l	98		90-112		
Magnesium	0.0135 U	0.0135	mg/l	97		89-110		
Silver	0.0016 U	0.0016	mg/l	99		90-118		
Zinc	0.0081 U	0.0081	mg/l	101		90-111		
Batch number: 062825708003 Aluminum	3.35 U	3.35	mg/kg	120		91-151		
Calcium	12.7 U	12.7	mg/kg	103		89-121		
Iron	4.71 U	4.71	mg/kg	122		68-158		
Magnesium	1.90 U	1.90	mg/kg	105		90-120		
Silver	0.170 U	0.170	mg/kg	106		90-126		
Zinc	0.655 U	0.655	mg/kg	95		85-110		
Batch number: 062825711001 Mercury	0.0105 U	0.0105	mg/kg	85		66-133		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 12:03 PM

Group Number: 1008535

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 062825713001			Sample number(s): 4882253-4882254					
Mercury	0.056 U	0.056	ug/l	104		80-120		
Batch number: 062826150002A			Sample number(s): 4882249, 4882251-4882252					
Arsenic	0.0231 J	0.0170	mg/kg	107		77-123		
Cadmium	0.0056 J	0.0038	mg/kg	108		79-121		
Chromium	0.198 J	0.0310	mg/kg	109		78-122		
Copper	0.0418 J	0.0350	mg/kg	110		81-119		
Nickel	0.0500 U	0.0500	mg/kg	110		81-119		
Selenium	0.0370 U	0.0370	mg/kg	109		74-126		
Batch number: 06283117101A			Sample number(s): 4882253-4882254					
Total Cyanide (water)	0.0050 U	0.0050	mg/l	92		90-110		
Batch number: 06283400102A			Sample number(s): 4882253, 4882255					
Chemical Oxygen Demand				99		94-110		
Batch number: 06285049511B			Sample number(s): 4882253, 4882255					
Total Organic Carbon	1.0 U	1.0	mg/l	97		80-120		
Batch number: 062886150002A			Sample number(s): 4882249, 4882251-4882252					
Lead	0.0459 J	0.0150	mg/kg	111		79-121		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>RPD Max</u>
Batch number: 06278023503A			Sample number(s): 4882253, 4882255 UNSPK: P882510 BKG: P881810						
Biochemical Oxygen Demand	110	124	67-144	12*	9	177.	161.	9	9
Batch number: 06279020601B			Sample number(s): 4882253 BKG: P882527						
Total Suspended Solids					197.	205.	4		20
Batch number: 06279102201B			Sample number(s): 4882249, 4882251-4882252 UNSPK: P881947 BKG: P881947						
Total Cyanide (solid)	97		59-124		0.17 U	0.18 U	200* (1)		17
Batch number: 06279820003A			Sample number(s): 4882249, 4882251-4882252 BKG: P881947						
Moisture				0.50 U	0.50 U	5 (1)			15
Batch number: 06280710301A			Sample number(s): 4882249-4882252 BKG: P881932						
75 mm					100.	100.	0		20
37.5 mm					100.	100.	0		20
19 mm					100.	100.	0		20
4.75 mm					99.6	99.5	0		20
3.35 mm					99.5	99.2	0		20
2.36 mm					99.2	98.3	1		20
1.18 mm					91.9	91.9	0		20
0.6 mm					72.8	71.5	2		20
0.3 mm					57.7	56.7	2		20
0.15 mm					49.2	48.6	1		20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 3 of 4
REVISED

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 12/07/06 at 12:03 PM

Group Number: 1008535

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 12:03 PM

Group Number: 1008535

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Specific Gravity					1.0	1.0	1.0	0	2
Batch number: 06283400102A Chemical Oxygen Demand	95		Sample number(s): 4882253, 4882255 UNSPK: P881814 BKG: P883056 90-110 420. 409.				3		5
Batch number: 06284656901A Bulk Density			Sample number(s): 4882249, 4882251-4882252 BKG: P881947		2.08	2.09	1		20
Batch number: 06285049511B Total Organic Carbon	101		Sample number(s): 4882253, 4882255 UNSPK: P882226 BKG: P882226 62-148 1.5 J 1.6 J			2 (1)		2	
Batch number: 06286656901A Bulk Density			Sample number(s): 4882250 BKG: P886259		0.78	0.77	1 (1)		20
Batch number: 062886150002A Lead	105	104	Sample number(s): 4882249, 4882251-4882252 UNSPK: P881947 BKG: P881947 75-125 1 20 0.901 J 0.978 J 8 (1)					20	

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



Acct. # 12098 Group# 1008535 Sample # 4882249-55

COC # 0132127

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>CHAN HILL</u> Acct. #: _____				5 Analyses Requested				For Lab Use Only										
Project Name#: <u>Great Lakes</u> PWSID #: _____				Preservation Codes				FSC: _____										
Project Manager: <u>B. Mosley</u> P.O.#: _____								SCR#: _____										
Sampler: <u>J. Coffey (571-274-605)</u> Quote #: _____								Preservation Codes										
Name of state where samples were collected: <u>NY</u>								H=HCl T=Thiosulfate										
								N=HNO ₃ B=NaOH										
								S=H ₂ SO ₄ O=Other										
								6 Temperature of samples upon receipt (if requested)										
2 Sample Identification		Date Collected	Time Collected	3 Grab	Composite	Soil	Water	4 Number of Containers	Bulk	Grain Size	Specific Gravity	TOT. METALS (W/Hg, % MOIST (soil))	S VOLCS, PATHS	TOC	DOC	BOD/COD	TS	Remarks
DLHTV2-DS-1		10-3-06	1300					2	X		X							
DLHTV2-DS-1-D								1	X									
DLHTV2-SS-1								2	X		X							
DLHTV2-SS-2								2	X		X							
DLHTV2-SS-2-BU								1										
DLHTV2-LS-1								2										
DLHTV2-LS-1-D								4		X	XX		X	X			<u>HOLD</u>	
DLHTV2-LS-1-BU								2		X			X	X				
DLHTV2-DS-1-BU								2									<u>HOLD</u>	
								1									<u>HOLD</u>	
7 Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)									8 Relinquished by: <u>Regan McMorris</u> Date <u>10-3-06</u> Time <u>1600</u>			Received by: _____			Date <u> </u> Time <u> </u>			
Date results are needed: _____									Relinquished by: _____			Received by: _____			Date <u> </u> Time <u> </u>			
Rush results requested by (please circle): Phone _____ Fax _____ E-mail _____									Relinquished by: _____			Received by: _____			Date <u> </u> Time <u> </u>			
Phone #: _____ Fax #: _____									Relinquished by: _____			Received by: _____			Date <u> </u> Time <u> </u>			
E-mail address: _____									Relinquished by: _____			Received by: _____			Date <u> </u> Time <u> </u>			
9 Data Package Options (please circle if required)					SDG Complete?				Relinquished by: _____			Received by: _____			Date <u> </u> Time <u> </u>			
Type I (validation/NJ Reg) TX TRRP-13					Yes No				Relinquished by: _____			Received by: _____			Date <u> </u> Time <u> </u>			
Type II (Tier II) MA MCP CT RCP									Relinquished by: _____			Received by: _____			Date <u> </u> Time <u> </u>			
Type III (Reduced NJ) Site-specific QC (MS/MSD/Dup)? Yes No									Relinquished by: _____			Received by: _____			Date <u> </u> Time <u> </u>			
Type IV (CLP SOW)									Relinquished by: _____			Received by: _____			Date <u> </u> Time <u> </u>			
Type VI (Raw Data Only)									Relinquished by: _____			Received by: _____			Date <u> </u> Time <u> </u>			
(If yes, indicate QC sample and submit triplicate volume.) Internal COC Required? Yes / No _____									<u>105706 0925</u>									

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008582. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHCV1-DS-1 Unspiked Composite Solid Sample	4882485
DLHCV1-DS-1 Matrix Spike Composite Solid Sample	4882486
DLHCV1-DS-1 Matrix Spike Dup. Composite Solid	4882487
DLHCV1-DS-1-D Composite Solid Sample	4882488

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
1 COPY TO	Data Package Group	
ELECTRONIC COPY TO	CH2M HILL	Attn: James Maugahn



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4882485
**DLHCV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0134 U	0.0134	mg/kg	1
01643	Aluminum	7429-90-5	2,640.	4.27	mg/kg	1
01650	Calcium	7440-70-2	6,090.	16.2	mg/kg	1
01654	Iron	7439-89-6	3,480.	6.00	mg/kg	1
01657	Magnesium	7439-95-4	2,200.	2.42	mg/kg	1
06125	Arsenic	7440-38-2	1.46 J	0.217	mg/kg	10
06128	Cadmium	7440-43-9	0.427	0.0484	mg/kg	10
06131	Chromium	7440-47-3	7.82	0.395	mg/kg	10
06133	Copper	7440-50-8	11.4	0.408	mg/kg	10
06135	Lead	7439-92-1	1.89	0.191	mg/kg	10
06139	Nickel	7440-02-0	2.78	0.637	mg/kg	10
06141	Selenium	7782-49-2	0.471 U	0.471	mg/kg	10
06966	Silver	7440-22-4	0.217 U	0.217	mg/kg	1
06972	Zinc	7440-66-6	16.0	0.834	mg/kg	1
00111	Moisture	n.a.	21.5	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	530,000.	14,400.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.23 U	0.23	mg/kg	1
06569	Bulk Density	n.a.	0.70	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	120.	6.	ug/kg	5
02870	Fluorene	86-73-7	30.	4.	ug/kg	5
02871	Phenanthrene	85-01-8	210.	4.	ug/kg	5
02872	Anthracene	120-12-7	72.	2.	ug/kg	5
02874	Fluoranthene	206-44-0	320.	4.	ug/kg	5
02875	Pyrene	129-00-0	380.	4.	ug/kg	5
02876	Benzo(a)anthracene	56-55-3	100.	4.	ug/kg	5
02877	Chrysene	218-01-9	67.	2.	ug/kg	5
02880	Benzo(a)pyrene	50-32-8	21.	4.	ug/kg	5
02882	Dibenz(a,h)anthracene	53-70-3	13.	6.	ug/kg	5
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4882485
**DLHCV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01BKG

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07138	4.75 mm	n.a.	95.0	0.50	%	1
07139	3.35 mm	n.a.	92.7	0.50	%	1
07140	2.36 mm	n.a.	89.7	0.50	%	1
07141	1.18 mm	n.a.	84.5	0.50	%	1
07142	0.6 mm	n.a.	72.7	0.50	%	1
07143	0.3 mm	n.a.	49.0	0.50	%	1
07144	0.15 mm	n.a.	24.1	0.50	%	1
07145	0.075 mm	n.a.	15.2	0.50	%	1
07146	0.064 mm	n.a.	13.0	0.50	%	1
07147	0.05 mm	n.a.	11.5	0.50	%	1
07148	0.02 mm	n.a.	6.0	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	1
07150	0.002 mm	n.a.	0.50	U	0.50	1
07151	0.001 mm	n.a.	0.50	U	0.50	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00159	Mercury	SW-846 7471A	1	10/09/2006 10:46	Damary Valentin 1
01643	Aluminum	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet 1
01650	Calcium	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet 1
01654	Iron	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet 1
01657	Magnesium	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet 1
06125	Arsenic	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner 10
06128	Cadmium	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner 10
06131	Chromium	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner 10
06133	Copper	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner 10
06135	Lead	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner 10

Lancaster Laboratories Sample No. SW 4882485
**DLHCV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01BKG

06139	Nickel	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 14:30	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/09/2006 18:02	Jayme E Curet	1
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	10/11/2006 08:35	James S Mathiot	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:20	Nicole M Kepley	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 11:27	Joseph M Gambler	5
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381	BNA Soil Extraction	SW-846 3550B	3	10/12/2006 11:00	Olivia Arosemena	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/08/2006 21:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882486
**DLHCV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.205	0.0132	mg/kg	1
01643	Aluminum	7429-90-5	3,730.	4.27	mg/kg	1
01650	Calcium	7440-70-2	6,460.	16.2	mg/kg	1
01654	Iron	7439-89-6	4,200.	6.00	mg/kg	1
01657	Magnesium	7439-95-4	2,420.	2.42	mg/kg	1
06125	Arsenic	7440-38-2	3.33	0.217	mg/kg	10
06128	Cadmium	7440-43-9	1.00	0.0484	mg/kg	10
06131	Chromium	7440-47-3	14.1	0.395	mg/kg	10
06133	Copper	7440-50-8	21.2	0.408	mg/kg	10
06135	Lead	7439-92-1	3.63	0.191	mg/kg	10
06139	Nickel	7440-02-0	9.41	0.637	mg/kg	10
06141	Selenium	7782-49-2	2.29 J	0.471	mg/kg	10
06966	Silver	7440-22-4	6.02	0.217	mg/kg	1
06972	Zinc	7440-66-6	69.7	0.834	mg/kg	1
00118	Moisture	n.a.	21.5	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	5.8	0.23	mg/kg	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	210.	6.	ug/kg	5
02870	Fluorene	86-73-7	59.	4.	ug/kg	5
02871	Phenanthrene	85-01-8	370.	4.	ug/kg	5
02872	Anthracene	120-12-7	150.	2.	ug/kg	5
02874	Fluoranthene	206-44-0	520.	4.	ug/kg	5
02875	Pyrene	129-00-0	740.	4.	ug/kg	5
02876	Benzo(a)anthracene	56-55-3	190.	4.	ug/kg	5
02877	Chrysene	218-01-9	140.	2.	ug/kg	5
02880	Benzo(a)pyrene	50-32-8	34.	4.	ug/kg	5
02882	Dibenz(a,h)anthracene	53-70-3	25.	6.	ug/kg	5

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471A	1	10/09/2006 10:53	Damary Valentin	1

Lancaster Laboratories Sample No. SW 4882486
**DLHCV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01MS

01643	Aluminum	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
01657	Magnesium	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 14:43	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/09/2006 18:14	Jayme E Curet	1
00118	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:21	Nicole M Kepley	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 12:07	Joseph M Gambler	5
00381	BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 11:00	Olivia Arosemena	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/08/2006 21:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882487
**DLHCV1-DS-1 Matrix Spike Dup. Composite Solid
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1DS1 SDG#: SWE06-01MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00118	Moisture	n.a.	21.5	0.50	%	1
00121	Moisture Duplicate	n.a.	21.3	0.50	%	1
The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.						
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	190.	6.	ug/kg	5
02870	Fluorene	86-73-7	62.	4.	ug/kg	5
02871	Phenanthrene	85-01-8	340.	4.	ug/kg	5
02872	Anthracene	120-12-7	140.	2.	ug/kg	5
02874	Fluoranthene	206-44-0	470.	4.	ug/kg	5
02875	Pyrene	129-00-0	750.	4.	ug/kg	5
02876	Benzo(a)anthracene	56-55-3	170.	4.	ug/kg	5
02877	Chrysene	218-01-9	130.	2.	ug/kg	5
02880	Benzo(a)pyrene	50-32-8	38.	4.	ug/kg	5
02882	Dibenz(a,h)anthracene	53-70-3	17.	6.	ug/kg	5

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00118	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
00121	Moisture Duplicate	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 12:47	Joseph M Gambler	5
00381	BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 11:00	Olivia Arosemena	1

Lancaster Laboratories Sample No. SW 4882488
**DLHCV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

1DS1D SDG#: SWE06-02FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0154 J	0.0130	mg/kg	1
01643	Aluminum	7429-90-5	2,700.	4.15	mg/kg	1
01650	Calcium	7440-70-2	6,050.	15.7	mg/kg	1
01654	Iron	7439-89-6	9,300.	5.83	mg/kg	1
01657	Magnesium	7439-95-4	2,160.	2.35	mg/kg	1
06125	Arsenic	7440-38-2	1.85 J	0.210	mg/kg	10
06128	Cadmium	7440-43-9	0.362	0.0470	mg/kg	10
06131	Chromium	7440-47-3	10.9	0.384	mg/kg	10
06133	Copper	7440-50-8	12.2	0.396	mg/kg	10
06135	Lead	7439-92-1	2.21	0.186	mg/kg	10
06139	Nickel	7440-02-0	3.11	0.619	mg/kg	10
06141	Selenium	7782-49-2	0.632 J	0.458	mg/kg	10
06966	Silver	7440-22-4	0.210 U	0.210	mg/kg	1
06972	Zinc	7440-66-6	25.5	0.811	mg/kg	1
00111	Moisture	n.a.	19.2	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	680,000.	16,900.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.22 U	0.22	mg/kg	1
06569	Bulk Density	n.a.	0.70	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	150.	6.	ug/kg	5
02870	Fluorene	86-73-7	47.	4.	ug/kg	5
02871	Phenanthrene	85-01-8	280.	4.	ug/kg	5
02872	Anthracene	120-12-7	79.	2.	ug/kg	5
02874	Fluoranthene	206-44-0	320.	4.	ug/kg	5
02875	Pyrene	129-00-0	670.	4.	ug/kg	5
02876	Benzo(a)anthracene	56-55-3	130.	4.	ug/kg	5
02877	Chrysene	218-01-9	89.	2.	ug/kg	5
02880	Benzo(a)pyrene	50-32-8	20.	4.	ug/kg	5
02882	Dibenz(a,h)anthracene	53-70-3	14.	6.	ug/kg	5
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4882488
**DLHCV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

1DS1D SDG#: SWE06-02FD

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07138	4.75 mm	n.a.	92.7	0.50	%	1
07139	3.35 mm	n.a.	88.8	0.50	%	1
07140	2.36 mm	n.a.	84.2	0.50	%	1
07141	1.18 mm	n.a.	77.9	0.50	%	1
07142	0.6 mm	n.a.	65.9	0.50	%	1
07143	0.3 mm	n.a.	48.1	0.50	%	1
07144	0.15 mm	n.a.	28.4	0.50	%	1
07145	0.075 mm	n.a.	17.7	0.50	%	1
07146	0.064 mm	n.a.	16.0	0.50	%	1
07147	0.05 mm	n.a.	13.0	0.50	%	1
07148	0.02 mm	n.a.	5.5	0.50	%	1
07149	0.005 mm	n.a.	0.50	U	0.50	1
07150	0.002 mm	n.a.	0.50	U	0.50	1
07151	0.001 mm	n.a.	0.50	U	0.50	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/09/2006 10:59	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1
01657	Magnesium	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10

Lancaster Laboratories Sample No. SW 4882488
**DLHCV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 10:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

1DS1D	SDG#:	SWE06-02FD						
06139	Nickel	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10		
06141	Selenium	SW-846 6020	1	10/09/2006 14:57	Amanda S Bitner	10		
06966	Silver	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1		
06972	Zinc	SW-846 6010B	1	10/09/2006 18:26	Jayme E Curet	1		
00111	Moisture	EPA 160.3 modified	1	10/06/2006 14:56	Scott W Freisher	1		
02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	10/11/2006 09:00	James S Mathiot	1		
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:26	Nicole M Kepley	1		
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1		
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 13:27	Joseph M Gambler	5		
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1		
00381	BNA Soil Extraction	SW-846 3550B	3	10/12/2006 11:00	Olivia Arosemena	1		
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1		
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/08/2006 21:15	Annamaria Stipkovits	1		
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1		
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1		

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008582

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279820003B			Sample number(s): 4882485-4882488					
Moisture				100		99-101		
Moisture				100		99-101		
Moisture Duplicate				100		99-101		
Batch number: 062815708002			Sample number(s): 4882485-4882486, 4882488					
Aluminum	3.35 U	3.35	mg/kg	125		91-151		
Calcium	12.7 U	12.7	mg/kg	107		89-121		
Iron	4.71 U	4.71	mg/kg	119		68-158		
Magnesium	1.90 U	1.90	mg/kg	109		90-120		
Silver	0.170 U	0.170	mg/kg	104		90-126		
Zinc	0.655 U	0.655	mg/kg	95		85-110		
Batch number: 062815711001			Sample number(s): 4882485-4882486, 4882488					
Mercury	0.0105 U	0.0105	mg/kg	93		66-133		
Batch number: 062816150001A			Sample number(s): 4882485-4882486, 4882488					
Arsenic	0.0170 U	0.0170	mg/kg	110		77-123		
Cadmium	0.0038 U	0.0038	mg/kg	109		79-121		
Chromium	0.209	0.0310	mg/kg	106		78-122		
Copper	0.0546 J	0.0320	mg/kg	112		81-119		
Lead	0.0614 J	0.0150	mg/kg	109		79-121		
Nickel	0.0500 U	0.0500	mg/kg	110		81-119		
Selenium	0.0370 U	0.0370	mg/kg	106		74-126		
Batch number: 06282113031A			Sample number(s): 4882485, 4882488					
TOC Solids/Sludges Combustion	60.0 U	60.0	mg/kg	49		40-148		
Batch number: 06283102201A			Sample number(s): 4882485-4882486, 4882488					
Total Cyanide (solid)	0.18 U	0.18	mg/kg	96		90-110		
Batch number: 06284SLC026			Sample number(s): 4882485-4882488					
Naphthalene	1. U	1.	ug/kg	77		71-105		
Fluorene	0.7 U	0.7	ug/kg	84		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	83		64-118		
Anthracene	0.3 U	0.3	ug/kg	74		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	79		57-128		
Pyrene	0.7 U	0.7	ug/kg	82		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	78		71-114		
Chrysene	0.3 U	0.3	ug/kg	84		69-114		
Benzo(a)pyrene	0.7 U	0.7	ug/kg	82		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	78		56-130		

Sample Matrix Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff

Group Number: 1008582

Reported: 10/19/06 at 03:29 PM

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279820003B			Sample number(s): 4882485-4882488		BKG: 4882485			
Moisture					21.5	21.3	1	15
Moisture					21.5	21.3	1	15
Moisture Duplicate					21.5	21.3	1	15
Batch number: 06280710301A			Sample number(s): 4882485, 4882488		BKG: P881932			
75 mm					100.	100.	0	20
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					99.6	99.5	0	20
3.35 mm					99.5	99.2	0	20
2.36 mm					99.2	98.3	1	20
1.18 mm					91.9	91.9	0	20
0.6 mm					72.8	71.5	2	20
0.3 mm					57.7	56.7	2	20
0.15 mm					49.2	48.6	1	20
0.075 mm					42.3	41.8	1	20
0.064 mm					37.0	35.0	6	20
0.05 mm					22.0	20.0	10	20
0.02 mm					6.0	4.0	40* (1)	20
0.005 mm					3.0	3.5	15 (1)	20
0.002 mm					0.50 J	0.50 J	0 (1)	20
0.001 mm					0.50 U	0.50 U	0 (1)	20
Batch number: 062815708002			Sample number(s): 4882485-4882486, 4882488 UNSPK:		4882485 BKG: 4882485			
Aluminum	(2)	(2)	75-125	1	2,080.	2,060.	1	20
Calcium	(2)	(2)	75-125	0	4,780.	4,720.	1	20
Iron	(2)	(2)	75-125	17	2,730.	2,580.	6	20
Magnesium	(2)	(2)	75-125	0	1,730.	1,690.	2	20
Silver	94	96	75-125	1	0.170 U	0.170 U	-56 (1)	20
Zinc	84	86	75-125	1	20	12.6	9.73	25* (1)
Batch number: 062815711001			Sample number(s): 4882485-4882486, 4882488 UNSPK:		4882485 BKG: 4882485			
Mercury	98	109	80-120	11	20	0.0105 U	0.0153 J	200* (1)
Batch number: 062816150001A			Sample number(s): 4882485-4882486, 4882488 UNSPK:		4882485 BKG: 4882485			
Arsenic	147*	91	70-130	24*	20	1.14 J	1.26 J	9 (1)
Cadmium	91	83	75-125	5	20	0.336	0.314	7 (1)
Chromium	99	94	75-125	2	20	6.14	6.15	0 (1)
Copper	153*	95	75-125	19	20	8.98	8.51	5
Lead	91	95	75-125	2	20	1.49	1.41	6 (1)
Nickel	104	110	75-125	4	20	2.18	2.20	1 (1)
Selenium	180*	141*	75-130	24*	20	0.370 U	0.471 J	200* (1)
Batch number: 06282113031A			Sample number(s): 4882485, 4882488 UNSPK:		4882485 BKG: 4882485			
TOC Solids/Sludges Combustion	78		51-115			416,000.	492,000.	17
Batch number: 06283102201A			Sample number(s): 4882485-4882486, 4882488 UNSPK:		4882485 BKG: 4882485			
Total Cyanide (solid)	90		59-124			0.18 U	0.18 U	63* (1)
Batch number: 06284656901A			Sample number(s): 4882485, 4882488 BKG: P881947					
Bulk Density						2.08	2.09	1
Batch number: 06284SLC026			Sample number(s): 4882485-4882488 UNSPK:		4882485			

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008582

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Naphthalene	222*	173*	54-121	10	30			
Fluorene	70	77	62-119	5	30			
Phenanthrene	(2)	(2)	31-160	9	30			
Anthracene	173*	147*	55-118	8	30			
Fluoranthene	(2)	(2)	49-125	11	30			
Pyrene	(2)	(2)	58-137	2	30			
Benzo(a)anthracene	206*	164*	69-118	10	30			
Chrysene	175*	150*	70-107	8	30			
Benzo(a)pyrene	31*	40*	69-106	11	30			
Dibenz(a,h)anthracene	28*	9*	40-126	39*	30			

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06284SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4882485	88	57	67
4882486	118	48	117
4882487	100	51	99
4882488	96	56	84
Blank	82	80	79
LCS	90	86	77
MS	118	48	117
MSD	100	51	99
Limits:	42-142	48-122	65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 1008582 Sample # 4882485-88

COC # 0132126

1 of 2

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: CHAM HILL Acct. #: _____
Project Name#: GREAT LAKES PWSID #: _____
Project Manager: E. MOSLEY P.O.#: _____
Sampler: J. COFFEY (571-274-6105) Quote #: _____
Name of state where samples were collected: MN

2 Sample Identification	Date Collected	Time Collected	3 Grab	Composite	Soil	Water	Other	4 Total # of Containers	Bulk Density, Grain Size	5 Analyses Requested	Preservation Codes	TDS	TOC	SOC	DOC	BOD/COD	TSS
<u>DLHCV1-DS-1</u>	<u>10-3-06</u>	<u>1020</u>	X	X				<u>3</u>	X	X	X	X	X	X			
<u>DLHCV1-DS-1-D</u>	<u>10-3-06</u>	<u>1020</u>	X	X				<u>3</u>	X	X	X	X	X	X			
<u>DLHCV1-DS-1-BS</u>	<u>10-3-06</u>	<u>1020</u>	X	X				<u>2</u>	.	.	.	.	.	.
<u>DLHCV1-SS-1</u>	<u>10-3-06</u>	<u>0820</u>	X	X				<u>3</u>	X	X	X	X	X	X			
<u>DLHCV1-SS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	X	X				<u>3</u>	X	X	X	X	X	X			
<u>DLHCV1-SS-1-BS</u>	<u>10-3-06</u>	<u>0900</u>	X	X				<u>3</u>	X	X	X	X	X	X			
<u>DLHCV1-SS-2-BS</u>			X	X				<u>3</u>									
<u>DLHCV1-SS-1-LS-1</u>	<u>10-3-06</u>	<u>0820</u>	X	X	X			<u>5</u>	X	X	X	X	X	X	X	X	<u>HOLD</u>
<u>DLHCV1-LS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	X	X	X			<u>4</u>	X	X	X	X	X	X	X	X	
<u>DLHCV1-LS-1-BS</u>	<u>10-3-06</u>	<u>0820</u>	X	X	X			<u>4</u>									<u>HOLD</u>

7 Turnaround Time Requested (TAT) (please circle): Normal Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: _____

Rush results requested by (please circle): Phone Fax E-mail

Phone #: _____ Fax #: _____

E-mail address: _____

8 Data Package Options (please circle if required)

Type I (validation/NJ Reg)

TX TRRP-13

SDG Complete?

Yes No

Type II (Tier II)

MA MCP CT RCP

Type III (Reduced NJ)

Site-specific QC (MS/MSD/Dup)? Yes No

Type IV (CLP SOW)

If yes, indicate QC sample and submit replicate volume.

Type VI (Raw Data Only)

Internal COC Required? Yes / No _____

5 Analyses Requested

Preservation Codes

Preservative Checked If Applicable

Non Detergent

Other

Total Solids, CN

Hg, % moist (soil)

Diss. metals, CN

Hg

SVOCs, Pesticides

TOC

DOC

BOD/COD

TSS

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate

N=NHO₃ B=NaOH

S=S₂O₈²⁻ O=Other

6

Temperature of Samples

MATRIX SPIKE FOR SVOCs, METALS, CN, Hg

HOLD
MATRIX SPIKE FOR SVOCs, METALS, CN, Hg

HOLD
MATRIX SPIKE FOR SVOCs, METALS, CN, Hg (top & bottom)

HOLD

Relinquished by: <u>Karen Morris, Lab M, phd</u>	Date <u>10-3-06</u>	Time <u>1700</u>	Received by:	Date <u>_____</u>	Time <u>_____</u>
Relinquished by:	Date <u>_____</u>	Time <u>_____</u>	Received by:	Date <u>_____</u>	Time <u>_____</u>
Relinquished by:	Date <u>_____</u>	Time <u>_____</u>	Received by:	Date <u>_____</u>	Time <u>_____</u>
Relinquished by:	Date <u>_____</u>	Time <u>_____</u>	Received by:	Date <u>_____</u>	Time <u>_____</u>
Relinquished by: <u>Barb Zerk</u>	Date <u>10/5/06</u>	Time <u>0925</u>	Received by:	Date <u>_____</u>	Time <u>_____</u>

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Reprint

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008584. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHCV1-SS-1 Matrix Spike Composite Solid Sample	4882493

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
1 COPY TO	Data Package Group	
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4882492
**DLHCV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0110 U	0.0110	mg/kg	1
01643	Aluminum	7429-90-5	204.	3.68	mg/kg	1
01650	Calcium	7440-70-2	2,470.	13.9	mg/kg	1
01654	Iron	7439-89-6	286,000.	103.	mg/kg	20
01657	Magnesium	7439-95-4	706.	2.09	mg/kg	1
06125	Arsenic	7440-38-2	19.0	0.373	mg/kg	20
06128	Cadmium	7440-43-9	0.291 J	0.0834	mg/kg	20
06131	Chromium	7440-47-3	206.	0.681	mg/kg	20
06133	Copper	7440-50-8	135.	0.703	mg/kg	20
06135	Lead	7439-92-1	11.4	0.329	mg/kg	20
06139	Nickel	7440-02-0	94.5	1.10	mg/kg	20
06141	Selenium	7782-49-2	0.812 U	0.812	mg/kg	20
06966	Silver	7440-22-4	0.562	0.187	mg/kg	1
06972	Zinc	7440-66-6	54.7	0.719	mg/kg	1
00111	Moisture	n.a.	8.9	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	19,400.	1,030.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.20 U	0.20	mg/kg	1
06569	Bulk Density	n.a.	1.79	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	1.2 J	1.	ug/kg	1
02870	Fluorene	86-73-7	0.7 U	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	2.0	0.7	ug/kg	1
02872	Anthracene	120-12-7	0.38 J	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	1.9	0.7	ug/kg	1
02875	Pyrene	129-00-0	8.2	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	0.7 U	0.7	ug/kg	1
02877	Chrysene	218-01-9	0.72 J	0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	0.91 J	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	1. U	1.	ug/kg	1
Trial ID: RE						
02863	Naphthalene	91-20-3	1.7 J	1.	ug/kg	1
02870	Fluorene	86-73-7	0.7 U	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	0.77 J	0.7	ug/kg	1
02872	Anthracene	120-12-7	0.4 U	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	1.1 J	0.7	ug/kg	1
02875	Pyrene	129-00-0	3.6	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	0.7 U	0.7	ug/kg	1

Lancaster Laboratories Sample No. SW 4882492
**DLHCV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01BKG

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
02877	Chrysene	218-01-9	1.8		0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	0.7	U	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	1.	U	1.	ug/kg	1

The GC/MS semivolatile internal standard peak areas were outside of QC limits. The matrix spike and matrix spike duplicate samples were analyzed and internal standard peak areas were again outside of QC limits, indicating a matrix effect.

Surrogate recoveries were outside of QC limits for the GC/MS semivolatile compounds. The analysis was repeated and surrogates met requirements.

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	29.4	0.50	% Passing	1
07139	3.35 mm	n.a.	21.4	0.50	% Passing	1
07140	2.36 mm	n.a.	17.0	0.50	% Passing	1
07141	1.18 mm	n.a.	8.8	0.50	% Passing	1
07142	0.6 mm	n.a.	3.5	0.50	% Passing	1
07143	0.3 mm	n.a.	1.2	0.50	% Passing	1
07144	0.15 mm	n.a.	0.56 J	0.50	% Passing	1
07145	0.075 mm	n.a.	0.50 U	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1
07147	0.05 mm	n.a.	0.50 U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50 U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50 U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality

Lancaster Laboratories Sample No. SW 4882492
**DLHCV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01BKG

CAT	No.	Analysis Name	CAS Number	Dry Result	Method Detection Limit	Units	Dilution Factor
-----	-----	---------------	------------	------------	------------------------	-------	-----------------

Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analysis Analyst	Dilution Factor
00159		Mercury	SW-846 7471A	1	10/11/2006 08:58	Damary Valentin	1
01643		Aluminum	SW-846 6010B	1	10/11/2006 16:51	John P Hook	1
01650		Calcium	SW-846 6010B	1	10/11/2006 16:51	John P Hook	1
01654		Iron	SW-846 6010B	1	10/12/2006 10:19	Amanda S Bitner	20
01657		Magnesium	SW-846 6010B	1	10/11/2006 16:51	John P Hook	1
06125		Arsenic	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
06128		Cadmium	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
06131		Chromium	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
06133		Copper	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
06135		Lead	SW-846 6020	2	10/16/2006 13:56	Jayme E Curet	20
06139		Nickel	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
06141		Selenium	SW-846 6020	1	10/16/2006 13:56	Jayme E Curet	20
06966		Silver	SW-846 6010B	1	10/11/2006 16:51	John P Hook	1
06972		Zinc	SW-846 6010B	1	10/11/2006 16:51	John P Hook	1
00111		Moisture	EPA 160.3 modified	1	10/06/2006 15:51	Scott W Freisher	1
02079		TOC Solids/Sludges Combustion	SM20 5310 B modified	1	10/11/2006 09:27	James S Mathiot	1
05895		Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 09:52	Nicole M Kepley	1
06569		Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
02858		Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 14:07	Joseph M Gambler	1
02858		Selected SVOA's in soil by SIM	SW-846 8270C SIM	2	10/10/2006 01:17	William T Parker	1
07103		Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
00381		BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381		BNA Soil Extraction	SW-846 3550B	2	10/07/2006 09:15	Mark P Mastropietro	1
00381		BNA Soil Extraction	SW-846 3550B	3	10/12/2006 11:00	Olivia Arosemena	1
05708		SW SW846 ICP Digest	SW-846 3050B	1	10/10/2006 20:05	Annamaria Stipkovits	1
05711		SW SW846 Hg Digest	SW-846 7471A modified	1	10/10/2006 22:30	Annamaria Stipkovits	1
05896		Cyanide Solid Distillation	SW-846 9012A	1	10/09/2006 10:20	Nancy J Shoop	1
06150		ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/11/2006 19:50	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882493
**DLHCV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/20/2006 at 13:21

75 Arlington Street

Discard: 11/20/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.190	0.0109	mg/kg	1
01643	Aluminum	7429-90-5	1,380.	3.68	mg/kg	1
01650	Calcium	7440-70-2	8,660.	13.9	mg/kg	1
01654	Iron	7439-89-6	467,000.	103.	mg/kg	20
01657	Magnesium	7439-95-4	1,280.	2.09	mg/kg	1
06125	Arsenic	7440-38-2	21.0	0.373	mg/kg	20
06128	Cadmium	7440-43-9	0.869	0.0834	mg/kg	20
06131	Chromium	7440-47-3	177.	0.681	mg/kg	20
06133	Copper	7440-50-8	123.	0.703	mg/kg	20
06135	Lead	7439-92-1	223.	3.29	mg/kg	200
06139	Nickel	7440-02-0	78.7	1.10	mg/kg	20
06141	Selenium	7782-49-2	1.19 J	0.812	mg/kg	20
06966	Silver	7440-22-4	6.70	0.187	mg/kg	1
06972	Zinc	7440-66-6	435.	0.719	mg/kg	1
00118	Moisture	n.a.	8.9	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	5.3	0.19	mg/kg	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	28.	1.	ug/kg	1
02870	Fluorene	86-73-7	29.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	30.	0.7	ug/kg	1
02872	Anthracene	120-12-7	31.	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	31.	0.7	ug/kg	1
02875	Pyrene	129-00-0	79.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	30.	0.7	ug/kg	1
02877	Chrysene	218-01-9	29.	0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	28.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	9.9	1.	ug/kg	1

The GC/MS semivolatile internal standard peak areas were outside of QC limits. The background and matrix spike duplicate samples were analyzed and internal standard peak areas were again outside of QC limits, indicating a matrix effect.

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. SW 4882493
**DLHCV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/20/2006 at 13:21

75 Arlington Street

Discard: 11/20/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01MS

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471A	1	10/11/2006 09:05	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/11/2006 17:05	John P Hook	1
01650	Calcium	SW-846 6010B	1	10/11/2006 17:05	John P Hook	1
01654	Iron	SW-846 6010B	1	10/12/2006 10:30	Amanda S Bitner	20
01657	Magnesium	SW-846 6010B	1	10/11/2006 17:05	John P Hook	1
06125	Arsenic	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06128	Cadmium	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06131	Chromium	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06133	Copper	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06135	Lead	SW-846 6020	2	10/17/2006 12:01	Jayme E Curet	200
06139	Nickel	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06141	Selenium	SW-846 6020	1	10/16/2006 14:09	Jayme E Curet	20
06966	Silver	SW-846 6010B	1	10/11/2006 17:05	John P Hook	1
06972	Zinc	SW-846 6010B	1	10/11/2006 17:05	John P Hook	1
00118	Moisture	EPA 160.3 modified	1	10/06/2006 15:51	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 09:54	Nicole M Kepley	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 14:47	Joseph M Gambler	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 11:00	Olivia Arosemena	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/10/2006 20:05	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/10/2006 22:30	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/09/2006 10:20	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/11/2006 19:50	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4882494

**DLHCV1-SS-1 Matrix Spiked Dup. Composite Solid
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

V1SS1 SDG#: SWE07-01MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00118	Moisture	n.a.	8.9	0.50	%	1
00121	Moisture Duplicate	n.a.	9.1	0.50	%	1

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

02858 Selected SVOA's in soil by SIM

02863	Naphthalene	91-20-3	33.	1.	ug/kg	1
02870	Fluorene	86-73-7	27.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	30.	0.7	ug/kg	1
02872	Anthracene	120-12-7	29.	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	22.	0.7	ug/kg	1
02875	Pyrene	129-00-0	57.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	28.	0.7	ug/kg	1
02877	Chrysene	218-01-9	28.	0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	28.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	10.	1.	ug/kg	1

The GC/MS semivolatile internal standard peak areas were outside of QC limits. The background and matrix spike samples were analyzed and internal standard peak areas were again outside of QC limits, indicating a matrix effect.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00118	Moisture	EPA 160.3 modified	1	10/06/2006 15:51	Scott W Freisher	1
00121	Moisture Duplicate	EPA 160.3 modified	1	10/06/2006 15:51	Scott W Freisher	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 15:27	Joseph M Gambler	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/06/2006 14:30	Maryan G Attalla	1
00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 11:00	Olivia Arosemena	1

Lancaster Laboratories Sample No. SW 4882495
**DLHCV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

ISS1D SDG#: SWE07-02FD*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0118 U	0.0118	mg/kg	1
01643	Aluminum	7429-90-5	2,650.	3.81	mg/kg	1
01650	Calcium	7440-70-2	9,460.	14.4	mg/kg	1
01654	Iron	7439-89-6	480,000.	268.	mg/kg	50
01657	Magnesium	7439-95-4	1,190.	2.16	mg/kg	1
06125	Arsenic	7440-38-2	23.5	0.197	mg/kg	10
06128	Cadmium	7440-43-9	1.11	0.0441	mg/kg	10
06131	Chromium	7440-47-3	213.	0.899	mg/kg	25
06133	Copper	7440-50-8	1,540.	8.12	mg/kg	200
06135	Lead	7439-92-1	237.	0.435	mg/kg	25
06139	Nickel	7440-02-0	111.	0.580	mg/kg	10
06141	Selenium	7782-49-2	0.444 J	0.429	mg/kg	10
06966	Silver	7440-22-4	1.22	0.193	mg/kg	1
06972	Zinc	7440-66-6	201.	0.745	mg/kg	1
00111	Moisture	n.a.	13.8	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	29,800.	1,070.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.24 J	0.20	mg/kg	1
06569	Bulk Density	n.a.	1.68	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	44.	1.	ug/kg	1
02870	Fluorene	86-73-7	2.9	0.8	ug/kg	1
02871	Phenanthrene	85-01-8	10.	0.8	ug/kg	1
02872	Anthracene	120-12-7	3.4	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	4.1	0.8	ug/kg	1
02875	Pyrene	129-00-0	14.	0.8	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	2.8	0.8	ug/kg	1
02877	Chrysene	218-01-9	3.8	0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	0.8 U	0.8	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	1. U	1.	ug/kg	1
Trial ID: RE						
02863	Naphthalene	91-20-3	45.	1.	ug/kg	1
02870	Fluorene	86-73-7	3.0	0.8	ug/kg	1
02871	Phenanthrene	85-01-8	10.	0.8	ug/kg	1
02872	Anthracene	120-12-7	3.3	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	6.0	0.8	ug/kg	1
02875	Pyrene	129-00-0	14.	0.8	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	2.3	0.8	ug/kg	1

Lancaster Laboratories Sample No. SW 4882495

**DLHCV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

ISS1D SDG#: SWE07-02FD*

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
02877	Chrysene	218-01-9	4.0		0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	0.8	U	0.8	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	1.	U	1.	ug/kg	1

The GC/MS semivolatile internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection.

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	94.5	0.50	% Passing	1
07138	4.75 mm	n.a.	26.5	0.50	% Passing	1
07139	3.35 mm	n.a.	20.8	0.50	% Passing	1
07140	2.36 mm	n.a.	15.2	0.50	% Passing	1
07141	1.18 mm	n.a.	8.4	0.50	% Passing	1
07142	0.6 mm	n.a.	3.6	0.50	% Passing	1
07143	0.3 mm	n.a.	1.4	0.50	% Passing	1
07144	0.15 mm	n.a.	0.74	J	0.50 % Passing	1
07145	0.075 mm	n.a.	0.56	J	0.50 % Passing	1
07146	0.064 mm	n.a.	0.50	J	0.50 % Passing	1
07147	0.05 mm	n.a.	0.50	J	0.50 % Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50 % Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50 % Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50 % Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50 % Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. SW 4882495
**DLHCV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/19/2006 at 15:29

75 Arlington Street

Discard: 11/19/2006

Ninth Floor

Boston MA 02116

ISS1D SDG#: SWE07-02FD*

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00159	Mercury	SW-846 7471A	1	10/11/2006 09:08	Damary Valentin	1
	01643	Aluminum	SW-846 6010B	1	10/11/2006 17:20	John P Hook	1
	01650	Calcium	SW-846 6010B	1	10/11/2006 17:20	John P Hook	1
	01654	Iron	SW-846 6010B	1	10/12/2006 10:45	Amanda S Bitner	50
	01657	Magnesium	SW-846 6010B	1	10/11/2006 17:20	John P Hook	1
	06125	Arsenic	SW-846 6020	1	10/16/2006 14:21	Jayme E Curet	10
	06128	Cadmium	SW-846 6020	1	10/16/2006 14:21	Jayme E Curet	10
	06131	Chromium	SW-846 6020	1	10/16/2006 14:25	Jayme E Curet	25
	06133	Copper	SW-846 6020	1	10/17/2006 12:07	Jayme E Curet	200
	06135	Lead	SW-846 6020	1	10/16/2006 14:25	Jayme E Curet	25
	06139	Nickel	SW-846 6020	1	10/16/2006 14:21	Jayme E Curet	10
	06141	Selenium	SW-846 6020	1	10/16/2006 14:21	Jayme E Curet	10
	06966	Silver	SW-846 6010B	1	10/11/2006 17:20	John P Hook	1
	06972	Zinc	SW-846 6010B	1	10/11/2006 17:20	John P Hook	1
	00111	Moisture	EPA 160.3 modified	1	10/06/2006 15:51	Scott W Freisher	1
	02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	10/11/2006 09:55	James S Mathiot	1
	05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 10:35	Nicole M Kepley	1
	06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
	02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 16:07	Joseph M Gambler	1
	02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	2	10/16/2006 00:36	William T Parker	1
	07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 11:30	Luz M Groff	1
	00381	BNA Soil Extraction	SW-846 3550B	3	10/12/2006 11:00	Olivia Arosemena	1
	05708	SW SW846 ICP Digest	SW-846 3050B	1	10/10/2006 20:05	Annamaria Stipkovits	1
	05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/10/2006 22:30	Annamaria Stipkovits	1
	05896	Cyanide Solid Distillation	SW-846 9012A	1	10/09/2006 10:20	Nancy J Shoop	1
	06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/11/2006 19:50	Annamaria Stipkovits	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008584

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279820005A			Sample number(s): 4882492-4882495					
Moisture				100		99-101		
Moisture				100		99-101		
Moisture Duplicate				100		99-101		
Batch number: 06279SLD026			Sample number(s): 4882492					
Naphthalene	1. U	1.	ug/kg	77		71-105		
Fluorene	0.7 U	0.7	ug/kg	82		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	85		64-118		
Anthracene	0.3 U	0.3	ug/kg	77		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	88		57-128		
Pyrene	0.7 U	0.7	ug/kg	88		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	84		71-114		
Chrysene	0.3 U	0.3	ug/kg	86		69-114		
Benzo(a)pyrene	0.7 U	0.7	ug/kg	77		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	80		56-130		
Batch number: 06282102201B			Sample number(s): 4882492-4882493, 4882495					
Total Cyanide (solid)	0.18 U	0.18	mg/kg	98		90-110		
Batch number: 06282113031B			Sample number(s): 4882492, 4882495					
TOC Solids/Sludges Combustion	60.0 U	60.0	mg/kg	49		40-148		
Batch number: 062835708003			Sample number(s): 4882492-4882493, 4882495					
Aluminum	13.9 J	3.35	mg/kg	125		91-151		
Calcium	12.7 U	12.7	mg/kg	107		89-121		
Iron	4.71 U	4.71	mg/kg	130		68-158		
Magnesium	3.44 J	1.90	mg/kg	109		90-120		
Silver	0.170 U	0.170	mg/kg	113		90-126		
Zinc	0.655 U	0.655	mg/kg	100		85-110		
Batch number: 062835711003			Sample number(s): 4882492-4882493, 4882495					
Mercury	0.0105 U	0.0105	mg/kg	95		66-133		
Batch number: 062846150001A			Sample number(s): 4882492-4882493, 4882495					
Arsenic	0.0170 U	0.0170	mg/kg	101		77-123		
Cadmium	0.0065 J	0.0038	mg/kg	109		79-121		
Chromium	0.108 J	0.0310	mg/kg	101		78-122		
Copper	0.0350 U	0.0350	mg/kg	105		81-119		
Lead	0.0597 J	0.0150	mg/kg	99		79-121		
Nickel	0.0500 U	0.0500	mg/kg	101		81-119		
Selenium	0.0370 U	0.0370	mg/kg	99		74-126		
Batch number: 062846150001C			Sample number(s): 4882495					
Cadmium	0.0038 U	0.0038	mg/kg	108		79-121		
Batch number: 06284SLD026			Sample number(s): 4882492-4882495					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008584

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Naphthalene	1. U	1.	ug/kg	78		71-105		
Fluorene	0.7 U	0.7	ug/kg	84		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	81		64-118		
Anthracene	0.3 U	0.3	ug/kg	76		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	78		57-128		
Pyrene	0.7 U	0.7	ug/kg	87		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	79		71-114		
Chrysene	0.3 U	0.3	ug/kg	82		69-114		
Benzo(a)pyrene	0.7 U	0.7	ug/kg	86		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	81		56-130		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279820005A			Sample number(s): 4882492-4882495		BKG: 4882492			
Moisture					8.9	9.1	2	15
Moisture					8.9	9.1	2	15
Moisture Duplicate					8.9	9.1	2	15
Batch number: 06279SLD026			Sample number(s): 4882492 UNSPK: P79LDUS					
Naphthalene	118	53*	54-121	14	30			
Fluorene	89	80	62-119	6	30			
Phenanthrene	(2)	(2)	31-160	24	30			
Anthracene	139*	78	55-118	21	30			
Fluoranthene	(2)	(2)	49-125	32*	30			
Pyrene	(2)	(2)	58-137	26	30			
Benzo(a)anthracene	94	0*	69-118	24	30			
Chrysene	91	1*	70-107	25	30			
Benzo(a)pyrene	81	39*	69-106	27	30			
Dibenz(a,h)anthracene	62	26*	40-126	25	30			
Batch number: 06280710301A			Sample number(s): 4882492, 4882495		BKG: P881932			
75 mm					100.	100.	0	20
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					99.6	99.5	0	20
3.35 mm					99.5	99.2	0	20
2.36 mm					99.2	98.3	1	20
1.18 mm					91.9	91.9	0	20
0.6 mm					72.8	71.5	2	20
0.3 mm					57.7	56.7	2	20
0.15 mm					49.2	48.6	1	20
0.075 mm					42.3	41.8	1	20
0.064 mm					37.0	35.0	6	20
0.05 mm					22.0	20.0	10	20
0.02 mm					6.0	4.0	40* (1)	20
0.005 mm					3.0	3.5	15 (1)	20
0.002 mm					0.50 J	0.50 J	0 (1)	20
0.001 mm					0.50 U	0.50 U	0 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008584

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>	
Batch number: 06282102201B Total Cyanide (solid)	99		59-124		0.18 U	0.21 J	200* (1)	17	
Batch number: 06282113031B TOC Solids/Sludges Combustion	94		51-115		17,600.	25,700.	37*	19	
Batch number: 062835708003 Aluminum Calcium Iron Magnesium Silver Zinc	534* (2) (2) 264* 112 694*	460* (2) (2) 252* 107 17263	75-125 75-125 75-125 75-125 75-125 75-125	12 46* 18 2 4 183*	20 20 20 20 20 20	186. 2,250. 260,000. 644. 0.512 49.8	654. 5,340. 432,000. 1,670. 0.896 87.9	112* 81* 50* 89* 55* (1) 55*	20 20 20 20 20 20
*									
Batch number: 062835711003 Mercury	110	111	80-120	1	20	0.010 U	0.0104 U	-107 (1)	
Batch number: 062846150001A Arsenic Cadmium Chromium Copper Lead Nickel Selenium	(2) 105 (2) (2) (2) (2) 109	(2) 94 (2) (2) (2) (2) 120	70-130 75-125 75-125 75-125 75-125 75-125 75-130	14 8 35* 2 53* 11 10	20 20 20 20 20 20 20	17.3 0.265 J 187. 123. 10.3 86.1 0.740 U	16.8 0.199 J 125. 88.2 423. 69.5 0.740 U	3 (1) 28* (1) 40* 33* 190* (1) 21* 14 (1)	20 20 20 20 20 20 20
Batch number: 062846150001C Cadmium	105	94	75-125	8	20	0.265 J	0.199 J	28* (1)	
Batch number: 06284656901A Bulk Density						2.08	2.09	1	
Batch number: 06284SLD026								20	
Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	72 79 77 83 80 193* 81 77 73 27*	87 73 77 79 56 134 77 74 73 27*	54-121 62-119 31-160 55-118 49-125 58-137 69-118 70-107 69-106 40-126	18 7 0 6 33* 32* 5 3 0 2	30 30 30 30 30 30 30 30 30 30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/19/06 at 03:29 PM

Group Number: 1008584

Surrogate Quality Control

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06279SLD026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4882492RE	76	75	93
Blank	41*	47*	92
LCS	72	78	91
MS	97	56	112
MSD	93	62	110
Limits:	42-142	48-122	65-125

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06284SLD026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4882492	49	47*	108
4882493	84	79	139*
4882494	88	79	98
4882495	78	73	74
4882495RE	86	69	77
Blank	85	79	79
LCS	89	84	75
MS	84	79	139*
MSD	88	79	98
Limits:	42-142	48-122	65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 4882492-95 Sample # 1008584

COC # 0132126

1 of 2

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>CH2M HILL</u> Acct. #: _____				Matrix	4		5 Analyses Requested										6				
Project Name#: <u>GREAT LAKES</u> PWSID #: _____		Project Manager: <u>E. MOSLEY</u> P.O.#: _____					Preservation Codes														
Sampler: <u>J. Coffey (571-274-6105)</u> Quote #: _____		Name of state where samples were collected: <u>MN</u>		Total # of Containers	5 Bulk Density, Grain Si/SZ	Specific Gravity	Tot. Metals, CN, Hg, % moist (sampled)	DOC	BOD/COD	TDS	Remarks	Preservation Codes									
												<input type="checkbox"/> Possible Check if NFTS Samples	<input type="checkbox"/> Water	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Grab	<input checked="" type="checkbox"/> Composite	<input type="checkbox"/> Soil	<input type="checkbox"/> Sediment	<input type="checkbox"/> Diss. Metals, Cd, Hg	<input type="checkbox"/> Cyanox, Paths	<input type="checkbox"/> TOC	☐ TDS	☐ Matrix Spike	☐ SVOCs, Metals, CN, Hg	☐ B=NaOH	☐ O=Other
2 Sample Identification		Date Collected	Time Collected	3																Temperature of Sample at Collection	
<u>DLHCV1-DS-1</u>		<u>10-3-06</u>	<u>1020</u>		X	X														<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg</u>	
<u>DLHCV1-DS-1-D</u>		<u>10-3-06</u>	<u>1020</u>		X	X														<u>HOLD</u>	
<u>DLHCV1-DS-1-BU</u>		<u>10-3-06</u>	<u>1020</u>		X	X														<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg</u>	
<u>DLHCV1-SS-1</u>		<u>10-3-06</u>	<u>0820</u>		X	X														<u>HOLD</u>	
<u>DLHCV1-SS-1-D</u>		<u>10-3-06</u>	<u>0820</u>		X	X														<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg</u>	
<u>DLHCV1-SS-1-D2</u>		<u>10-3-06</u>	<u>0900</u>		X	X														<u>HOLD</u>	
<u>DLHCV1-SS-2-BU</u>					X	X														<u>HOLD</u>	
<u>DLHCV1-SS-1-LS-1</u>		<u>10-3-06</u>	<u>0820</u>		X	X	X													<u>MATRIX SPIKE FOR SVOCs, METALS, CN, Hg (tot. & det.)</u>	
<u>DLHCV1-LS-1-D</u>		<u>10-3-06</u>	<u>0820</u>		X	X	X													<u>HOLD</u>	
<u>DLHCV1-LS-1-BU</u>		<u>10-3-06</u>	<u>0820</u>		X	X	X													<u>HOLD</u>	
7 Turnaround Time Requested (TAT) (please circle): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush		8 Relinquished by: <u>Randy McMorris R. McMorris</u> Date <u>10-3-06</u> Time <u>1700</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																			
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)		Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																			
Date results are needed: _____		Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																			
Rush results requested by (please circle): <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> E-mail		Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																			
Phone #: _____ Fax #: _____		Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																			
E-mail address: _____		Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																			
8 Data Package Options (please circle if required)		Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																			
Type I (validation/NJ Reg)	TX TRRP-13	SDG Complete?		Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																	
Type II (Tier II)	MA MCP	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																	
Type III (Reduced NJ)	CT RCP	Site-specific QC (MS/MSD/Dup)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																	
Type IV (CLP SOW)	Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																				
Type VI (Raw Data Only)	Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																				
Internal COC Required? Yes / No _____		Relinquished by: _____ Date <u>_____</u> Time <u>_____</u> Received by: _____ Date <u>_____</u> Time <u>_____</u>																			

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2800 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008588. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHCV1-LS-1 Unspiked Composite Water Sample	4882510
DLHCV1-LS-1 Matrix Spike Composite Water Sample	4882511
DLHCV1-LS-1 Unspiked Filtered Composite Water	4882512
DLHCV1-LS-1 Matrix Spike Filtered Composite Water	4882513
DLHCV1-LS-1-D Composite Water Sample	4882514

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	3CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
1 COPY TO	Data Package Group	
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4882510
**DLHCV1-LS-1 Unspiked Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V1LS1 SDG#: SWE08-01BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l
01750	Calcium	7440-70-2	15.4	0.104	mg/l
01754	Iron	7439-89-6	0.689	0.0522	mg/l
01757	Magnesium	7439-95-4	4.18	0.0135	mg/l
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l
06031	Chromium	7440-47-3	0.0012 J	0.00026	mg/l
06033	Copper	7440-50-8	0.0052	0.00020	mg/l
06035	Lead	7439-92-1	0.0011	0.000047	mg/l
06039	Nickel	7440-02-0	0.0015 J	0.00043	mg/l
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l
00206	Total Suspended Solids	n.a.	16.0	3.0	mg/l
00235	Biochemical Oxygen Demand	n.a.	2.8 U	2.8	mg/l
This sample was submitted past the 48-hour holding time for BOD.					
00273	Total Organic Carbon	n.a.	2.9	1.0	mg/l
01443	Specific Gravity	n.a.	1.00	0.0050	1
04001	Chemical Oxygen Demand	n.a.	22.0 J	12.8	mg/l
07547	Dissolved Organic Carbon	n.a.	1.0 U	1.0	mg/l
08255	Total Cyanide (water)	57-12-5	0.0083 U	0.0083	mg/l
08357	Selected SVOAs by 8270 SIM				
08362	Naphthalene	91-20-3	0.093	0.01	ug/l
08368	Fluorene	86-73-7	0.024 J	0.01	ug/l
08369	Phenanthrene	85-01-8	0.062 J	0.01	ug/l
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l
08372	Fluoranthene	206-44-0	0.040 J	0.01	ug/l
08373	Pyrene	129-00-0	0.047 J	0.02	ug/l
08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l
08375	Chrysene	218-01-9	0.02 U	0.02	ug/l
08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l
Trial ID: RE					
08362	Naphthalene	91-20-3	0.013 J	0.01	ug/l
08368	Fluorene	86-73-7	0.01 U	0.01	ug/l
08369	Phenanthrene	85-01-8	0.022 J	0.01	ug/l
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l
08372	Fluoranthene	206-44-0	0.021 J	0.01	ug/l

Lancaster Laboratories Sample No. WW 4882510

**DLHCV1-LS-1 Unspiked Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V1LS1 SDG#: SWE08-01BKG

As Received

CAT	No.	Analysis Name	CAS Number	Result	Method	Dilution Factor
	08373	Pyrene	129-00-0	0.023 J	0.02	ug/l 1
	08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l 1
	08375	Chrysene	218-01-9	0.02 U	0.02	ug/l 1
	08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l 1
	08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l 1

Phenanthrene was detected in the method blank at a concentration of .01 ug/l.

The blank value was not subtracted from the analytical result. This sample was re-extracted, and phenanthrene was again detected in the sample.

Sample from a plastic bottle was used for the re-analysis of this sample.

Due to insufficient sample, the reporting limits for the GC/MS semivolatile compounds were raised.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00259	Mercury	SW-846 7470A	1	10/11/2006 07:58	Damary Valentin	1
	01743	Aluminum	SW-846 6010B	1	10/11/2006 21:03	John P Hook	1
	01750	Calcium	SW-846 6010B	1	10/10/2006 21:46	John P Hook	1
	01754	Iron	SW-846 6010B	1	10/10/2006 21:46	John P Hook	1
	01757	Magnesium	SW-846 6010B	1	10/10/2006 21:46	John P Hook	1
	06025	Arsenic	SW-846 6020	1	10/13/2006 23:00	David K Beck	1
	06028	Cadmium	SW-846 6020	1	10/13/2006 10:34	Jayme E Curet	1
	06031	Chromium	SW-846 6020	1	10/13/2006 10:34	Jayme E Curet	1
	06033	Copper	SW-846 6020	1	10/13/2006 10:34	Jayme E Curet	1
	06035	Lead	SW-846 6020	1	10/13/2006 10:34	Jayme E Curet	1
	06039	Nickel	SW-846 6020	1	10/13/2006 10:34	Jayme E Curet	1
	06041	Selenium	SW-846 6020	1	10/13/2006 23:00	David K Beck	1
	07066	Silver	SW-846 6010B	1	10/10/2006 21:46	John P Hook	1
	07072	Zinc	SW-846 6010B	1	10/10/2006 21:46	John P Hook	1
	00206	Total Suspended Solids	EPA 160.2	1	10/06/2006 10:08	Maria O Gittens	1
	00235	Biochemical Oxygen Demand	EPA 405.1	1	10/05/2006 13:06	Susan A Engle	1
	00273	Total Organic Carbon	EPA 415.1	1	10/12/2006 10:52	James S Mathiot	1
	01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
	04001	Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1

Lancaster Laboratories Sample No. WW 4882510
**DLHCV1-LS-1 Unspiked Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V1LS1 SDG#: SWE08-01BKG							
07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/11/2006 12:06	James S Mathiot	1	
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:42	Courtney A Shoff	1	
08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/10/2006 22:07	William T Parker	1	
08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	2	10/17/2006 12:15	Timothy J Trees	1	
00813	BNA Water Extraction	SW-846 3510C	1	10/08/2006 22:30	Brian C Veety	1	
00813	BNA Water Extraction	SW-846 3510C	2	10/13/2006 04:15	Sherry L Morrow	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/09/2006 00:35	Helen L Schaeffer	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/10/2006 18:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/09/2006 11:15	Megersa Deyessa	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1	

Lancaster Laboratories Sample No. WW 4882511
**DLHCV1-LS-1 Matrix Spike Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

V1LS1 SDG#: SWE08-01MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0012	0.000056	mg/l
01743	Aluminum	7429-90-5	2.09	0.0802	mg/l
01750	Calcium	7440-70-2	19.3	0.104	mg/l
01754	Iron	7439-89-6	1.66	0.0522	mg/l
01757	Magnesium	7439-95-4	6.10	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0113	0.00067	mg/l
06028	Cadmium	7440-43-9	0.0055	0.000099	mg/l
06031	Chromium	7440-47-3	0.0575	0.00026	mg/l
06033	Copper	7440-50-8	0.0623	0.00020	mg/l
06035	Lead	7439-92-1	0.0182	0.000047	mg/l
06039	Nickel	7440-02-0	0.0574	0.00043	mg/l
06041	Selenium	7782-49-2	0.0103	0.00050	mg/l
07066	Silver	7440-22-4	0.0496	0.0016	mg/l
07072	Zinc	7440-66-6	0.515	0.0081	mg/l
08255	Total Cyanide (water)	57-12-5	0.27	0.0083	mg/l
08357	Selected SVOAs by 8270 SIM				
08362	Naphthalene	91-20-3	0.82	0.01	ug/l
08368	Fluorene	86-73-7	0.83	0.01	ug/l
08369	Phenanthrene	85-01-8	0.84	0.01	ug/l
08370	Anthracene	120-12-7	0.80	0.02	ug/l
08372	Fluoranthene	206-44-0	0.83	0.01	ug/l
08373	Pyrene	129-00-0	0.87	0.02	ug/l
08374	Benzo(a)anthracene	56-55-3	0.78	0.02	ug/l
08375	Chrysene	218-01-9	0.76	0.02	ug/l
08378	Benzo(a)pyrene	50-32-8	0.59	0.02	ug/l
08380	Dibenz(a,h)anthracene	53-70-3	0.50	0.02	ug/l

Sample from a plastic bottle was used for the analysis of this sample.

Due to insufficient sample, the reporting limits for the GC/MS semivolatile compounds were raised.

This sample was extracted outside of the method required holding time.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. WW 4882511
**DLHCV1-LS-1 Matrix Spike Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

V1LS1 SDG#: SWE08-01MS

Boston MA 02116

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00259	Mercury	SW-846 7470A	1	10/11/2006 08:00	Damary Valentin	1
	01743	Aluminum	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	01750	Calcium	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	01754	Iron	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	01757	Magnesium	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	06025	Arsenic	SW-846 6020	1	10/13/2006 23:10	David K Beck	1
	06028	Cadmium	SW-846 6020	1	10/13/2006 10:47	Jayme E Curet	1
	06031	Chromium	SW-846 6020	1	10/13/2006 10:47	Jayme E Curet	1
	06033	Copper	SW-846 6020	1	10/13/2006 10:47	Jayme E Curet	1
	06035	Lead	SW-846 6020	1	10/13/2006 10:47	Jayme E Curet	1
	06039	Nickel	SW-846 6020	1	10/13/2006 10:47	Jayme E Curet	1
	06041	Selenium	SW-846 6020	1	10/13/2006 23:10	David K Beck	1
	07066	Silver	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	07072	Zinc	SW-846 6010B	1	10/10/2006 22:01	John P Hook	1
	08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:43	Courtney A Shoff	1
	08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/17/2006 12:43	Timothy J Trees	1
	00813	BNA Water Extraction	SW-846 3510C	1	10/13/2006 04:15	Sherry L Morrow	1
	01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/09/2006 00:35	Helen L Schaeffer	1
	05713	WW SW846 Hg Digest	SW-846 7470A	1	10/10/2006 18:00	Nelli S Markaryan	1
	06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/09/2006 11:15	Megersa Deyessa	1
	08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4882512
**DLHCV1-LS-1 Unspiked Filtered Composite Water
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1F SDG#: SWE08-02BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	15.7	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	4.39	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00057 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0022	0.00020	mg/l 1
06035	Lead	7439-92-1	0.00011 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0016 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 07:28	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1
01754	Iron	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/16/2006 17:08	Jayme E Curet	1
06041	Selenium	SW-846 6020	2	10/16/2006 17:08	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/12/2006 19:17	John P Hook	1

Lancaster Laboratories Sample No. WW 4882512
**DLHCV1-LS-1 Unspiked Filtered Composite Water
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1F	SDG#:	SWE08-02BKG						
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:46	Courtney A Shoff	1		
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006 19:55	James L Mertz	1		
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1		
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/09/2006 09:30	Megersa Deyessa	1		
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1		

Lancaster Laboratories Sample No. WW 4882513
**DLHCV1-LS-1 Matrix Spike Filtered Composite Water
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1F SDG#: SWE08-02MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0012	0.000056	mg/l 1
01743	Aluminum	7429-90-5	1.83	0.0802	mg/l 1
01750	Calcium	7440-70-2	19.5	0.104	mg/l 1
01754	Iron	7439-89-6	0.957	0.0522	mg/l 1
01757	Magnesium	7439-95-4	6.30	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0107	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0051	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0542	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0566	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0160	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0547	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0106	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0484	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.469	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.17	0.0050	mg/l 1

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 07:30	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1
01754	Iron	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/16/2006 17:25	Jayme E Curet	1
06041	Selenium	SW-846 6020	2	10/16/2006 17:25	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/12/2006 19:31	John P Hook	1

Lancaster Laboratories Sample No. WW 4882513**DLHCV1-LS-1 Matrix Spike Filtered Composite Water
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1F	SDG#:	SWE08-02MS						
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006	21:47	Courtney A Shoff	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006	19:55	James L Mertz	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006	17:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/09/2006	09:30	Megersa Deyessa	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006	11:00	Nancy J Shoop	1	

Lancaster Laboratories Sample No. WW 4882514
**DLHCV1-LS-1-D Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1D SDG#: SWE08-03FD

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	14.8	0.104	mg/l	1	
01754	Iron	7439-89-6	0.607	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	4.00	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0011 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0041	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00091 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0014 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	2.6 U	2.6	mg/l	1	
This sample was submitted past the 48-hour holding time for BOD.							
00273	Total Organic Carbon	n.a.	2.5	1.0	mg/l	1	
01443	Specific Gravity	n.a.	1.00	0.0050		1	
04001	Chemical Oxygen Demand	n.a.	19.7 J	12.8	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	
08357	Selected SVOAs by 8270 SIM						
08362	Naphthalene	91-20-3	0.10	0.01	ug/l	1	
08368	Fluorene	86-73-7	0.025 J	0.01	ug/l	1	
08369	Phenanthrene	85-01-8	0.066	0.01	ug/l	1	
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l	1	
08372	Fluoranthene	206-44-0	0.040 J	0.01	ug/l	1	
08373	Pyrene	129-00-0	0.048 J	0.02	ug/l	1	
08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l	1	
08375	Chrysene	218-01-9	0.02 U	0.02	ug/l	1	
08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l	1	
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l	1	
Phenanthrene was detected in the method blank at a concentration of .01 ug/l. The blank value was not subtracted from the analytical result. Sufficient sample was unavailable to repeat the analysis.							

Due to insufficient sample, the reporting limits for the GC/MS semivolatile compounds were raised.

Lancaster Laboratories Sample No. WW 4882514
**DLHCV1-LS-1-D Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20

by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:46

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1LS1D SDG#: SWE08-03FD

As Received

CAT	No.	Analysis Name	CAS Number	As Received	Method	Dilution Factor
				Result	Detection Limit	Units

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Analysis			Dilution Factor
				Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A		1	10/11/2006 08:06	Damary Valentin	1
01743	Aluminum	SW-846 6010B		1	10/11/2006 21:19	John P Hook	1
01750	Calcium	SW-846 6010B		1	10/10/2006 22:34	John P Hook	1
01754	Iron	SW-846 6010B		1	10/10/2006 22:34	John P Hook	1
01757	Magnesium	SW-846 6010B		1	10/10/2006 22:34	John P Hook	1
06025	Arsenic	SW-846 6020		1	10/16/2006 18:04	Jayne E Curet	1
06028	Cadmium	SW-846 6020		1	10/16/2006 18:04	Jayne E Curet	1
06031	Chromium	SW-846 6020		1	10/16/2006 18:04	Jayne E Curet	1
06033	Copper	SW-846 6020		1	10/16/2006 18:04	Jayne E Curet	1
06035	Lead	SW-846 6020		1	10/16/2006 18:04	Jayne E Curet	1
06039	Nickel	SW-846 6020		1	10/16/2006 18:04	Jayne E Curet	1
06041	Selenium	SW-846 6020		1	10/16/2006 18:04	Jayne E Curet	1
07066	Silver	SW-846 6010B		1	10/10/2006 22:34	John P Hook	1
07072	Zinc	SW-846 6010B		1	10/10/2006 22:34	John P Hook	1
00235	Biochemical Oxygen Demand	EPA 405.1		1	10/05/2006 13:06	Susan A Engle	1
00273	Total Organic Carbon	EPA 415.1		1	10/12/2006 15:51	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F		1	10/10/2006 20:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4		1	10/10/2006 08:30	Susan A Engle	1
08255	Total Cyanide (water)	SW-846 9012A		1	10/11/2006 21:49	Courtney A Shoff	1
08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM		1	10/10/2006 22:35	William T Parker	1
00813	BNA Water Extraction	SW-846 3510C		1	10/08/2006 22:30	Brian C Veety	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A		1	10/09/2006 00:35	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A		1	10/10/2006 18:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified		1	10/09/2006 09:30	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A		1	10/11/2006 11:00	Nancy J Shoop	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:46 AM

Group Number: 1008588

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06278023503A Biochemical Oxygen Demand			Sample number(s): 4882510, 4882514	108	107	85-115	1	8
Batch number: 06279020601B Total Suspended Solids	3.0 U	3.0	mg/l	103		56-128		
Batch number: 06279WAH026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	0.01 U 0.01 U 0.012 J 0.02 U 0.01 U 0.02 U 0.02 U 0.02 U 0.02 U 0.02 U	0.01 0.01 0.01 0.02 0.01 0.02 0.02 0.02 0.02	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	92 89 91 87 93 93 89 93 85 84	95 93 95 90 95 95 76-114 76-111 76-112 64-114 60-126	70-111 75-115 76-114 67-113 69-123 76-114 76-111 76-112 64-114 60-126	3 4 4 3 3 3 3 3 3 4	30 30 30 30 30 30 30 30 30 30
Batch number: 062821848001 Aluminum Calcium Iron Magnesium Silver Zinc	0.0802 U 0.104 U 0.0522 U 0.0135 U 0.0016 U 0.0081 U	0.0802 0.104 0.0522 0.0135 0.0016 0.0081	mg/l mg/l mg/l mg/l mg/l mg/l	104 102 98 97 99 101		90-112 90-112 90-112 89-110 90-118 90-111		
Batch number: 062825713003 Mercury	0.000056 U	0.000056	mg/l	117 6		80-120		
Batch number: 062826050001A Arsenic Cadmium Chromium Copper Lead Nickel Selenium	0.00067 U	0.00067	mg/l	105		80-120		
Batch number: 062826050002A Arsenic Cadmium Chromium Copper Lead	0.67 U 0.099 U 0.43 J 0.20 U 0.047 U	0.67 0.099 0.26 0.20 0.047	ug/l ug/l ug/l ug/l ug/l	104 104 111 115 111		80-120 80-120 80-120 80-120 80-120		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:46 AM

Group Number: 1008588

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Nickel	0.43 U	0.43	ug/l	107		80-120		
Batch number: 062826050002B			Sample number(s): 4882512-4882514					
Selenium	0.00050	0.00050	mg/l	98		80-120		
	U							
Batch number: 062831848006			Sample number(s): 4882512-4882513					
Aluminum	80.2 U	80.2	ug/l	93		90-112		
Calcium	104. U	104.	ug/l	96		90-112		
Iron	52.2 U	52.2	ug/l	95		90-112		
Magnesium	13.5 U	13.5	ug/l	98		89-110		
Silver	1.6 U	1.6	ug/l	98		90-118		
Zinc	8.1 U	8.1	ug/l	97		90-111		
Batch number: 06283400102A			Sample number(s): 4882510,4882514					
Chemical Oxygen Demand			99			94-110		
Batch number: 062835713003			Sample number(s): 4882510-4882511,4882514					
Mercury	0.000056	0.00005	mg/l	115		80-120		
	U	6						
Batch number: 06284049511B			Sample number(s): 4882510,4882514					
Total Organic Carbon	1.0 U	1.0	mg/l	100		80-120		
Batch number: 06284049512A			Sample number(s): 4882510					
Dissolved Organic Carbon	1.0 U	1.0	mg/l	107		80-120		
Batch number: 06284117101A			Sample number(s): 4882510-4882511					
Total Cyanide (water)	0.0050 U	0.0050	mg/l	95		90-110		
Batch number: 06284117101B			Sample number(s): 4882512-4882514					
Total Cyanide (water)	0.0050 U	0.0050	mg/l	95		90-110		
Batch number: 06285WAE026			Sample number(s): 4882510-4882511					
Naphthalene	0.005 U	0.005	ug/l	81	81	70-111	0	30
Fluorene	0.005 U	0.005	ug/l	82	83	75-115	0	30
Phenanthrene	0.005 U	0.005	ug/l	82	82	76-114	1	30
Anthracene	0.01 U	0.01	ug/l	81	81	67-113	1	30
Fluoranthene	0.005 U	0.005	ug/l	83	84	69-123	0	30
Pyrene	0.01 U	0.01	ug/l	86	87	76-114	1	30
Benzo(a)anthracene	0.01 U	0.01	ug/l	83	84	76-111	1	30
Chrysene	0.01 U	0.01	ug/l	82	83	76-112	1	30
Benzo(a)pyrene	0.01 U	0.01	ug/l	79	80	64-114	1	30
Dibenz(a,h)anthracene	0.01 U	0.01	ug/l	71	71	60-126	0	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06278023503A			Sample number(s): 4882510,4882514 UNSPK: 4882510 BKG: P881810					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:46 AM

Group Number: 1008588

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max RPD</u>
Biochemical Oxygen Demand	110	124	67-144	12*	9	177.	161.	9	9
Batch number: 06279020601B Total Suspended Solids									
	Sample number(s): 4882510		BKG: P882527						
						197.	205.	4	20
Batch number: 062821848001 Aluminum	104	102	75-125	2	20	0.0802 U	0.0802 U	-7233 (1)	20
Calcium	100	94	75-125	1	20	15.4	14.8	4	20
Iron	97	92	75-125	3	20	0.689	0.627	9 (1)	20
Magnesium	96	92	75-125	1	20	4.18	4.00	4	20
Silver	99	97	75-125	2	20	0.0016 U	0.0016 U	-6 (1)	20
Zinc	103	98	75-125	5	20	0.0081 U	0.0082 J	200* (1)	20
Batch number: 062825713003 Mercury	116	119	80-120	3	20	0.000056 U	0.000056 U	104* (1)	20
Batch number: 062826050001A Arsenic	113	111	75-125	1	20	0.00067 U	0.00067 U	14 (1)	20
Cadmium	109	106	75-125	3	20	0.099 U	0.099 U	46* (1)	20
Chromium	113	109	75-125	3	20	1.2 J	1.2 J	1 (1)	20
Copper	114	111	75-125	3	20	5.2	4.9	4 (1)	20
Lead	114	113	75-125	1	20	1.1	1.1	4 (1)	20
Nickel	112	108	75-125	3	20	1.5 J	1.4 J	6 (1)	20
Selenium	103	102	75-125	0	20	0.00050 U	0.00050 U	-44 (1)	20
Batch number: 062826050002A Arsenic	107	109	75-125	1	20	0.67 U	0.67 U	8 (1)	20
Cadmium	101	102	75-125	1	20	0.099 U	0.099 U	90* (1)	20
Chromium	107	106	75-125	1	20	0.57 J	0.63 J	9 (1)	20
Copper	109	107	75-125	1	20	2.2	2.2	2 (1)	20
Lead	106	106	75-125	0	20	0.11 J	0.10 J	3 (1)	20
Nickel	106	105	75-125	1	20	1.6 J	1.1 J	37* (1)	20
Batch number: 062826050002B Selenium	106	105	75-125	1	20	0.00050 U	0.50 U	200* (1)	20
Batch number: 06283144301A Specific Gravity									
	Sample number(s): 4882510, 4882514		BKG: P883056						
			1.0			1.0	0		2
Batch number: 062831848006									
	Sample number(s): 4882512-4882513 UNSPK: 4882512		BKG: 4882512						
Aluminum	92	92	75-125	0	20	0.0802 U	0.0802 U	-2 (1)	20
Calcium	94	90	75-125	1	20	15.7	14.7	7	20
Iron	96	95	75-125	1	20	0.0522 U	0.0522 U	-6 (1)	20
Magnesium	95	94	75-125	0	20	4.39	4.12	6	20
Silver	97	97	75-125	0	20	1.6 U	1.6 U	93* (1)	20
Zinc	94	95	75-125	1	20	8.1 U	8.1 U	61* (1)	20
Batch number: 06283400102A									
	Sample number(s): 4882510, 4882514 UNSPK: P881814		BKG: P883056						

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:46 AM

Group Number: 1008588

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Chemical Oxygen Demand	95		90-110		420.	409.	3	5
Batch number: 062835713003 Mercury			Sample number(s): 4882510-4882511, 4882514 UNSPK: 4882510 BKG: 4882510 119 118 80-120 1 20 0.000056 0.000056 143* (1) U U					20
Batch number: 06284049511B Total Organic Carbon			Sample number(s): 4882510, 4882514 UNSPK: 4882510 BKG: 4882510 92 62-148 2.9 3.0 2 (1)					2
Batch number: 06284049512A Dissolved Organic Carbon			Sample number(s): 4882510 UNSPK: 4882510 BKG: 4882510 114 66-137 1.0 U 1.0 U 200* (1)					4
Batch number: 06284117101A Total Cyanide (water)			Sample number(s): 4882510-4882511 UNSPK: 4882510 BKG: 4882510 80* 83-111 0.0083 U 0.0083 U 0 (1)					20
Batch number: 06284117101B Total Cyanide (water)			Sample number(s): 4882512-4882514 UNSPK: 4882512 BKG: 4882512 83 83-111 0.0050 U 0.0050 U 0 (1)					20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06279WAH026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4882510	94	92	99
4882514	95	92	100
Blank	99	97	109
LCS	91	90	97
LCSD	95	94	101
Limits:	57-137	60-115	64-123

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06285WAE026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4882510RE	92	90	95
4882511	85	83	88
Blank	90	86	92
LCS	86	84	89
LCSD	85	82	89
Limits:	57-137	60-115	64-123

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 1008588 Sample # 4882510-14

COC # 0132126

1 of 2

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: CHAM HILL Acct. #: _____
Project Name/ #: GREAT LAKES PWSID #: _____
Project Manager: E. Mosley P.O. #: _____
Sampler: J. Coffey (571-274-6105) Quote #: _____
Name of state where samples were collected: MN

		Preservation Codes							For Lab Use Only	
4									FSC: _____	
									SCR#: _____	
		Specific Gravity	TOT METALS, CN, HG, % MOIST (SOL)	DIS. METALS, CN, HG	SYNOX, PATT	TOC	DOC	BOD/COD	TSST	Remarks
X	3	X	X	X	X	X				MATRIX SPIKE FOR SVOCs, METALS, CN, HG
X	3	X	X	X	X	X				HOLD
X	2									MATRIX SPIKE FOR SVOCs, METALS, CN, HG
X	3	X	X	X	X	X				HOLD
X	3	X	X	X	X	X				MATRIX SPIKE FOR SVOCs, METALS, CN, HG (TOT. d) 1/13
X	3	X	X	X	X	X				HOLD
X	5	X	X	X	X	X	X	X		
X	4	X	X	X	X	X	X			
X	4									
Inquished by:		Date	Time	Received by:			Date	Time	9	
<i>John Morris, M.P.A.</i>		10-3-06	1700							
Inquished by:		Date	Time	Received by:			Date	Time		
Inquished by:		Date	Time	Received by:			Date	Time		
Inquished by:		Date	Time	Received by:			Date	Time		
Inquished by:		Date	Time	Received by:			Date	Time		

Turnaround Time Requested (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed:

Rush results requested by (please circle): Phone Fax E-mail

Phone #: _____ Fax #: _____

E-mail address:

Data Package Options (Leave blank if not applicable)

Type I (validation/NI) Project SDG Complete

Type I (Validation/NS Reg) IX TRRP-13 Yes - No
Type II (Tier II) MA MCR ST RCS

Type III (Reduced N.)

Type IV (CLP SOW) Site specific QC (MS/MSD/Dup)? Yes No
If yes, indicate QC sample no. and date (MM/DD/YY).

Type VI (Raw Data Only) Internal COC Required? Yes / No

Project Name _____

Lancaster Laboratories, Inc., 2425 N.

copies. White and yellow should accompany

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

Sample Reprint

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008728. Samples arrived at the laboratory on Friday, October 06, 2006. The PO# for this group is 18957F_T0003_TM1.

Client Description
DLHCV2-LS-1 Grab Water Sample

Lancaster Labs Number
4883054

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4883054
**DLHCV2-LS-1 Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:10 by RM Account Number: 12098

 Submitted: 10/06/2006 09:40 Parsons Brinkerhoff
 Reported: 10/18/2006 at 08:40 75 Arlington Street
 Discard: 11/18/2006 Ninth Floor
 Boston MA 02116

C2LS1 SDG#: SWE08-04

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.00028 U	0.00028	mg/l
	The quantitation limit for mercury was raised due to the nature of the sample matrix.				5
01743	Aluminum	7429-90-5	0.955	0.0802	mg/l
01750	Calcium	7440-70-2	6.28	0.104	mg/l
01754	Iron	7439-89-6	9.79	0.0522	mg/l
01757	Magnesium	7439-95-4	2.21	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0011 J	0.00067	mg/l
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l
06031	Chromium	7440-47-3	0.0028	0.00026	mg/l
06033	Copper	7440-50-8	0.0056	0.00020	mg/l
06035	Lead	7439-92-1	0.0013	0.000047	mg/l
06039	Nickel	7440-02-0	0.0033	0.00043	mg/l
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0696	0.0081	mg/l
00206	Total Suspended Solids	n.a.	232.	15.0	mg/l
00235	Biochemical Oxygen Demand	n.a.	5.9 U	5.9	mg/l
00273	Total Organic Carbon	n.a.	4.8	1.0	mg/l
01443	Specific Gravity	n.a.	0.99	0.0050	1
04001	Chemical Oxygen Demand	n.a.	354.	12.8	mg/l
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l
08357	Selected SVOAs by 8270 SIM				
08362	Naphthalene	91-20-3	0.29	0.01	ug/l
08368	Fluorene	86-73-7	0.078	0.01	ug/l
08369	Phenanthrene	85-01-8	0.32	0.01	ug/l
08370	Anthracene	120-12-7	0.038 J	0.02	ug/l
08372	Fluoranthene	206-44-0	0.33	0.01	ug/l
08373	Pyrene	129-00-0	0.44	0.02	ug/l
08374	Benzo(a)anthracene	56-55-3	0.091	0.02	ug/l
08375	Chrysene	218-01-9	0.10	0.02	ug/l
08378	Benzo(a)pyrene	50-32-8	0.037 J	0.02	ug/l
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l

Phenanthrene was detected in the method blank at a concentration of .01 ug/l.
 The blank value was not subtracted from the analytical result.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. WW 4883054
**DLHCV2-LS-1 Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/18/2006 at 08:40

75 Arlington Street

Discard: 11/18/2006

Ninth Floor

Boston MA 02116

C2LS1 SDG#: SWE08-04

As Received

CAT	No.	Analysis Name	CAS Number	As Received	Method	Dilution Factor
				Result	Detection Limit	Units

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00259		Mercury	SW-846 7470A	1	10/11/2006 08:08	Damary Valentin	5
01743		Aluminum	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
01750		Calcium	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
01754		Iron	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
01757		Magnesium	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
06025		Arsenic	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06028		Cadmium	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06031		Chromium	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06033		Copper	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06035		Lead	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06039		Nickel	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
06041		Selenium	SW-846 6020	1	10/13/2006 20:16	Parker D Lindstrom	1
07066		Silver	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
07072		Zinc	SW-846 6010B	1	10/12/2006 20:10	John P Hook	1
00206		Total Suspended Solids	EPA 160.2	1	10/10/2006 09:14	Christopher M Cunningham	1
00235		Biochemical Oxygen Demand	EPA 405.1	1	10/06/2006 13:39	Susan A Engle	1
00273		Total Organic Carbon	EPA 415.1	1	10/13/2006 12:33	James S Mathiot	1
01443		Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
04001		Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1
08255		Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:54	Courtney A Shoff	1
08357		Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/10/2006 23:04	William T Parker	1
00813		BNA Water Extraction	SW-846 3510C	1	10/08/2006 22:30	Brian C Veety	1
01848		WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006 19:55	James L Mertz	1
05713		WW SW846 Hg Digest	SW-846 7470A	1	10/10/2006 18:00	Nelli S Markaryan	1
06050		ICP/MS SW-846 Water	SW-846 3010A modified	1	10/10/2006 19:38	James L Mertz	1
08256		Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4883055
**DLHCV2-LS-1 Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:18

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

2LS1F SDG#: SWE08-05

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	5.96	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	1.98	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00083 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0015	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000054 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0011 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was field filtered for dissolved metals and cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/11/2006 08:10	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1
01754	Iron	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06028	Cadmium	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/13/2006 20:29	Parker D Lindstrom	1
07066	Silver	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/12/2006 20:15	John P Hook	1

Lancaster Laboratories Sample No. WW 4883055**DLHCV2-LS-1 Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:18

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

2LS1F	SDG#:	SWE08-05					
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:55	Courtney A Shoff	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006 19:55	James L Mertz	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/10/2006 18:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/10/2006 19:38	James L Mertz	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop	1	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Lancaster Laboratories Sample No. WW 4883056

DLHCV2-LS-1-D Grab Water Sample
Great Lakes - Sweepings

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:18

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

2LS1D SDG#: SWE08-06FD

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method			
00235	Biochemical Oxygen Demand	n.a.	6.2	U	6.2	mg/l	1
00273	Total Organic Carbon	n.a.	4.3		1.0	mg/l	1
01443	Specific Gravity	n.a.	1.0		0.0050		1
04001	Chemical Oxygen Demand	n.a.	420.		12.8	mg/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/06/2006 13:39	Susan A Engle	1
00273	Total Organic Carbon	EPA 415.1	1	10/13/2006 12:41	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	10/10/2006 20:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/10/2006 08:30	Susan A Engle	1

Lancaster Laboratories Sample No. WW 4883058
**DLHCV2-LS-1-BK Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:18

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

LS1BF SDG#: SWE08-08BL

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	0.104 U	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	0.0135 U	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00085 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.00020 U	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.00043 U	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1

This sample was field filtered for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 07:33	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1
01754	Iron	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06028	Cadmium	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/13/2006 20:33	Parker D Lindstrom	1
07066	Silver	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/12/2006 20:20	John P Hook	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 2 of 2

Lancaster Laboratories Sample No. WW 4883058

DLHCV2-LS-1-BK Filtered Grab Water Sample
Great Lakes - Sweepings

Collected: 10/04/2006 21:10 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:18

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

LS1BF	SDG#:	SWE08-08BL					
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006 19:55	James L Mertz	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/10/2006 19:38	James L Mertz	1	

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 12:18 PM

Group Number: 1008728

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06279023502A Biochemical Oxygen Demand			Sample number(s): 4883054, 4883056					
				106	111	85-115	5	8
Batch number: 06279WAH026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	0.01 U 0.01 U 0.012 J 0.02 U 0.01 U 0.02 U 0.02 U 0.02 U 0.02 U	0.01 0.01 0.01 0.02 0.01 0.02 0.02 0.02 0.02	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	92 89 91 87 93 93 89 90 85	95 93 95 90 95 96 93 94 87	70-111 75-115 76-114 67-113 69-123 76-114 76-111 76-112 64-114	3 4 4 3 3 3 3 4 3	30 30 30 30 30 30 30 30 30
Batch number: 062825713003 Mercury	0.000056 U	0.00005 6	Sample number(s): 4883058				80-120	
Batch number: 06283020601B Total Suspended Solids	3.0 U	3.0	mg/l	117				
Batch number: 062831848006 Aluminum Calcium Iron Magnesium Silver Zinc	0.0802 U 0.104 U 0.0522 U 0.0135 U 0.0016 U 0.0081 U	0.0802 0.104 0.0522 0.0135 0.0016 0.0081	mg/l mg/l mg/l mg/l mg/l mg/l	93 96 95 98 98 97		90-112 90-112 90-112 89-110 90-118 90-111		
Batch number: 06283400102B Chemical Oxygen Demand			Sample number(s): 4883054, 4883056	99			94-110	
Batch number: 062835713003 Mercury	0.000056 U	0.00005 6	Sample number(s): 4883054-4883055	115			80-120	
Batch number: 062836050004A Arsenic Cadmium Chromium Copper Lead	0.00067 U 0.000099 0.00076 0.00020 0.000047	0.00067 9 0.00009 0.00026 0.00020 0.00004	mg/l mg/l mg/l mg/l mg/l mg/l	99 101 108 111 104		80-120 80-120 80-120 80-120 80-120		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 12:18 PM

Group Number: 1008728

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Nickel	U	7						
	0.00043	0.00043	mg/l	106		80-120		
Selenium	U							
	0.00050	0.00050	mg/l	98		80-120		
	U							
Batch number: 06284117101B			Sample number(s): 4883054-4883055					
Total Cyanide (water)	0.0050	U	0.0050 mg/l	95		90-110		
Batch number: 06286049511A			Sample number(s): 4883054, 4883056					
Total Organic Carbon	1.0	U	1.0 mg/l	98		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06279023502A			Sample number(s): 4883054, 4883056 UNSPK: P882925			BKG: P882651			
Biochemical Oxygen Demand	122	120	67-144	1	9	80.0	83.3	4	9
Batch number: 062825713003			Sample number(s): 4883058 UNSPK: P882512			BKG: P882512			
Mercury	116	119	80-120	3	20	0.000056	0.000056	104* (1)	20
			U			U			
Batch number: 06283020601B			Sample number(s): 4883054 BKG: 4883054						
Total Suspended Solids						232.	232.	0 (1)	20
Batch number: 06283144301A			Sample number(s): 4883054, 4883056 BKG: 4883056						
Specific Gravity						1.0	1.0	0	2
Batch number: 062831848006			Sample number(s): 4883054-4883055, 4883058 UNSPK: P882512			BKG: P882512			
Aluminum	92	92	75-125	0	20	0.0802 U	0.0802 U	-2 (1)	20
Calcium	94	90	75-125	1	20	15.7	14.7	7	20
Iron	96	95	75-125	1	20	0.0522 U	0.0522 U	-6 (1)	20
Magnesium	95	94	75-125	0	20	4.39	4.12	6	20
Silver	97	97	75-125	0	20	0.0016 U	0.0016 U	93* (1)	20
Zinc	94	95	75-125	1	20	0.0081 U	0.0081 U	61* (1)	20
Batch number: 06283400102B			Sample number(s): 4883054, 4883056 UNSPK: 4883056			BKG: 4883056			
Chemical Oxygen Demand	118*		90-110			420.	409.	3	5
Batch number: 062835713003			Sample number(s): 4883054-4883055 UNSPK: P882510			BKG: P882510			
Mercury	119	118	80-120	1	20	0.000056	0.000056	143* (1)	20
			U			U			
Batch number: 062836050004A			Sample number(s): 4883054-4883055, 4883058 UNSPK: P883569			BKG: P883569			
Arsenic	95	95	75-125	0	20	0.0083	0.0081	3 (1)	20
Cadmium	104	104	75-125	0	20	0.0035	0.0034	3	20
Chromium	89	88	75-125	0	20	0.0374	0.0367	2	20
Copper	89	77	75-125	3	20	0.172	0.172	0	20
Lead	(2)	(2)	75-125	2	20	0.0785	0.0780	1	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 12:18 PM

Group Number: 1008728

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max</u>	<u>RPD Max</u>
Nickel	92	91	75-125	1	20	0.0324	0.0318	2	20	20
Selenium	98	102	75-125	3	20	0.0016 J	0.0015 J	5 (1)	20	20
Batch number: 06284117101B			Sample number(s): 4883054-4883055 UNSPK: P882512 BKG: P882512							
Total Cyanide (water)	83		83-111		0.0050 U	0.0050 U	0 (1)		20	
Batch number: 06286049511A			Sample number(s): 4883054, 4883056 UNSPK: P885109 BKG: P885109							
Total Organic Carbon	97		62-148		14.6	14.5	0		2	

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06279WAH026

Nitrobenzene-d5

2-Fluorobiphenyl

Terphenyl-d14

4883054	91	80	93
Blank	99	97	109
LCS	91	90	97
LCSD	95	94	101
Limits:	57-137	60-115	64-123

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



Acct. # 12098 Group# 1008728 Sample # 4883054-58

2 of 2

COC # 0132131

Please print. Instructions on reverse side correspond with circled numbers

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

Sample Reprint

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008732. Samples arrived at the laboratory on Friday, October 06, 2006. The PO# for this group is 18957F_T0003_TM1.

Client Description
DLHCV2-DS-1 Composite Solid Sample

Lancaster Labs Number
4883068

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4883068
**DLHCV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 22:30 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 11/01/2006 at 08:20

75 Arlington Street

Discard: 12/02/2006

Ninth Floor

Boston MA 02116

C2DS1 SDG#: SWE06-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0394 J	0.0135	mg/kg	1
01643	Aluminum	7429-90-5	3,470.	4.43	mg/kg	1
01650	Calcium	7440-70-2	9,060.	16.8	mg/kg	1
01654	Iron	7439-89-6	5,460.	6.22	mg/kg	1
01657	Magnesium	7439-95-4	1,800.	2.51	mg/kg	1
06125	Arsenic	7440-38-2	1.27 J	0.225	mg/kg	10
06128	Cadmium	7440-43-9	0.425	0.0502	mg/kg	10
06131	Chromium	7440-47-3	7.94	0.410	mg/kg	10
06133	Copper	7440-50-8	19.0	0.423	mg/kg	10
06135	Lead	7439-92-1	5.48	0.198	mg/kg	10
06139	Nickel	7440-02-0	4.72	0.661	mg/kg	10
06141	Selenium	7782-49-2	0.489 U	0.489	mg/kg	10
06966	Silver	7440-22-4	0.225 U	0.225	mg/kg	1
06972	Zinc	7440-66-6	47.1	0.865	mg/kg	1
00111	Moisture	n.a.	24.3	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.27 J	0.24	mg/kg	1
06569	Bulk Density	n.a.	0.71	0.080	g/cc	1

02858 Selected SVOA's in soil by SIM

02863	Naphthalene	91-20-3	360.	13.	ug/kg	10
02870	Fluorene	86-73-7	71.	9.	ug/kg	10
02871	Phenanthrene	85-01-8	220.	9.	ug/kg	10
02872	Anthracene	120-12-7	88.	4.	ug/kg	10
02874	Fluoranthene	206-44-0	480.	9.	ug/kg	10
02875	Pyrene	129-00-0	720.	9.	ug/kg	10
02876	Benzo(a)anthracene	56-55-3	110.	9.	ug/kg	10
02877	Chrysene	218-01-9	75.	4.	ug/kg	10
02880	Benzo(a)pyrene	50-32-8	35.	9.	ug/kg	10
02882	Dibenz(a,h)anthracene	53-70-3	13. U	13.	ug/kg	10

The GC/MS semivolatile internal standard peak areas were outside of QC limits. The matrix spike and matrix spike duplicate samples were analyzed and internal standard peak areas were again outside of QC limits, indicating a matrix effect.

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
-------	-------	------	------	------	--------------	---

Lancaster Laboratories Sample No. SW 4883068

**DLHCV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 22:30 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 11/01/2006 at 08:20

75 Arlington Street

Discard: 12/02/2006

Ninth Floor

Boston MA 02116

C2DS1 SDG#: SWE06-03

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07136	37.5 mm	n.a.	100.	0.50	%	Passing	1
07137	19 mm	n.a.	93.2	0.50	%	Passing	1
07138	4.75 mm	n.a.	56.3	0.50	%	Passing	1
07139	3.35 mm	n.a.	47.7	0.50	%	Passing	1
07140	2.36 mm	n.a.	40.4	0.50	%	Passing	1
07141	1.18 mm	n.a.	39.7	0.50	%	Passing	1
07142	0.6 mm	n.a.	37.5	0.50	%	Passing	1
07143	0.3 mm	n.a.	32.9	0.50	%	Passing	1
07144	0.15 mm	n.a.	28.2	0.50	%	Passing	1
07145	0.075 mm	n.a.	24.5	0.50	%	Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	%	Passing	1
07147	0.05 mm	n.a.	0.50 U	0.50	%	Passing	1
07148	0.02 mm	n.a.	0.50 U	0.50	%	Passing	1
07149	0.005 mm	n.a.	0.50 U	0.50	%	Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	%	Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	%	Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/09/2006 11:00	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1

Lancaster Laboratories Sample No. SW 4883068
**DLHCV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 22:30 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 11/01/2006 at 08:20

75 Arlington Street

Discard: 12/02/2006

Ninth Floor

Boston MA 02116

C2DS1 SDG#: SWE06-03

01654	Iron	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1
01657	Magnesium	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10
06131	Chromium	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 15:01	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/09/2006 18:38	Jayme E Curet	1
00111	Moisture	EPA 160.3 modified	1	10/09/2006 14:21	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:33	Nicole M Kepley	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/16/2006 01:56	William T Parker	10
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 13:00	Luz M Groff	1
00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 21:00	Sally L Appleyard	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/08/2006 21:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4883069
**DLHCV2-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 22:30 by RM Account Number: 12098

 Submitted: 10/06/2006 09:40 Parsons Brinkerhoff
 Reported: 10/28/2006 at 22:45 75 Arlington Street
 Discard: 11/28/2006 Ninth Floor
 Boston MA 02116

2DS1D SDG#: SWE06-04FD

CAT No.	Analysis Name	CAS Number	As Received		Units	Dilution Factor
			Result	Method Detection Limit		
06569	Bulk Density	n.a.	0.59	0.080	g/cc	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	98.2	0.50	% Passing	1
07138	4.75 mm	n.a.	83.0	0.50	% Passing	1
07139	3.35 mm	n.a.	78.2	0.50	% Passing	1
07140	2.36 mm	n.a.	73.4	0.50	% Passing	1
07141	1.18 mm	n.a.	71.5	0.50	% Passing	1
07142	0.6 mm	n.a.	62.2	0.50	% Passing	1
07143	0.3 mm	n.a.	43.6	0.50	% Passing	1
07144	0.15 mm	n.a.	26.5	0.50	% Passing	1
07145	0.075 mm	n.a.	16.3	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1
07147	0.05 mm	n.a.	0.50 U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50 U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50 U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 2 of 2

Lancaster Laboratories Sample No. SW 4883069

DLHCV2-DS-1-D Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/04/2006 22:30 by RM Account Number: 12098

Submitted: 10/06/2006 09:40 Parsons Brinkerhoff
Reported: 10/28/2006 at 22:45 75 Arlington Street
Discard: 11/28/2006 Ninth Floor
Boston MA 02116

2DS1D SDG#: SWE06-04FD

Laboratory Chronicle

CAT	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 13:00	Luz M Groff	1

Lancaster Laboratories Sample No. SW 4883070

**DLHCV2-SS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:20 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/28/2006 at 22:45

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

C2SS1 SDG#: SWE06-05*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0167 U	0.0167	mg/kg	1
01643	Aluminum	7429-90-5	3,340.	5.38	mg/kg	1
01650	Calcium	7440-70-2	7,800.	20.4	mg/kg	1
01654	Iron	7439-89-6	2,880.	7.56	mg/kg	1
01657	Magnesium	7439-95-4	1,580.	3.05	mg/kg	1
06125	Arsenic	7440-38-2	1.70 J	0.273	mg/kg	10
06128	Cadmium	7440-43-9	0.0610 U	0.0610	mg/kg	10
06131	Chromium	7440-47-3	9.90	0.498	mg/kg	10
06133	Copper	7440-50-8	14.8	0.514	mg/kg	10
06135	Lead	7439-92-1	2.67	0.241	mg/kg	10
06139	Nickel	7440-02-0	4.56	0.803	mg/kg	10
06141	Selenium	7782-49-2	0.594 U	0.594	mg/kg	10
06966	Silver	7440-22-4	0.273 U	0.273	mg/kg	1
06972	Zinc	7440-66-6	15.8	1.05	mg/kg	1
00111	Moisture	n.a.	37.7	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.28 U	0.28	mg/kg	1
06569	Bulk Density	n.a.	0.68	0.080	g/cc	1

02858 Selected SVOA's in soil by SIM

02863	Naphthalene	91-20-3	94.	8.	ug/kg	5
02870	Fluorene	86-73-7	22.	5.	ug/kg	5
02871	Phenanthrene	85-01-8	90.	5.	ug/kg	5
02872	Anthracene	120-12-7	27.	3.	ug/kg	5
02874	Fluoranthene	206-44-0	120.	5.	ug/kg	5
02875	Pyrene	129-00-0	150.	5.	ug/kg	5
02876	Benzo(a)anthracene	56-55-3	36.	5.	ug/kg	5
02877	Chrysene	218-01-9	29.	3.	ug/kg	5
02880	Benzo(a)pyrene	50-32-8	9.4 J	5.	ug/kg	5
02882	Dibenz(a,h)anthracene	53-70-3	8. U	8.	ug/kg	5

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	98.9	0.50	% Passing	1
07137	19 mm	n.a.	84.8	0.50	% Passing	1
07138	4.75 mm	n.a.	27.9	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4883070

**DLHCV2-SS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:20 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/28/2006 at 22:45

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

C2SS1 SDG#: SWE06-05*

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07139	3.35 mm	n.a.	20.7		0.50	% Passing	1
07140	2.36 mm	n.a.	15.5		0.50	% Passing	1
07141	1.18 mm	n.a.	0.50	U	0.50	% Passing	1
07142	0.6 mm	n.a.	0.50	U	0.50	% Passing	1
07143	0.3 mm	n.a.	0.50	U	0.50	% Passing	1
07144	0.15 mm	n.a.	0.50	U	0.50	% Passing	1
07145	0.075 mm	n.a.	0.50	U	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50	U	0.50	% Passing	1
07147	0.05 mm	n.a.	0.50	U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 2.36 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/09/2006 11:02	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
01650	Calcium	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
01654	Iron	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
01657	Magnesium	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
06125	Arsenic	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06128	Cadmium	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10

Lancaster Laboratories Sample No. SW 4883070
**DLHCV2-SS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/04/2006 21:20 by RM

Account Number: 12098

Submitted: 10/06/2006 09:40

Parsons Brinkerhoff

Reported: 10/28/2006 at 22:45

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

C2SS1 SDG#: SWE06-05*

06131	Chromium	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06133	Copper	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06135	Lead	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06139	Nickel	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06141	Selenium	SW-846 6020	1	10/09/2006 15:15	Amanda S Bitner	10
06966	Silver	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
06972	Zinc	SW-846 6010B	1	10/09/2006 18:42	Jayme E Curet	1
00111	Moisture	EPA 160.3 modified	1	10/09/2006 14:21	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:34	Nicole M Kepley	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/11/2006 12:51	Joseph M Gambler	5
07103	Grain Size to 1 um	ASTM D422	1	10/07/2006 13:00	Luz M Groff	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/10/2006 03:15	David V Hershey Jr	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/08/2006 21:15	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	2	10/10/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/08/2006 19:20	Annamaria Stipkovits	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 10:45 PM

Group Number: 1008732

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 062815708002								
Aluminum	3.35 U	3.35	mg/kg	125		91-151		
Calcium	12.7 U	12.7	mg/kg	107		89-121		
Iron	4.71 U	4.71	mg/kg	119		68-158		
Magnesium	1.90 U	1.90	mg/kg	109		90-120		
Silver	0.170 U	0.170	mg/kg	104		90-126		
Zinc	0.655 U	0.655	mg/kg	95		85-110		
Batch number: 062815711001								
Mercury	0.0105 U	0.0105	mg/kg	93		66-133		
Batch number: 062816150001A								
Arsenic	0.0170 U	0.0170	mg/kg	110		77-123		
Cadmium	0.0038 U	0.0038	mg/kg	109		79-121		
Chromium	0.209	0.0310	mg/kg	106		78-122		
Copper	0.0546 J	0.0320	mg/kg	112		81-119		
Lead	0.0614 J	0.0150	mg/kg	109		79-121		
Nickel	0.0500 U	0.0500	mg/kg	110		81-119		
Selenium	0.0370 U	0.0370	mg/kg	106		74-126		
Batch number: 06282820004B								
Moisture				Sample number(s): 4883068, 4883070	100	99-101		
Batch number: 06282SLC026								
Naphthalene	1. U	1.	ug/kg	92	91	71-105	1	30
Fluorene	0.7 U	0.7	ug/kg	91	91	70-115	0	30
Phenanthrene	0.7 U	0.7	ug/kg	95	93	64-118	1	30
Anthracene	0.3 U	0.3	ug/kg	87	84	60-111	4	30
Fluoranthene	0.7 U	0.7	ug/kg	88	87	57-128	2	30
Pyrene	0.7 U	0.7	ug/kg	91	91	71-117	0	30
Benzo(a)anthracene	0.7 U	0.7	ug/kg	89	88	71-114	1	30
Chrysene	0.3 U	0.3	ug/kg	93	91	69-114	1	30
Benzo(a)pyrene	0.7 U	0.7	ug/kg	96	86	59-118	11	30
Dibenz(a,h)anthracene	1. U	1.	ug/kg	107	96	56-130	12	30
Batch number: 06283102201A								
Total Cyanide (solid)	0.18 U	0.18	mg/kg	96		90-110		
Batch number: 06285SLC026								
Naphthalene	1. U	1.	ug/kg	87		71-105		
Fluorene	0.7 U	0.7	ug/kg	88		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	93		64-118		
Anthracene	0.3 U	0.3	ug/kg	82		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	84		57-128		
Pyrene	0.7 U	0.7	ug/kg	90		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	82		71-114		
Chrysene	0.3 U	0.3	ug/kg	83		69-114		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 10:45 PM

Group Number: 1008732

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Benzo(a)pyrene	0.7 U	0.7	ug/kg	82		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	74		56-130		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06280710301A			Sample number(s): 4883070 BKG: P881932					
75 mm					100.	100.	0	20
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					99.6	99.5	0	20
3.35 mm					99.5	99.2	0	20
2.36 mm					99.2	98.3	1	20
1.18 mm					91.9	91.9	0	20
0.6 mm					72.8	71.5	2	20
0.3 mm					57.7	56.7	2	20
0.15 mm					49.2	48.6	1	20
0.075 mm					42.3	41.8	1	20
0.064 mm					37.0	35.0	6	20
0.05 mm					22.0	20.0	10	20
0.02 mm					6.0	4.0	40* (1)	20
0.005 mm					3.0	3.5	15 (1)	20
0.002 mm					0.50 J	0.50 J	0 (1)	20
0.001 mm					0.50 U	0.50 U	0 (1)	20
Batch number: 062815708002			Sample number(s): 4883068, 4883070 UNSPK: P882485 BKG: P882485					
Aluminum	(2)	(2)	75-125	1	20	2,080.	2,060.	1
Calcium	(2)	(2)	75-125	0	20	4,780.	4,720.	1
Iron	(2)	(2)	75-125	17	20	2,730.	2,580.	6
Magnesium	(2)	(2)	75-125	0	20	1,730.	1,690.	2
Silver	94	96	75-125	1	20	0.170 U	0.170 U	-56 (1)
Zinc	84	86	75-125	1	20	12.6	9.73	25* (1)
Batch number: 062815711001			Sample number(s): 4883068, 4883070 UNSPK: P882485 BKG: P882485					
Mercury	98	109	80-120	11	20	0.0105 U	0.0153 J	200* (1)
Batch number: 062816150001A			Sample number(s): 4883068, 4883070 UNSPK: P882485 BKG: P882485					
Arsenic	147*	91	70-130	24*	20	1.14 J	1.26 J	9 (1)
Cadmium	91	83	75-125	5	20	0.336	0.314	7 (1)
Chromium	99	94	75-125	2	20	6.14	6.15	0 (1)
Copper	153*	95	75-125	19	20	8.98	8.51	5
Lead	91	95	75-125	2	20	1.49	1.41	6 (1)
Nickel	104	110	75-125	4	20	2.18	2.20	1 (1)
Selenium	180*	141*	75-130	24*	20	0.370 U	0.471 J	200* (1)
Batch number: 06282820004B			Sample number(s): 4883068, 4883070 BKG: P884171					
Moisture						31.1	31.3	1
Batch number: 06283102201A			Sample number(s): 4883068, 4883070 UNSPK: P882485 BKG: P882485					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 10:45 PM

Group Number: 1008732

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG Conc 0.18</u>	<u>DUP Conc 0.18</u>	<u>DUP RPD 63*</u>	<u>Dup RPD Max 17 (1)</u>
Total Cyanide (solid)	90		59-124		U	U	(1)	17
Batch number: 06284656901B			Sample number(s): 4883068, 4883070	BKG: P884379				
Bulk Density				0.83		0.83	1 (1)	20
Batch number: 06285SLC026			Sample number(s): 4883068 UNSPK: 4883068					
Naphthalene	(2)	(2)	54-121	8	30			
Fluorene	43*	52*	62-119	4	30			
Phenanthrene	(2)	(2)	31-160	5	30			
Anthracene	77	79	55-118	1	30			
Fluoranthene	(2)	(2)	49-125	1	30			
Pyrene	(2)	(2)	58-137	12	30			
Benzo(a)anthracene	82	93	69-118	3	30			
Chrysene	74	51*	70-107	10	30			
Benzo(a)pyrene	10*	-3*	69-106	15	30			
Dibenz(a,h)anthracene	0*	36*	40-126	200*	30			
Batch number: 06286656901A			Sample number(s): 4883069 BKG: P886259					
Bulk Density				0.78		0.77	1 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06282SLC026

		Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4883070	97		81	78
Blank	106		93	96
LCS	94		88	84
LCSD	94		91	87
Limits:	42-142		48-122	65-125

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06285SLC026

		Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4883068	98		67	100
Blank	105		85	86
LCS	98		86	81
MS	85		67	117
MSD	97		57	94
Limits:	42-142		48-122	65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 4 of 4

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 10/28/06 at 10:45 PM

Group Number: 1008732

- *- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # 12098 Group# 1068732 Sample # 4883068-70

10/2

COC # 0132130

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>CH2M Hill</u> Acct. #: _____		2 Sample Identification		3 Matrix <input type="checkbox"/> Grab <input checked="" type="checkbox"/> Composite <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Other		4 <input type="checkbox"/> Possible Check Samples <input type="checkbox"/> NPDQS		5 Analyses Requested		6 Preservation Codes H=HCl T=Thiosulfate N=NHO ₃ B=NaOH S=S ₂ O ₈ ²⁻ O=Other		7 For Lab Use Only FSC: _____ SCR#: _____					
Project Name/ #: <u>GREAT LAKES</u> PWSID #: _____		Project Manager: <u>ERIN MOSLEY</u> P.O.#: _____		Sampler: <u>Ragan McMorris</u> Quote #: _____		Name of state where samples were collected: <u>MN</u>								Temperature of samples (if applicable) _____			
Date Collected: <u>10-4-06</u> Time Collected: <u>2230</u>		Date Collected: <u>10-4-06</u> Time Collected: <u>2230</u>		Date Collected: <u>10-4-06</u> Time Collected: <u>2230</u>		Date Collected: <u>10-4-06</u> Time Collected: <u>2120</u>		Date Collected: <u>10-4-06</u> Time Collected: <u>2120</u>		Date Collected: <u>10-4-06</u> Time Collected: <u>2100</u>		Date Collected: <u>10-4-06</u> Time Collected: <u>2120</u>		Date Collected: <u>10-4-06</u> Time Collected: <u>2120</u>			
DLHCV2-DS-1		DLHCV2-DS-1-D		DLHCV2-DS-1-BCU		DLHCV2-SS-1		DLHCV2-SS-1-D		DLHCV2-SS-2		DLHCV2-SS-2-BCU		DLHCV2-SS-1-BCU		Remarks	
X X		X X		X X		X X		X X		X X		X X		HOLD			
3 X		1 X		1		3 X		X		X		TDC		per RKL 10/13/02			
X		X		X		X		X		X		DOC		HOLD 10/6/06			
BOD/CO ₂		TDS		TDS		TDS		TDS		TDS		TDS		HOLD			
7 Turnaround Time Requested (TAT) (please circle): <input checked="" type="radio"/> Normal <input type="radio"/> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)		Relinquished by: <u>J. Coffey</u>		Date <u>10-05-06</u> Time <u>1100</u>		Received by: _____		Date _____ Time _____									
Date results are needed: _____		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____									
Rush results requested by (please circle): Phone <input type="radio"/> Fax <input type="radio"/> E-mail <input type="radio"/>		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____									
Phone #: _____ Fax #: _____		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____									
E-mail address: _____		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____									
8 Data Package Options (please circle if required)		SDG Complete?		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____							
Type I (validation/NJ Reg)		TX TRRP-13		Yes <input type="radio"/> No <input checked="" type="radio"/>		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____					
Type II (Tier II)		MA MCP CT RCP		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____							
Type III (Reduced NJ)		Site-specific QC (MS/MSD/Dup)? Yes <input checked="" type="radio"/> No <input type="radio"/>		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____							
Type IV (CLP SOW)		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____									
Type VI (Raw Data Only)		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____									
Internal COC Required? Yes <input checked="" type="radio"/> No <input type="radio"/>		Relinquished by: _____		Date _____ Time _____		Received by: _____		Date _____ Time _____									

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008768. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
DLHCV1-LS-1-D Filtered Composite Water Sample	4883449

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4883449
**DLHCV1-LS-1-D Filtered Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:19

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

LS1DF SDG#: SWE08-09FD*

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	16.5	0.104	mg/l	1	
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	4.69	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0011 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0026	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00011 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0019 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

This sample was field filtered for dissolved metals.

This sample was filtered in the lab for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/10/2006 07:34	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/12/2006 20:05	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/12/2006 20:05	John P Hook	1
01754	Iron	SW-846 6010B	1	10/12/2006 20:05	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/12/2006 20:05	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06028	Cadmium	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/13/2006 20:12	Parker D Lindstrom	1

Lancaster Laboratories Sample No. WW 4883449
**DLHCV1-LS-1-D Filtered Composite Water Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 08:20 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 10/17/2006 at 12:19

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

LS1DF	SDG#:	SWE08-09FD*						
07066	Silver	SW-846 6010B	1	10/12/2006 20:05	John P Hook			1
07072	Zinc	SW-846 6010B	1	10/12/2006 20:05	John P Hook			1
08255	Total Cyanide (water)	SW-846 9012A	1	10/11/2006 21:56	Courtney A Shoff			1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/10/2006 19:55	James L Mertz			1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/09/2006 17:00	Nelli S Markaryan			1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/10/2006 19:38	James L Mertz			1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/11/2006 11:00	Nancy J Shoop			1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 12:19 PM

Group Number: 1008768

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 062825713003			Sample number(s): 4883449					
Mercury	0.000056	0.00005	mg/l	117		80-120		
	U	6						
Batch number: 062831848006			Sample number(s): 4883449					
Aluminum	0.0802	U	0.0802	mg/l	93	90-112		
Calcium	0.104	U	0.104	mg/l	96	90-112		
Iron	0.0522	U	0.0522	mg/l	95	90-112		
Magnesium	0.0135	U	0.0135	mg/l	98	89-110		
Silver	0.0016	U	0.0016	mg/l	98	90-118		
Zinc	0.0081	U	0.0081	mg/l	97	90-111		
Batch number: 062836050004A			Sample number(s): 4883449					
Arsenic	0.00067	0.00067	mg/l	99		80-120		
	U							
Cadmium	0.000099	0.00009	mg/l	101		80-120		
	U	9						
Chromium	0.00076	0.00026	mg/l	108		80-120		
	J							
Copper	0.00020	0.00020	mg/l	111		80-120		
	U							
Lead	0.000047	0.00004	mg/l	104		80-120		
	U	7						
Nickel	0.00043	0.00043	mg/l	106		80-120		
	U							
Selenium	0.00050	0.00050	mg/l	98		80-120		
	U							
Batch number: 06284117101B			Sample number(s): 4883449					
Total Cyanide (water)	0.0050	U	0.0050	mg/l	95	90-110		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 062825713003			Sample number(s): 4883449 UNSPK: P882512 BKG: P882512						
Mercury	116	119	80-120	3	20	0.000056	0.000056	104* (1)	20
					U		U		
Batch number: 062831848006			Sample number(s): 4883449 UNSPK: P882512 BKG: P882512						
Aluminum	92	92	75-125	0	20	0.0802	U	0.0802	20
Calcium	94	90	75-125	1	20	15.7	14.7	-2 (1)	7

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 12:19 PM

Group Number: 1008768

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max</u>	<u>RPD Max</u>
Iron	96	95	75-125	1	20	0.0522 U	0.0522 U	-6 (1)	20	20
Magnesium	95	94	75-125	0	20	4.39	4.12	6	20	20
Silver	97	97	75-125	0	20	0.0016 U	0.0016 U	93* (1)	20	20
Zinc	94	95	75-125	1	20	0.0081 U	0.0081 U	61* (1)	20	20
Batch number: 062836050004A			Sample number(s): 4883449 UNSPK: P883569 BKG: P883569							
Arsenic	95	95	75-125	0	20	0.0083	0.0081	3 (1)	20	20
Cadmium	104	104	75-125	0	20	0.0035	0.0034	3	20	20
Chromium	89	88	75-125	0	20	0.0374	0.0367	2	20	20
Copper	89	77	75-125	3	20	0.172	0.172	0	20	20
Lead	(2)	(2)	75-125	2	20	0.0785	0.0780	1	20	20
Nickel	92	91	75-125	1	20	0.0324	0.0318	2	20	20
Selenium	98	102	75-125	3	20	0.0016 J	0.0015 J	5 (1)	20	20
Batch number: 06284117101B			Sample number(s): 4883449 UNSPK: P882512 BKG: P882512							
Total Cyanide (water)			83-111			0.0050 U	0.0050 U	0 (1)	20	

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
 Acct. # 12098 Group# 48834492-95 Sample # 1008584
1008768 4883449

A/H 10/6/06

COC # 0132126

1 of 2

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: CH2M HILL Acct. #: _____
 Project Name/#: GREAT LAKES PWSID #: _____
 Project Manager: E. Mosley P.O.#: _____
 Sampler: J. Coffey (571-274-6105) Quote #: _____
 Name of state where samples were collected: MN

2

3	4	5 Preservation Codes						6	
		BOTTLE DENSITY, GROSS NET SIZE	SPECIFIC GRAVITY NET, MORSE, CN Hg, % MOIST (WATER) DLS, MORSE, CN, Hg	TOC	SYDNC, PATT	DOL	BOD/COD		TSS
<u>DLHCV1-DS-1</u>	<u>10-3-06</u>	<u>1020</u>	<u>XX</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>XX</u>	<u>XX</u>	<u>MATRIX SPIKE FOR SVOCs, METALS, CN, HG</u>
<u>DLHCV1-DS-1-D</u>	<u>10-3-06</u>	<u>1020</u>	<u>XX</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>XX</u>	<u>XX</u>	<u>HOLD</u>
<u>DLHCV1-DS-1-BU</u>	<u>10-3-06</u>	<u>1020</u>	<u>XX</u>	<u>2</u>					<u>MATRIX SPIKE FOR SVOCs, METALS, CN, HG</u>
<u>DLHCV1-SS-1</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>XX</u>	<u>XX</u>	<u>HOLD</u>
<u>DLHCV1-SS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>XX</u>	<u>XX</u>	<u>MATRIX SPIKE FOR SVOCs, METALS, CN, HG</u>
<u>DLHCV1-SS-1-M 2</u>	<u>10-3-06</u>	<u>0900</u>	<u>XX</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>XX</u>	<u>XX</u>	<u>HOLD</u>
<u>DLHCV1-SS-2-BU</u>			<u>XX</u>	<u>3</u>					<u>MATRIX SPIKE FOR SVOCs, METALS, CN, HG (TOM & PIS)</u>
<u>DLACV1-SS-1-LS-1</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>5</u>	<u>X</u>	<u>X</u>	<u>XX</u>	<u>XX</u>	<u>MATRIX SPIKE FOR SVOCs, METALS, CN, HG (TOM & PIS)</u>
<u>DLHCV1-LS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>XX</u>	<u>XX</u>	<u>HOLD</u>
<u>DLHCV1-LS-1-BU</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>4</u>					

3

<u>DLHCV1-DS-1</u>	<u>10-3-06</u>	<u>1020</u>	<u>XX</u>	<u>3</u>
<u>DLHCV1-DS-1-D</u>	<u>10-3-06</u>	<u>1020</u>	<u>XX</u>	<u>3</u>
<u>DLHCV1-DS-1-BU</u>	<u>10-3-06</u>	<u>1020</u>	<u>XX</u>	<u>2</u>
<u>DLHCV1-SS-1</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>3</u>
<u>DLHCV1-SS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>3</u>
<u>DLHCV1-SS-1-M 2</u>	<u>10-3-06</u>	<u>0900</u>	<u>XX</u>	<u>3</u>
<u>DLHCV1-SS-2-BU</u>			<u>XX</u>	<u>3</u>
<u>DLACV1-SS-1-LS-1</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>5</u>
<u>DLHCV1-LS-1-D</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>4</u>
<u>DLHCV1-LS-1-BU</u>	<u>10-3-06</u>	<u>0820</u>	<u>XX</u>	<u>4</u>

7 Turnaround Time Requested (TAT) (please circle): Normal Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed:

Rush results requested by (please circle): Phone Fax E-mail

Phone #: Fax #:

E-mail address:

8 Data Package Options (please circle if required)

Type I (validation/NJ Reg)	TX TRRP-13	SDG Complete?
Type II (Tier II)	MA MCP	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type III (Reduced NJ)	CT RCP	
Type IV (CLP SOW)		
Type VI (Raw Data Only)		

Site-specific QC (MS/MSD/Dup)? Yes No
 (If yes, indicate QC sample and submit triplicate volume.)

Internal COC Required? Yes / No

Relinquished by: <u>Ronni McMorris, Lab Mgr</u>	Date <u>10-3-06</u>	Time <u>1700</u>	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1008920. Samples arrived at the laboratory on Saturday, October 07, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLECV3-DS-1 Unspiked Composite Solid Sample	4884379
CLECV3-DS-1 Matrix Spike Composite Solid Sample	4884380
CLECV3-DS-1-D Composite Solid Sample	4884381

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4884379
**CLECV3-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01BKG

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.146	0.0107	mg/kg	1
01643	Aluminum	7429-90-5	2,730.	3.45	mg/kg	1
01650	Calcium	7440-70-2	4,740.	13.1	mg/kg	1
01654	Iron	7439-89-6	16,900.	4.86	mg/kg	1
01657	Magnesium	7439-95-4	1,170.	1.96	mg/kg	1
06125	Arsenic	7440-38-2	11.3	0.175	mg/kg	10
06128	Cadmium	7440-43-9	0.456	0.0392	mg/kg	10
06131	Chromium	7440-47-3	9.84	0.320	mg/kg	10
06133	Copper	7440-50-8	13.9	0.361	mg/kg	10
06135	Lead	7439-92-1	6.54	0.155	mg/kg	10
06139	Nickel	7440-02-0	21.7	0.515	mg/kg	10
06141	Selenium	7782-49-2	3.20	0.381	mg/kg	10
06966	Silver	7440-22-4	0.175 U	0.175	mg/kg	1
06972	Zinc	7440-66-6	41.2	0.675	mg/kg	1
00111	Moisture	n.a.	3.0	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	525,000.	12,400.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	0.83	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	400. E	1.	ug/kg	1
02870	Fluorene	86-73-7	62.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	580. E	0.7	ug/kg	1
02872	Anthracene	120-12-7	23.	0.3	ug/kg	1
02874	Fluoranthene	206-44-0	83.	0.7	ug/kg	1
02875	Pyrene	129-00-0	190.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	67.	0.7	ug/kg	1
02877	Chrysene	218-01-9	290.	0.3	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	32.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	19.	1.	ug/kg	1
Trial ID: DL						
02863	Naphthalene	91-20-3	270.	10.	ug/kg	10
02870	Fluorene	86-73-7	52.	7.	ug/kg	10
02871	Phenanthrene	85-01-8	420.	7.	ug/kg	10
02872	Anthracene	120-12-7	13. J	3.	ug/kg	10
02874	Fluoranthene	206-44-0	59.	7.	ug/kg	10
02875	Pyrene	129-00-0	310.	7.	ug/kg	10
02876	Benzo(a)anthracene	56-55-3	33.	7.	ug/kg	10

Lancaster Laboratories Sample No. SW 4884379
**CLECV3-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00

by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01BKG

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result				
02877	Chrysene	218-01-9	170.		3.	ug/kg	10
02880	Benzo(a)pyrene	50-32-8	20.		7.	ug/kg	10
02882	Dibenz(a,h)anthracene	53-70-3	10.	U	10.	ug/kg	10
07103	Grain Size to 1 um						
07135	75 mm	n.a.	100.		0.50	% Passing	1
07136	37.5 mm	n.a.	100.		0.50	% Passing	1
07137	19 mm	n.a.	100.		0.50	% Passing	1
07138	4.75 mm	n.a.	90.8		0.50	% Passing	1
07139	3.35 mm	n.a.	82.0		0.50	% Passing	1
07140	2.36 mm	n.a.	73.3		0.50	% Passing	1
07141	1.18 mm	n.a.	68.0		0.50	% Passing	1
07142	0.6 mm	n.a.	54.2		0.50	% Passing	1
07143	0.3 mm	n.a.	36.2		0.50	% Passing	1
07144	0.15 mm	n.a.	24.8		0.50	% Passing	1
07145	0.075 mm	n.a.	16.7		0.50	% Passing	1
07146	0.064 mm	n.a.	0.50	U	0.50	% Passing	1
07147	0.05 mm	n.a.	0.50	U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. SW 4884379
**CLECV3-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01BKG

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00159	Mercury	SW-846 7471A	1	10/16/2006 11:29	Damary Valentin	1
	01643	Aluminum	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	01650	Calcium	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	01654	Iron	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	01657	Magnesium	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	06125	Arsenic	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06128	Cadmium	SW-846 6020	2	10/17/2006 12:24	Jayme E Curet	10
	06131	Chromium	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06133	Copper	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06135	Lead	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06139	Nickel	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06141	Selenium	SW-846 6020	1	10/17/2006 12:24	Jayme E Curet	10
	06966	Silver	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	06972	Zinc	SW-846 6010B	1	10/16/2006 11:19	Deborah A Krady	1
	00111	Moisture	EPA 160.3 modified	1	10/10/2006 12:00	Scott W Freisher	1
	02079	TOC Solids/Sludges	SM20 5310 B modified	1	10/17/2006 12:54	James S Mathiot	1
	05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:35	Nicole M Kepley	1
	06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1
	02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/12/2006 22:59	William T Parker	1
	02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	2	10/13/2006 16:47	Joseph M Gambler	10
	07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 13:00	Luz M Groff	1
	00381	BNA Soil Extraction	SW-846 3550B	2	10/12/2006 10:30	Amanda W Herr	1
	05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:20	Annamaria Stipkovits	1
	05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1
	05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1
	06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/16/2006 19:50	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4884380
**CLECV3-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.318	0.0108	mg/kg	1
01643	Aluminum	7429-90-5	5,520.	3.45	mg/kg	1
01650	Calcium	7440-70-2	6,910.	13.1	mg/kg	1
01654	Iron	7439-89-6	12,700.	4.86	mg/kg	1
01657	Magnesium	7439-95-4	2,750.	1.96	mg/kg	1
06125	Arsenic	7440-38-2	10.8	0.175	mg/kg	10
06128	Cadmium	7440-43-9	0.862	0.0392	mg/kg	10
06131	Chromium	7440-47-3	16.0	0.320	mg/kg	10
06133	Copper	7440-50-8	22.2	0.361	mg/kg	10
06135	Lead	7439-92-1	8.38	0.155	mg/kg	10
06139	Nickel	7440-02-0	28.0	0.515	mg/kg	10
06141	Selenium	7782-49-2	4.12	0.381	mg/kg	10
06966	Silver	7440-22-4	5.01	0.175	mg/kg	1
06972	Zinc	7440-66-6	85.2	0.675	mg/kg	1
00118	Moisture	n.a.	3.0	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	4.4	0.19	mg/kg	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	260.	1.	ug/kg	1
02870	Fluorene	86-73-7	64.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	380. E	0.7	ug/kg	1
02872	Anthracene	120-12-7	55.	0.3	ug/kg	1
02874	Fluoranthene	206-44-0	80.	0.7	ug/kg	1
02875	Pyrene	129-00-0	160.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	68.	0.7	ug/kg	1
02877	Chrysene	218-01-9	200.	0.3	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	46.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	39.	1.	ug/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471A	1	10/16/2006 11:34	Damary Valentin	1

Lancaster Laboratories Sample No. SW 4884380
**CLECV3-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01MS

01643	Aluminum	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1
01650	Calcium	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1
01654	Iron	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1
01657	Magnesium	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1
06125	Arsenic	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10
06128	Cadmium	SW-846 6020	2	10/17/2006 12:40	Jayme E Curet	10
06131	Chromium	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10
06133	Copper	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10
06135	Lead	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10
06141	Selenium	SW-846 6020	1	10/17/2006 12:40	Jayme E Curet	10
06966	Silver	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1
06972	Zinc	SW-846 6010B	1	10/16/2006 11:34	Deborah A Krady	1
00118	Moisture	EPA 160.3 modified	1	10/10/2006 12:00	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:39	Nicole M Kepley	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/12/2006 23:39	William T Parker	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/10/2006 03:15	David V Hershey Jr	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:20	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/16/2006 19:50	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4884381
**CLECV3-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00

by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3FD SDG#: SWE09-02FD*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.146	0.0107	mg/kg	1
01643	Aluminum	7429-90-5	2,550.	3.33	mg/kg	1
01650	Calcium	7440-70-2	6,120.	12.6	mg/kg	1
01654	Iron	7439-89-6	14,200.	4.68	mg/kg	1
01657	Magnesium	7439-95-4	1,570.	1.89	mg/kg	1
06125	Arsenic	7440-38-2	12.4	0.176	mg/kg	10
06128	Cadmium	7440-43-9	0.376	0.0393	mg/kg	10
06131	Chromium	7440-47-3	10.0	0.320	mg/kg	10
06133	Copper	7440-50-8	15.6	0.362	mg/kg	10
06135	Lead	7439-92-1	8.96	0.155	mg/kg	10
06139	Nickel	7440-02-0	23.2	0.517	mg/kg	10
06141	Selenium	7782-49-2	3.46	0.382	mg/kg	10
06966	Silver	7440-22-4	0.169 U	0.169	mg/kg	1
06972	Zinc	7440-66-6	295.	0.651	mg/kg	1
00111	Moisture	n.a.	3.2	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	462,000.	14,800.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.19 U	0.19	mg/kg	1
06569	Bulk Density	n.a.	0.79	0.080	g/cc	1
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	430.	10.	ug/kg	10
02870	Fluorene	86-73-7	54.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	630.	7.	ug/kg	10
02872	Anthracene	120-12-7	22.	0.3	ug/kg	1
02874	Fluoranthene	206-44-0	83.	0.7	ug/kg	1
02875	Pyrene	129-00-0	200.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	53.	0.7	ug/kg	1
02877	Chrysene	218-01-9	240.	0.3	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	30.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	11.	1.	ug/kg	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4884381
**CLECV3-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3FD SDG#: SWE09-02FD*

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07138	4.75 mm	n.a.	89.0	0.50	%	1
07139	3.35 mm	n.a.	83.9	0.50	%	1
07140	2.36 mm	n.a.	77.6	0.50	%	1
07141	1.18 mm	n.a.	71.5	0.50	%	1
07142	0.6 mm	n.a.	56.6	0.50	%	1
07143	0.3 mm	n.a.	38.8	0.50	%	1
07144	0.15 mm	n.a.	26.9	0.50	%	1
07145	0.075 mm	n.a.	19.1	0.50	%	1
07146	0.064 mm	n.a.	16.5	0.50	%	1
07147	0.05 mm	n.a.	11.0	0.50	%	1
07148	0.02 mm	n.a.	7.0	0.50	%	1
07149	0.005 mm	n.a.	5.0	0.50	%	1
07150	0.002 mm	n.a.	2.5	0.50	%	1
07151	0.001 mm	n.a.	1.0	0.50	%	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00159	Mercury	SW-846 7471A	1	10/16/2006 11:39	Damary Valentin 1
01643	Aluminum	SW-846 6010B	1	10/16/2006 11:48	Deborah A Kraday 1
01650	Calcium	SW-846 6010B	1	10/16/2006 11:48	Deborah A Kraday 1
01654	Iron	SW-846 6010B	1	10/16/2006 11:48	Deborah A Kraday 1
01657	Magnesium	SW-846 6010B	1	10/16/2006 11:48	Deborah A Kraday 1
06125	Arsenic	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet 10
06128	Cadmium	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet 10
06131	Chromium	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet 10
06133	Copper	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet 10
06135	Lead	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet 10

Lancaster Laboratories Sample No. SW 4884381
**CLECV3-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:24

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

CV3FD	SDG#:	SWE09-02FD*					
06139	Nickel	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet	10	
06141	Selenium	SW-846 6020	1	10/17/2006 13:08	Jayme E Curet	10	
06966	Silver	SW-846 6010B	1	10/16/2006 11:48	Deborah A Krady	1	
06972	Zinc	SW-846 6010B	1	10/16/2006 11:48	Deborah A Krady	1	
00111	Moisture	EPA 160.3 modified	1	10/10/2006 12:00	Scott W Freisher	1	
02079	TOC Solids/Sludges Combustion	SM20 5310 B modified	1	10/17/2006 13:16	James S Mathiot	1	
05895	Total Cyanide (solid)	SW-846 9012A	1	10/10/2006 13:41	Nicole M Kepley	1	
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/11/2006 01:50	Daniel S Smith	1	
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/11/2006 13:31	Joseph M Gambler	1	
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/11/2006 17:35	Joseph M Gambler	10	
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 13:00	Luz M Groff	1	
00381	BNA Soil Extraction	SW-846 3550B	1	10/10/2006 03:15	David V Hershey Jr	1	
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:20	Annamaria Stipkovits	1	
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1	
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/10/2006 10:30	Nancy J Shoop	1	
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/16/2006 19:50	Annamaria Stipkovits	1	

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:24 PM

Group Number: 1008920

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	LCS %REC	LCSD %REC	LCS/LCSD Limits	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06282SLC026			Sample number(s): 4884381					
Naphthalene	1. U	1.	ug/kg	92	91	71-105	1	30
Fluorene	0.7 U	0.7	ug/kg	91	91	70-115	0	30
Phenanthrene	0.7 U	0.7	ug/kg	95	93	64-118	1	30
Anthracene	0.3 U	0.3	ug/kg	87	84	60-111	4	30
Fluoranthene	0.7 U	0.7	ug/kg	88	87	57-128	2	30
Pyrene	0.7 U	0.7	ug/kg	91	91	71-117	0	30
Benzo(a)anthracene	0.7 U	0.7	ug/kg	89	88	71-114	1	30
Chrysene	0.3 U	0.3	ug/kg	93	91	69-114	1	30
Benzo(a)pyrene	0.7 U	0.7	ug/kg	96	86	59-118	11	30
Dibenz(a,h)anthracene	1. U	1.	ug/kg	107	96	56-130	12	30
Batch number: 06283102201B			Sample number(s): 4884379-4884381					
Total Cyanide (solid)	0.18 U	0.18	mg/kg	96		90-110		
Batch number: 06283820003B			Sample number(s): 4884379-4884381					
Moisture				100		99-101		
Moisture				100		99-101		
Batch number: 06284SLI026			Sample number(s): 4884379-4884380					
Naphthalene	1. U	1.	ug/kg	84		71-105		
Fluorene	0.7 U	0.7	ug/kg	84		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	90		64-118		
Anthracene	0.3 U	0.3	ug/kg	76		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	86		57-128		
Pyrene	0.7 U	0.7	ug/kg	87		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	83		71-114		
Chrysene	0.3 U	0.3	ug/kg	87		69-114		
Benzo(a)pyrene	0.7 U	0.7	ug/kg	84		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	83		56-130		
Batch number: 062885708002			Sample number(s): 4884379-4884381					
Aluminum	8.02 J	3.35	mg/kg	124		91-151		
Calcium	14.2 J	12.7	mg/kg	103		89-121		
Iron	4.71 U	4.71	mg/kg	80		68-158		
Magnesium	3.61 J	1.90	mg/kg	109		90-120		
Silver	0.170 U	0.170	mg/kg	104		90-126		
Zinc	0.655 U	0.655	mg/kg	94		85-110		
Batch number: 062885711002			Sample number(s): 4884379-4884381					
Mercury	0.0105 U	0.0105	mg/kg	96		66-133		
Batch number: 062896150002A			Sample number(s): 4884379-4884381					
Arsenic	0.0170 U	0.0170	mg/kg	106		77-123		
Cadmium	0.0038 U	0.0038	mg/kg	108		79-121		
Chromium	0.141 J	0.0310	mg/kg	103		78-122		
Copper	0.0435 J	0.0350	mg/kg	109		81-119		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:24 PM

Group Number: 1008920

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Lead	0.0423 J	0.0150	mg/kg	105		79-121		
Nickel	0.0500 U	0.0500	mg/kg	107		81-119		
Selenium	0.0370 U	0.0370	mg/kg	105		74-126		
Batch number: 062896150002C			Sample number(s): 4884379-4884380					
Cadmium	0.0038 U	0.0038	mg/kg	107		79-121		
Batch number: 06290049531A			Sample number(s): 4884379, 4884381					
TOC Solids/Sludges Combustion	60.0 U	60.0	mg/kg	71		40-148		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06283102201B			Sample number(s): 4884379-4884381 UNSPK: 4884379					
Total Cyanide (solid)	86		59-124		0.17 U	0.18 U	25* (1)	17
Batch number: 06283820003B			Sample number(s): 4884379-4884381		BKG: 4884379			
Moisture					3.0	3.1	3	15
Moisture					3.0	3.1	3	15
Batch number: 06284656901B			Sample number(s): 4884379, 4884381		BKG: 4884379			
Bulk Density					0.83	0.83	1 (1)	20
Batch number: 06284SLI026			Sample number(s): 4884379-4884380 UNSPK: 4884379					
Naphthalene	(2)	(2)	54-121	46*	30			
Fluorene	7*	77	62-119	31*	30			
Phenanthrene	(2)	(2)	31-160	47*	30			
Anthracene	91	109	55-118	10	30			
Fluoranthene	-9*	69	49-125	29	30			
Pyrene	(2)	(2)	58-137	54*	30			
Benzo(a)anthracene	5*	143*	69-118	52*	30			
Chrysene	(2)	(2)	70-107	46*	30			
Benzo(a)pyrene	41*	85	69-106	28	30			
Dibenz(a,h)anthracene	59	58	40-126	1	30			
Batch number: 062885708002			Sample number(s): 4884379-4884381 UNSPK: 4884379		BKG: 4884379			
Aluminum	(2)	(2)	75-125	1	20	2,650.	2,570.	3
Calcium	(2)	(2)	75-125	47*	20	4,600.	12,100.	90*
Iron	(2)	(2)	75-125	20	20	16,400.	13,100.	23*
Magnesium	(2)	(2)	75-125	67*	20	1,140.	1,100.	3
Silver	97	98	75-125	1	20	0.170 U	0.170 U	17 (1)
Zinc	85	86	75-125	1	20	40.0	39.3	2
Batch number: 062885711002			Sample number(s): 4884379-4884381 UNSPK: 4884379		BKG: 4884379			
Mercury	100	100	80-120	0	20	0.142	0.136	4 (1)
Batch number: 062896150002A			Sample number(s): 4884379-4884381 UNSPK: 4884379		BKG: 4884379			
Arsenic	(2)	(2)	70-130	16	20	10.9	10.8	1
Cadmium	79	76	75-125	2	20	0.443	0.301	38* (1)

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:24 PM

Group Number: 1008920

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u>	<u>MSD</u>	<u>MS/MSD</u>	<u>RPD</u>	<u>BKG</u>	<u>DUP</u>	<u>DUP</u>	<u>Dup RPD</u>
	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>MAX</u>	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>	<u>Max</u>
Chromium	119	122	75-125	1	20	9.54	9.45	1 (1)
Copper	160*	111	75-125	12	20	13.5	13.4	1
Lead	(2)	(2)	75-125	8	20	6.34	6.20	2
Nickel	(2)	(2)	75-125	5	20	21.0	21.1	0
Selenium	90	66*	75-130	6	20	3.10	3.15	1 (1)
Batch number: 062896150002C	Sample number(s): 4884379-4884380 UNSPK: 4884379 BKG: 4884379							
Cadmium	79	76	75-125	2	20	0.443	0.301	38* (1)
Batch number: 06290049531A	Sample number(s): 4884379, 4884381 UNSPK: 4884379 BKG: 4884379							
TOC Solids/Sludges Combustion	76	51-115		509,000.		613,000.	19	19

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06282SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4884381	72	54	79
Blank	106	93	96
LCS	94	88	84
LCSD	94	91	87
Limits:	42-142	48-122	65-125

Analysis Name: Selected SVOA's in soil by SIM

Batch number: 06284SLI026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4884379	111	77	93
4884379DL	73	51	88
4884380	112	79	98
Blank	87	84	89
LCS	97	88	90
MS	112	79	98
MSD	117	82	115
Limits:	42-142	48-122	65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 1008920 Sample # 4884379-81

COC # 0132132

Please print. Instructions on reverse side correspond with circled numbers.

1	Client: <u>Cham Hill</u> Acct. #: _____				Project Name/#: <u>GREAT LAKES</u> PWSID #: _____				5 Analyses Requested				For Lab Use Only			
	Project Manager: <u>Ben Mosley</u> P.O.#: _____				Sampler: <u>Brian McMorris</u> Quote #: _____				Preservation Codes				FSC: _____			
	Name of state where samples were collected: <u>MN</u>												SCR#: _____			
2	Sample Identification		Date Collected	Time Collected	Grab	Composite	Soil	<input type="checkbox"/> NPDES Applicable	Total # of Containers	Sugars	TSP	TOC	Grain Size	Bulk Density	Preservation Codes	
	<u>CLECV3-DS-1</u>		<u>10/6/06</u>	<u>1300</u>	X	X			2	X	X	X	X	X	H=HCl	T=Thiosulfate
	<u>CLECV3-DS-1-D</u>		<u>↓</u>	<u>↓</u>	X	X			2	X	X	X	X	X	N=HNO ₃	B=NaOH
	<u>CLECV3-DS-1-BUL</u>				X	X			1						S=H ₂ SO ₄	O=Other
															Remarks	
															<u>MAPS SPICE FOR PATHS, TOT METALS C1, Hg HOLD</u>	
3	Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)				Relinquished by: <u>Brian McMorris</u>				Date <u>10/6/06</u>	Time <u>16:20</u>	Received by:				Date	Time
	Date results are needed: _____				Relinquished by:				Date	Time	Received by:				Date	Time
	Rush results requested by (please circle): Phone <input checked="" type="checkbox"/> Fax <input type="checkbox"/> E-mail <input type="checkbox"/>				Relinquished by:				Date	Time	Received by:				Date	Time
	Phone #: _____ Fax #: _____				Relinquished by:				Date	Time	Received by:				Date	Time
	E-mail address: _____				Relinquished by:				Date	Time	Received by:				Date	Time
4	Data Package Options (please circle if required)				SDG Complete?				Relinquished by:				Date	Time		
	Type I (validation/NJ Reg)		TX TRRP-13		Yes		No		Relinquished by:				Date	Time		
	Type II (Tier II)		MA MCP		CT RCP				Relinquished by:				Date	Time		
	Type III (Reduced NJ)		Site-specific QC (MS/MSD/Dup)? <input checked="" type="checkbox"/>		Yes		No		Relinquished by:				Date	Time		
	Type IV (CLP SOW)								Relinquished by:				Date	Time		
	Type VI (Raw Data Only)		Internal COC Required? Yes <input checked="" type="checkbox"/>		No				Relinquished by:				Date	Time		
	If yes, indicate QC sample and submit triplicate volume.															

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1009070. Samples arrived at the laboratory on Saturday, October 07, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLECV3-DS-1 Matrix Spike Duplicate Composite Solid	4885287

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4885287
**CLECV3-DS-1 Matrix Spike Duplicate Composite Solid
Great Lakes - Sweepings**

Collected: 10/06/2006 13:00 by BM

Account Number: 12098

Submitted: 10/07/2006 09:30

Parsons Brinkerhoff

Reported: 10/17/2006 at 13:51

75 Arlington Street

Discard: 11/17/2006

Ninth Floor

Boston MA 02116

CV3D1 SDG#: SWE09-01MSD

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
00118	Moisture	n.a.	3.0	0.50	%	1
00121	Moisture Duplicate	n.a.	3.1	0.50	%	1
The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.						
02858	Selected SVOA's in soil by SIM					
02863	Naphthalene	91-20-3	410. E	1.	ug/kg	1
02870	Fluorene	86-73-7	88.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	620. E	0.7	ug/kg	1
02872	Anthracene	120-12-7	61.	0.3	ug/kg	1
02874	Fluoranthene	206-44-0	110.	0.7	ug/kg	1
02875	Pyrene	129-00-0	270.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	120.	0.7	ug/kg	1
02877	Chrysene	218-01-9	330.	0.3	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	61.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	39.	1.	ug/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00118	Moisture	EPA 160.3 modified	1	10/10/2006 16:00	Scott W Freisher	1
00121	Moisture Duplicate	EPA 160.3 modified	1	10/10/2006 16:00	Scott W Freisher	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/13/2006 00:19	William T Parker	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/12/2006 10:30	Amanda W Herr	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/17/06 at 01:51 PM

Group Number: 1009070

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06283820003B			Sample number(s): 4885287					
Moisture				100		99-101		
Moisture Duplicate				100		99-101		
Batch number: 06284SLI026			Sample number(s): 4885287					
Naphthalene	1. U	1.	ug/kg	84		71-105		
Fluorene	0.7 U	0.7	ug/kg	84		70-115		
Phenanthrene	0.7 U	0.7	ug/kg	90		64-118		
Anthracene	0.3 U	0.3	ug/kg	76		60-111		
Fluoranthene	0.7 U	0.7	ug/kg	86		57-128		
Pyrene	0.7 U	0.7	ug/kg	87		71-117		
Benzo(a)anthracene	0.7 U	0.7	ug/kg	83		71-114		
Chrysene	0.3 U	0.3	ug/kg	87		69-114		
Benzo(a)pyrene	0.7 U	0.7	ug/kg	84		59-118		
Dibenz(a,h)anthracene	1. U	1.	ug/kg	83		56-130		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06283820003B			Sample number(s): 4885287 BKG: P884379					
Moisture				3.0		3.1	3	15
Moisture Duplicate				3.0		3.1	3	15
Batch number: 06284SLI026			Sample number(s): 4885287 UNSPK: P884379					
Naphthalene	(2)	(2)	54-121	46*	30			
Fluorene	7*	77	62-119	31*	30			
Phenanthrene	(2)	(2)	31-160	47*	30			
Anthracene	91	109	55-118	10	30			
Fluoranthene	-9*	69	49-125	29	30			
Pyrene	(2)	(2)	58-137	54*	30			
Benzo(a)anthracene	5*	143*	69-118	52*	30			
Chrysene	(2)	(2)	70-107	46*	30			
Benzo(a)pyrene	41*	85	69-106	28	30			
Dibenz(a,h)anthracene	59	58	40-126	1	30			

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 10/17/06 at 01:51 PM

Group Number: 1009070

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM
Batch number: 06284SLI026

Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14

4885287	117	82	115
Blank	87	84	89
LCS	97	88	90
MS	112	79	98
MSD	117	82	115

Limits: 42-142 48-122 65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



12098
Acct. #

For Lancaster Laboratories use only

AH 10/10/06

Group#

Sample #

1009070

Please print. Instructions on reverse side correspond with circled numbers.

4885287

COC # 0132132

SWED9

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate

N=HNO₃ B=NaOH

S=H₂SO₄ O=Other

6

Temperature of samples
upon receipt (if requested)

1

Client: CHAM HILL Acct. #: _____

Project Name#: GREAT LAKES PWSID #: _____

Project Manager: ERIN MOSLEY P.O.#: _____

Sampler: Bryan Morris Quote #: _____

Name of state where samples were collected: MN

2

Sample Identification

Date Collected 10/6/06 Time Collected 1320

3
Grab
Composite
Soil

4
Portable
Check if
NBBES Applicable
Water
Other

Total # of Containers
2

5 Analyses Requested

Preservation Codes

Sample Types
SM = SIGHTS
TOT METALS
CH = CHG
TNC = TNC
Ingrain Size
BULK DENSITY

Remarks

MATRIX SPIKE FOR
PAHs, TOT. METALS CH, HG

H2O

7

Turnaround Time Requested (TAT) (please circle): Normal Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: _____

Rush results requested by (please circle): Phone Fax E-mail

Phone #: _____ Fax #: _____

E-mail address: _____

Relinquished by:

Karen Morris

Date

10/6/06

Time

16:20

Received by:

Date

Time

9

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

8

Data Package Options (please circle if required)

SDG Complete?

Yes No

Type I (validation/NJ Reg)

TX TRRP-13

Type II (Tier II)

MA MCP CT RCP

Type III (Reduced NJ)

Site-specific QC (MS/MSD/Dup)? Yes No

Type IV (CLP SOW)

Internal COC Required? Yes No

Type VI (Raw Data Only)

(If yes, indicate QC sample and submit triplicate volume.)

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1009259. Samples arrived at the laboratory on Wednesday, October 11, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLELV1-LS-1 Unspiked Grab Water Sample	4886189
CLELV1-LS-1 Matrix Spike Grab Water Sample	4886190
CLELV1-LS-1 Unspiked Filtered Grab Water	4886191
CLELV1-LS-1 Matrix Spike Filtered Grab Water	4886192
CLELV1-LS-1-D Grab Water Sample	4886193
CLELV1-LS-1-D Filtered Grab Water	4886194

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4886189
**CLELV1-LS-1 Unspiked Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1-LS1 SDG#: SWE10-01BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l
01743	Aluminum	7429-90-5	0.951	0.0802	mg/l
01750	Calcium	7440-70-2	124.	0.104	mg/l
01754	Iron	7439-89-6	1.60	0.0522	mg/l
01757	Magnesium	7439-95-4	42.4	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0028	0.00067	mg/l
06028	Cadmium	7440-43-9	0.00015 J	0.000099	mg/l
06031	Chromium	7440-47-3	0.0036	0.00026	mg/l
06033	Copper	7440-50-8	0.0058	0.00020	mg/l
06035	Lead	7439-92-1	0.0026	0.000047	mg/l
06039	Nickel	7440-02-0	0.0057	0.00043	mg/l
06041	Selenium	7782-49-2	0.0025	0.00050	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0247	0.0081	mg/l
00206	Total Suspended Solids	n.a.	406.	3.0	mg/l
00235	Biochemical Oxygen Demand	n.a.	3.9 U	3.9	mg/l
This sample was analyzed 1 hour past the 48-hour hold time for BOD.					
00273	Total Organic Carbon	n.a.	5.1 J	5.0	mg/l
The reporting limit for TOC was increased due to insufficient sample volume.					
01443	Specific Gravity	n.a.	1.00	0.0050	1
04001	Chemical Oxygen Demand	n.a.	28.1 J	12.8	mg/l
07547	Dissolved Organic Carbon	n.a.	7.8 J	5.0	mg/l
The reporting limit for DOC was increased due to insufficient sample volume.					
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l

The sample received for the COD, TOC and cyanide analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. WW 4886189
**CLELV1-LS-1 Unspiked Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1-LS1 SDG#: SWE10-01BKG

No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/16/2006 07:38	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
01754	Iron	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06028	Cadmium	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/18/2006 11:35	Parker D Lindstrom	1
07066	Silver	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/13/2006 21:11	John P Hook	1
00206	Total Suspended Solids	EPA 160.2	1	10/13/2006 08:47	Maria O Gittens	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/12/2006 07:48	Christopher M Cunningham	1
00273	Total Organic Carbon	EPA 415.1	1	10/16/2006 15:11	James S Mathiot	5
01443	Specific Gravity	SM18 2710 F	1	10/18/2006 19:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/17/2006 09:00	Susan A Engle	1
07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/18/2006 10:42	James S Mathiot	5
08255	Total Cyanide (water)	SW-846 9012A	1	10/17/2006 12:54	Tonya M Beck	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/12/2006 19:35	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/13/2006 18:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/17/2006 09:00	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/16/2006 17:50	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4886190

**CLELV1-LS-1 Matrix Spike Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1-LS1 SDG#: SWE10-01MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0012	0.000056	mg/l
01743	Aluminum	7429-90-5	3.25	0.0802	mg/l
01750	Calcium	7440-70-2	129.	0.104	mg/l
01754	Iron	7439-89-6	2.57	0.0522	mg/l
01757	Magnesium	7439-95-4	44.6	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0134	0.00067	mg/l
06028	Cadmium	7440-43-9	0.0055	0.000099	mg/l
06031	Chromium	7440-47-3	0.0555	0.00026	mg/l
06033	Copper	7440-50-8	0.0568	0.00020	mg/l
06035	Lead	7439-92-1	0.0180	0.000047	mg/l
06039	Nickel	7440-02-0	0.0564	0.00043	mg/l
06041	Selenium	7782-49-2	0.0128	0.00050	mg/l
07066	Silver	7440-22-4	0.0507	0.0016	mg/l
07072	Zinc	7440-66-6	0.526	0.0081	mg/l
08255	Total Cyanide (water)	57-12-5	0.19	0.0050	mg/l

The sample received for the COD, TOC and cyanide analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/16/2006 07:40	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1
01754	Iron	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06028	Cadmium	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/18/2006 11:47	Parker D Lindstrom	1

Lancaster Laboratories Sample No. WW 4886190
**CLELV1-LS-1 Matrix Spike Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

1-LS1 SDG#: SWE10-01MS

07066	Silver	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/13/2006 21:25	John P Hook	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/17/2006 12:55	Tonya M Beck	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/12/2006 19:35	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/13/2006 18:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/17/2006 09:00	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/16/2006 17:50	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4886191**CLELV1-LS-1 Unspiked Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11F SDG#: SWE10-02BKG

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.00028 U	0.00028	mg/l
The quantitation limit for mercury was raised due to limited sample volume.					
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l
01750	Calcium	7440-70-2	34.9	0.104	mg/l
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l
01757	Magnesium	7439-95-4	9.58	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0015 J	0.00067	mg/l
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l
06031	Chromium	7440-47-3	0.00078 J	0.00026	mg/l
06033	Copper	7440-50-8	0.0043	0.00020	mg/l
06035	Lead	7439-92-1	0.000073 J	0.000047	mg/l
06039	Nickel	7440-02-0	0.0023	0.00043	mg/l
06041	Selenium	7782-49-2	0.00076 J	0.00050	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l

This sample was field filtered for dissolved metals and lab filtered for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:12	Damary Valentin	5
01743	Aluminum	SW-846 6010B	1	10/17/2006 10:48	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/17/2006 10:48	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/17/2006 10:48	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/17/2006 10:48	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/17/2006 23:52	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/17/2006 23:52	David K Beck	1
06031	Chromium	SW-846 6020	1	10/17/2006 23:52	David K Beck	1
06033	Copper	SW-846 6020	1	10/23/2006 13:00	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/17/2006 23:52	David K Beck	1

Lancaster Laboratories Sample No. WW 4886191
**CLELV1-LS-1 Unspiked Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11F SDG#: SWE10-02BKG

06039	Nickel	SW-846 6020	1	10/17/2006 23:52	David K Beck	1
06041	Selenium	SW-846 6020	1	10/17/2006 23:52	David K Beck	1
07066	Silver	SW-846 6010B	1	10/16/2006 16:28	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/17/2006 10:48	Joanne M Gates	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/18/2006 18:30	Venia B McFadden	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/14/2006 00:35	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/16/2006 01:00	Helen L Schaeffer	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	2	10/20/2006 10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/17/2006 18:00	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4886192
**CLELV1-LS-1 Matrix Spike Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11F SDG#: SWE10-02MS

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.0054	0.00028	mg/l 5
01743	Aluminum	7429-90-5	1.92	0.0802	mg/l 1
01750	Calcium	7440-70-2	40.2	0.104	mg/l 1
01754	Iron	7439-89-6	1.01	0.0522	mg/l 1
01757	Magnesium	7439-95-4	11.9	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0121	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0053	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0535	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0567	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0155	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0541	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0118	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0501	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.497	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.19	0.0050	mg/l 1

This sample was field filtered for dissolved metals and lab filtered for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:15	Damary Valentin 5
01743	Aluminum	SW-846 6010B	1	10/17/2006 10:59	Joanne M Gates 1
01750	Calcium	SW-846 6010B	1	10/17/2006 10:59	Joanne M Gates 1
01754	Iron	SW-846 6010B	1	10/17/2006 10:59	Joanne M Gates 1
01757	Magnesium	SW-846 6010B	1	10/17/2006 10:59	Joanne M Gates 1
06025	Arsenic	SW-846 6020	1	10/18/2006 00:04	David K Beck 1
06028	Cadmium	SW-846 6020	1	10/18/2006 00:04	David K Beck 1
06031	Chromium	SW-846 6020	1	10/18/2006 00:04	David K Beck 1
06033	Copper	SW-846 6020	2	10/23/2006 13:11	Parker D Lindstrom 1
06035	Lead	SW-846 6020	1	10/18/2006 00:04	David K Beck 1
06039	Nickel	SW-846 6020	1	10/18/2006 00:04	David K Beck 1
06041	Selenium	SW-846 6020	1	10/18/2006 00:04	David K Beck 1

Lancaster Laboratories Sample No. WW 4886192
**CLELV1-LS-1 Matrix Spike Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11F SDG#: SWE10-02MS

07066	Silver	SW-846 6010B	1	10/16/2006 02:59	Suzette L Lehman	1
07072	Zinc	SW-846 6010B	1	10/17/2006 10:59	Joanne M Gates	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/18/2006 18:32	Venia B McFadden	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/14/2006 00:35	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/16/2006 01:00	Helen L Schaeffer	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	2	10/20/2006 10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/17/2006 18:00	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4886193**CLELV1-LS-1-D Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11D SDG#: SWE10-03FD

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.588	0.0802	mg/l	1	
01750	Calcium	7440-70-2	189.	0.104	mg/l	1	
01754	Iron	7439-89-6	1.52	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	63.2	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0029	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.00017 J	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0038	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0057	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.0029	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0062	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.0029	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0186 J	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	3.4 U	3.4	mg/l	1	
	This sample was analyzed 1 hour past the 48-hour hold time for BOD.						
00273	Total Organic Carbon	n.a.	3.8	1.0	mg/l	1	
01443	Specific Gravity	n.a.	1.0	0.0050		1	
04001	Chemical Oxygen Demand	n.a.	25.7 J	12.8	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

The sample received for the COD, TOC and cyanide analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/16/2006 07:43	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/16/2006 03:42	Suzette L Lehman	1
01750	Calcium	SW-846 6010B	1	10/16/2006 03:42	Suzette L Lehman	1
01754	Iron	SW-846 6010B	1	10/16/2006 03:42	Suzette L Lehman	1
01757	Magnesium	SW-846 6010B	1	10/16/2006 03:42	Suzette L Lehman	1
06025	Arsenic	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1

Lancaster Laboratories Sample No. WW 4886193
**CLELV1-LS-1-D Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LS11D SDG#: SWE10-03FD

06028	Cadmium	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
06031	Chromium	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
06033	Copper	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
06035	Lead	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
06039	Nickel	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
06041	Selenium	SW-846 6020	1	10/18/2006 12:17	Parker D Lindstrom	1
07066	Silver	SW-846 6010B	1	10/16/2006 16:50	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/17/2006 12:27	Joanne M Gates	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/12/2006 07:48	Christopher M Cunningham	1
00273	Total Organic Carbon	EPA 415.1	1	10/16/2006 15:35	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	10/18/2006 19:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/17/2006 09:00	Susan A Engle	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/17/2006 12:57	Tonya M Beck	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/14/2006 00:35	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/13/2006 18:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/17/2006 09:00	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/16/2006 17:50	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4886194
**CLELV1-LS-1-D Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

S11DF SDG#: SWE10-04FD*

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	37.4	0.104	mg/l	1	
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	10.1	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0016 J	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00073 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0130	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.000068 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0026	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00085 J	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

This sample was field filtered for dissolved metals and lab filtered for dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:20	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/16/2006 16:54	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/16/2006 16:54	John P Hook	1
01754	Iron	SW-846 6010B	1	10/16/2006 16:54	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/16/2006 16:54	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/18/2006 00:17	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/18/2006 00:17	David K Beck	1
06031	Chromium	SW-846 6020	1	10/18/2006 00:17	David K Beck	1
06033	Copper	SW-846 6020	1	10/20/2006 12:13	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/18/2006 00:17	David K Beck	1
06039	Nickel	SW-846 6020	1	10/18/2006 00:17	David K Beck	1
06041	Selenium	SW-846 6020	1	10/18/2006 00:17	David K Beck	1

Lancaster Laboratories Sample No. WW 4886194
**CLELV1-LS-1-D Filtered Grab Water
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:45

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

S11DF SDG#: SWE10-04FD*

07066	Silver	SW-846 6010B	1	10/16/2006 16:54	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/17/2006 12:31	Joanne M Gates	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/17/2006 12:58	Tonya M Beck	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/14/2006 00:35	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/16/2006 01:00	Helen L Schaeffer	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/16/2006 17:50	Carolyn M Mastropietro	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:45 AM

Group Number: 1009259

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06285023501A Biochemical Oxygen Demand			Sample number(s): 4886189, 4886193	103	101	85-115	2	8
Batch number: 062851848001 Aluminum Calcium Iron Magnesium Silver Zinc	0.0802 U 0.104 U 0.0522 U 0.0159 J 0.0016 U 0.0109 J	0.0802 0.104 0.0522 0.0135 0.0016 0.0081	mg/l mg/l mg/l mg/l mg/l mg/l	101 100 98 98 99 100		90-112 90-112 90-112 89-110 90-118 90-111		
Batch number: 06286020601B Total Suspended Solids	3.0 U	3.0	mg/l	99		56-128		
Batch number: 062865713002 Mercury	0.000056 U	0.00005 6	mg/l	116		80-120		
Batch number: 062871848002 Aluminum Calcium Iron Magnesium Silver	0.0802 U 0.104 U 0.0522 U 0.0135 U 0.0016 U	0.0802 0.104 0.0522 0.0135 0.0016	mg/l mg/l mg/l mg/l mg/l	102 111 105 108 101		90-112 90-112 90-112 89-110 90-118		
Batch number: 06289049511B Total Organic Carbon	1.0 U	1.0	mg/l	98		80-120		
Batch number: 06289117101B Total Cyanide (water)	0.0050 U	0.0050	mg/l	100		90-110		
Batch number: 062896050002A Arsenic Cadmium Chromium Lead Selenium	0.00067 U 0.000099 U 0.00047 J 0.000047 U 0.00050 U	0.00067 0.000099 0.00026 0.00004 0.00050	mg/l mg/l mg/l mg/l mg/l	102 100 105 105 99		80-120 80-120 80-120 80-120 80-120		
Batch number: 062896050002C Nickel	0.00043 U	0.00043	mg/l	102		80-120		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

 Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:45 AM

Group Number: 1009259

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06290117101A Total Cyanide (water)	Sample number(s): 4886191-4886192 0.0050 U	0.0050	mg/l	97		90-110		
Batch number: 062901848004 Aluminum	Sample number(s): 4886191-4886194 0.0802 U	0.0802	mg/l	92		90-112		
Calcium	0.104 U	0.104	mg/l	97		90-112		
Iron	0.0522 U	0.0522	mg/l	96		90-112		
Magnesium	0.0135 U	0.0135	mg/l	96		89-110		
Zinc	0.0081 U	0.0081	mg/l	96		90-111		
Batch number: 06290400102A Chemical Oxygen Demand	Sample number(s): 4886189, 4886193		107			94-110		
Batch number: 062905713002 Mercury	Sample number(s): 4886191-4886192, 4886194 0.00035	0.00005	mg/l	104		80-120		
		6						
Batch number: 062906050003A Arsenic	Sample number(s): 4886189-4886190, 4886193 0.00067	0.00067	mg/l	102		80-120		
Cadmium	U							
	0.000099	0.00009	mg/l	101		80-120		
Chromium	U	9						
	0.00027	0.00026	mg/l	106		80-120		
Copper	J							
	0.00020	0.00020	mg/l	110		80-120		
Lead	U							
	0.000047	0.00004	mg/l	105		80-120		
Selenium	U	7						
	0.00050	0.00050	mg/l	98		80-120		
Batch number: 062906050003C Nickel	Sample number(s): 4886189-4886190, 4886193 0.00043	0.00043	mg/l	108		80-120		
	U							
Batch number: 06291049512A Dissolved Organic Carbon	Sample number(s): 4886189 1.0 U	1.0	mg/l	103		80-120		
Batch number: 062926050004C Copper	Sample number(s): 4886194 0.20 U	0.20	ug/l	109		80-120		
Batch number: 062936050002A Copper	Sample number(s): 4886191-4886192 0.00020	0.00020	mg/l	111		80-120		
	U							

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06285023501A			Sample number(s): 4886189, 4886193 UNSPK: P887153 BKG: P887130					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:45 AM

Group Number: 1009259

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max RPD</u>
Biochemical Oxygen Demand	112	110	67-144	1	9	270.	249.	8	9
Batch number: 062851848001									
Aluminum	115	108	75-125	4	20	0.951	0.962	1 (1)	20
Calcium	(2)	(2)	75-125	1	20	124.	125.	0	20
Iron	97	89	75-125	3	20	1.60	1.64	2	20
Magnesium	(2)	(2)	75-125	1	20	42.4	42.6	0	20
Silver	101	101	75-125	1	20	0.0016 U	0.0016 U	-11 (1)	20
Zinc	100	99	75-125	1	20	0.0247	0.0255	3 (1)	20
Batch number: 06286020601B									
Total Suspended Solids	Sample number(s): 4886189 BKG: P887063						4.4 J	5.2 J	17 (1)
Batch number: 062865713002									
Mercury	118	118	80-120	0	20	0.000056 U	0.000056 U	-9 (1)	20
Batch number: 062871848002									
Aluminum	110	105	75-125	5	20	0.0802 U	0.0802 U	98* (1)	20
Calcium	(2)	(2)	75-125	7	20	40.4	38.9	4	20
Iron	118	112	75-125	5	20	0.0522 U	0.0522 U	-95 (1)	20
Magnesium	(2)	(2)	75-125	6	20	11.2	10.7	4	20
Silver	100	102	75-125	1	20	0.0016 U	0.0016 U	-193 (1)	20
Batch number: 06289049511B									
Total Organic Carbon	103	Sample number(s): 4886189, 4886193 UNSPK: 4886189 BKG: 4886189		62-148	5.1 J	5.0 U	13* (1)	2	
Batch number: 06289117101B									
Total Cyanide (water)	95	Sample number(s): 4886189-4886190, 4886193-4886194 UNSPK: 4886189 BKG: 4886189		83-111	0.0050 U	0.0050 U	0 (1)	20	
Batch number: 062896050002A									
Arsenic	106	104	75-125	2	20	0.0015 J	0.0015 J	3 (1)	20
Cadmium	106	102	75-125	4	20	0.000099 U	0.000099 U	107* (1)	20
Chromium	106	104	75-125	2	20	0.00078 J	0.00079 J	1 (1)	20
Lead	103	102	75-125	1	20	0.000073 J	0.000075 J	2 (1)	20
Selenium	110	106	75-125	3	20	0.00076 J	0.00078 J	1 (1)	20
Batch number: 062896050002C									
Nickel	104	102	75-125	2	20	0.0023 U	0.0024 U	4 (1)	20
Batch number: 06290117101A									
Total Cyanide (water)	97	Sample number(s): 4886191-4886192 UNSPK: 4886191 BKG: 4886191		83-111	0.0050 U	0.0050 U	0 (1)	20	
Batch number: 062901848004									
Aluminum	96	91	75-125	5	20	0.0802 U	0.0802 U	-1 (1)	20
Calcium	(2)	(2)	75-125	2	20	34.9	35.6	2	20
Iron	101	97	75-125	4	20	0.0522 U	0.0522 U	19 (1)	20
Magnesium	(2)	(2)	75-125	2	20	9.58	9.76	2	20
Zinc	99	95	75-125	4	20	0.0081 U	0.0081 U	1 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:45 AM

Group Number: 1009259

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06290400102A Chemical Oxygen Demand	90		Sample number(s): 4886189, 4886193 UNSPK: P887151 BKG: P888274 90-110		70.1	67.8	3 (1)	5
Batch number: 062905713002 Mercury	107	108	Sample number(s): 4886191-4886192, 4886194 UNSPK: 4886191 BKG: 4886191 80-120	1 20	0.00028 U	0.00028 U	200* (1)	20
Batch number: 062906050003A Arsenic	106	106	Sample number(s): 4886189-4886190, 4886193 UNSPK: 4886189 BKG: 4886189 75-125	0 20	0.0028	0.0031	10 (1)	20
Cadmium	106	100	75-125	6 20	0.00015	0.00014	4 (1)	20
J			J		J			
Chromium	104	103	75-125	0 20	0.0036	0.0035	2 (1)	20
Copper	102	100	75-125	2 20	0.0058	0.0055	5	20
Lead	103	102	75-125	0 20	0.0026	0.0027	4 (1)	20
Selenium	103	104	75-125	1 20	0.0025	0.0026	4 (1)	20
Nickel	101	100	Sample number(s): 4886189-4886190, 4886193 UNSPK: 4886189 BKG: 4886189 75-125	1 20	0.0057	0.0057	1 (1)	20
Dissolved Organic Carbon	103		Sample number(s): 4886189 UNSPK: 4886189 BKG: 4886189 66-137		7.8 J	7.5 J	5* (1)	4
Batch number: 06291144301A Specific Gravity			Sample number(s): 4886189, 4886193 BKG: P889868		1.00	1.00	0	2
Batch number: 062926050004C Copper	101	101	Sample number(s): 4886194 UNSPK: P891579 BKG: P891579 75-125	0 20	26.5	29.1	9	20
Copper	105	106	Sample number(s): 4886191-4886192 UNSPK: 4886191 BKG: 4886191 75-125	1 20	0.0043	0.0042	3 (1)	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # 12098 Group# 1009259 Sample # 4886189-94

COC # 0130307

Please print. Instructions on reverse side correspond with circled numbers

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1009271. Samples arrived at the laboratory on Wednesday, October 11, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLELV1-DS-1 Unspiked Composite Solid Sample	4886256
CLELV1-DS-1 Matrix Spike Composite Solid Sample	4886257
CLELV1-DS-1-D Composite Solid Sample	4886258
CLECV4-DS-1 Composite Solid Sample	4886259
CLECV4-DS-1-D Composite Solid Sample	4886260

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4886256
**CLELV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1DS1 SDG#: SWE11-01BKG

CAT No.	Analysis Name	CAS Number	Dry	Method	Dilution Factor
			Result	Detection Limit	
00159	Mercury	7439-97-6	0.0118 J	0.0107	mg/kg
01643	Aluminum	7429-90-5	1,250.	3.54	mg/kg
01650	Calcium	7440-70-2	264,000.	67.1	mg/kg
01654	Iron	7439-89-6	2,740.	4.98	mg/kg
01657	Magnesium	7439-95-4	97,300.	10.0	mg/kg
06125	Arsenic	7440-38-2	1.22 J	0.180	mg/kg
06128	Cadmium	7440-43-9	0.288	0.0402	mg/kg
06131	Chromium	7440-47-3	4.78	0.328	mg/kg
06133	Copper	7440-50-8	1.99	0.338	mg/kg
06135	Lead	7439-92-1	3.35	0.159	mg/kg
06139	Nickel	7440-02-0	5.33	0.529	mg/kg
06141	Selenium	7782-49-2	0.959 J	0.391	mg/kg
06966	Silver	7440-22-4	0.180 U	0.180	mg/kg
06972	Zinc	7440-66-6	6.73	0.692	mg/kg
00111	Moisture	n.a.	5.4	0.50	%
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					
05895	Total Cyanide (solid)	57-12-5	0.19 U	0.19	mg/kg
06569	Bulk Density	n.a.	1.07	0.080	g/cc

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	79.5	0.50	% Passing	1
07139	3.35 mm	n.a.	70.5	0.50	% Passing	1
07140	2.36 mm	n.a.	65.7	0.50	% Passing	1
07141	1.18 mm	n.a.	61.8	0.50	% Passing	1
07142	0.6 mm	n.a.	55.4	0.50	% Passing	1
07143	0.3 mm	n.a.	48.0	0.50	% Passing	1
07144	0.15 mm	n.a.	39.9	0.50	% Passing	1
07145	0.075 mm	n.a.	31.2	0.50	% Passing	1
07146	0.064 mm	n.a.	29.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4886256
**CLELV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1DS1 SDG#: SWE11-01BKG

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07147	0.05 mm	n.a.	25.0	0.50	%	1
07148	0.02 mm	n.a.	14.0	0.50	%	1
07149	0.005 mm	n.a.	5.5	0.50	%	1
07150	0.002 mm	n.a.	3.0	0.50	%	1
07151	0.001 mm	n.a.	2.0	0.50	%	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/16/2006 12:07	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/16/2006 20:27	John P Hook	1
01650	Calcium	SW-846 6010B	1	10/18/2006 18:37	John P Hook	5
01654	Iron	SW-846 6010B	1	10/16/2006 20:27	John P Hook	1
01657	Magnesium	SW-846 6010B	1	10/18/2006 18:37	John P Hook	5
06125	Arsenic	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06131	Chromium	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06133	Copper	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06135	Lead	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06139	Nickel	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06141	Selenium	SW-846 6020	1	10/18/2006 17:53	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	10/16/2006 20:27	John P Hook	1
06972	Zinc	SW-846 6010B	1	10/16/2006 20:27	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:02	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:45	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/17/2006 19:50	Annamaria Stipkovits	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4886256

CLELV1-DS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

E1DS1 SDG#: SWE11-01BKG

Boston MA 02116

Lancaster Laboratories Sample No. SW 4886257
**CLELV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1DS1 SDG#: SWE11-01MS

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
00159	Mercury	7439-97-6	0.181	0.0107	mg/kg	1
01643	Aluminum	7429-90-5	1,650.	3.54	mg/kg	1
01650	Calcium	7440-70-2	274,000.	67.1	mg/kg	5
01654	Iron	7439-89-6	1,590.	4.98	mg/kg	1
01657	Magnesium	7439-95-4	81,200.	10.0	mg/kg	5
06125	Arsenic	7440-38-2	2.40	0.180	mg/kg	10
06128	Cadmium	7440-43-9	0.864	0.0402	mg/kg	10
06131	Chromium	7440-47-3	10.9	0.328	mg/kg	10
06133	Copper	7440-50-8	6.70	0.338	mg/kg	10
06135	Lead	7439-92-1	7.85	0.159	mg/kg	10
06139	Nickel	7440-02-0	10.5	0.529	mg/kg	10
06141	Selenium	7782-49-2	2.07 J	0.391	mg/kg	10
06966	Silver	7440-22-4	5.96	0.180	mg/kg	1
06972	Zinc	7440-66-6	67.3	0.692	mg/kg	1
00118	Moisture	n.a.	5.4	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	1.9	0.18	mg/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00159	Mercury	SW-846 7471A	1	10/16/2006 12:17	Damary Valentin 1
01643	Aluminum	SW-846 6010B	1	10/16/2006 20:41	John P Hook 1
01650	Calcium	SW-846 6010B	1	10/18/2006 18:51	John P Hook 5
01654	Iron	SW-846 6010B	1	10/16/2006 20:41	John P Hook 1
01657	Magnesium	SW-846 6010B	1	10/18/2006 18:51	John P Hook 5
06125	Arsenic	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06128	Cadmium	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06131	Chromium	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06133	Copper	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06135	Lead	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06139	Nickel	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06141	Selenium	SW-846 6020	1	10/18/2006 18:05	Parker D Lindstrom 10
06966	Silver	SW-846 6010B	1	10/16/2006 20:41	John P Hook 1
06972	Zinc	SW-846 6010B	1	10/16/2006 20:41	John P Hook 1
00118	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher 1

Lancaster Laboratories Sample No. SW 4886257**CLELV1-DS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1DS1	SDG#:	SWE11-01MS						
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 16:08	Courtney A Shoff	1		
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:45	Annamaria Stipkovits	1		
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1		
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1		
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/17/2006 19:50	Annamaria Stipkovits	1		

Lancaster Laboratories Sample No. SW 4886258
**CLELV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1D1D SDG#: SWE11-02FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0105 U	0.0105	mg/kg	1
01643	Aluminum	7429-90-5	1,360.	3.31	mg/kg	1
01650	Calcium	7440-70-2	256,000.	62.8	mg/kg	5
01654	Iron	7439-89-6	1,520.	4.65	mg/kg	1
01657	Magnesium	7439-95-4	86,400.	9.39	mg/kg	5
06125	Arsenic	7440-38-2	1.13 J	0.175	mg/kg	10
06128	Cadmium	7440-43-9	0.281	0.0391	mg/kg	10
06131	Chromium	7440-47-3	4.61	0.319	mg/kg	10
06133	Copper	7440-50-8	1.82	0.329	mg/kg	10
06135	Lead	7439-92-1	7.70	0.154	mg/kg	10
06139	Nickel	7440-02-0	4.88	0.514	mg/kg	10
06141	Selenium	7782-49-2	0.822 J	0.380	mg/kg	10
06966	Silver	7440-22-4	0.168 U	0.168	mg/kg	1
06972	Zinc	7440-66-6	6.53	0.647	mg/kg	1
00111	Moisture	n.a.	2.7	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	1.19	0.080	g/cc	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	93.9	0.50	% Passing	1
07139	3.35 mm	n.a.	84.5	0.50	% Passing	1
07140	2.36 mm	n.a.	77.9	0.50	% Passing	1
07141	1.18 mm	n.a.	74.1	0.50	% Passing	1
07142	0.6 mm	n.a.	64.0	0.50	% Passing	1
07143	0.3 mm	n.a.	51.0	0.50	% Passing	1
07144	0.15 mm	n.a.	39.4	0.50	% Passing	1
07145	0.075 mm	n.a.	28.5	0.50	% Passing	1
07146	0.064 mm	n.a.	26.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4886258
**CLELV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1D1D SDG#: SWE11-02FD

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07147	0.05 mm	n.a.	20.0	0.50	% Passing	1
07148	0.02 mm	n.a.	15.0	0.50	% Passing	1
07149	0.005 mm	n.a.	4.0	0.50	% Passing	1
07150	0.002 mm	n.a.	2.0	0.50	% Passing	1
07151	0.001 mm	n.a.	1.0	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/16/2006 12:19	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/16/2006 20:55	John P Hook	1
01650	Calcium	SW-846 6010B	1	10/18/2006 19:05	John P Hook	5
01654	Iron	SW-846 6010B	1	10/16/2006 20:55	John P Hook	1
01657	Magnesium	SW-846 6010B	1	10/18/2006 19:05	John P Hook	5
06125	Arsenic	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06131	Chromium	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06133	Copper	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06135	Lead	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06139	Nickel	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06141	Selenium	SW-846 6020	1	10/18/2006 18:26	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	10/16/2006 20:55	John P Hook	1
06972	Zinc	SW-846 6010B	1	10/16/2006 20:55	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:06	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:45	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/17/2006 19:50	Annamaria Stipkovits	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4886258

CLELV1-DS-1-D Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/10/2006 09:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

E1D1D SDG#: SWE11-02FD

Boston MA 02116

Lancaster Laboratories Sample No. SW 4886259
CLECV4-DS-1 Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/09/2006 16:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E4DS1 SDG#: SWE11-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0162 J	0.0105	mg/kg	1
01643	Aluminum	7429-90-5	1,600.	3.39	mg/kg	1
01650	Calcium	7440-70-2	1,950.	12.9	mg/kg	1
01654	Iron	7439-89-6	5,770.	4.77	mg/kg	1
01657	Magnesium	7439-95-4	245.	1.92	mg/kg	1
06125	Arsenic	7440-38-2	6.59	0.174	mg/kg	10
06128	Cadmium	7440-43-9	0.390	0.0389	mg/kg	10
06131	Chromium	7440-47-3	17.0	0.317	mg/kg	10
06133	Copper	7440-50-8	24.2	0.327	mg/kg	10
06135	Lead	7439-92-1	9.99	0.153	mg/kg	10
06139	Nickel	7440-02-0	12.6	0.511	mg/kg	10
06141	Selenium	7782-49-2	5.99	0.378	mg/kg	10
06966	Silver	7440-22-4	0.184 J	0.172	mg/kg	1
06972	Zinc	7440-66-6	11.2	0.663	mg/kg	1
00111	Moisture	n.a.	2.2	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	0.78	0.080	g/cc	1

02858 Selected SVOA's in soil by SIM

02863	Naphthalene	91-20-3	3,100.	10.	ug/kg	10
02870	Fluorene	86-73-7	180.	0.7	ug/kg	1
02871	Phenanthrene	85-01-8	930.	7.	ug/kg	10
02872	Anthracene	120-12-7	35.	0.3	ug/kg	1
02874	Fluoranthene	206-44-0	220.	0.7	ug/kg	1
02875	Pyrene	129-00-0	280.	0.7	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	150.	0.7	ug/kg	1
02877	Chrysene	218-01-9	180.	0.3	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	120.	0.7	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	17.	1.	ug/kg	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	95.3	0.50	% Passing	1
07138	4.75 mm	n.a.	81.1	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4886259

CLECV4-DS-1 Composite Solid Sample

Great Lakes - Sweepings

Collected: 10/09/2006 16:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E4DS1 SDG#: SWE11-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
07139	3.35 mm	n.a.	78.2	0.50	% Passing	1
07140	2.36 mm	n.a.	74.9	0.50	% Passing	1
07141	1.18 mm	n.a.	69.0	0.50	% Passing	1
07142	0.6 mm	n.a.	47.8	0.50	% Passing	1
07143	0.3 mm	n.a.	22.5	0.50	% Passing	1
07144	0.15 mm	n.a.	10.1	0.50	% Passing	1
07145	0.075 mm	n.a.	6.2	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1
07147	0.05 mm	n.a.	0.50 U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50 U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50 U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50 U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50 U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/16/2006 12:20	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/16/2006 21:00	John P Hook	1
01650	Calcium	SW-846 6010B	1	10/16/2006 21:00	John P Hook	1
01654	Iron	SW-846 6010B	1	10/16/2006 21:00	John P Hook	1
01657	Magnesium	SW-846 6010B	1	10/16/2006 21:00	John P Hook	1
06125	Arsenic	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10

Lancaster Laboratories Sample No. SW 4886259
CLECV4-DS-1 Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/09/2006 16:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E4DS1 SDG#: SWE11-03

06131	Chromium	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06133	Copper	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06135	Lead	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06139	Nickel	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06141	Selenium	SW-846 6020	1	10/18/2006 18:30	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	10/16/2006 21:00	John P Hook	1
06972	Zinc	SW-846 6010B	1	10/16/2006 21:00	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:09	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/18/2006 06:19	Brian K Graham	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/18/2006 08:12	Brian K Graham	10
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff	1
00381	BNA Soil Extraction	SW-846 3550B	2	10/17/2006 18:00	Sally L Appleyard	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/15/2006 19:45	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/15/2006 22:30	Annamaria Stipkovits	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/17/2006 19:50	Annamaria Stipkovits	1

Lancaster Laboratories Sample No. SW 4886260
CLECV4-DS-1-D Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/09/2006 16:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:28

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E4D1D SDG#: SWE11-04FD*

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
06569	Bulk Density	n.a.	0.81	0.080		g/cc	1
07103	Grain Size to 1 um						
07135	75 mm	n.a.	100.	0.50	%		1
07136	37.5 mm	n.a.	92.4	0.50	%	Passing	1
07137	19 mm	n.a.	86.1	0.50	%	Passing	1
07138	4.75 mm	n.a.	73.7	0.50	%	Passing	1
07139	3.35 mm	n.a.	71.0	0.50	%	Passing	1
07140	2.36 mm	n.a.	68.0	0.50	%	Passing	1
07141	1.18 mm	n.a.	60.4	0.50	%	Passing	1
07142	0.6 mm	n.a.	40.0	0.50	%	Passing	1
07143	0.3 mm	n.a.	17.7	0.50	%	Passing	1
07144	0.15 mm	n.a.	7.7	0.50	%	Passing	1
07145	0.075 mm	n.a.	5.1	0.50	%	Passing	1
07146	0.064 mm	n.a.	0.50	U	0.50	%	Passing
07147	0.05 mm	n.a.	0.50	U	0.50	%	Passing
07148	0.02 mm	n.a.	0.50	U	0.50	%	Passing
07149	0.005 mm	n.a.	0.50	U	0.50	%	Passing
07150	0.002 mm	n.a.	0.50	U	0.50	%	Passing
07151	0.001 mm	n.a.	0.50	U	0.50	%	Passing

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 2 of 2

Lancaster Laboratories Sample No. SW 4886260

CLECV4-DS-1-D Composite Solid Sample

Great Lakes - Sweepings

Collected: 10/09/2006 16:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Reported: 10/28/2006 at 21:28

Discard: 11/28/2006

Parsons Brinkerhoff

75 Arlington Street

Ninth Floor

Boston MA 02116

E4D1D SDG#: SWE11-04FD*

Laboratory Chronicle

CAT	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/17/2006 04:25	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:29 PM

Group Number: 1009271

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06285102201A Total Cyanide (solid)			Sample number(s): 4886256-4886259 0.18 U	mg/kg 100		90-110		
Batch number: 06285820004A Moisture Moisture			Sample number(s): 4886256-4886259 100 100			99-101 99-101		
Batch number: 062885708003 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4886256-4886259 11.3 J 25.6 4.71 U 3.19 J 0.170 U 0.655 U	mg/kg 121 102 74 105 109 96		91-151 89-121 68-158 90-120 90-126 85-110		
Batch number: 062885711003 Mercury			Sample number(s): 4886256-4886259 0.0105 U	mg/kg 94		66-133		
Batch number: 062906150001A Arsenic Cadmium Chromium Copper Lead Nickel Selenium			Sample number(s): 4886256-4886259 0.0170 U 0.0038 U 0.201 0.0388 J 0.0492 J 0.0500 U 0.0370 U	mg/kg 109 112 107 113 112 112 110		77-123 79-121 78-122 81-119 79-121 81-119 74-126		
Batch number: 062906150001C Nickel			Sample number(s): 4886256-4886258 0.0500 U	mg/kg 114		81-119		
Batch number: 06290SLD026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene			Sample number(s): 4886259 1. U 0.7 U 0.7 U 0.3 U 0.7 U 0.7 U 0.7 U 0.3 U 0.7 U 1. U	ug/kg 1. 0.7 0.7 0.3 0.7 0.7 0.7 0.3 0.7 1.	77 79 79 75 83 84 83 82 74 65	71-105 70-115 64-118 60-111 57-128 71-117 71-114 69-114 59-118 56-130		

Sample Matrix Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff

Group Number: 1009271

Reported: 10/28/06 at 09:29 PM

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX</u>	<u>DUP Conc</u>	<u>DUP Conc</u>	<u>Dup RPD Max</u>
Batch number: 06285102201A Total Cyanide (solid)			Sample number(s): 4886256-4886259 UNSPK: 4886256 BKG: 4886256 38* 59-124 0.18 U 0.18 U 0 (1) 17					
Batch number: 06285820004A Moisture Moisture			Sample number(s): 4886256-4886259 BKG: 4886256 5.4 5.4 5.8 5.8 6 6 15 15					
Batch number: 06286656901A Bulk Density			Sample number(s): 4886256, 4886258-4886259 BKG: 4886259 0.78 0.77 1 (1) 20					
Batch number: 062885708003 Aluminum Calcium Iron Magnesium Silver Zinc	(2) 113 115	(2) 113 105	Sample number(s): 4886256-4886259 UNSPK: 4886256 BKG: 4886256 75-125 10 20 1,180. 1,240. 5 20 75-125 5 20 250,000. 251,000. 1 20 75-125 13 20 2,590. 1,730. 40* 20 75-125 19 20 92,100. 88,000. 5 20 75-125 0 20 0.170 U 0.170 U 69* (1) 20 75-125 8 20 6.37 6.47 2 (1) 20					
Batch number: 062885711003 Mercury	100	101	Sample number(s): 4886256-4886259 UNSPK: 4886256 BKG: 4886256 80-120 1 20 0.0111 J 0.0100 U 200* (1) 20					
Batch number: 062906150001A Arsenic Cadmium Chromium Copper Lead Nickel Selenium	112 89 284* 98 105	108 84 189* 96 107	Sample number(s): 4886256-4886259 UNSPK: 4886256 BKG: 4886256 70-130 2 20 1.16 J 1.10 J 5 (1) 20 75-125 1 20 0.273 0.325 18 (1) 20 75-125 4 20 4.52 4.25 6 (1) 20 75-125 4 20 1.89 1.05 57* (1) 20 75-125 21* 20 3.16 5.02 45* (1) 20 75-125 1 20 5.05 4.86 4 (1) 20 75-130 2 20 0.908 J 0.963 J 6 (1) 20					
Batch number: 062906150001C Nickel	98	96	Sample number(s): 4886256-4886258 UNSPK: 4886256 BKG: 4886256 75-125 1 20 5.05 4.86 4 (1) 20					
Batch number: 06290656901A Bulk Density			Sample number(s): 4886260 BKG: 4886260 0.81 0.81 1 (1) 20					
Batch number: 06290SLD026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	75 73 74 87 106 98 84 91 73 66	73 73 78 82 94 91 82 85 75 66	Sample number(s): 4886259 UNSPK: P886381 54-121 2 30 62-119 1 30 31-160 6 30 55-118 6 30 49-125 11 30 58-137 7 30 69-118 2 30 70-107 6 30 69-106 2 30 40-126 0 30					

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 10/28/06 at 09:29 PM

Group Number: 1009271

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM
Batch number: 06290SLD026

Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14

4886259	116	63	96
Blank	88	83	95
LCS	79	76	89
MS	80	74	88
MSD	80	76	92

Limits: 42-142 48-122 65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # 12098 Group# 1009271 Sample # 4886256-60

COC # 0130307

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>CHAM HILL</u>	Acct. #: _____
Project Name#: <u>GREAT LAKES</u>	PWSID #: _____
Project Manager: <u>ERIN MOSLEY</u>	P.O.#: _____
Sampler: <u>REGAN McMAHIS</u>	Quote #: _____
Name of state where samples were collected: <u>OH</u>	

Matrix	5 Analyses Requested										For Lab Use Only FSC: _____ SCR#: _____			
	Preservation Codes													
	<input type="checkbox"/> Possible	<input type="checkbox"/> Direct	<input type="checkbox"/> Application	<input type="checkbox"/> NPDES	<input type="checkbox"/> Water	<input type="checkbox"/> Sediment	<input type="checkbox"/> Soil	<input type="checkbox"/> Fish	<input type="checkbox"/> Tissue	<input type="checkbox"/> Plant	<input type="checkbox"/> TDS	<input type="checkbox"/> DOC	<input type="checkbox"/> BOD/COD	<input type="checkbox"/> TSS
	PH/TDS	TOT NITROUS, CN	TOT HG, % Sulfate	DIS METALS, CR	BULK DENSITY	CATION SIZE	SPECIFIC GRAVITY							

6

Temperature of samples (in degrees)

Sample Identification	Date Collected	Time Collected	Comments	Water	Sediment	Soil	Fish	Tissue	Plant	TDS	DOC	BOD/COD	TSS	Remarks
<u>D¹³C CLELV1 - DS-1</u>	<u>10-10-06</u>	<u>0900</u>		X	X	2		X	X					MATRIX SPIKE FOR METALS, CN, HG
<u>CLELV1 - DS-1-D</u>			↓	X	X	2		X	X					
<u>CLELV1 - DS-1-BU</u>				X	X	2								
<u>CLELV1 - SS-1</u>		<u>0700</u>		X	X	2		X	X					
<u>CLELV1 - SS-1-D</u>			↓	X	X	2		X	X					
<u>CLELV1 - SS-1-BU</u>				X	X	2 ^{ext}		X	X					
<u>CLELV1 - SS-2-D</u>				X	X	+		X						
<u>CLELV1 - LS-1</u>		<u>0700</u>		X			X ^{ext}	X	X	X	X	X	X	MATRIX SPIKE FOR METALS, CN, HG
<u>CLELV1 - LS-1-D</u>			↓	X			X ^{ext}	X	X	X	X	X		
<u>CLELV1 - LS-1-BU</u>				X			X ^{ext}							HOLD

7 Turnaround Time Requested (TAT) (please circle): Normal Rush

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed:

Rush results requested by (please circle): Phone Fax E-mail

Phone #: _____ Fax #: _____

E-mail address: _____

8 Data Package Options (please circle if required)

Type I (validation/NJ Reg)

TX TRRP-13

SDG Complete?

Yes No

Type II (Tier II)

MA MCP CT RCP

Type III (Reduced NJ)

Site-specific QC (MS/MSD/Dup)? Yes No

Type IV (CLP SOW)

(If yes, indicate QC sample and submit triplicate volume.)

Type VI (Raw Data Only)

Internal COC Required? Yes / No

Relinquished by: <i>Regan McMahis</i>	Date <u>10-10-06</u>	Time <u>1405</u>	Received by:	Date <u>10/11/06</u>	Time <u>0915</u>
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
 Acct. # 12098 Group# 1009271 sample # 4886256-60

COC # 0130305

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>Cham Hill</u> Acct. #: _____ Project Name#: <u>GREAT LAKES</u> PWSID #: _____ Project Manager: <u>ERIN MOSLEY</u> P.O.#: _____ Sampler: <u>REGAN MCKNELLIS</u> Quote #: _____ Name of state where samples were collected: <u>OH</u>			5 Analyses Requested 4 Preservation Codes										6 For Lab Use Only FSC: _____ SCR#: _____ Preservation Codes H=HCl T=Thiosulfate N=NHO ₃ B=NaOH S=H ₂ SO ₄ O=Other										
2 Sample Identification			Date Collected	Time Collected	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
					Composite	Soil	Water	Oil	Dust	Gas	Plant	Path	TOT. METALS	% Solids	Hg Dis.	METALS	Grain Size	Specific Gravity	TOC	DOC	BOD/COD	TSS	Remarks
<u>CLECY4-DS-1</u> <u>CLECY4- DS-1-D</u> <u>CLECY4- DS-1-BL</u>			10-9-06	1600	X	X						X	X	X									
						X	X																
						X	X																
7 Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone _____ Fax _____ E-mail _____ Phone #: _____ Fax #: _____ E-mail address: _____			Relinquished by: <u>Regan McKnellis</u>					Date	Time	Received by: <u>14:50</u>					Date	Time							
			Relinquished by: <u>Regan McKnellis</u>					Date	Time	Received by: <u></u>					Date	Time							
			Relinquished by: <u>Regan McKnellis</u>					Date	Time	Received by: <u></u>					Date	Time							
8 Data Package Options (please circle if required)			SDG Complete? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Relinquished by: <u>Regan McKnellis</u>					Date	Time	Received by: <u></u>					Date	Time					
Type I (validation/NJ Reg) Type II (Tier II) <u>Type III (Reduced NJ)</u> Type IV (CLP SOW) Type VI (Raw Data Only)			TX TRRP-13 MA MCP CT RCP		Site-specific QC (MS/MSD/Dup)? Yes <input checked="" type="checkbox"/> <small>If yes, indicate QC sample and submit triplicate volume.</small>					Date	Time	Received by: <u>Regan McKnellis</u>					Date	Time					
			Internal COC Required? Yes <input checked="" type="checkbox"/> <u>Regan McKnellis</u>		Relinquished by: <u>Regan McKnellis</u>					Date	Time	Received by: <u>Regan McKnellis</u>					Date	Time					

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1009277. Samples arrived at the laboratory on Wednesday, October 11, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLELV1-SS-1 Unspiked Composite Solid Sample	4886323
CLELV1-SS-1 Matrix Spike Composite Solid Sample	4886324
CLELV1-SS-1-D Composite Solid Sample	4886325

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4886323
**CLELV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1SS1 SDG#: SWE12-01BKG

CAT No.	Analysis Name	CAS Number	Dry	Method	Dilution Factor
			Result	Detection Limit	
00159	Mercury	7439-97-6	0.0120 U	0.0120	mg/kg
01643	Aluminum	7429-90-5	1,090.	3.90	mg/kg
01650	Calcium	7440-70-2	263,000.	148.	mg/kg
01654	Iron	7439-89-6	1,700.	5.48	mg/kg
01657	Magnesium	7439-95-4	97,800.	22.1	mg/kg
06125	Arsenic	7440-38-2	1.02 J	0.198	mg/kg
06128	Cadmium	7440-43-9	0.244 J	0.0442	mg/kg
06131	Chromium	7440-47-3	4.33	0.360	mg/kg
06133	Copper	7440-50-8	1.22	0.372	mg/kg
06135	Lead	7439-92-1	1.89	0.174	mg/kg
06139	Nickel	7440-02-0	4.54	0.581	mg/kg
06141	Selenium	7782-49-2	0.866 J	0.430	mg/kg
06966	Silver	7440-22-4	0.198 U	0.198	mg/kg
06972	Zinc	7440-66-6	9.32	0.762	mg/kg
00111	Moisture	n.a.	14.0	0.50	%
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					
05895	Total Cyanide (solid)	57-12-5	0.20 U	0.20	mg/kg
06569	Bulk Density	n.a.	0.99	0.080	g/cc

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	97.1	0.50	% Passing	1
07139	3.35 mm	n.a.	91.9	0.50	% Passing	1
07140	2.36 mm	n.a.	85.0	0.50	% Passing	1
07141	1.18 mm	n.a.	82.3	0.50	% Passing	1
07142	0.6 mm	n.a.	78.6	0.50	% Passing	1
07143	0.3 mm	n.a.	76.8	0.50	% Passing	1
07144	0.15 mm	n.a.	74.4	0.50	% Passing	1
07145	0.075 mm	n.a.	61.6	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4886323

**CLELV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1SS1 SDG#: SWE12-01BKG

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	U	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50	% Passing	1

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analysis		Dilution Factor
					Analyst		
00159	Mercury	SW-846 7471A	1	10/17/2006 10:21	Damary Valentin		1
01643	Aluminum	SW-846 6010B	1	10/17/2006 04:10	Suzette L Lehman		1
01650	Calcium	SW-846 6010B	1	10/18/2006 08:24	Joanne M Gates		10
01654	Iron	SW-846 6010B	1	10/17/2006 04:10	Suzette L Lehman		1
01657	Magnesium	SW-846 6010B	1	10/18/2006 08:24	Joanne M Gates		10
06125	Arsenic	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom		10
06128	Cadmium	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom		10
06131	Chromium	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom		10
06133	Copper	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom		10
06135	Lead	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom		10
06139	Nickel	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom		10
06141	Selenium	SW-846 6020	1	10/18/2006 16:06	Parker D Lindstrom		10
06966	Silver	SW-846 6010B	1	10/17/2006 04:10	Suzette L Lehman		1
06972	Zinc	SW-846 6010B	1	10/17/2006 04:10	Suzette L Lehman		1
00111	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher		1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:11	Courtney A Shoff		1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith		1
07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff		1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/16/2006 18:45	Annamaria Stipkovits		1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/16/2006 22:10	Annamaria Stipkovits		1
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop		1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4886323

CLELV1-SS-1 Unspiked Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1SS1 SDG#: SWE12-01BKG
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1 10/16/2006 20:20 Annamaria Stipkovits 1

Lancaster Laboratories Sample No. SW 4886324
**CLELV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1SS1 SDG#: SWE12-01MS

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
00159	Mercury	7439-97-6	0.187	0.0115	mg/kg	1
01643	Aluminum	7429-90-5	1,450.	3.90	mg/kg	1
01650	Calcium	7440-70-2	260,000.	148.	mg/kg	10
01654	Iron	7439-89-6	1,960.	5.48	mg/kg	1
01657	Magnesium	7439-95-4	100,000.	22.1	mg/kg	10
06125	Arsenic	7440-38-2	2.18 J	0.198	mg/kg	10
06128	Cadmium	7440-43-9	0.785	0.0442	mg/kg	10
06131	Chromium	7440-47-3	10.4	0.360	mg/kg	10
06133	Copper	7440-50-8	6.98	0.372	mg/kg	10
06135	Lead	7439-92-1	3.65	0.174	mg/kg	10
06139	Nickel	7440-02-0	9.73	0.581	mg/kg	10
06141	Selenium	7782-49-2	2.15 J	0.430	mg/kg	10
06966	Silver	7440-22-4	6.49	0.198	mg/kg	1
06972	Zinc	7440-66-6	70.5	0.762	mg/kg	1
00118	Moisture	n.a.	14.0	0.50	%	1
05895	Total Cyanide (solid)	57-12-5	1.6	0.21	mg/kg	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/17/2006 10:27	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	10/17/2006 04:26	Suzette L Lehman	1
01650	Calcium	SW-846 6010B	1	10/18/2006 08:35	Joanne M Gates	10
01654	Iron	SW-846 6010B	1	10/17/2006 04:26	Suzette L Lehman	1
01657	Magnesium	SW-846 6010B	1	10/18/2006 08:35	Joanne M Gates	10
06125	Arsenic	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom	10
06131	Chromium	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom	10
06133	Copper	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom	10
06135	Lead	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom	10
06139	Nickel	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom	10
06141	Selenium	SW-846 6020	1	10/18/2006 16:19	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	10/17/2006 04:26	Suzette L Lehman	1
06972	Zinc	SW-846 6010B	1	10/17/2006 04:26	Suzette L Lehman	1
00118	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher	1

Lancaster Laboratories Sample No. SW 4886324**CLELV1-SS-1 Matrix Spike Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1SS1	SDG#:	SWE12-01MS						
05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:12	Courtney A Shoff	1		
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/16/2006 18:45	Annamaria Stipkovits	1		
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/16/2006 22:10	Annamaria Stipkovits	1		
05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1		
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/16/2006 20:20	Annamaria Stipkovits	1		

Lancaster Laboratories Sample No. SW 4886325
**CLELV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00

by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1S1D SDG#: SWE12-02FD*

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
00159	Mercury	7439-97-6	0.0135 U	0.0135	mg/kg	1
01643	Aluminum	7429-90-5	1,070.	4.23	mg/kg	1
01650	Calcium	7440-70-2	260,000.	160.	mg/kg	10
01654	Iron	7439-89-6	1,900.	5.94	mg/kg	1
01657	Magnesium	7439-95-4	100,000.	24.0	mg/kg	10
06125	Arsenic	7440-38-2	1.11 J	0.212	mg/kg	10
06128	Cadmium	7440-43-9	0.267 J	0.0475	mg/kg	10
06131	Chromium	7440-47-3	4.66	0.387	mg/kg	10
06133	Copper	7440-50-8	1.29	0.400	mg/kg	10
06135	Lead	7439-92-1	2.15	0.187	mg/kg	10
06139	Nickel	7440-02-0	4.44	0.625	mg/kg	10
06141	Selenium	7782-49-2	0.842 J	0.462	mg/kg	10
06966	Silver	7440-22-4	0.215 U	0.215	mg/kg	1
06972	Zinc	7440-66-6	9.90	0.826	mg/kg	1
00111	Moisture	n.a.	22.3	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.23 U	0.23	mg/kg	1
06569	Bulk Density	n.a.	1.94	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.5	0.50	% Passing	1
07139	3.35 mm	n.a.	98.0	0.50	% Passing	1
07140	2.36 mm	n.a.	92.2	0.50	% Passing	1
07141	1.18 mm	n.a.	89.3	0.50	% Passing	1
07142	0.6 mm	n.a.	84.2	0.50	% Passing	1
07143	0.3 mm	n.a.	80.7	0.50	% Passing	1
07144	0.15 mm	n.a.	76.2	0.50	% Passing	1
07145	0.075 mm	n.a.	62.3	0.50	% Passing	1
07146	0.064 mm	n.a.	0.50 U	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4886325

**CLELV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff

Reported: 10/28/2006 at 21:39

75 Arlington Street

Discard: 11/28/2006

Ninth Floor

Boston MA 02116

E1S1D SDG#: SWE12-02FD*

CAT	No.	Analysis Name	CAS Number	Dry		Method	Dilution Factor
				Dry Result	Detection Limit		
	07147	0.05 mm	n.a.	0.50	U	0.50	%
	07148	0.02 mm	n.a.	0.50	U	0.50	%
	07149	0.005 mm	n.a.	0.50	U	0.50	%
	07150	0.002 mm	n.a.	0.50	U	0.50	%
	07151	0.001 mm	n.a.	0.50	U	0.50	%

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 0.075 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor	Analysis
	00159	Mercury	SW-846 7471A	1	10/17/2006 10:30	Damary Valentin	1	
	01643	Aluminum	SW-846 6010B	1	10/17/2006 04:41	Suzette L Lehman	1	
	01650	Calcium	SW-846 6010B	1	10/18/2006 08:46	Joanne M Gates	10	
	01654	Iron	SW-846 6010B	1	10/17/2006 04:41	Suzette L Lehman	1	
	01657	Magnesium	SW-846 6010B	1	10/18/2006 08:46	Joanne M Gates	10	
	06125	Arsenic	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06128	Cadmium	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06131	Chromium	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06133	Copper	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06135	Lead	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06139	Nickel	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06141	Selenium	SW-846 6020	1	10/18/2006 16:31	Parker D Lindstrom	10	
	06966	Silver	SW-846 6010B	1	10/17/2006 04:41	Suzette L Lehman	1	
	06972	Zinc	SW-846 6010B	1	10/17/2006 04:41	Suzette L Lehman	1	
	00111	Moisture	EPA 160.3 modified	1	10/12/2006 18:04	Scott W Freisher	1	
	05895	Total Cyanide (solid)	SW-846 9012A	1	10/13/2006 15:14	Courtney A Shoff	1	
	06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/13/2006 04:00	Daniel S Smith	1	
	07103	Grain Size to 1 um	ASTM D422	1	10/11/2006 19:40	Luz M Groff	1	
	05708	SW SW846 ICP Digest	SW-846 3050B	1	10/16/2006 18:45	Annamaria Stipkovits	1	
	05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/16/2006 22:10	Annamaria Stipkovits	1	
	05896	Cyanide Solid Distillation	SW-846 9012A	1	10/12/2006 10:30	Nancy J Shoop	1	



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3

Lancaster Laboratories Sample No. SW 4886325

CLELV1-SS-1-D Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/10/2006 07:00 by RM

Account Number: 12098

Submitted: 10/11/2006 09:15

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 10/28/2006 at 21:39

Discard: 11/28/2006

E1S1D SDG#: SWE12-02FD*
06150 ICP/MS SW-846 Solid digest SW-846 3050B

1 10/16/2006 20:20 Annamaria Stipkovits 1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:39 PM

Group Number: 1009277

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06285102201B Total Cyanide (solid)			Sample number(s): 4886323-4886325 0.18 U 0.18 mg/kg	100		90-110		
Batch number: 06285820004B Moisture Moisture			Sample number(s): 4886323-4886325 100 100			99-101 99-101		
Batch number: 062895708001 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4886323-4886325 3.35 U 3.35 mg/kg 12.7 U 12.7 mg/kg 4.71 U 4.71 mg/kg 1.90 U 1.90 mg/kg 0.170 U 0.170 mg/kg 0.655 U 0.655 mg/kg	130 107 130 107 107 98		91-151 89-121 68-158 90-120 90-126 85-110		
Batch number: 062895711001 Mercury			Sample number(s): 4886323-4886325 0.0105 U 0.0105 mg/kg	94		66-133		
Batch number: 062896150001A Arsenic Cadmium Chromium Copper Lead Selenium			Sample number(s): 4886323-4886325 0.0170 U 0.0170 mg/kg 0.0038 U 0.0038 mg/kg 0.178 J 0.0310 mg/kg 0.0540 J 0.0320 mg/kg 0.0497 J 0.0150 mg/kg 0.0370 U 0.0370 mg/kg	108 110 105 110 103 107		77-123 79-121 78-122 81-119 79-121 74-126		
Batch number: 062896150001C Nickel			Sample number(s): 4886323-4886325 0.0500 U 0.0500 mg/kg	115		81-119		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06285102201B Total Cyanide (solid)			Sample number(s): 4886323-4886325 UNSPK: 4886323 BKG: 4886323 28* 59-124		0.17 U	0.18 U	0 (1)	17
Batch number: 06285820004B Moisture Moisture			Sample number(s): 4886323-4886325 BKG: 4886323 14.0 14.0		14.0	14.0	0	15
Batch number: 06286656901A Bulk Density			Sample number(s): 4886323, 4886325 BKG: P886259 0.78		0.77	1 (1)		20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/28/06 at 09:39 PM

Group Number: 1009277

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup Max RPD</u>
Batch number: 062895708001			Sample number(s): 4886323-4886325 UNSPK: 4886323 BKG: 4886323					
Aluminum	(2)	(2)	75-125	1 20	935. 933.	0		20
Calcium	(2)	(2)	75-125	2 20	226,000. 218,000.	3		20
Iron	(2)	(2)	75-125	2 20	1,460. 1,540.	5		20
Magnesium	(2)	(2)	75-125	0 20	84,100. 85,400.	2		20
Silver	112	112	75-125	0 20	0.170 U 0.170 U	15 (1)		20
Zinc	105	106	75-125	1 20	8.02 8.92	11 (1)		20
Batch number: 062895711001			Sample number(s): 4886323-4886325 UNSPK: 4886323 BKG: 4886323					
Mercury	103	107	80-120	4 20	0.0103 U 0.0103 U	110* (1)		20
Batch number: 062896150001A			Sample number(s): 4886323-4886325 UNSPK: 4886323 BKG: 4886323					
Arsenic	100	112	70-130	6 20	0.875 J 0.886 J	1 (1)		20
Cadmium	93	102	75-125	7 20	0.210 J 0.208 J	1 (1)		20
Chromium	105	121	75-125	9 20	3.72 3.79	2 (1)		20
Copper	99	107	75-125	6 20	1.04 1.14	9 (1)		20
Lead	101	112	75-125	5 20	1.62 1.60	2 (1)		20
Selenium	110	123	75-130	7 20	0.745 J 0.775 J	4 (1)		20
Batch number: 062896150001C			Sample number(s): 4886323-4886325 UNSPK: 4886323 BKG: 4886323					
Nickel	89	99	75-125	6 20	3.91 3.69	6 (1)		20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only
Acct. # 12098 Group# 1009277 Sample # 4886323-25

COC # 0130307

Please print. Instructions on reverse side correspond with circled numbers

<p>1 Client: <u>CHAM HILL</u> Acct. #: _____</p> <p>Project Name/#: <u>GREAT LAKES</u> PWSID #: _____</p> <p>Project Manager: <u>ERIN MOSLEY</u> P.O.#: _____</p> <p>Sampler: <u>REGAN McMORRIS</u> Quote #: _____</p> <p>Name of state where samples were collected: <u>OH</u></p>				<p>4 Matrix</p> <table border="1"> <tr> <td><input type="checkbox"/> Soil</td> <td><input type="checkbox"/> Water</td> <td><input type="checkbox"/> Other</td> </tr> <tr> <td><input type="checkbox"/> Check if Applicable</td> <td><input type="checkbox"/> NPDES</td> <td></td> </tr> </table> <p>5 Analyses Requested</p> <table border="1"> <thead> <tr> <th colspan="6">Preservation Codes</th> </tr> <tr> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>3</td> <td>Path's</td> <td>TOT. METALS, CN Hg, Tl, Saver</td> <td>DIS. METALS, CN Hg</td> <td>BULK DENSITY GRAIN SIZE</td> <td>SPECIFIC GRAVITY</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>TOC</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>DOC</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>BOD/COD</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>TSS</td> </tr> </tbody> </table>	<input type="checkbox"/> Soil	<input type="checkbox"/> Water	<input type="checkbox"/> Other	<input type="checkbox"/> Check if Applicable	<input type="checkbox"/> NPDES		Preservation Codes												3	Path's	TOT. METALS, CN Hg, Tl, Saver	DIS. METALS, CN Hg	BULK DENSITY GRAIN SIZE	SPECIFIC GRAVITY						TOC						DOC						BOD/COD						TSS	<p>For Lab Use Only</p> <p>FSC: _____</p> <p>SCR#: _____</p> <p>6 Preservation Codes</p> <p>H=HCl T=Thiosulfate N=NHO₃ B=NaOH S=H₂SO₄ O=Other</p>							
<input type="checkbox"/> Soil	<input type="checkbox"/> Water	<input type="checkbox"/> Other																																																										
<input type="checkbox"/> Check if Applicable	<input type="checkbox"/> NPDES																																																											
Preservation Codes																																																												
3	Path's	TOT. METALS, CN Hg, Tl, Saver	DIS. METALS, CN Hg	BULK DENSITY GRAIN SIZE	SPECIFIC GRAVITY																																																							
					TOC																																																							
					DOC																																																							
					BOD/COD																																																							
					TSS																																																							
				<p>Remarks</p> <p>MATRIX SPIKE FOR METALS, CN, HG</p> <p>HOLD</p> <p>MATRIX SPIKE FOR METALS, CN, HG</p> <p>MATRIX SPIKE FOR METALS, CN, HG</p> <p>HOLD</p>																																																								
<table border="1"> <thead> <tr> <th>Sample Identification</th> <th>Date Collected</th> <th>Time Collected</th> <th>Grab Composite</th> <th>Total # of Containers</th> </tr> </thead> <tbody> <tr> <td><u>CLELV1-DS-1</u></td> <td><u>10-10-06</u></td> <td><u>0900</u></td> <td>X</td> <td>2</td> </tr> <tr> <td><u>CLELV1-DS-1-D</u></td> <td></td> <td>↓</td> <td>X</td> <td>2</td> </tr> <tr> <td><u>CLELV1-DS-1-BUL</u></td> <td></td> <td>↓</td> <td>X</td> <td>2</td> </tr> <tr> <td><u>CLELV1-SS-1</u></td> <td></td> <td><u>0700</u></td> <td>X</td> <td>2</td> </tr> <tr> <td><u>CLELV1-SS-1-D</u></td> <td></td> <td>↓</td> <td>X</td> <td>2</td> </tr> <tr> <td><u>CLELV1-SS-1-BUL</u></td> <td></td> <td>↓</td> <td>X</td> <td>2</td> </tr> <tr> <td><u>CLELV1-SS-2</u></td> <td></td> <td></td> <td>X</td> <td>1</td> </tr> <tr> <td><u>CLELV1-LS-1</u></td> <td></td> <td><u>0700</u></td> <td>X</td> <td>1</td> </tr> <tr> <td><u>CLELV1-LS-1-D</u></td> <td></td> <td>↓</td> <td>X</td> <td>1</td> </tr> <tr> <td><u>CLELV1-LS-1-BUL</u></td> <td></td> <td>↓</td> <td>X</td> <td>1</td> </tr> </tbody> </table>				Sample Identification	Date Collected	Time Collected	Grab Composite	Total # of Containers	<u>CLELV1-DS-1</u>	<u>10-10-06</u>	<u>0900</u>	X	2	<u>CLELV1-DS-1-D</u>		↓	X	2	<u>CLELV1-DS-1-BUL</u>		↓	X	2	<u>CLELV1-SS-1</u>		<u>0700</u>	X	2	<u>CLELV1-SS-1-D</u>		↓	X	2	<u>CLELV1-SS-1-BUL</u>		↓	X	2	<u>CLELV1-SS-2</u>			X	1	<u>CLELV1-LS-1</u>		<u>0700</u>	X	1	<u>CLELV1-LS-1-D</u>		↓	X	1	<u>CLELV1-LS-1-BUL</u>		↓	X	1		
Sample Identification	Date Collected	Time Collected	Grab Composite	Total # of Containers																																																								
<u>CLELV1-DS-1</u>	<u>10-10-06</u>	<u>0900</u>	X	2																																																								
<u>CLELV1-DS-1-D</u>		↓	X	2																																																								
<u>CLELV1-DS-1-BUL</u>		↓	X	2																																																								
<u>CLELV1-SS-1</u>		<u>0700</u>	X	2																																																								
<u>CLELV1-SS-1-D</u>		↓	X	2																																																								
<u>CLELV1-SS-1-BUL</u>		↓	X	2																																																								
<u>CLELV1-SS-2</u>			X	1																																																								
<u>CLELV1-LS-1</u>		<u>0700</u>	X	1																																																								
<u>CLELV1-LS-1-D</u>		↓	X	1																																																								
<u>CLELV1-LS-1-BUL</u>		↓	X	1																																																								
<p>7 Turnaround Time Requested (TAT) (please circle): <input checked="" type="radio"/> Normal <input type="radio"/> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)</p> <p>Date results are needed: _____</p> <p>Rush results requested by (please circle): Phone Fax E-mail</p> <p>Phone #: _____ Fax #: _____</p> <p>E-mail address: _____</p>				<p>Relinquished by: <u>Lynne Morris</u> Date <u>10-10-06</u> Time <u>1455</u> Received by: _____ Date _____ Time _____</p> <p>Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____</p> <p>Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____</p> <p>Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____</p> <p>Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____</p>																																																								
<p>8 Data Package Options (please circle if required)</p> <p>Type I (validation/NJ Reg)</p> <p>Type II (Tier II)</p> <p><u>Type III (Reduced NJ)</u></p> <p>Type IV (CLP SOW)</p> <p>Type VI (Raw Data Only)</p>				<p>SDG Complete? Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>TX TRRP-13 MA MCP CT RCP Site-specific QC (MS/MSD/Dup)? Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>If yes, indicate QC sample and submit triplicate volume.</p> <p>Internal COC Required? Yes / <input checked="" type="radio"/> No</p>																																																								

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1009874. Samples arrived at the laboratory on Saturday, October 14, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
WCOALLKE Water Sample	4889617
WCOALLKE Filtered Water Sample	4889618
ECOALLKE Water Sample	4889619
ECOALLKE Filtered Water Sample	4889620
LIME_LKE Water Sample	4889621
LIME_LKE Filtered Water Sample	4889622
IRON_LKE Water Sample	4889623
IRON_LKE Filtered Water Sample	4889624

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
ELECTRONIC COPY TO	CH2M HILL	Attn: James Maugahn
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. WW 4889617
**WCOALLKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15

by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

WCOAL SDG#: SWE13-01

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l
01743	Aluminum	7429-90-5	0.267	0.0802	mg/l
01750	Calcium	7440-70-2	29.3	0.104	mg/l
01754	Iron	7439-89-6	0.204	0.0522	mg/l
01757	Magnesium	7439-95-4	7.85	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0015 J	0.00067	mg/l
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l
06031	Chromium	7440-47-3	0.0017 J	0.00026	mg/l
06033	Copper	7440-50-8	0.0032	0.00020	mg/l
06035	Lead	7439-92-1	0.00071 J	0.000047	mg/l
06039	Nickel	7440-02-0	0.0031	0.00043	mg/l
06041	Selenium	7782-49-2	0.00075 J	0.00050	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l
00235	Biochemical Oxygen Demand	n.a.	1.9 U	1.9	mg/l
00273	Total Organic Carbon	n.a.	5.2	1.0	mg/l
04001	Chemical Oxygen Demand	n.a.	35.1 J	12.8	mg/l
07547	Dissolved Organic Carbon	n.a.	5.0	1.0	mg/l
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l
08357	Selected SVOAs by 8270 SIM				
08362	Naphthalene	91-20-3	0.051	0.01	ug/l
08368	Fluorene	86-73-7	0.014 J	0.01	ug/l
08369	Phenanthrene	85-01-8	0.041 J	0.01	ug/l
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l
08372	Fluoranthene	206-44-0	0.064	0.01	ug/l
08373	Pyrene	129-00-0	0.079	0.02	ug/l
08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l
08375	Chrysene	218-01-9	0.02 U	0.02	ug/l
08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l

The recovery of anthracene was outside of QC limits in the LCSD. Sufficient sample was unavailable to repeat the analysis.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. WW 4889617
**WCOALLKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

WCOAL SDG#: SWE13-01

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00259	Mercury	SW-846 7470A	1	10/18/2006 08:23	Damary Valentin	1
	01743	Aluminum	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	01750	Calcium	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	01754	Iron	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	01757	Magnesium	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	06025	Arsenic	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06028	Cadmium	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06031	Chromium	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06033	Copper	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06035	Lead	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06039	Nickel	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	06041	Selenium	SW-846 6020	1	10/19/2006 15:36	Jayme E Curet	1
	07066	Silver	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	07072	Zinc	SW-846 6010B	1	10/18/2006 09:09	Joanne M Gates	1
	00235	Biochemical Oxygen Demand	EPA 405.1	1	10/14/2006 11:21	Christopher M Cunningham	1
	00273	Total Organic Carbon	EPA 415.1	1	10/20/2006 09:55	James S Mathiot	1
	04001	Chemical Oxygen Demand	EPA 410.4	1	10/18/2006 08:45	Susan A Engle	1
	07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/18/2006 11:16	James S Mathiot	1
	08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006 20:56	Courtney A Shoff	1
	08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/18/2006 11:24	Joseph M Gambler	1
	00813	BNA Water Extraction	SW-846 3510C	1	10/17/2006 17:30	JoElla L Rice	1
	01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006 02:10	Helen L Schaeffer	1
	05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
	06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006 19:00	James L Mertz	1
	08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006 10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889618
**WCOALLKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FWCOA SDG#: SWE13-02

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	29.0	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	7.83	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0011 J	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00099 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0011	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0022	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00083 J	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:25	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 12:46	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:12	Joanne M Gates	1

Lancaster Laboratories Sample No. WW 4889618

**WCOALLKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FWCOA	SDG#:	SWE13-02						
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006	20:57	Courtney A Shoff	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006	02:10	Helen L Schaeffer	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006	18:30	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006	10:15	Megersa Deyessa	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006	10:35	Nancy J Shoop	1	

Lancaster Laboratories Sample No. WW 4889619
**ECOALLKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

 Submitted: 10/14/2006 10:10
 Reported: 12/07/2006 at 10:41
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

ECOAL SDG#: SWE13-03

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.439	0.0802	mg/l	1	
01750	Calcium	7440-70-2	31.7	0.104	mg/l	1	
01754	Iron	7439-89-6	0.757	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	8.48	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0035	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0023	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0038	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.0019	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0058	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.0010 J	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	1.9 U	1.9	mg/l	1	
00273	Total Organic Carbon	n.a.	3.7	1.0	mg/l	1	
04001	Chemical Oxygen Demand	n.a.	18.7 J	12.8	mg/l	1	
07547	Dissolved Organic Carbon	n.a.	4.0	1.0	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analysis		Dilution Factor
					Analyst		
00259	Mercury	SW-846 7470A	1	10/18/2006 08:26	Damary Valentin		1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates		1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates		1
01754	Iron	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates		1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates		1
06025	Arsenic	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06028	Cadmium	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06031	Chromium	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06033	Copper	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06035	Lead	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06039	Nickel	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1
06041	Selenium	SW-846 6020	1	10/19/2006 15:41	Jayme E Curet		1

Lancaster Laboratories Sample No. WW 4889619
**ECOALLKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

ECOAL SDG#: SWE13-03

07066	Silver	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:16	Joanne M Gates	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/14/2006 11:21	Christopher M Cunningham	1
00273	Total Organic Carbon	EPA 415.1	1	10/20/2006 10:03	James S Mathiot	1
04001	Chemical Oxygen Demand	EPA 410.4	1	10/18/2006 08:45	Susan A Engle	1
07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/18/2006 11:27	James S Mathiot	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006 19:29	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006 02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006 19:00	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006 10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889620
**ECOALLKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FECOA SDG#: SWE13-04

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	27.8	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	7.39	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00097 J	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00087 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0015	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0033	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0011 J	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:27	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 12:51	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:20	Joanne M Gates	1

Lancaster Laboratories Sample No. WW 4889620**ECOALLKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FEKOA	SDG#:	SWE13-04					
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006	19:30	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006	02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006	18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006	10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006	10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889621
**LIME_LKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15

by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMEL SDG#: SWE13-05

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0813 J	0.0802	mg/l	1	
01750	Calcium	7440-70-2	32.3	0.104	mg/l	1	
01754	Iron	7439-89-6	0.109 J	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	8.46	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0015 J	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0017 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0024	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00045 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0029	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00086 J	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

The sample received for the metals analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:28	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 12:56	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4889621
**LIME_LKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMEL SDG#: SWE13-05

07066	Silver	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:24	Joanne M Gates	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006 19:31	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006 02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006 10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006 10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889622**LIME_LKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FLIME SDG#: SWE13-06

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	30.6	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	7.95	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0013 J	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00097 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0016	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000051 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0027	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00081 J	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:31	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 13:01	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:27	Joanne M Gates	1

Lancaster Laboratories Sample No. WW 4889622**LIME_LKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FLIME	SDG#:	SWE13-06					
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006	19:35	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006	02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006	18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006	10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006	10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889623
**IRON_LKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

 Submitted: 10/14/2006 10:10
 Reported: 12/07/2006 at 10:41
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

IRONL SDG#: SWE13-07

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	31.2	0.104	mg/l 1
01754	Iron	7439-89-6	1.25	0.0522	mg/l 1
01757	Magnesium	7439-95-4	8.06	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0028	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00094 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0020	0.00020	mg/l 1
06035	Lead	7439-92-1	0.00038 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0027	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00088 J	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

The sample received for the metals analysis was subsampled from an unpreserved container.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:33	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 13:06	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4889623
**IRON_LKE Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

IRONL SDG#: SWE13-07

07066	Silver	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:31	Joanne M Gates	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/20/2006 19:36	Courtney A Shoff	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/17/2006 02:10	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/17/2006 18:30	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/18/2006 10:15	Megersa Deyessa	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/20/2006 10:35	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4889624**IRON_LKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:41

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

FIRON SDG#: SWE13-08*

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	28.5	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	7.33	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0026	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0013 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0017	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000062 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0026	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0010 J	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/18/2006 08:35	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1
01750	Calcium	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1
01754	Iron	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1
01757	Magnesium	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1
06025	Arsenic	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06033	Copper	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06035	Lead	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
06041	Selenium	SW-846 6020	1	10/19/2006 13:11	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1
07072	Zinc	SW-846 6010B	1	10/18/2006 09:35	Joanne M Gates	1

Lancaster Laboratories Sample No. WW 4889624**IRON_LKE Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/13/2006 13:15 by RL

Account Number: 12098

Submitted: 10/14/2006 10:10

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 10:41

Discard: 01/07/2007

FIRON SDG#: SWE13-08*

08255 Total Cyanide (water) SW-846 9012A

01848 WW SW846 ICP Digest (tot SW-846 3005A
rec)

05713 WW SW846 Hg Digest SW-846 7470A

06050 ICP/MS SW-846 Water SW-846 3010A modified

08256 Cyanide Water Distillation SW-846 9012A

1 10/20/2006 19:37 Courtney A Shoff 1
1 10/17/2006 02:10 Helen L Schaeffer 1

1 10/17/2006 18:30 Nelli S Markaryan 1

1 10/18/2006 10:15 Megersa Deyessa 1

1 10/20/2006 10:35 Nancy J Shoop 1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:41 AM

Group Number: 1009874

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06287023501A Biochemical Oxygen Demand			Sample number(s): 4889617, 4889619					
				101	107	85-115	6	8
Batch number: 062901848005 Aluminum Calcium Iron Magnesium Silver Zinc			Sample number(s): 4889617-4889624					
	0.0802 U	0.0802	mg/l	100		90-112		
	0.104 U	0.104	mg/l	104		90-112		
	0.0522 U	0.0522	mg/l	103		90-112		
	0.0135 U	0.0135	mg/l	101		89-110		
	0.0016 U	0.0016	mg/l	101		90-118		
	0.0081 U	0.0081	mg/l	103		90-111		
Batch number: 062905713002 Mercury			Sample number(s): 4889617-4889624					
	0.00035	0.00005	mg/l	104		80-120		
		6						
Batch number: 06290WAD026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene			Sample number(s): 4889617					
	0.01 U	0.01	ug/l	82	80	70-111	2	30
	0.01 U	0.01	ug/l	85	78	75-115	8	30
	0.01 U	0.01	ug/l	81	82	76-114	2	30
	0.02 U	0.02	ug/l	68	65*	67-113	5	30
	0.01 U	0.01	ug/l	84	83	69-123	1	30
	0.02 U	0.02	ug/l	83	81	76-114	3	30
	0.02 U	0.02	ug/l	77	81	76-111	5	30
	0.02 U	0.02	ug/l	80	80	76-112	1	30
	0.02 U	0.02	ug/l	64	67	64-114	5	30
	0.02 U	0.02	ug/l	62	64	60-126	3	30
Batch number: 06291049512A Dissolved Organic Carbon			Sample number(s): 4889617, 4889619					
	1.0 U	1.0	mg/l	103		80-120		
Batch number: 06291400102B Chemical Oxygen Demand			Sample number(s): 4889617, 4889619					
				104		94-110		
Batch number: 062916050002A Arsenic			Sample number(s): 4889618, 4889620-4889624					
	0.00067	0.00067	mg/l	106		80-120		
	U							
Cadmium	0.000099	0.00009	mg/l	108		80-120		
	U	9						
Chromium	0.00042	0.00026	mg/l	112		80-120		
	J							
Copper	0.00020	0.00020	mg/l	115		80-120		
	U							
Lead	0.000047	0.00004	mg/l	113		80-120		
	U	7						
Nickel	0.00043	0.00043	mg/l	110		80-120		
	U							
Selenium	0.00050	0.00050	mg/l	109		80-120		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:41 AM

Group Number: 1009874

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 062916050004A Arsenic	U	0.00067	0.00067 mg/l	97		80-120		
Cadmium	U	0.000099	0.00009 mg/l	98		80-120		
Chromium	U	0.00031	0.00026 mg/l	107		80-120		
Lead	J	0.000047	0.00004 mg/l	103		80-120		
Nickel	U	0.00043	0.00043 mg/l	105		80-120		
Selenium	U	0.00050	0.00050 mg/l	93		80-120		
Batch number: 062916050004C Copper	U	0.00020	0.00020 mg/l	107		80-120		
Batch number: 06293049511A Total Organic Carbon	1.0 U	1.0	mg/l	97		80-120		
Batch number: 06293117101A Total Cyanide (water)	0.0050 U	0.0050	mg/l	101		90-110		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06287023501A Biochemical Oxygen Demand	110	115	67-144	3	9 347.	339.	2	9
Batch number: 062901848005 Aluminum	163*	168*	75-125	3 20	0.0992 J 0.0802 U	200* (1)	20	
Calcium	(2)	(2)	75-125	2 20	1,710. 1,680.	1	20	
Iron	88	85	75-125	2 20	0.554 0.577	4 (1)	20	
Magnesium	(2)	(2)	75-125	8 20	2,400. 2,350.	2	20	
Silver	189*	189*	75-125	0 20	0.0016 U 0.0016 U	70* (1)	20	
Zinc	91	83	75-125	9 20	0.0406 U 0.0406 U	-64 (1)	20	
Batch number: 062905713002 Mercury	107	108	80-120	1 20	0.00028 0.00028	200* (1)	20	
Batch number: 06291049512A Dissolved Organic Carbon	103		66-137		7.8 J 7.5 J	5* (1)	4	
Batch number: 06291400102B Chemical Oxygen Demand	98		90-110		21.1 J 18.7 J	12* (1)	5	

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:41 AM

Group Number: 1009874

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 062916050002A			Sample number(s): 4889618, 4889620-4889624 UNSPK:			P888169 BKG: P888169			
Arsenic	108	105	75-125	3	20	0.00067 U	0.00067 U	219* (1)	20
Cadmium	109	105	75-125	4	20	0.00044 J	0.00045 J	3 (1)	20
Chromium	110	107	75-125	3	20	0.00056 J	0.00055 J	4 (1)	20
Copper	117	112	75-125	4	20	0.00060 J	0.00058 J	3 (1)	20
Lead	114	109	75-125	4	20	0.000065 J	0.000061 J	6 (1)	20
Nickel	111	106	75-125	4	20	0.0027 U	0.0027 U	1 (1)	20
Selenium	110	106	75-125	3	20	0.00050 U	0.00050 U	19 (1)	20
Batch number: 062916050004A			Sample number(s): 4889617, 4889619 UNSPK:			P888188 BKG: P888188			
Arsenic	103	100	75-125	4	20	0.00067 U	0.00067 U	109* (1)	20
Cadmium	106	105	75-125	1	20	0.00046 J	0.00047 J	2 (1)	20
Chromium	106	103	75-125	3	20	0.00028 J	0.00031 J	10 (1)	20
Lead	106	103	75-125	1	20	0.000047 U	0.000047 U	81* (1)	20
Nickel	105	104	75-125	1	20	0.0023 U	0.0026 U	10 (1)	20
Selenium	102	103	75-125	1	20	0.00050 U	0.00050 U	25* (1)	20
Batch number: 062916050004C			Sample number(s): 4889617, 4889619 UNSPK:			P888188 BKG: P888188			
Copper	108	106	75-125	2	20	0.0011 U	0.0012 U	6 (1)	20
Batch number: 06293049511A			Sample number(s): 4889617, 4889619 UNSPK:			P891280 BKG: P891280			
Total Organic Carbon	99		62-148			3.3	3.3	0 (1)	2
Batch number: 06293117101A			Sample number(s): 4889617-4889624 UNSPK:			P888345 BKG: P888345			
Total Cyanide (water)	97		83-111			0.0050 U	0.0050 U	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06290WAD026

Nitrobenzene-d5

2-Fluorobiphenyl

Terphenyl-d14

4889617	89	79	77
Blank	88	75	78
LCS	86	79	81
LCSD	87	75	87

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 12/07/06 at 10:41 AM

Group Number: 1009874

Limits: 57-137 60-115 64-123

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

CH2M

Applied Sciences Lab

CHAIN OF CUSTODY RECORD
AND AGREEMENT TO PERFORM SERVICESCVO 2300 NW Walnut Boulevard
Corvallis, OR 97330-3538
(541) 752-4271 FAX (541) 752-0276

12098/1009874/4889617-24

COC #

Project #				Purchase Order #				TOTAL # OF CONTAINERS PAH DOC / TOC ASBESTOS BOD / COD TOTAL AND DISSOLVED METALS (TOTAL + HG) TOTAL AND DISSOLVED CYANIDE	Requested Analytical Method #				THIS AREA FOR LAB USE ONLY		
Project Name													Lab #	Page	of
GREAT LAKES ASBESTOS PROJECT													TO: LANCASTER		
Company Name															
CH2M Hill INC.															
Report to: RYAN COVERIDGE / CH2M BOSTON			Phone No: (617) 523-2002 x 239												
Requested Completion Date:				Sample Disposal:											
				Dispose <input type="checkbox"/> Return <input type="checkbox"/>											
				Preservative											
Sampling		Type	Matrix			CLIENT SAMPLE ID (8 CHARACTERS)			LAB QC	EPA Tier QC Level					
COMP	GRAB	WATER	SOLID	AIR	Other					1 (Screening) 2 3 4					
Date	Time	X				W COAL LKE			1	X				Alternate Description	Lab ID
10/13/06	13:05	X				W COAL LKE			4	X				1L GLASS, NO PRESERVE	
		X				W COAL LKE			21		X X X			4x40mL VOA, NO PRESERVE	
		X				ECO AL LKE			1	X				850mL PLASTIC, NO PRESERVE	
		X				ECO AL LKE			4	X				1L GLASS NO PRESERVE	
		X				ECO AL LKE			21		X X X			4x40mL VOA	
		X				LIME LKE			2		X X			850mL PLASTIC	
		X				IRON LKE			2		X X			8oz PLASTIC	
														8oz PLASTIC	
Relinquished By <i>Brett McKinley Assoc. Sci. CH2M</i>						Date/Time 10-13-06		Received By					Date/Time		
Sampled By and Title (Please sign and print name)						Date/Time		Relinquished By (Please sign and print name)					Date/Time		
Received By (Please sign and print name)						Date/Time		Relinquished By (Please sign and print name)					Date/Time		
Received By (Please sign and print name)						Date/Time 10/14/06 10:00 10/16/06 10:00 10/16		Shipped Via UPS	Fed-Ex	Other	Shipping #				
Special Instructions: <i>Lake Erie, OHR 100% TEST CONDITIONS</i>															

Instructions and Agreement Provisions on Reverse Side

DISTRIBUTION: Original - LAB, Yellow - LAB, Pink - Client
Rev 2/01 Lab form 340

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1010298. Samples arrived at the laboratory on Wednesday, October 18, 2006. The PO# for this group is 18957F_T0003_TM1.

Client Description

ECOALLKE Water Sample

Lancaster Labs Number

4892317

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Lancaster Laboratories Sample No. WW 4892317

ECOALLKE Water Sample
Great Lakes - Sweepings

Collected: 10/16/2006 16:00

Account Number: 12098

Submitted: 10/18/2006 09:05
Reported: 10/23/2006 at 18:46
Discard: 11/23/2006

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

ECOLL SDG#: SWE14-01*

CAT No.	Analysis Name	CAS Number	As Received		Units	Dilution Factor
			Method	Result		
08357	Selected SVOAs by 8270 SIM					
08362	Naphthalene	91-20-3		0.29	0.01	ug/l
08368	Fluorene	86-73-7		0.030 J	0.01	ug/l
08369	Phenanthrene	85-01-8		0.16	0.01	ug/l
08370	Anthracene	120-12-7		0.02 U	0.02	ug/l
08372	Fluoranthene	206-44-0		0.038 J	0.01	ug/l
08373	Pyrene	129-00-0		0.045 J	0.02	ug/l
08374	Benzo(a)anthracene	56-55-3		0.022 J	0.02	ug/l
08375	Chrysene	218-01-9		0.045 J	0.02	ug/l
08378	Benzo(a)pyrene	50-32-8		0.02 U	0.02	ug/l
08380	Dibenz(a,h)anthracene	53-70-3		0.02 U	0.02	ug/l

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/22/2006 08:40	Timothy J Trees	1
00813	BNA Water Extraction	SW-846 3510C	1	10/21/2006 01:15	Karen L Beyer	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 10/23/06 at 06:46 PM

Group Number: 1010298

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06292WAG026			Sample number(s): 4892317					
Naphthalene	0.01 U	0.01	ug/l	86	87	70-111	2	30
Fluorene	0.01 U	0.01	ug/l	95	98	75-115	3	30
Phenanthrene	0.01 U	0.01	ug/l	94	96	76-114	3	30
Anthracene	0.02 U	0.02	ug/l	94	97	67-113	3	30
Fluoranthene	0.01 U	0.01	ug/l	97	100	69-123	3	30
Pyrene	0.02 U	0.02	ug/l	99	101	76-114	2	30
Benzo(a)anthracene	0.02 U	0.02	ug/l	97	100	76-111	3	30
Chrysene	0.02 U	0.02	ug/l	96	99	76-112	4	30
Benzo(a)pyrene	0.02 U	0.02	ug/l	92	95	64-114	3	30
Dibenz(a,h)anthracene	0.02 U	0.02	ug/l	86	89	60-126	3	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06292WAG026

Nitrobenzene-d5

2-Fluorobiphenyl

Terphenyl-d14

4892317	96	91	92
Blank	96	87	108
LCS	97	88	101
LCSD	97	93	102

Limits: 57-137 60-115 64-123

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

CH2MHILL Applied Sciences Lab

CHAIN OF CUSTODY RECORD
AND AGREEMENT TO PERFORM SERVICESCVO 2300 NW Walnut Boulevard
Corvallis, OR 97330-3538
(541) 752-4271 FAX (541) 752-0276

Act 12098-1010298

4892317

COC #

Project # <i>349871.TP.01.04</i>		Purchase Order #		TOTAL # OF CONTAINERS P → H Preservative None	Requested Analytical Method #							THIS AREA FOR LAB USE ONLY									
Project Name <i>Great Lakes Project</i>												Lab #	Page	of							
Company Name <i>CH2M HILL INC</i>												<i>To: Lancaster</i>									
Report to: <i>Ryan Loveridge / CH2M Hill Boston</i>		Phone No: <i>(617) 523-2002 x239</i>																			
Requested Completion Date:					Sample Disposal:		Dispose	Return													
Sampling		Type	Matrix		CLIENT SAMPLE ID (8 CHARACTERS)		LAB QC								EPA Tier QC Level						
Date	Time	C O M P A R E R	G R A T E R		W A T E R	S O I L	A I R	Other								1 (Screening)	2	3	4		
10/16/06	1600	X			E	C	O	A	L	L	K	E	2	X							
															Alternate Description		Lab ID				
															<i>IL Glass, not preserved</i>						
Relinquished By				Date/Time		Received By							Date/Time								
<i>Troy P. Heugler CH2M Hill</i>				Date/Time 10/16/06 1600		<i>Brett Mackey CIRW</i>							Date/Time 10/17/06 0845								
Received By				Date/Time		Relinquished By							Date/Time								
<i>J. J. O'Dell</i>				Date/Time 10/16/06		<i>Troy P. Heugler CH2M Hill</i>															
Received By				Date/Time		Shipped Via							Shipping #								
<i>J. J. O'Dell</i>				Date/Time 10/16/06		UPS Fed-Ex Other _____															
Special Instructions: <i>0905</i>																					

Instructions and Agreement Provisions on Reverse Side

DISTRIBUTION: Original - LAB, Yellow - LAB, Pink - Client
Rev 2/01 Lab form 340

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1010834. Samples arrived at the laboratory on Thursday, October 05, 2006. The PO# for this group is 18957F_T0003_TM1.

Client Description
DLHCV1-SS-2 Composite Solid Sample

Lancaster Labs Number
4895678

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

A handwritten signature in black ink that reads "Rachel R. Cochis".

Rachel R. Cochis
Group Leader

Lancaster Laboratories Sample No. SW 4895678
**DLHCV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 09:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 11/08/2006 at 15:31

75 Arlington Street

Discard: 12/09/2006

Ninth Floor

Boston MA 02116

V1SS2 SDG#: SWE15-01*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0177 J	0.0114	mg/kg	1
01643	Aluminum	7429-90-5	1,470.	3.71	mg/kg	1
01650	Calcium	7440-70-2	5,040.	14.1	mg/kg	1
01654	Iron	7439-89-6	470,000.	266.	mg/kg	50
01657	Magnesium	7439-95-4	796.	2.10	mg/kg	1
06125	Arsenic	7440-38-2	28.9 J	4.90	mg/kg	250
06128	Cadmium	7440-43-9	0.563	0.0438	mg/kg	10
06131	Chromium	7440-47-3	144.	8.93	mg/kg	250
06133	Copper	7440-50-8	1,940.	10.1	mg/kg	250
06135	Lead	7439-92-1	91.6	0.173	mg/kg	10
06139	Nickel	7440-02-0	119.	14.4	mg/kg	250
06141	Selenium	7782-49-2	10.7 U	10.7	mg/kg	250
06966	Silver	7440-22-4	2.44	0.188	mg/kg	1
06972	Zinc	7440-66-6	72.5	0.726	mg/kg	1
00111	Moisture	n.a.	13.2	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
02079	TOC Solids/Sludges Combustion	n.a.	14,400.	200.	mg/kg	1
05895	Total Cyanide (solid)	57-12-5	0.20 U	0.20	mg/kg	1
06569	Bulk Density	n.a.	1.71	0.080	g/cc	1

02858 Selected SVOA's in soil by SIM

02863	Naphthalene	91-20-3	13.	1.	ug/kg	1
02870	Fluorene	86-73-7	3.3	0.8	ug/kg	1
02871	Phenanthrene	85-01-8	15.	0.8	ug/kg	1
02872	Anthracene	120-12-7	2.7	0.4	ug/kg	1
02874	Fluoranthene	206-44-0	12.	0.8	ug/kg	1
02875	Pyrene	129-00-0	15.	0.8	ug/kg	1
02876	Benzo(a)anthracene	56-55-3	4.2	0.8	ug/kg	1
02877	Chrysene	218-01-9	6.9	0.4	ug/kg	1
02880	Benzo(a)pyrene	50-32-8	2.9	0.8	ug/kg	1
02882	Dibenz(a,h)anthracene	53-70-3	1. U	1.	ug/kg	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	98.8	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4895678
**DLHCV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 09:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 11/08/2006 at 15:31

75 Arlington Street

Discard: 12/09/2006

Ninth Floor

Boston MA 02116

V1SS2 SDG#: SWE15-01*

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07138	4.75 mm	n.a.	59.1	0.50	%	Passing	1
07139	3.35 mm	n.a.	56.8	0.50	%	Passing	1
07140	2.36 mm	n.a.	56.6	0.50	%	Passing	1
07141	1.18 mm	n.a.	0.50	U	0.50	%	Passing
07142	0.6 mm	n.a.	0.50	U	0.50	%	Passing
07143	0.3 mm	n.a.	0.50	U	0.50	%	Passing
07144	0.15 mm	n.a.	0.50	U	0.50	%	Passing
07145	0.075 mm	n.a.	0.50	U	0.50	%	Passing
07146	0.064 mm	n.a.	0.50	U	0.50	%	Passing
07147	0.05 mm	n.a.	0.50	U	0.50	%	Passing
07148	0.02 mm	n.a.	0.50	U	0.50	%	Passing
07149	0.005 mm	n.a.	0.50	U	0.50	%	Passing
07150	0.002 mm	n.a.	0.50	U	0.50	%	Passing
07151	0.001 mm	n.a.	0.50	U	0.50	%	Passing

Due to the nature of the sample, the hydrometer portion of the analysis could not be completed. Therefore, no results for the particle sizes less than 2.36 mm were reported.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	10/24/2006 19:42	Nelli S Markaryan	1
01643	Aluminum	SW-846 6010B	1	10/24/2006 21:50	John P Hook	1
01650	Calcium	SW-846 6010B	1	10/24/2006 21:50	John P Hook	1
01654	Iron	SW-846 6010B	1	10/27/2006 18:53	John P Hook	50
01657	Magnesium	SW-846 6010B	1	10/24/2006 21:50	John P Hook	1
06125	Arsenic	SW-846 6020	1	10/26/2006 16:08	Jayme E Curet	250
06128	Cadmium	SW-846 6020	1	10/25/2006 13:02	Jayme E Curet	10

Lancaster Laboratories Sample No. SW 4895678
**DLHCV1-SS-2 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/03/2006 09:00 by JC

Account Number: 12098

Submitted: 10/05/2006 09:25

Parsons Brinkerhoff

Reported: 11/08/2006 at 15:31

75 Arlington Street

Discard: 12/09/2006

Ninth Floor

Boston MA 02116

V1SS2 SDG#: SWE15-01*

06131	Chromium	SW-846 6020	1	10/26/2006 16:08	Jayme E Curet	250
06133	Copper	SW-846 6020	1	10/30/2006 13:24	Jayme E Curet	250
06135	Lead	SW-846 6020	1	10/25/2006 13:02	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	10/30/2006 13:24	Jayme E Curet	250
06141	Selenium	SW-846 6020	1	10/26/2006 16:08	Jayme E Curet	250
06966	Silver	SW-846 6010B	1	10/24/2006 21:50	John P Hook	1
06972	Zinc	SW-846 6010B	1	10/24/2006 21:50	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	10/23/2006 12:19	William C Schwebel	1
02079	TOC Solids/Sludges	SM20 5310 B modified	1	10/24/2006 12:17	James S Mathiot	1
05895	Total Cyanide (solid)	SW-846 9012A	1	10/25/2006 17:57	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	10/23/2006 23:55	Daniel S Smith	1
02858	Selected SVOA's in soil by SIM	SW-846 8270C SIM	1	10/25/2006 08:44	Brian K Graham	1
07103	Grain Size to 1 um	ASTM D422	1	11/06/2006 12:00	Luz M Groff	1
00381	BNA Soil Extraction	SW-846 3550B	1	10/24/2006 18:30	Sally L Appleyard	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	10/24/2006 08:35	Megersa Deyessa	1
05708	SW SW846 ICP Digest	SW-846 3050B	2	10/26/2006 20:45	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	10/24/2006 10:30	Megersa Deyessa	1
05896	Cyanide Solid Distillation	SW-846 9012A	2	10/25/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	10/24/2006 20:20	Annamaria Stipkovits	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 11/08/06 at 03:31 PM

Group Number: 1010834

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06296820002A Moisture			Sample number(s): 4895678		100	99-101		
Batch number: 06297113031A TOC Solids/Sludges Combustion	60.0 U	60.0	mg/kg	40		40-148		
Batch number: 062975708001 Aluminum Calcium Magnesium Silver Zinc	3.35 U 12.7 U 1.90 U 0.170 U 0.655 U	3.35 12.7 1.90 0.170 0.655	mg/kg	132 100 105 101 98		61-139 81-119 78-122 66-134 79-121		
Batch number: 062975711001 Mercury	0.0105 U	0.0105	mg/kg	96		66-133		
Batch number: 062976150001A Arsenic Chromium Copper Lead Nickel Selenium	0.0170 U 0.179 J 0.459 0.0464 J 0.0500 U 0.0370 U	0.0170 0.0310 0.0350 0.0150 0.0500 0.0370	mg/kg	94 114 115 109 113 104		66-101 73-127 82-118 82-118 82-118 74-126		
Batch number: 062976150001C Cadmium	0.0038 U	0.0038	mg/kg	112		81-119		
Batch number: 06297SLA026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	1. U 0.7 U 0.7 U 0.3 U 0.7 U 0.7 U 0.7 U 0.3 U 0.7 U 1. U	1. 0.7 0.7 0.3 0.7 0.7 0.7 0.3 0.7 1.	ug/kg	82 89 86 82 89 91 90 89 83 82		71-105 70-115 64-118 60-111 57-128 71-117 71-114 69-114 59-118 56-130		
Batch number: 06298102201B Total Cyanide (solid)	0.18 U	0.18	mg/kg	105		90-110		
Batch number: 062995708006 Iron	4.71 U	4.71	mg/kg	110		76-124		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 11/08/06 at 03:31 PM

Group Number: 1010834

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06296656901A Bulk Density			Sample number(s): 4895678 BKG: 4895678			1.71	1.68	2	20
Batch number: 06296820002A Moisture			Sample number(s): 4895678 BKG: 4895678			13.2	13.3	1	15
Batch number: 06297113031A TOC Solids/Sludges Combustion	96		Sample number(s): 4895678 UNSPK: P893173 BKG: P893173 51-115			11,900.	7,850.	41*	19
Batch number: 062975708001 Aluminum	(2)	(2)	Sample number(s): 4895678 UNSPK: P896143 BKG: P896143 75-125	6	20	16,000.	15,600.	3	20
Calcium	(2)	(2)		17	20	11,700.	9,950.	16	20
Magnesium	(2)	(2)		15	20	5,180.	4,430.	16	20
Silver	99	98		1	20	0.374 J	0.319 J	16 (1)	20
Zinc	1594*	95		146*	20	90.0	77.3	15	20
Batch number: 062975711001 Mercury	69*	74*	Sample number(s): 4895678 UNSPK: P896338 BKG: P896338 80-120	2	20	0.216	0.356	49* (1)	20
Batch number: 062976150001A Arsenic	236*	143*	Sample number(s): 4895678 UNSPK: P892227 BKG: P892227 70-130	19	20	3.02	6.42	72* (1)	20
Chromium	111	72*		11	20	13.3	13.1	2	20
Copper	173*	342*		30*	20	15.5	22.9	38*	20
Lead	(2)	(2)		12	20	53.5	110.	69*	20
Nickel	78	71*		2	20	9.85	9.13	8 (1)	20
Selenium	123	105		16	20	0.370 U	0.375 J	200* (1)	20
Batch number: 062976150001C Cadmium	123	126*	Sample number(s): 4895678 UNSPK: P892227 BKG: P892227 75-125	1	20	0.277	0.392	34* (1)	20
Batch number: 06297SLA026 Naphthalene	185*	113	Sample number(s): 4895678 UNSPK: P893686 54-121	19	30				
Fluorene	(2)	(2)		23	30				
Phenanthrene	(2)	(2)		24	30				
Anthracene	(2)	(2)		22	30				
Fluoranthene	(2)	(2)		21	30				
Pyrene	(2)	(2)		20	30				
Benzo(a)anthracene	(2)	(2)		18	30				
Chrysene	(2)	(2)		18	30				
Benzo(a)pyrene	(2)	(2)		22	30				
Dibenz(a,h)anthracene	(2)	(2)		9	30				
Batch number: 06298102201B Total Cyanide (solid)	102		Sample number(s): 4895678 UNSPK: P894629 BKG: P894629 59-124			0.18 U	0.18 U	2 (1)	17
Batch number: 062995708006 Iron	(2)	(2)	Sample number(s): 4895678 UNSPK: P899642 BKG: P899642 75-125	2	20	38,500.	32,700.	16	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
Reported: 11/08/06 at 03:31 PM

Group Number: 1010834

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOA's in soil by SIM
Batch number: 06297SLA026

Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14

4895678	83	71	85
Blank	95	90	104
LCS	88	83	95
MS	49	46*	73
MSD	67	65	97

Limits: 42-142 48-122 65-125

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1010910. Samples arrived at the laboratory on Saturday, October 21, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
WCOALLKS Water Sample	4896155
WCOALLKS Filtered Water Sample	4896156
ECOALLKS Water Sample	4896157
ECOALLKS Filtered Water Sample	4896158
LIME_LKS Water Sample	4896159
LIME_LKS Filtered Water Sample	4896160
IRON_LKS Water Sample	4896161
IRON_LKS Filtered Water Sample	4896162

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC	CH2M Hill	Attn: John Coffey
COPY TO		
ELECTRONIC	CH2M Hill	Attn: Ryan Loveridge
COPY TO		
ELECTRONIC	CH2M HILL	Attn: James Maugahn
COPY TO		
1 COPY TO	Data Package Group	



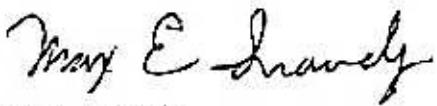
2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,



Max E. Snavely
Max E. Snavely
Senior Specialist

Lancaster Laboratories Sample No. WW 4896155
**WCOALLKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

COALT SDG#: SWE16-01

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.542	0.0802	mg/l	1	
01750	Calcium	7440-70-2	13.6	0.104	mg/l	1	
01754	Iron	7439-89-6	0.246	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	3.09	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00088 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0022	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00034 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0014 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	1.3 U	1.3	mg/l	1	
00273	Total Organic Carbon	n.a.	5.3	1.0	mg/l	1	
04001	Chemical Oxygen Demand	n.a.	30.4 J	12.8	mg/l	1	
07547	Dissolved Organic Carbon	n.a.	2.1	1.0	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	
08357	Selected SVOAs by 8270 SIM						
08362	Naphthalene	91-20-3	0.030 J	0.01	ug/l	1	
08368	Fluorene	86-73-7	0.01 U	0.01	ug/l	1	
08369	Phenanthrene	85-01-8	0.026 J	0.01	ug/l	1	
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l	1	
08372	Fluoranthene	206-44-0	0.045 J	0.01	ug/l	1	
08373	Pyrene	129-00-0	0.054	0.02	ug/l	1	
08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l	1	
08375	Chrysene	218-01-9	0.02 U	0.02	ug/l	1	
08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l	1	
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l	1	

The recovery of dibenz(a,h)anthracene was outside QC limits in the LCSD associated with this sample. Sufficient sample was unavailable to repeat the analysis.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories Sample No. WW 4896155
**WCOALLKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

COALT SDG#: SWE16-01

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Analysis	Dilution Factor
				Trial# Date and Time	Analyst
	00259	Mercury	SW-846 7470A	1 10/31/2006 08:02	Damary Valentin 1
	01743	Aluminum	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	01750	Calcium	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	01754	Iron	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	01757	Magnesium	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	06025	Arsenic	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06028	Cadmium	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06031	Chromium	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06033	Copper	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06035	Lead	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06039	Nickel	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	06041	Selenium	SW-846 6020	1 10/31/2006 22:15	David K Beck 1
	07066	Silver	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	07072	Zinc	SW-846 6010B	1 10/31/2006 19:16	John P Hook 1
	00235	Biochemical Oxygen Demand	EPA 405.1	1 10/21/2006 12:40	Christopher M Cunningham 1
	00273	Total Organic Carbon	EPA 415.1	1 10/26/2006 17:13	James S Mathiot 1
	04001	Chemical Oxygen Demand	EPA 410.4	1 10/23/2006 10:10	Susan A Engle 1
	07547	Dissolved Organic Carbon	EPA 415.1 modified	1 10/24/2006 15:14	James S Mathiot 1
	08255	Total Cyanide (water)	SW-846 9012A	1 10/31/2006 14:05	Nicole M Kepley 1
	08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1 10/25/2006 14:25	Brian K Graham 1
	00813	BNA Water Extraction	SW-846 3510C	1 10/24/2006 16:45	Desiree J Wann 1
	01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1 10/31/2006 01:00	Helen L Schaeffer 1
	05713	WW SW846 Hg Digest	SW-846 7470A	1 10/30/2006 16:00	Nelli S Markaryan 1
	06050	ICP/MS SW-846 Water	SW-846 3010A modified	1 10/30/2006 19:05	James L Mertz 1
	08256	Cyanide Water Distillation	SW-846 9012A	1 10/30/2006 18:00	Carolyn M Mastropietro 1

Lancaster Laboratories Sample No. WW 4896156
**WCOALLKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

COALF SDG#: SWE16-02

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	12.0	0.104	mg/l	1	
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	2.75	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00049 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.00044 J	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.00089 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:04	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 22:20	David K Beck	1
07066	Silver	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:27	John P Hook	1

Lancaster Laboratories Sample No. WW 4896156**WCOALLKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

COALF	SDG#:	SWE16-02					
08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006 14:06	Nicole M Kepley	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006 01:00	Helen L Schaeffer	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006 16:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006 19:05	James L Mertz	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/30/2006 18:00	Carolyn M Mastropietro	1	

Lancaster Laboratories Sample No. WW 4896157
**ECOALLKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

ECOAT SDG#: SWE16-03

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.641	0.0802	mg/l	1	
01750	Calcium	7440-70-2	14.1	0.104	mg/l	1	
01754	Iron	7439-89-6	0.890	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	3.10	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0015 J	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00097 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0023	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.00087 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0033	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
00235	Biochemical Oxygen Demand	n.a.	1.3 U	1.3	mg/l	1	
00273	Total Organic Carbon	n.a.	2.3	1.0	mg/l	1	
04001	Chemical Oxygen Demand	n.a.	23.4 J	12.8	mg/l	1	
07547	Dissolved Organic Carbon	n.a.	1.7 J	1.0	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.010 U	0.010	mg/l	1	

The reporting limit for total cyanide was increased due to insufficient sample volume.

08357 Selected SVOAs by 8270 SIM

08362	Naphthalene	91-20-3	0.26	0.01	ug/l	1
08368	Fluorene	86-73-7	0.025 J	0.01	ug/l	1
08369	Phenanthrene	85-01-8	0.14	0.01	ug/l	1
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l	1
08372	Fluoranthene	206-44-0	0.030 J	0.01	ug/l	1
08373	Pyrene	129-00-0	0.040 J	0.02	ug/l	1
08374	Benzo(a)anthracene	56-55-3	0.02 U	0.02	ug/l	1
08375	Chrysene	218-01-9	0.050	0.02	ug/l	1
08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l	1
08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l	1
Trial ID: RE						
08362	Naphthalene	91-20-3	0.26	0.01	ug/l	1
08368	Fluorene	86-73-7	0.027 J	0.01	ug/l	1
08369	Phenanthrene	85-01-8	0.15	0.01	ug/l	1
08370	Anthracene	120-12-7	0.02 U	0.02	ug/l	1
08372	Fluoranthene	206-44-0	0.033 J	0.01	ug/l	1
08373	Pyrene	129-00-0	0.041 J	0.02	ug/l	1

Lancaster Laboratories Sample No. WW 4896157
**ECOALLKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

 Submitted: 10/21/2006 09:50
 Reported: 12/07/2006 at 10:39
 Discard: 01/07/2007

 Parsons Brinkerhoff
 75 Arlington Street
 Ninth Floor
 Boston MA 02116

ECOAT SDG#: SWE16-03

As Received

CAT	No.	Analysis Name	CAS Number	Result	Method	Dilution Factor
					As Received	
	08374	Benzo(a)anthracene	56-55-3	0.021 J	0.02	ug/l 1
	08375	Chrysene	218-01-9	0.048 J	0.02	ug/l 1
	08378	Benzo(a)pyrene	50-32-8	0.02 U	0.02	ug/l 1
	08380	Dibenz(a,h)anthracene	53-70-3	0.02 U	0.02	ug/l 1

The recovery of dibenz(a,h)anthracene was outside of QC limits in the LCSD associated with this sample. The analysis was repeated outside the method required hold time and dibenz(a,h)anthracene was within QC limits.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT	No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
	00259	Mercury	SW-846 7470A	1	10/31/2006 08:05	Damary Valentin	1
	01743	Aluminum	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	01750	Calcium	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	01754	Iron	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	01757	Magnesium	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	06025	Arsenic	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06028	Cadmium	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06031	Chromium	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06033	Copper	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06035	Lead	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06039	Nickel	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	06041	Selenium	SW-846 6020	1	10/31/2006 22:35	David K Beck	1
	07066	Silver	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	07072	Zinc	SW-846 6010B	1	10/31/2006 19:31	John P Hook	1
	00235	Biochemical Oxygen Demand	EPA 405.1	1	10/21/2006 12:40	Christopher M Cunningham	1
	00273	Total Organic Carbon	EPA 415.1	1	10/26/2006 17:37	James S Mathiot	1
	04001	Chemical Oxygen Demand	EPA 410.4	1	10/23/2006 10:10	Susan A Engle	1
	07547	Dissolved Organic Carbon	EPA 415.1 modified	1	10/24/2006 15:48	James S Mathiot	1
	08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006 14:07	Nicole M Kepley	1
	08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	1	10/25/2006 14:53	Brian K Graham	1
	08357	Selected SVOAs by 8270 SIM	SW-846 8270C SIM	2	10/29/2006 09:39	Timothy J Trees	1
	00813	BNA Water Extraction	SW-846 3510C	1	10/24/2006 16:45	Desiree J Wann	1
	01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006 01:00	Helen L Schaeffer	1
	05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006 16:00	Nelli S Markaryan	1
	06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006 19:05	James L Mertz	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. WW 4896157

**ECOALLKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 10:39

Discard: 01/07/2007

ECOAT SDG#: SWE16-03
08256 Cyanide Water Distillation SW-846 9012A

1 10/30/2006 18:00 Carolyn M
Mastropietro

1

Lancaster Laboratories Sample No. WW 4896158
**ECOALLKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

ECOAF SDG#: SWE16-04

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	13.3	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	2.93	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00043 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.00049 J	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0018 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:06	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 22:40	David K Beck	1
07066	Silver	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:34	John P Hook	1

Lancaster Laboratories Sample No. WW 4896158**ECOALLKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

ECOAF	SDG#:	SWE16-04						
08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006	14:13	Nicole M Kepley	1	
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006	01:00	Helen L Schaeffer	1	
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006	16:00	Nelli S Markaryan	1	
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006	19:05	James L Mertz	1	
08256	Cyanide Water Distillation	SW-846 9012A	1	10/30/2006	18:00	Carolyn M Mastropietro	1	

Lancaster Laboratories Sample No. WW 4896159
**LIME_LKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMET SDG#: SWE16-05

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	16.1	0.104	mg/l	1	
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	3.45	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00047 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0010	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0014 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

The sample received for the cyanide and metals analysis was subsampled from unpreserved containers.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:08	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 22:45	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 22:45	David K Beck	1

Lancaster Laboratories Sample No. WW 4896159
**LIME_LKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMET SDG#: SWE16-05

07066	Silver	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:38	John P Hook	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006 14:01	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006 01:00	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006 16:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006 19:05	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/30/2006 18:00	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4896160
**LIME_LKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

LIMEF SDG#: SWE16-06

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	14.2	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	3.04	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.00067 U	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00053 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0010	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0014 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:09	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 22:50	David K Beck	1
07066	Silver	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:42	John P Hook	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 2 of 2
REVISED

Lancaster Laboratories Sample No. WW 4896160

LIME_LKS Filtered Water Sample Great Lakes - Sweepings

Collected:10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

10/31/2006	14:16	Nicole M Kepley	1
10/31/2006	01:00	Helen L Schaeffer	1
10/30/2006	16:00	Nelli S Markaryan	1
10/30/2006	19:05	James L Mertz	1
10/30/2006	18:00	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4896161
**IRON_LKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

IRONT SDG#: SWE16-07

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	14.3	0.104	mg/l	1	
01754	Iron	7439-89-6	0.150 J	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	2.88	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0015 J	0.00067	mg/l	1	
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.00054 J	0.00026	mg/l	1	
06033	Copper	7440-50-8	0.0010	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.000081 J	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0012 J	0.00043	mg/l	1	
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l	1	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

The sample received for the metals and cyanide analysis was subsampled from unpreserved containers.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:14	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 22:55	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 22:55	David K Beck	1

Lancaster Laboratories Sample No. WW 4896161
**IRON_LKS Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

IRONT SDG#: SWE16-07

07066	Silver	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:46	John P Hook	1
08255	Total Cyanide (water)	SW-846 9012A	1	10/31/2006 14:18	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	10/31/2006 01:00	Helen L Schaeffer	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	10/30/2006 16:00	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	10/30/2006 19:05	James L Mertz	1
08256	Cyanide Water Distillation	SW-846 9012A	1	10/30/2006 18:00	Carolyn M Mastropietro	1

Lancaster Laboratories Sample No. WW 4896162
**IRON_LKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:39

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

IRONF SDG#: SWE16-08*

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l 1
01750	Calcium	7440-70-2	13.4	0.104	mg/l 1
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l 1
01757	Magnesium	7439-95-4	2.69	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0013 J	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.00055 J	0.00026	mg/l 1
06033	Copper	7440-50-8	0.00098 J	0.00020	mg/l 1
06035	Lead	7439-92-1	0.000066 J	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0012 J	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.00050 U	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

This sample was filtered in the lab for dissolved metals and dissolved cyanide.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	10/31/2006 08:15	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1
01750	Calcium	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1
01754	Iron	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1
01757	Magnesium	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1
06025	Arsenic	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06028	Cadmium	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06031	Chromium	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06033	Copper	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06035	Lead	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06039	Nickel	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
06041	Selenium	SW-846 6020	1	10/31/2006 23:00	David K Beck	1
07066	Silver	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1
07072	Zinc	SW-846 6010B	1	10/31/2006 19:49	John P Hook	1

Lancaster Laboratories Sample No. WW 4896162**IRON_LKS Filtered Water Sample
Great Lakes - Sweepings**

Collected: 10/20/2006 11:30

Account Number: 12098

Submitted: 10/21/2006 09:50

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 10:39

Discard: 01/07/2007

IRONF SDG#: SWE16-08*

08255	Total Cyanide (water)	SW-846 9012A
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A
05713	WW SW846 Hg Digest	SW-846 7470A
06050	ICP/MS SW-846 Water	SW-846 3010A modified
08256	Cyanide Water Distillation	SW-846 9012A

1	10/31/2006 14:19	Nicole M Kepley	1
1	10/31/2006 01:00	Helen L Schaeffer	1
1	10/30/2006 16:00	Nelli S Markaryan	1
1	10/30/2006 19:05	James L Mertz	1
1	10/30/2006 18:00	Carolyn M Mastropietro	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:39 AM

Group Number: 1010910

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06294023502A Biochemical Oxygen Demand			Sample number(s): 4896155, 4896157	103	102	85-115	1	8
Batch number: 06296400102B Chemical Oxygen Demand			Sample number(s): 4896155, 4896157	105		94-110		
Batch number: 06297049512B Dissolved Organic Carbon			Sample number(s): 4896155, 4896157	1.0 U	1.0 mg/l	100	80-120	
Batch number: 06297WAD026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	0.01 U 0.01 U 0.01 U 0.02 U 0.01 U 0.02 U 0.02 U 0.02 U 0.02 U 0.02 U	0.01 0.01 0.01 0.02 0.01 0.02 0.02 0.02 0.02 0.02	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	82 88 84 78 87 87 87 86 77 62	78 85 82 77 86 85 84 83 77 58*	70-111 75-115 76-114 67-113 69-123 76-114 76-111 76-112 64-114 60-126	5 3 2 1 2 3 3 3 0 7	30 30 30 30 30 30 30 30 30 30
Batch number: 06299049511B Total Organic Carbon	1.0 U	1.0	mg/l	97		80-120		
Batch number: 06300WAG026 Naphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(a)pyrene Dibenz(a,h)anthracene	0.01 U 0.01 U 0.01 U 0.02 U 0.01 U 0.02 U 0.02 U 0.02 U 0.02 U 0.02 U	0.01 0.01 0.01 0.02 0.01 0.02 0.02 0.02 0.02 0.02	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	87 100 98 98 103 107 102 101 95 89	86 99 97 98 102 105 101 100 94 89	70-111 75-115 76-114 67-113 69-123 76-114 76-111 76-112 64-114 60-126	1 0 1 1 0 1 1 1 1 0	30 30 30 30 30 30 30 30 30 30
Batch number: 06303117102A Total Cyanide (water)	0.0050 U	0.0050	mg/l	90		90-110		
Batch number: 06303117102B Total Cyanide (water)	0.0050 U	0.0050	mg/l	90		90-110		
Batch number: 063035713005 Mercury	U	6	mg/l	99		80-120		
Batch number: 063036050005A			Sample number(s): 4896155-4896162					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:39 AM

Group Number: 1010910

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Arsenic	0.00067	0.00067	mg/l	100		80-120		
	U							
Cadmium	0.000099	0.00009	mg/l	101		80-120		
	U	9						
Chromium	0.00029	0.00026	mg/l	104		80-120		
	J							
Copper	0.00020	0.00020	mg/l	106		80-120		
	U							
Lead	0.000047	0.00004	mg/l	104		80-120		
	U	7						
Nickel	0.00043	0.00043	mg/l	103		80-120		
	U							
Selenium	0.00050	0.00050	mg/l	100		80-120		
	U							
Batch number: 063041848002			Sample number(s): 4896155-4896162					
Aluminum	0.0802	U	0.0802	mg/l	104			
Calcium	0.104	U	0.104	mg/l	101			
Iron	0.0522	U	0.0522	mg/l	101			
Magnesium	0.0135	U	0.0135	mg/l	101			
Silver	0.0016	U	0.0016	mg/l	104			
Zinc	0.0081	U	0.0081	mg/l	103			
						90-112		
						90-112		
						90-112		
						89-110		
						90-118		
						90-111		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06294023502A			Sample number(s): 4896155, 4896157 UNSPK: P896096			BKG: P896100			
Biochemical Oxygen Demand	103	107	67-144	3	9	40.4	42.7	5	9
Batch number: 06296400102B			Sample number(s): 4896155, 4896157 UNSPK: P893387			BKG: P893387			
Chemical Oxygen Demand	91		90-110			4,250.	4,210.	1 (1)	5
Batch number: 06297049512B			Sample number(s): 4896155, 4896157 UNSPK: P893500			BKG: P893500			
Dissolved Organic Carbon	105		66-137			12.6	12.8	1	4
Batch number: 06299049511B			Sample number(s): 4896155, 4896157 UNSPK: P897653			BKG: P897653			
Total Organic Carbon	100		62-148			11.2	11.3	0	2
Batch number: 06303117102A			Sample number(s): 4896155-4896157, 4896159 UNSPK:			4896157 BKG: 4896157			
Total Cyanide (water)	83		83-111			0.010 U	0.010 U	200* (1)	20
Batch number: 06303117102B			Sample number(s): 4896158, 4896160-4896162 UNSPK:			4896158 BKG: 4896158			
Total Cyanide (water)	91		83-111			0.0050 U	0.0050 U	0 (1)	20
Batch number: 063035713005			Sample number(s): 4896155-4896162 UNSPK: P894622			BKG: P894622			
Mercury	102	108	80-120	6	20	0.000056	0.000056	-8 (1)	20
Batch number: 063036050005A			Sample number(s): 4896155-4896162 UNSPK: P894622			BKG: P894622			

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

 Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:39 AM

Group Number: 1010910

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD 0</u>	<u>RPD MAX 20</u>	<u>BKG Conc 0.00067</u>	<u>DUP Conc 0.00067</u>	<u>DUP RPD 0 (1)</u>	<u>Dup Max 20</u>
Arsenic	102	102	75-125	0	20	U	U		
Cadmium	94	97	75-125	3	20	0.0018	0.0017	1	20
Chromium	104	105	75-125	0	20	0.00042	0.00047	12 (1)	20
Copper	103	104	75-125	1	20	0.0013	0.0013	3 (1)	20
Lead	99	101	75-125	2	20	0.00014	0.00017	18 (1)	20
Nickel	102	102	75-125	0	20	0.0027	0.0028	5 (1)	20
Selenium	103	98	75-125	4	20	0.00059	0.00066	11 (1)	20
						J	J		

Batch number: 063041848002

Sample number(s): 4896155-4896162 UNSPK: P893381 BKG: P893381

Aluminum	109	105	75-125	3	20	0.0802	U	0.0802	U	8 (1)	20
Calcium	106	99	75-125	4	20	3.32		3.29		1	20
Iron	(2)	(2)	75-125	4	20	6.46		6.44		0	20
Magnesium	107	97	75-125	4	20	3.44		3.44		0	20
Silver	106	104	75-125	2	20	0.0016	U	0.0016	U	107* (1)	20
Zinc	105	102	75-125	3	20	0.0116	J	0.0103	J	12 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06297WAD026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4896155	89	84	91
4896157	90	86	92
Blank	84	84	95
LCS	83	83	91
LCSD	80	80	89
Limits:	57-137	60-115	64-123

Analysis Name: Selected SVOAs by 8270 SIM

Batch number: 06300WAG026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4896157RE	101	94	90
Blank	90	82	101
LCS	99	91	108
LCSD	95	90	105
Limits:	57-137	60-115	64-123

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control SummaryClient Name: Parsons Brinkerhoff
Reported: 12/07/06 at 10:39 AM

Group Number: 1010910

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

CH2MH Applied Sciences Lab
 CHAIN OF CUSTODY RECORD
 AND AGREEMENT TO PERFORM SERVICES

CVD 2300 NW Walnut Boulevard
 Corvallis, OR 97330-3538
 (541) 752-4271 FAX (541) 752-0276

12098/1010910/4896155-62

COC #

Project #			Purchase Order #			TOTAL # OF CONTAINERS TRA-H Doc / TOC BOD / COD TOTAL & D�SSOLVED METALS (TAL + Hg) TOTAL & DISSOLVED OTHER & DISCHARGE	Requested Analytical Method #						THIS AREA FOR LAB USE ONLY		
Project Name <i>GREAT LAKES</i>												Lab #	Page	of	
Company Name <i>City Hill</i>												<i>To: LANCASTER</i>			
Report to: <i>RYAN LAWRENCE / Boston</i>			Phone No: <i>(617) 523-2002 x 239</i>												
Requested Completion Date:							Sample Disposal:								
							Dispose <input type="checkbox"/> Return <input type="checkbox"/> Preservative								
Sampling		Type	Matrix		CLIENT SAMPLE ID (8 CHARACTERS)			LAB QC	none	none	none	none	none		
Date	Time	COMP	GRAB	WATER	SOIL		AIR	Other							
10/20/06	130								WC O A L K S	2	X				EPA Tier QC Level
									WC O A L K S	4		X			1 (Screening) 2 3 4
								WC O A L K S	2			X X X			
								ECO A L K S	2	X				Alternate Description	
								ECO A L K S	4		X			Lab ID	
								ECO A L K S	2			X X X			
								L I M E L K S	2			X X			
								I R O N L K S	2			X X			

10/20/06

Relinquished By <i>Troy Pittenger</i>	Date/Time 130 10/20/06	Received By	Date/Time
Sampled By and Time (Please sign and print name) <i>Troy Pittenger</i>	Date/Time 130 10/20/06	Relinquished By (Please sign and print name)	Date/Time
Received By (Please sign and print name) <i>John Lang</i>	Date/Time 10/20 0950	Relinquished By (Please sign and print name)	Date/Time
Received By (Please sign and print name) <i>John Lang</i>	Date/Time 10/20 0950	Shipped Via UPS FedEx Other _____	Shipping #
Special Instructions:			

Instructions and Agreement Provisions on Reverse Side

DISTRIBUTION: Original - LAB, Yellow - LAB, Pink - Client
 Rev 2/01 Lab form 340

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

REVISED

ANALYTICAL RESULTS

Prepared for:

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

617-960-4884

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1011929. Samples arrived at the laboratory on Saturday, October 28, 2006. The PO# for this group is 18957F_T0003_TM1.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
CLELV2-DS-1 Composite Solid Sample	4902189
CLELV2-DS-1-D Composite Solid Sample	4902190
CLELV2-SS-1 Grab Solid Sample	4902191
CLELV2-SS-2 Grab Solid Sample	4902192
CLELV2-LS-1 Grab Water Sample	4902193
CLELV2-LS-1 Filtered Grab Water Sample	4902194
CLELV2-LS-1-D Grab Water Sample	4902195
CLELV2-LS-1-BK Filtered Grab Water Sample	4902196

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the laboratory chronicles.

ELECTRONIC COPY TO	CH2M Hill	Attn: John Coffey
ELECTRONIC COPY TO	CH2M Hill	Attn: Ryan Loveridge
ELECTRONIC COPY TO	CH2M HILL	Attn: James Maugahn
1 COPY TO	Data Package Group	



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

REVISED

Questions? Contact your Client Services Representative
Jennifer L Good at (717) 656-2300

Respectfully Submitted,

Lancaster Laboratories Sample No. SW 4902189
**CLELV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 10:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2DS1- SDG#: SWE17-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
00159	Mercury	7439-97-6	0.0105 U	0.0105	mg/kg	1
01643	Aluminum	7429-90-5	226.	3.35	mg/kg	1
01650	Calcium	7440-70-2	350,000.	127.	mg/kg	10
01654	Iron	7439-89-6	861.	4.72	mg/kg	1
01657	Magnesium	7439-95-4	23,100.	1.90	mg/kg	1
06125	Arsenic	7440-38-2	0.515 J	0.174	mg/kg	10
06128	Cadmium	7440-43-9	0.223 J	0.0388	mg/kg	10
06131	Chromium	7440-47-3	1.88 J	0.317	mg/kg	10
06133	Copper	7440-50-8	3.74	0.358	mg/kg	10
06135	Lead	7439-92-1	12.2	0.153	mg/kg	10
06139	Nickel	7440-02-0	4.90	0.511	mg/kg	10
06141	Selenium	7782-49-2	0.480 J	0.378	mg/kg	10
06966	Silver	7440-22-4	0.170 U	0.170	mg/kg	1
06972	Zinc	7440-66-6	10.9	0.656	mg/kg	1
00111	Moisture	n.a.	2.1	0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.						
05895	Total Cyanide (solid)	57-12-5	0.18 U	0.18	mg/kg	1
06569	Bulk Density	n.a.	1.17	0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.9	0.50	% Passing	1
07139	3.35 mm	n.a.	99.8	0.50	% Passing	1
07140	2.36 mm	n.a.	99.5	0.50	% Passing	1
07141	1.18 mm	n.a.	88.4	0.50	% Passing	1
07142	0.6 mm	n.a.	73.1	0.50	% Passing	1
07143	0.3 mm	n.a.	62.3	0.50	% Passing	1
07144	0.15 mm	n.a.	52.8	0.50	% Passing	1
07145	0.075 mm	n.a.	45.1	0.50	% Passing	1
07146	0.064 mm	n.a.	42.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4902189
**CLELV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 10:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2DS1- SDG#: SWE17-01

CAT No.	Analysis Name	CAS Number	Dry	Method	Units	Dilution Factor
			Result	Detection Limit		
07147	0.05 mm	n.a.	38.0	0.50	%	1
07148	0.02 mm	n.a.	26.5	0.50	%	1
07149	0.005 mm	n.a.	13.0	0.50	%	1
07150	0.002 mm	n.a.	6.0	0.50	%	1
07151	0.001 mm	n.a.	1.0	0.50	%	1
					Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	11/03/2006 09:28	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	11/03/2006 23:36	John P Hook	1
01650	Calcium	SW-846 6010B	1	11/04/2006 18:02	Amanda S Bitner	10
01654	Iron	SW-846 6010B	1	11/03/2006 23:36	John P Hook	1
01657	Magnesium	SW-846 6010B	1	11/03/2006 23:36	John P Hook	1
06125	Arsenic	SW-846 6020	1	11/07/2006 12:13	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	11/07/2006 12:13	Parker D Lindstrom	10
06131	Chromium	SW-846 6020	1	11/08/2006 21:01	David K Beck	10
06133	Copper	SW-846 6020	1	11/08/2006 21:01	David K Beck	10
06135	Lead	SW-846 6020	1	11/07/2006 15:26	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	11/08/2006 21:01	David K Beck	10
06141	Selenium	SW-846 6020	1	11/07/2006 12:13	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	11/03/2006 23:36	John P Hook	1
06972	Zinc	SW-846 6010B	1	11/03/2006 23:36	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	11/01/2006 18:29	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	11/08/2006 18:43	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	11/06/2006 22:35	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	11/05/2006 11:45	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	11/02/2006 10:30	Megersa Deyessa	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	11/02/2006 11:50	Megersa Deyessa	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	11/06/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	11/04/2006 12:45	Mirit S Shenouda	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4902189

CLELV2-DS-1 Composite Solid Sample
Great Lakes - Sweepings

Collected: 10/27/2006 10:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

Reported: 12/07/2006 at 10:37

Discard: 01/07/2007

2DS1- SDG#: SWE17-01

Lancaster Laboratories Sample No. SW 4902190
**CLELV2-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 10:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2DS1D SDG#: SWE17-02FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Units	Dilution Factor
06569	Bulk Density	n.a.	1.27	0.080	g/cc	1
07103	Grain Size to 1 um					
07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	100.	0.50	% Passing	1
07138	4.75 mm	n.a.	99.8	0.50	% Passing	1
07139	3.35 mm	n.a.	99.8	0.50	% Passing	1
07140	2.36 mm	n.a.	99.4	0.50	% Passing	1
07141	1.18 mm	n.a.	86.1	0.50	% Passing	1
07142	0.6 mm	n.a.	83.5	0.50	% Passing	1
07143	0.3 mm	n.a.	72.5	0.50	% Passing	1
07144	0.15 mm	n.a.	62.9	0.50	% Passing	1
07145	0.075 mm	n.a.	55.8	0.50	% Passing	1
07146	0.064 mm	n.a.	50.0	0.50	% Passing	1
07147	0.05 mm	n.a.	38.5	0.50	% Passing	1
07148	0.02 mm	n.a.	23.0	0.50	% Passing	1
07149	0.005 mm	n.a.	9.0	0.50	% Passing	1
07150	0.002 mm	n.a.	7.0	0.50	% Passing	1
07151	0.001 mm	n.a.	4.0	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Dilution Factor
------------	---------------	--------	--------	---------------	---------	--------------------

Lancaster Laboratories Sample No. SW 4902190**CLELV2-DS-1-D Composite Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 10:00	by RM	Account Number: 12098
Submitted: 10/28/2006 09:50		Parsons Brinkerhoff
Reported: 12/07/2006 at 10:37		75 Arlington Street
Discard: 01/07/2007		Ninth Floor
		Boston MA 02116
2DS1D SDG#: SWE17-02FD		
06569 Bulk Density	ASTM E868-82 Sec 9.9	1 11/06/2006 22:35 Daniel S Smith 1
07103 Grain Size to 1 um	modified ASTM D422	1 11/05/2006 11:45 Luz M Groff 1

Lancaster Laboratories Sample No. SW 4902191
**CLELV2-SS-1 Grab Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00

by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2SS1- SDG#: SWE17-03

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result				
00159	Mercury	7439-97-6	0.0107	U	0.0107	mg/kg	1
01643	Aluminum	7429-90-5	97.4		3.40	mg/kg	1
01650	Calcium	7440-70-2	139,000.		129.	mg/kg	10
01654	Iron	7439-89-6	293,000.		95.7	mg/kg	20
01657	Magnesium	7439-95-4	33,800.		1.93	mg/kg	1
06125	Arsenic	7440-38-2	2.63		0.178	mg/kg	10
06128	Cadmium	7440-43-9	0.257	J	0.0397	mg/kg	10
06131	Chromium	7440-47-3	10.3		0.324	mg/kg	10
06133	Copper	7440-50-8	11.2		0.366	mg/kg	10
06135	Lead	7439-92-1	0.859	J	0.157	mg/kg	10
06139	Nickel	7440-02-0	21.9		0.523	mg/kg	10
06141	Selenium	7782-49-2	0.486	J	0.387	mg/kg	10
06966	Silver	7440-22-4	0.373	J	0.173	mg/kg	1
06972	Zinc	7440-66-6	55.9		0.665	mg/kg	1
00111	Moisture	n.a.	4.4		0.50	%	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.							
05895	Total Cyanide (solid)	57-12-5	0.18	U	0.18	mg/kg	1
06569	Bulk Density	n.a.	1.34		0.080	g/cc	1

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	91.1	0.50	% Passing	1
07137	19 mm	n.a.	51.9	0.50	% Passing	1
07138	4.75 mm	n.a.	11.9	0.50	% Passing	1
07139	3.35 mm	n.a.	7.5	0.50	% Passing	1
07140	2.36 mm	n.a.	4.6	0.50	% Passing	1
07141	1.18 mm	n.a.	1.9	0.50	% Passing	1
07142	0.6 mm	n.a.	0.56	J	0.50 % Passing	1
07143	0.3 mm	n.a.	0.50	U	0.50 % Passing	1
07144	0.15 mm	n.a.	0.50	U	0.50 % Passing	1
07145	0.075 mm	n.a.	0.50	U	0.50 % Passing	1
07146	0.064 mm	n.a.	0.50	J	0.50 % Passing	1

Lancaster Laboratories Sample No. SW 4902191
**CLELV2-SS-1 Grab Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2SS1- SDG#: SWE17-03

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	0.50	J	0.50	% Passing	1
07148	0.02 mm	n.a.	0.50	U	0.50	% Passing	1
07149	0.005 mm	n.a.	0.50	U	0.50	% Passing	1
07150	0.002 mm	n.a.	0.50	U	0.50	% Passing	1
07151	0.001 mm	n.a.	0.50	U	0.50	% Passing	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	11/03/2006 09:29	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	11/03/2006 23:41	John P Hook	1
01650	Calcium	SW-846 6010B	1	11/04/2006 18:07	Amanda S Bitner	10
01654	Iron	SW-846 6010B	1	11/05/2006 14:27	John P Hook	20
01657	Magnesium	SW-846 6010B	1	11/03/2006 23:41	John P Hook	1
06125	Arsenic	SW-846 6020	1	11/07/2006 12:47	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	11/07/2006 12:47	Parker D Lindstrom	10
06131	Chromium	SW-846 6020	1	11/08/2006 21:50	David K Beck	10
06133	Copper	SW-846 6020	1	11/08/2006 21:50	David K Beck	10
06135	Lead	SW-846 6020	1	11/07/2006 16:07	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	11/08/2006 21:50	David K Beck	10
06141	Selenium	SW-846 6020	1	11/07/2006 12:47	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	11/03/2006 23:41	John P Hook	1
06972	Zinc	SW-846 6010B	1	11/03/2006 23:41	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	11/01/2006 18:29	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	11/08/2006 18:46	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	11/06/2006 22:35	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	11/05/2006 11:45	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	11/02/2006 10:30	Megersa Deyessa	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	11/02/2006 11:50	Megersa Deyessa	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	11/06/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	11/04/2006 12:45	Mirit S Shenouda	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4902191

CLELV2-SS-1 Grab Solid Sample
Great Lakes - Sweepings

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

2SS1- SDG#: SWE17-03

Boston MA 02116

Lancaster Laboratories Sample No. SW 4902192
**CLELV2-SS-2 Grab Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2SS2 - SDG#: SWE17-04

CAT No.	Analysis Name	CAS Number	Dry	Method	Dilution Factor
			Result	Detection Limit	
00159	Mercury	7439-97-6	0.0111 U	0.0111	mg/kg
01643	Aluminum	7429-90-5	416.	3.61	mg/kg
01650	Calcium	7440-70-2	390,000.	137.	mg/kg
01654	Iron	7439-89-6	3,130.	5.07	mg/kg
01657	Magnesium	7439-95-4	13,600.	2.05	mg/kg
06125	Arsenic	7440-38-2	0.400 J	0.178	mg/kg
06128	Cadmium	7440-43-9	0.0995 J	0.0398	mg/kg
06131	Chromium	7440-47-3	2.45	0.324	mg/kg
06133	Copper	7440-50-8	0.531 J	0.348	mg/kg
06135	Lead	7439-92-1	0.613 J	0.157	mg/kg
06139	Nickel	7440-02-0	2.75	0.523	mg/kg
06141	Selenium	7782-49-2	0.714 J	0.387	mg/kg
06966	Silver	7440-22-4	0.183 U	0.183	mg/kg
06972	Zinc	7440-66-6	4.92	0.706	mg/kg
00111	Moisture	n.a.	8.1	0.50	%
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					
05895	Total Cyanide (solid)	57-12-5	0.20 U	0.20	mg/kg
06569	Bulk Density	n.a.	1.28	0.080	g/cc

07103 Grain Size to 1 um

07135	75 mm	n.a.	100.	0.50	% Passing	1
07136	37.5 mm	n.a.	100.	0.50	% Passing	1
07137	19 mm	n.a.	43.7	0.50	% Passing	1
07138	4.75 mm	n.a.	21.0	0.50	% Passing	1
07139	3.35 mm	n.a.	16.9	0.50	% Passing	1
07140	2.36 mm	n.a.	12.8	0.50	% Passing	1
07141	1.18 mm	n.a.	6.2	0.50	% Passing	1
07142	0.6 mm	n.a.	3.7	0.50	% Passing	1
07143	0.3 mm	n.a.	2.7	0.50	% Passing	1
07144	0.15 mm	n.a.	2.2	0.50	% Passing	1
07145	0.075 mm	n.a.	2.0	0.50	% Passing	1
07146	0.064 mm	n.a.	2.0	0.50	% Passing	1

Lancaster Laboratories Sample No. SW 4902192
**CLELV2-SS-2 Grab Solid Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2SS2- SDG#: SWE17-04

CAT No.	Analysis Name	CAS Number	Dry		Method Detection Limit	Units	Dilution Factor
			Result	Dilution			
07147	0.05 mm	n.a.	2.0		0.50	%	1
07148	0.02 mm	n.a.	1.5		0.50	%	1
07149	0.005 mm	n.a.	0.50	J	0.50	%	1
07150	0.002 mm	n.a.	0.50	U	0.50	%	1
07151	0.001 mm	n.a.	0.50	U	0.50	%	1
						Passing	

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00159	Mercury	SW-846 7471A	1	11/03/2006 09:30	Damary Valentin	1
01643	Aluminum	SW-846 6010B	1	11/03/2006 23:45	John P Hook	1
01650	Calcium	SW-846 6010B	1	11/04/2006 18:12	Amanda S Bitner	10
01654	Iron	SW-846 6010B	1	11/03/2006 23:45	John P Hook	1
01657	Magnesium	SW-846 6010B	1	11/03/2006 23:45	John P Hook	1
06125	Arsenic	SW-846 6020	1	11/07/2006 13:02	Parker D Lindstrom	10
06128	Cadmium	SW-846 6020	1	11/07/2006 13:02	Parker D Lindstrom	10
06131	Chromium	SW-846 6020	1	11/08/2006 21:55	David K Beck	10
06133	Copper	SW-846 6020	1	11/13/2006 23:25	David K Beck	10
06135	Lead	SW-846 6020	1	11/07/2006 16:12	Jayme E Curet	10
06139	Nickel	SW-846 6020	1	11/08/2006 21:55	David K Beck	10
06141	Selenium	SW-846 6020	1	11/07/2006 13:02	Parker D Lindstrom	10
06966	Silver	SW-846 6010B	1	11/03/2006 23:45	John P Hook	1
06972	Zinc	SW-846 6010B	1	11/03/2006 23:45	John P Hook	1
00111	Moisture	EPA 160.3 modified	1	11/01/2006 18:29	Scott W Freisher	1
05895	Total Cyanide (solid)	SW-846 9012A	1	11/08/2006 18:47	Courtney A Shoff	1
06569	Bulk Density	ASTM E868-82 Sec 9.9 modified	1	11/06/2006 22:35	Daniel S Smith	1
07103	Grain Size to 1 um	ASTM D422	1	11/05/2006 11:45	Luz M Groff	1
05708	SW SW846 ICP Digest	SW-846 3050B	1	11/02/2006 10:30	Megersa Deyessa	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	11/02/2006 11:50	Megersa Deyessa	1
05896	Cyanide Solid Distillation	SW-846 9012A	1	11/06/2006 10:30	Nancy J Shoop	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	1	11/04/2006 12:45	Mirit S Shenouda	1
06150	ICP/MS SW-846 Solid digest	SW-846 3050B	2	11/10/2006 11:05	Megersa Deyessa	1



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Page 3 of 3
REVISED

Lancaster Laboratories Sample No. SW 4902192

CLELV2-SS-2 Grab Solid Sample
Great Lakes - Sweepings

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50
Reported: 12/07/2006 at 10:37
Discard: 01/07/2007

Parsons Brinkerhoff
75 Arlington Street
Ninth Floor
Boston MA 02116

2SS2- SDG#: SWE17-04

Lancaster Laboratories Sample No. WW 4902193**CLELV2-LS-1 Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2LS1- SDG#: SWE17-05

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000095 J	0.000056	mg/l 1
01743	Aluminum	7429-90-5	0.297	0.0802	mg/l 1
01750	Calcium	7440-70-2	135.	0.104	mg/l 1
01754	Iron	7439-89-6	1.49	0.0522	mg/l 1
01757	Magnesium	7439-95-4	20.4	0.0135	mg/l 1
06025	Arsenic	7440-38-2	0.0023	0.00067	mg/l 1
06028	Cadmium	7440-43-9	0.0022	0.000099	mg/l 1
06031	Chromium	7440-47-3	0.0026	0.00026	mg/l 1
06033	Copper	7440-50-8	0.0139	0.00020	mg/l 1
06035	Lead	7439-92-1	0.0079	0.000047	mg/l 1
06039	Nickel	7440-02-0	0.0123	0.00043	mg/l 1
06041	Selenium	7782-49-2	0.0093	0.00050	mg/l 1
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l 1
07072	Zinc	7440-66-6	0.191	0.0081	mg/l 1
00206	Total Suspended Solids	n.a.	174.	5.0	mg/l 1
00235	Biochemical Oxygen Demand	n.a.	17.6	0.80	mg/l 1
00273	Total Organic Carbon	n.a.	10.5	1.0	mg/l 1
01443	Specific Gravity	n.a.	1.0	0.0050	1
04001	Chemical Oxygen Demand	n.a.	84.2	12.8	mg/l 1
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l 1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	11/03/2006 08:18	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	11/02/2006 08:24	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	11/04/2006 01:27	John P Hook	1
01754	Iron	SW-846 6010B	1	11/02/2006 08:24	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	11/02/2006 08:24	Eric L Eby	1
06025	Arsenic	SW-846 6020	1	11/03/2006 14:37	Jayme E Curet	1
06028	Cadmium	SW-846 6020	1	11/03/2006 10:10	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	11/03/2006 14:37	Jayme E Curet	1
06033	Copper	SW-846 6020	1	11/03/2006 14:37	Jayme E Curet	1
06035	Lead	SW-846 6020	1	11/03/2006 10:10	Jayme E Curet	1
06039	Nickel	SW-846 6020	1	11/03/2006 14:37	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4902193
**CLELV2-LS-1 Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

2LS1- SDG#: SWE17-05

06041	Selenium	SW-846 6020	1	11/03/2006 14:37	Jayme E Curet	1
07066	Silver	SW-846 6010B	1	11/02/2006 08:24	Eric L Eby	1
07072	Zinc	SW-846 6010B	1	11/04/2006 01:27	John P Hook	1
00206	Total Suspended Solids	EPA 160.2	1	10/31/2006 11:26	Christopher M Cunningham	1
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/28/2006 12:01	Christopher M Cunningham	1
00273	Total Organic Carbon	EPA 415.1	1	11/09/2006 14:30	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	11/02/2006 21:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	11/02/2006 12:00	Susan A Engle	1
08255	Total Cyanide (water)	SW-846 9012A	1	11/01/2006 13:40	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/01/2006 19:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	11/02/2006 19:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	11/03/2006 01:25	Helen L Schaeffer	1
08256	Cyanide Water Distillation	SW-846 9012A	1	11/01/2006 10:30	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4902194**CLELV2-LS-1 Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00

by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

-LS1- SDG#: SWE17-06

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result	Method Detection Limit			
00259	Mercury	7439-97-6	0.000081 J	0.000056	mg/l	1	
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l	1	
01750	Calcium	7440-70-2	84.9	0.104	mg/l	1	
01754	Iron	7439-89-6	0.101 J	0.0522	mg/l	1	
01757	Magnesium	7439-95-4	18.9	0.0135	mg/l	1	
06025	Arsenic	7440-38-2	0.0034 U	0.0034	mg/l	5	
06028	Cadmium	7440-43-9	0.0015	0.000099	mg/l	1	
06031	Chromium	7440-47-3	0.0031 J	0.0013	mg/l	5	
06033	Copper	7440-50-8	0.0084	0.00020	mg/l	1	
06035	Lead	7439-92-1	0.0030	0.000047	mg/l	1	
06039	Nickel	7440-02-0	0.0082 J	0.0022	mg/l	5	
The quantitation limits for arsenic, chromium, nickel, and selenium were raised due to the nature of the sample matrix.							
06041	Selenium	7782-49-2	0.0109	0.0025	mg/l	5	
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l	1	
07072	Zinc	7440-66-6	0.110	0.0081	mg/l	1	
08255	Total Cyanide (water)	57-12-5	0.0050 U	0.0050	mg/l	1	

This sample was filtered in the lab for dissolved cyanide.

This sample was field filtered for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00259	Mercury	SW-846 7470A	1	11/03/2006 08:19	Damary Valentin	1
01743	Aluminum	SW-846 6010B	1	11/02/2006 08:29	Eric L Eby	1
01750	Calcium	SW-846 6010B	1	11/04/2006 16:39	Amanda S Bitner	1
01754	Iron	SW-846 6010B	1	11/02/2006 08:29	Eric L Eby	1
01757	Magnesium	SW-846 6010B	1	11/02/2006 08:29	Eric L Eby	1
06025	Arsenic	SW-846 6020	1	11/03/2006 14:42	Jayme E Curet	5
06028	Cadmium	SW-846 6020	1	11/03/2006 10:15	Jayme E Curet	1
06031	Chromium	SW-846 6020	1	11/03/2006 14:42	Jayme E Curet	5
06033	Copper	SW-846 6020	1	11/07/2006 00:51	David K Beck	1
06035	Lead	SW-846 6020	1	11/03/2006 10:15	Jayme E Curet	1

Lancaster Laboratories Sample No. WW 4902194
**CLELV2-LS-1 Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:37

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

-LS1- SDG#: SWE17-06

06039	Nickel	SW-846 6020	1	11/03/2006 14:42	Jayme E Curet	5
06041	Selenium	SW-846 6020	1	11/03/2006 14:42	Jayme E Curet	5
07066	Silver	SW-846 6010B	1	11/02/2006 08:29	Eric L Eby	1
07072	Zinc	SW-846 6010B	1	11/04/2006 16:39	Amanda S Bitner	1
08255	Total Cyanide (water)	SW-846 9012A	1	11/01/2006 13:41	Nicole M Kepley	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/01/2006 19:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	11/02/2006 19:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	11/03/2006 01:25	Helen L Schaeffer	1
08256	Cyanide Water Distillation	SW-846 9012A	1	11/01/2006 10:30	Nancy J Shoop	1

Lancaster Laboratories Sample No. WW 4902195
**CLELV2-LS-1-D Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/27/2006 07:00 by RM Account Number: 12098

 Submitted: 10/28/2006 09:50 Parsons Brinkerhoff
 Reported: 12/07/2006 at 10:37 75 Arlington Street
 Discard: 01/07/2007 Ninth Floor
 Boston MA 02116

2LS1D SDG#: SWE17-07FD

CAT No.	Analysis Name	CAS Number	As Received		Method Detection Limit	Units	Dilution Factor
			Result				
00235	Biochemical Oxygen Demand	n.a.	18.1		0.80	mg/l	1
00273	Total Organic Carbon	n.a.	12.5		1.0	mg/l	1
01443	Specific Gravity	n.a.	1.01		0.0050		1
04001	Chemical Oxygen Demand	n.a.	95.8		12.8	mg/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
00235	Biochemical Oxygen Demand	EPA 405.1	1	10/28/2006 12:01	Christopher M Cunningham	1
00273	Total Organic Carbon	EPA 415.1	1	11/09/2006 14:38	James S Mathiot	1
01443	Specific Gravity	SM18 2710 F	1	11/02/2006 21:00	Geraldine C Smith	1
04001	Chemical Oxygen Demand	EPA 410.4	1	11/02/2006 12:00	Susan A Engle	1

Lancaster Laboratories Sample No. WW 4902196
**CLELV2-LS-1-BK Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/11/2006 08:00

by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:38

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

-LSBK SDG#: SWE17-08BL*

CAT No.	Analysis Name	CAS Number	As Received		Dilution Factor
			Result	Method Detection Limit	
00259	Mercury	7439-97-6	0.000056 U	0.000056	mg/l
01743	Aluminum	7429-90-5	0.0802 U	0.0802	mg/l
01750	Calcium	7440-70-2	0.104 U	0.104	mg/l
01754	Iron	7439-89-6	0.0522 U	0.0522	mg/l
01757	Magnesium	7439-95-4	0.0243 J	0.0135	mg/l
06025	Arsenic	7440-38-2	0.0034 U	0.0034	mg/l
06028	Cadmium	7440-43-9	0.000099 U	0.000099	mg/l
06031	Chromium	7440-47-3	0.0022 J	0.0013	mg/l
06033	Copper	7440-50-8	0.0010 U	0.0010	mg/l
The quantitation limits for arsenic, chromium, copper, nickel, and selenium were raised due to the nature of the sample matrix.					
06035	Lead	7439-92-1	0.000047 U	0.000047	mg/l
06039	Nickel	7440-02-0	0.0022 U	0.0022	mg/l
06041	Selenium	7782-49-2	0.0025 U	0.0025	mg/l
07066	Silver	7440-22-4	0.0016 U	0.0016	mg/l
07072	Zinc	7440-66-6	0.0081 U	0.0081	mg/l

This sample was field filtered for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Dilution Factor
			Trial#	Date and Time	
00259	Mercury	SW-846 7470A	1	11/03/2006 08:21	Damary Valentin
01743	Aluminum	SW-846 6010B	1	11/02/2006 08:34	Eric L Eby
01750	Calcium	SW-846 6010B	1	11/04/2006 16:44	Amanda S Bitner
01754	Iron	SW-846 6010B	1	11/02/2006 08:34	Eric L Eby
01757	Magnesium	SW-846 6010B	1	11/02/2006 08:34	Eric L Eby
06025	Arsenic	SW-846 6020	1	11/03/2006 14:46	Jayme E Curet
06028	Cadmium	SW-846 6020	1	11/03/2006 10:19	Jayme E Curet
06031	Chromium	SW-846 6020	1	11/03/2006 14:46	Jayme E Curet
06033	Copper	SW-846 6020	1	11/07/2006 00:54	David K Beck
06035	Lead	SW-846 6020	1	11/03/2006 10:19	Jayme E Curet
06039	Nickel	SW-846 6020	1	11/03/2006 14:46	Jayme E Curet
06041	Selenium	SW-846 6020	1	11/03/2006 14:46	Jayme E Curet

Lancaster Laboratories Sample No. WW 4902196**CLELV2-LS-1-BK Filtered Grab Water Sample
Great Lakes - Sweepings**

Collected: 10/11/2006 08:00

by RM

Account Number: 12098

Submitted: 10/28/2006 09:50

Parsons Brinkerhoff

Reported: 12/07/2006 at 10:38

75 Arlington Street

Discard: 01/07/2007

Ninth Floor

Boston MA 02116

-LSBK SDG#: SWE17-08BL*

07066	Silver	SW-846 6010B	1	11/02/2006 08:34	Eric L Eby	1
07072	Zinc	SW-846 6010B	1	11/04/2006 16:44	Amanda S Bitner	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	11/01/2006 19:14	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	11/02/2006 19:45	Nelli S Markaryan	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	11/03/2006 01:25	Helen L Schaeffer	1

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:38 AM

Group Number: 1011929

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 06301023501A Biochemical Oxygen Demand			Sample number(s): 4902193, 4902195	98	97	85-115	2	8
Batch number: 06304020601B Total Suspended Solids	3.0 U	3.0	mg/l	94		56-128		
Batch number: 06305117101A Total Cyanide (water)	0.0050 U	0.0050	mg/l	95		90-110		
Batch number: 063051848002 Aluminum Calcium Iron Magnesium Silver Zinc	0.0802 U 0.104 U 0.0522 U 0.0203 J 0.0016 U 0.0081 U	0.0802 0.104 0.0522 0.0135 0.0016 0.0081	mg/l mg/l mg/l mg/l mg/l mg/l	98 100 102 102 99 101		90-112 90-112 90-112 89-110 90-118 90-111		
Batch number: 06305820009B Moisture			Sample number(s): 4902189, 4902191-4902192	100		99-101		
Batch number: 06306400101A Chemical Oxygen Demand			Sample number(s): 4902193, 4902195	105		94-110		
Batch number: 063065708002 Aluminum Calcium Iron Magnesium Silver Zinc	3.35 U 12.7 U 4.71 U 1.90 U 0.170 U 0.655 U	3.35 12.7 4.71 1.90 0.170 0.655	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	123 102 72 105 99 96		61-139 81-119 35-165 78-122 66-134 79-121		
Batch number: 063065711001 Mercury	0.0105 U	0.0105	mg/kg	92		66-133		
Batch number: 063065713002 Mercury	U	0.000056	mg/l	104		80-120		
Batch number: 063076050002A Arsenic Cadmium Chromium Copper	U	0.00067 0.000099 0.00033 0.00020	mg/l mg/l mg/l mg/l	104 102 109 111		80-120 80-120 80-120 80-120		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

 Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:38 AM

Group Number: 1011929

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Lead	0.000047	0.00004	mg/l	107		80-120		
	U	7						
Nickel	0.00043	0.00043	mg/l	108		80-120		
	U							
Selenium	0.00050	0.00050	mg/l	105		80-120		
	U							
Batch number: 063086150002A	Sample number(s): 4902189, 4902191-4902192							
Arsenic	0.0170 U	0.0170	mg/kg	86		66-101		
Cadmium	0.0038 U	0.0038	mg/kg	102		81-119		
Chromium	0.0958 J	0.0310	mg/kg	109		73-127		
Copper	0.164	0.0350	mg/kg	110		82-118		
Lead	0.0416 J	0.0150	mg/kg	101		82-118		
Selenium	0.0370 U	0.0370	mg/kg	101		74-126		
Batch number: 063086150002C	Sample number(s): 4902189, 4902191-4902192							
Nickel	0.0500 U	0.0500	mg/kg	111		82-118		
Batch number: 06310102201A	Sample number(s): 4902189, 4902191-4902192							
Total Cyanide (solid)	0.18 U	0.18	mg/kg	99		90-110		
Batch number: 06313049511A	Sample number(s): 4902193, 4902195							
Total Organic Carbon	1.0 U	1.0	mg/l	95		80-120		
Batch number: 063146150001A	Sample number(s): 4902192							
Copper	0.0331 J	0.0320	mg/kg	110		82-118		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06301023501A	Sample number(s): 4902193, 4902195 UNSPK: P901505 BKG: P901505							
Biochemical Oxygen Demand	100	87	67-144	4	9	460.	470.	2
Batch number: 06304020601B	Sample number(s): 4902193 BKG: P901505							
Total Suspended Solids					284.	284.	0 (1)	20
Batch number: 06305117101A	Sample number(s): 4902193-4902194 UNSPK: P899998 BKG: P899998							
Total Cyanide (water)	95	83-111			0.0050 U	0.0050 U	0 (1)	20
Batch number: 063051848002	Sample number(s): 4902193-4902194, 4902196 UNSPK: P903319 BKG: P903319							
Aluminum	116	115	75-125	1	20	0.0802 U	0.0802 U	2 (1)
Calcium	(2)	(2)	75-125	1	20	914.	895.	20
Iron	103	100	75-125	2	20	0.617	0.630	2 (1)
Magnesium	(2)	(2)	75-125	1	20	1,240.	1,210.	20
Silver	126*	122	75-125	3	20	0.0016 U	0.0016 U	-140 (1)
Zinc	109	112	75-125	3	20	0.0081 U	0.0081 U	-12 (1)
Batch number: 06305820009B	Sample number(s): 4902189, 4902191-4902192 BKG: P899341							
Moisture					22.0	22.3	1	15

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

 Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:38 AM

Group Number: 1011929

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG MAX Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 06306144301A Specific Gravity			Sample number(s): 4902193, 4902195	BKG: P899232	1.04	1.04	0	2
Batch number: 06306400101A Chemical Oxygen Demand	91		Sample number(s): 4902193, 4902195 UNSPK: 4902195	BKG: 4902195	95.8	91.2	5 (1)	5
90-110			90-110					
Batch number: 063065708002 Aluminum	(2)	(2)	75-125	10	20	9,100.	11,300.	21*
Calcium	135*	131*	75-125	2	20	250.	398.	46*
Iron	(2)	(2)	75-125	8	20	24,400.	33,300.	31*
Magnesium	(2)	(2)	75-125	35*	20	3,030.	3,680.	19
Silver	101	103	75-125	1	20	0.168 U	0.165 U	42* (1)
Zinc	83	146*	75-125	24*	20	69.3	82.1	17
Batch number: 063065711001 Mercury	102	100	80-120	2	20	0.0472 J	0.0436 J	8 (1)
Batch number: 063065713002 Mercury	109	110	80-120	1	20	0.000056 U	0.000056 U	7 (1)
Batch number: 063076050002A Arsenic	(2)	(2)	75-125	2	20	0.0583	0.0627	7 (1)
Cadmium	(2)	(2)	75-125	3	20	0.129	0.135	4
Chromium	110	106	75-125	3	20	0.010 J	0.0109 J	9 (1)
Copper	107	104	75-125	1	20	0.121	0.119	1
Lead	106	105	75-125	1	20	0.00050	0.00050	0 (1)
Nickel	(2)	(2)	75-125	4	20	1.82	1.80	1
Selenium	(2)	(2)	75-125	13	20	0.0809	0.0841	4 (1)
Batch number: 063086150002A Arsenic	105	107	70-130	1	20	0.505 J	0.298 J	52* (1)
Cadmium	80	98	75-125	13	20	0.218 J	0.124 J	55* (1)
Chromium	95	105	75-125	7	20	1.84 J	1.57 J	16 (1)
Copper	69*	70*	75-125	1	20	3.66	2.06	56* (1)
Lead	(2)	(2)	75-125	10	20	11.9	1.19	164* (1)
Selenium	119	149*	75-130	16	20	0.470 J	0.572 J	20 (1)
Batch number: 063086150002C Nickel	100	111	75-125	6	20	4.80	4.60	4 (1)
Batch number: 06309710301A 75 mm			Sample number(s): 4902189-4902192	BKG: P901605	100.	100.	0	20
37.5 mm					100.	100.	0	20
19 mm					100.	100.	0	20
4.75 mm					100.	100.	0	20
3.35 mm					99.9	99.9	0	20
2.36 mm					99.8	99.8	0	20
1.18 mm					99.7	99.7	0	20
0.6 mm					99.4	99.4	0	20
0.3 mm					97.6	97.5	0	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
 (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Parsons Brinkerhoff
 Reported: 12/07/06 at 10:38 AM

Group Number: 1011929

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD RPD</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
0.15 mm					29.1	27.8	4	20
0.075 mm					13.6	16.9	21*	20
0.064 mm					12.0	14.5	19	20
0.05 mm					10.0	11.5	14	20
0.02 mm					6.5	6.5	0	20
0.005 mm					3.5	3.5	0 (1)	20
0.002 mm					2.0	2.0	0 (1)	20
0.001 mm					2.0	2.0	0 (1)	20
Batch number: 06310102201A Total Cyanide (solid)			Sample number(s): 4902189, 4902191-4902192 UNSPK: 4902189 BKG: 4902189 53* 59-124 0.17 U 0.18 U 0 (1)					17
Batch number: 06310656901A Bulk Density			Sample number(s): 4902189-4902192 BKG: 4902189		1.17	1.15	1 (1)	20
Batch number: 06313049511A Total Organic Carbon			Sample number(s): 4902193, 4902195 UNSPK: P901836 BKG: P901836 97 62-148 1.9 J 1.9 J 1 (1)					2
Batch number: 063146150001A Copper			Sample number(s): 4902192 UNSPK: P907397 BKG: P907397 (2) (2) 75-125 1 20 204. 147.				33*	20

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Analysis Request/ Environmental Services Chain of Custody

For Lancaster Laboratories use only

Acct. # 120918 Group# 1011929 Sample # 4962188-86COC # 0130303

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: CHAM HILL Acct. #: _____
 Project Name/#: GREAT LAKES PWSID #: _____
 Project Manager: ERIN MOSELEY P.O.#: _____
 Sampler: REGAN McMORRIS Quote #: _____
 Name of state where samples were collected: OH

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers
			X	X				
CLELV2-DS-1	10/27/06	10:00						2
CLELV2-DS-1-D		↓			X			1
CLELV2-SS-1		0700	X	X				1
CLELV2-SS-BU			X	X				1
CLELV2-SS-2			X	X				1
CLELV2-SS-BU			X	X				1
CLELV2-LS-1			X		X			6
CLELV2-LS-1-D			X		X			3
CLELV2-LS-1-BU	10/27/06	↓	X		X			2
CLELV2-LS-1-BK	10/11/06	0800	X		X			1

Preservation Codes	5 Analyses Required								Remarks	
	Path	TOT METALS, SUL	TOT Hg, SUL	AS4361 METALS, CN	Bulk Density	Grain Size	Specific Gravity	TOC		DOC	BOD/COD
P/H/S	X	X	X							
TOT METALS, SUL										
TOT Hg, SUL										
AS4361 METALS, CN										
Bulk Density										
Grain Size										
Specific Gravity										
TOC										
DOC										
BOD/COD										
TSS										

7 Turnaround Time Requested (TAT) (please circle): Normal Rush
 (Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: _____

Rush results requested by (please circle): Phone Fax E-mail

Phone #: _____ Fax #: _____

E-mail address: _____

8 Data Package Options (please circle if required)

Type I (validation/NJ Reg)	TX TRRP-13	SDG Complete?
Type II (Tier II)	MA MCP	Yes No
Type III (Reduced N)	CT RCP	
Type IV (CLP SOW)		
Type VI (Raw Data Only)		

Site-specific QC (MS/MSD/Dup)? Yes NO
 (If yes, indicate QC sample and submit triplicate volume.)

Internal COC Required? Yes / NO

Relinquished by: <u>Regan Morris</u>	Date <u>10/27/06</u>	Time <u>13:30</u>	Received by: _____	Date <u>10/27/06</u>	Time <u>13:30</u>
Relinquished by: <u>Regan Morris</u>	Date <u>10/27/06</u>	Time <u>13:30</u>	Received by: _____	Date <u>10/27/06</u>	Time <u>13:30</u>
Relinquished by: _____	Date _____	Time _____	Received by: _____	Date _____	Time _____
Relinquished by: _____	Date _____	Time _____	Received by: _____	Date _____	Time _____
Relinquished by: _____	Date _____	Time _____	Received by: _____	Date _____	Time _____
Relinquished by: _____	Date _____	Time _____	Received by: _____	Date _____	Time _____

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	Ib.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

- A** TIC is a possible aldol-condensation product
- B** Analyte was also detected in the blank
- C** Pesticide result confirmed by GC/MS
- D** Compound quantitated on a diluted sample
- E** Concentration exceeds the calibration range of the instrument
- J** Estimated value
- N** Presumptive evidence of a compound (TICs only)
- P** Concentration difference between primary and confirmation columns >25%
- U** Compound was not detected
- X,Y,Z** Defined in case narrative

Inorganic Qualifiers

- B** Value is <CRDL, but \geq IDL
- E** Estimated due to interference
- M** Duplicate injection precision not met
- N** Spike amount not within control limits
- S** Method of standard additions (MSA) used for calculation
- U** Compound was not detected
- W** Post digestion spike out of control limits
- * Duplicate analysis not within control limits
- + Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008466

Samples: 4881932-4881935

Submitted: 10/03/06 09:30

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE01



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008466

Samples: 4881932-4881935

Submitted: 10/03/06 09:30

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE01



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008469

Samples: 4881940-4881942

Submitted: 10/03/06 09:30

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE02



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008469

Samples: 4881940-4881942

Submitted: 10/03/06 09:30

P.O. Number: 18957F T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE02



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008470

Samples: 4881943-4881945

Submitted: 10/03/06 09:30

P.O. Number: 18957F_T0003_TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE03



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008470

Samples: 4881943-4881945

Submitted: 10/03/06 09:30

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE03



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008472

Samples: 4881947-4881949

Submitted: 10/03/06 09:30

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE04



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008472

Samples: 4881947-4881949

Submitted: 10/03/06 09:30

P.O. Number: 18957F T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE04

Account: 12098**Client:** Parsons Brinkerhoff**Group Number:** 1008535**Samples:** 4882249-4882255**Submitted:** 10/05/06 09:25**P.O. Number:** 18957F_T0003_TM1**Project:** Great Lakes - Sweeping**Release Number:****Quote Number:** 204158 A**SDG Number:** SWE01

Sample #	Description	Collection Date/Time	00111-Moisture	00159-Mercury	00206-Total Suspended Solids	00235-Biochemical Oxygen Demand	00259-Mercury	00273-Total Organic Carbon	01443-Specific Gravity	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	01743-Aluminum	01750-Calcium	01754-Iron	01757-Magnesium	04001-Chemical Oxygen Demand	05895-Total Cyanide (solid)	06025-Arsenic	06028-Cadmium	06031-Chromium	06033-Copper	06035-Lead	06039-Nickel	
4882249	DLHTV2-DS-1 Solid Sample	10/03/06 13:00	X	X						X	X	X	X						X							
4882250	DLHTV2-DS-1-D Solid Sample	10/03/06 13:00																								
4882251	DLHTV2-SS-1 Solid Sample	10/03/06 13:00	X	X					X	X	X	X							X							
4882252	DLHTV2-SS-2 Solid Sample	10/03/06 13:00	X	X					X	X	X	X							X							
4882253	DLHTV2-LS-1 Water Sample	10/03/06 13:00			X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	
4882254	DLHTV2-LS-1 Filtered Water Sample	10/03/06 13:00				X													X	X	X	X	X	X	X	
4882255	DLHTV2-LS-1-D Water Sample	10/03/06 13:00				X		X	X										X							



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008535

Samples: 4882249-4882255

Submitted: 10/05/06 09:25

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE01



Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008535

Samples: 4882249-4882255

Submitted: 10/05/06 09:25

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE01

Sample #	Description	Collection Date/Time	00111-Moisture	00159-Mercury	00206-Total Suspended Solids	00235-Biochemical Oxygen Demand	00259-Mercury	00273-Total Organic Carbon	01443-Specific Gravity	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	01743-Aluminum	01750-Calcium	01754-Iron	01757-Magnesium	04001-Chemical Oxygen Demand	05895- Total Cyanide (solid)	06025-Arsenic	06028-Cadmium	06031-Chromium	06033-Copper	06035-Lead	06039-Nickel	06041-Selenium	06125-Arsenic
4882249	DLHTV2-DS-1 Solid Sample	10/03/06 13:00	X	X																							
4882250	DLHTV2-DS-1-D Solid Sample	10/03/06 13:00																									
4882251	DLHTV2-SS-1 Solid Sample	10/03/06 13:00	X	X					X	X	X	X															X
4882252	DLHTV2-SS-2 Solid Sample	10/03/06 13:00	X	X					X	X	X	X															X
4882253	DLHTV2-LS-1 Water Sample	10/03/06 13:00			X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X		
4882254	DLHTV2-LS-1 Filtered Water Sample	10/03/06 13:00				X															X	X	X	X	X	X	
4882255	DLHTV2-LS-1-D Water Sample	10/03/06 13:00				X		X	X											X							X



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008582

Samples: 4882485-4882488

Submitted: 10/05/06 09:25

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWF06



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008582

Samples: 4882485-4882488

Submitted: 10/05/06 09:25

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE06



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008584

Samples: 4882492-4882495

Submitted: 10/05/06 09:25

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWF07



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008584

Samples: 4882492-4882495

Submitted: 10/05/06 09:25

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE07



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008588

Samples: 4882510-4882514

Submitted: 10/05/06 09:25

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008588

Samples: 4882510-4882514

Submitted: 10/05/06 09:25

P.O. Number: 18957F T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008728

Samples: 4883054-4883058

Submitted: 10/06/06 09:40

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008728

Samples: 4883054-4883058

Submitted: 10/06/06 09:40

P.O. Number: 18957F T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008732

Samples: 4883068-4883070

Submitted: 10/06/06 09:40

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE06



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008732

Samples: 4883068-4883070

Submitted: 10/06/06 09:40

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWF06



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008768

Samples: 4883449-4883449

Submitted: 10/05/06 09:25

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE08

Sample #	Description	Collection Date/Time	00259-Mercury	01743-Aluminum	01750-Calcium	01754-Iron	01757-Magnesium	06025-Arsenic	06028-Cadmium	06031-Chromium	06033-Copper	06035-Lead	06039-Nickel	06041-Selenium	07066-Silver	07072-Zinc	08255- Total Cyanide (water)						
4883449	DLHCV1-LS-1-D Filtered Composite Water Sample	10/03/06 08:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008768

Samples: 4883449-4883449

Submitted: 10/05/06 09:25

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE08



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1008920

Samples: 4884379-4884381

Submitted: 10/07/06 09:30

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE09



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1008920

Samples: 4884379-4884381

Submitted: 10/07/06 09:30

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE09



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009070

Samples: 4885287-4885287

Submitted: 10/07/06 09:30

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE09



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1009070

Samples: 4885287-4885287

Submitted: 10/07/06 09:30

P.O. Number: 18957F T0003 TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE09



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009259

Samples: 4886189-4886194

Submitted: 10/11/06 09:1

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE10



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009259

Samples: 4886189-4886194

Submitted: 10/11/06 09:15

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWF10

Account: 12098**Client:** Parsons Brinkerhoff**Group Number:** 1009271**Samples:** 4886256-4886260**Submitted:** 10/11/06 09:15**P.O. Number:** 18957F_T0003_TM1**Project:** Great Lakes - Sweeping**Release Number:****Quote Number:** 204158 A**SDG Number:** SWE11

Sample #	Description	Collection Date/Time	00111-Moisture	00118-Moisture	00159-Mercury	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	02858-Selected SVOA's in soil by SIM	05895-Total Cyanide (solid)	06125-Arsenic	06128-Cadmium	06131-Chromium	06133-Copper	06135-Lead	06139-Nickel	06141-Selenium	06569-Bulk Density	06966-Silver	06972-Zinc	07103-Grain Size to 1 um
4886256	CLELV1-DS-1 Unspiked Composite Solid Sample	10/10/06 09:00	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		
4886257	CLELV1-DS-1 Matrix Spike Composite Solid Sample	10/10/06 09:00		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		
4886258	CLELV1-DS-1-D Composite Solid Sample	10/10/06 09:00	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		
4886259	CLELV4-DS-1 Composite Solid Sample	10/09/06 16:00	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886260	CLELV4-DS-1-D Composite Solid Sample	10/09/06 16:00																X		X		



Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1009271

Samples: 4886256-4886260

Submitted: 10/11/06 09:15

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE11

Sample #	Description	Collection Date/Time	00111-Moisture	00118-Moisture	00159-Mercury	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	02858-Selected SVOA's in soil by SIM	05895-Total Cyanide (solid)	06125-Arsenic	06128-Cadmium	06131-Chromium	06133-Copper	06135-Lead	06139-Nickel	06141-Selenium	06569-Bulk Density	06966-Silver	06972-Zinc	07103-Grain Size to 1 um
4886256	CLELV1-DS-1 Unspiked Composite Solid Sample	10/10/06 09:00	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886257	CLELV1-DS-1 Matrix Spike Composite Solid Sample	10/10/06 09:00		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886258	CLELV1-DS-1-D Composite Solid Sample	10/10/06 09:00	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886259	CLELV4-DS-1 Composite Solid Sample	10/09/06 16:00	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
4886260	CLELV4-DS-1-D Composite Solid Sample	10/09/06 16:00															X		X			



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009277

Samples: 4886323-4886325

Submitted: 10/11/06 09:15

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE12



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009277

Samples: 4886323-4886325

Submitted: 10/11/06 09:15

P.O. Number: 18957F T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE12



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1009874

Samples: 4889617-4889624

Submitted: 10/14/06 10:1

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE13



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1009874

Samples: 4889617-4889624

Submitted: 10/14/06 10:1

P.O. Number: 18957E T0003 TM

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE13



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1010298

Samples: 4892317-4892317

Submitted: 10/18/06 09:05

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE14



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1010298

Samples: 4892317-4892317

Submitted: 10/18/06 09:05

P.O. Number: 18957F_T0003_TM1

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE14

Account: 12098**Client:** Parsons Brinkerhoff**Group Number:** 1011929**Samples:** 4902189-4902196**Submitted:** 10/28/06 09:50**P.O. Number:** 18957F_T0003_TM1**Project:** Great Lakes - Sweeping**Release Number:****Quote Number:** 204158 A**SDG Number:** SWE17

Sample #	Description	Collection Date/Time	00111-Moisture	00159-Mercury	00206-Total Suspended Solids	00235-Biochemical Oxygen Demand	00259-Mercury	00273-Total Organic Carbon	01443-Specific Gravity	01643-Aluminum	01650-Calcium	01654-Iron	01657-Magnesium	01743-Aluminum	01750-Calcium	01754-Iron	01757-Magnesium	04001-Chemical Oxygen Demand	05895-Total Cyanide (solid)	06025-Arsenic	06028-Cadmium	06031-Chromium	06033-Copper	06035-Lead	06039-Nickel	
4902189	CLELV2-DS-1 Composite Solid Sample	10/27/06 10:00	X	X															X							
4902190	CLELV2-DS-1-D Composite Solid Sample	10/27/06 10:00																								
4902191	CLELV2-SS-1 Grab Solid Sample	10/27/06 07:00	X	X					X	X	X	X							X							
4902192	CLELV2-SS-2 Grab Solid Sample	10/27/06 07:00	X	X					X	X	X	X							X							
4902193	CLELV2-LS-1 Grab Water Sample	10/27/06 07:00			X	X	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X
4902194	CLELV2-LS-1 Filtered Grab Water Sample	10/27/06 07:00				X														X	X	X	X	X	X	
4902195	CLELV2-LS-1-D Grab Water Sample	10/27/06 07:00				X		X	X										X							
4902196	CLELV2-LS-1-BK Filtered Grab Water Sample	10/11/06 08:00				X														X	X	X	X	X	X	



Account: 12098

Client: Parsons Brinkerhof

Group Number: 1011929

Samples: 4902189-4902196

Submitted: 10/28/06 09:50

P.O. Number: 18957F T0003 TM

Project: Great Lakes - Sweepings

Release Number:

Quote Number: 204158 A

SDG Number: SWE17

Sample	Description	Collection Date/Time	06041-Selenium	06125-Arsenic	06128-Cadmium	06131-Chromium	06133-Copper	06135-Lead	06139-Nickel	06141-Selenium	06569-Bulk Density	06966-Silver	06972-Zinc	07066-Silver	07072-Zinc	07103-Grain Size to 1 um	08255- Total Cyanide (water)
4902189	CLELV2-DS-1 Composite Solid Sample	10/27/06 10:00	X	X	X	X	X	X	X	X	X	X				X	
4902190	CLELV2-DS-1-D Composite Solid Sample	10/27/06 10:00									X					X	
4902191	CLELV2-SS-1 Grab Solid Sample	10/27/06 07:00	X	X	X	X	X	X	X	X	X	X	X			X	
4902192	CLELV2-SS-2 Grab Solid Sample	10/27/06 07:00	X	X	X	X	X	X	X	X	X	X	X			X	
4902193	CLELV2-LS-1 Grab Water Sample	10/27/06 07:00	X											X	X		X
4902194	CLELV2-LS-1 Filtered Grab Water Sample	10/27/06 07:00	X										X	X			X
4902195	CLELV2-LS-1-D Grab Water Sample	10/27/06 07:00															
4902196	CLELV2-LS-1-BK Filtered Grab Water Sample	10/11/06 08:00	X									X	X				



Lancaster Laboratories

Account: 12098

Client: Parsons Brinkerhoff

Group Number: 1011929

Samples: 4902189-4902196

Submitted: 10/28/06 09:50

P.O. Number: 18957E T0003 TM1

Project: Great Lakes - Sweeping

Release Number:

Quote Number: 204158 A

SDG Number: SWE17

