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June 29, 2011

Mr. Brian Neckermann/Mr. Michael Barrar  
Walsh Construction Company

Transmitted via email - [bneckermann@walshgroup.com](mailto:bneckermann@walshgroup.com) / [mbarrar@walshgroup.com](mailto:mbarrar@walshgroup.com)

RE: Clean Fill Classification Sampling Results – Pa Turnpike Northeast Extension Station(s) 76+00 to 86+00 – northbound, Region Located between Walton and Township Line Roads, Montgomery County, Pennsylvania

## INTRODUCTION

The H&K Group® Engineering and Environmental Services Division (The H&K Group®) is pleased to provide Walsh Construction Company (Walsh) with the classification of the excavated and in-situ soils located adjacent and related to the reconstruction of the Pennsylvania Turnpike Northeast Extension.

The materials classified between Station(s) 76+00 to 86+00 - northbound, situated between Walton and Township Line Roads have been determined to be Clean Fill. Clean Fill is defined by the Pennsylvania Department of Environmental Protection's Bureau of Land Recycling and Waste Management (PADEP) Management of Fill Technical Guidance Document (Document No. 258-2182-773, dated August 7, 2010). A description of the process and methodology employed to make this classification as Clean or Regulated Fill is provided below.

The H&K Group® utilized construction plan documents and calculated the estimated soil volume to be excavated and exported between each established one-hundred (100) foot station. Based upon these calculations, The H&K Group® collected four (4) discrete soil samples for each one-thousand (1000) cubic yards of soil material where export was anticipated, as specified by the sampling methodology from the PADEP Guidance and EPA SW846. Soil Sampling was facilitated by use of a truck mounted Geoprobe sampling device. Discrete samples were collected directly from the PVC Geoprobe Core Sleeves. Underlying native rock was not sampled or submitted for laboratory analysis as rock is considered clean fill by definition by the PADEP. Samples were placed in laboratory-supplied containers, packed in ice and submitted via Chain of Custody to ALS Environmental Laboratories of Middletown, PA (NELAP/PA Certification PA 22-293). Sample locations are depicted on the sample location plan (attached herewith for reference).

Soil Samples were analyzed for Priority Pollutant RCRA Metals by EPA Method 1311, Priority Pollutant Volatile Organic Compounds by EPA Method 8260, Priority Pollutant Semi-Volatile Polycyclic Aromatic Hydrocarbons by EPA Method 8270, Polychlorinated biphenyls (PCB's) by EPA Method 1668, Pesticides by EPA Method 8081 and Herbicides by EPA Method 8151. Analytical Results are included in Table 1 for reference.

## DATA REVIEW AND ANALYSIS

Based upon the review of the soil analytical results in comparison to the PA DEP Management of Clean Fill Technical Guidance Document Table FP-1a (Organics) and FP-1b (Inorganics), the laboratory results demonstrate compliance with the most stringent residential standards for Clean Fill for the materials generated between Stations 76+00 to 86+00 - northbound.

## CONCLUSIONS

The H&K Group® collected 4 samples from the soil(s) to be excavated and exported from the areas adjacent and related to the reconstruction of the Pennsylvania Turnpike Northeast Extension between Station(s) 76+00 to 86+00 - northbound, situated between Walton and Township Line Roads and were submitted for laboratory analysis to ALS Environmental Laboratories. Based upon the review of the analytical results, the 6,197 cubic yards of material(s), including soils and underlying rock generated from this region may be handled as clean fill as defined by the Pennsylvania Department of Environmental Protection's Bureau of Land Recycling and Waste Management (PADEP) Management of Fill Technical Guidance Document (Document No. 258-2182-773, dated August 7, 2010).

Note that no rock was sampled or submitted for laboratory analysis, and that ALL rock generated from either region may be handled as clean fill by definition.

Thank you for the opportunity to support this project. If you have any questions, or if you require additional information, please do not hesitate to contact us.

Sincerely,

THE H&K GROUP®

Engineering and Environmental Services Division



Andrew R. Curtis  
Environmental Scientist



RP Norley  
Project Geologist

Attachments



**FORM FP-001 - CERTIFICATION OF CLEAN FILL**

Prior to completing this form and signing this certification, please review the entire Management of Fill policy (#258-2182-773), including the certification requirements. Please note that historic fill, as defined in the Management of Fill policy, may meet the definition of clean fill if the material is limited to uncontaminated soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and recognizable as such.

**Instructions:** Sections 1 and 2 of this form must be completed by the person making the determination of clean fill at the site of origin. Section 3 must be completed by the person using the material as clean fill. Both the person determining clean fill and the user of the clean fill are responsible for maintaining copies of this completed form on site for a period of five (5) years for Department inspection.

**Section 1: Person Determining Clean Fill**

Name (Print): Andrew R. Curtis Title: Envrionmental Manager Date: 06/29/2011

Company Name: The H&K Group® Engineering and Environmental Services Division

Street Address: 2052 Lucon Road City: Skippack State: PA Zip Code: 19474

Telephone Number: (610) 584-8500 E-mail Address: acurtis@hkgroup.com

**Clean Fill Material originated on the following property:**

Site Name: Walsh Construction Company - PA Turnpike NE Extension Expansion

Street Address: Stations NB76+00-86+00 City: \_\_\_\_\_ State: PA Zip Code: \_\_\_\_\_

**Section 2: Site Characterization**

Check the following that applies:

- A. IF the site of origin for the fill material has undergone or is undergoing cleanup or remediation pursuant to a local state or federal regulatory program that requires site characterization, provide the following information along with a copy of the entire site characterization and laboratory analysis for the material to be used as clean fill.

Name of local, state, or federal agency: \_\_\_\_\_

Identification number assigned to the project: \_\_\_\_\_

Name of the local, state, or federal contact person: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ E-mail Address: \_\_\_\_\_

Name of the Laboratory that conducted the analysis: \_\_\_\_\_

Laboratory Accreditation Number: \_\_\_\_\_

- B. IF the material proposed to be used as clean fill has otherwise been subject to analytical testing or other procedure identified in the definition of "environmental due diligence" contained in the Management of Fill policy, provide or attach the following:

Copies of **ALL** lab analytical testing performed as part of environmental due diligence (see Management of Fill policy, #258-2182-773).

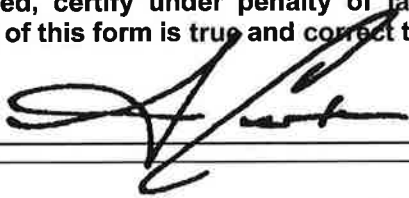
Name of the Laboratory that conducted the analysis: ALS Environmental - Analytical Laboratory Services, Inc.

Laboratory Accreditation Number: PA 22-293

C. IF the proposed material to be used as clean fill was subject to environmental due diligence procedures as defined in the Management of Fill policy other than those listed in A and B, describe those procedures.

I, the undersigned, certify under penalty of law (18 Pa. C.S.A. §4904) that the information provided in Sections 1 and 2 of this form is true and correct to the best of my knowledge, information and belief.

Signature: \_\_\_\_\_



**Section 3: Person Receiving or Placing Clean Fill**

**Name and address of person completing this form:**

Name (Print): \_\_\_\_\_ Date: \_\_\_\_\_

Mailing Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ E-mail Address: \_\_\_\_\_

**Fill material that has been determined to be clean fill will be placed on the following property solely for property improvement or construction purposes:**

Property Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Current Owner of Property: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ E-mail Address: \_\_\_\_\_

**The quantity of clean fill to be placed on the property is:**

<3,000 cubic yards

3,000 cubic yards to 20,000 cubic yards

>20,000 cubic yards

I, the undersigned, certify under penalty of law (18 Pa. C.S.A. §4904) that the information provided is true and correct to the best of my knowledge, information and belief.

Signature: \_\_\_\_\_

\* \* \* \* \*

**Prior to placement of the clean fill, the owner of the property receiving fill material shall provide a copy of this completed form and attachments to the DEP Regional Office serving the county in which the receiving site is located. If a property receives fill from multiple sources, a separate Form FP-001 is required for each source.**

| TABLES FP-1a & FP-1b                 |                 |                           |                       | GRAB SAMPLE IDENTIFICATION AND RESULTS (mg/kg) |                    |                    |                    |                  |            |                  |            |  |
|--------------------------------------|-----------------|---------------------------|-----------------------|--|--------------------|--------------------|--------------------|------------------|------------|------------------|------------|--|
| PROJECT SITE:                        | ALSI CAS Number | Clean Fill Total Analysis | Clean Fill Water Zone | H & K Sample ID:                               |                    | H & K Sample ID:   |                    | H & K Sample ID: |            | H & K Sample ID: |            |  |
| NE PA TURNPIKE EXT (CLEAN FILL)      |                 |                           |                       | GRAB NB76+00-78+00                             | GRAB NB78+00-81+00 | GRAB NB80+00-83+00 | GRAB NB82+00-86+00 | ALS ID:          | ALS ID:    | ALS ID:          | ALS ID:    |  |
| PARAMETER:                           |                 | (mg/kg)                   | (mg/kg)               | Result   | Evaluation         | Result             | Evaluation         | Result           | Evaluation | Result           | Evaluation |  |
| <b>PPL VOCS</b>                      |                 |                           |                       |  |                    |                    |                    |                  |            |                  |            |  |
| ACETONE                              | 67-64-1         | 41                        | 4.1                   | < 0.0123                                       | Below W            | < 0.0292           | Below W            | < 0.0996         | Below W    | < 0.014          | Below W    |  |
| BENZENE                              | 71-43-2         | 0.13                      | 0.013                 | < 0.0283                                       | Above W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| BROMOCHLOROMETHANE                   | 74-97-5         | 1.6                       | 0.16                  | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| BROMODICHLOROMETHANE                 | 75-27-4         | 3.40                      | 0.34                  | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| TRIBROMOMETHANE (BROMOFORM)          | 75-25-2         | 4.4                       | 0.44                  | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| BROMOMETHANE                         | 74-83-9         | 0.54                      | 0.054                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| 2-BUTANONE (METHYL ETHYL KETONE)     | 78-93-3         | 54                        | 5.4                   | < 0.0123                                       | Below W            | < 0.0097           | Below W            | < 0.0087         | Below W    | < 0.0066         | Below W    |  |
| CARBON DISULFIDE                     | 75-15-0         | 160                       | 16                    | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| CARBON TETRACHLORIDE                 | 56-23-5         | 0.26                      | 0.026                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| CHLOROBENZENE                        | 108-90-7        | 6.1                       | 0.61                  | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| CHLORODIBROMOMETHANE                 | 124-48-1        | 3.20                      | 0.32                  | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| CHLOROETHANE                         | 75-00-3         | 5.00                      | 0.5                   | < 0.0061                                       | Below W            | < 0.0048           | Below W            | < 0.0043         | Below W    | < 0.0033         | Below W    |  |
| CHLOROFORM                           | 67-66-3         | 2.50                      | 0.25                  | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| METHYL CHLORIDE (CHLOROMETHANE)      | 74-87-3         | 0.002                     | 0.002                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| 1,2-DIBROMO-3-CHLOROPROPANE          | 96-12-8         | 0.0092                    | 0.005                 | < 0.0061                                       | Below W            | < 0.0048           | Below W            | < 0.0043         | Below W    | < 0.0033         | Below W    |  |
| DIBROMOETHANE, 1,2-                  | 106-93-4        | 0.002                     | 0.002                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| DICHLOROETHANE, 1, 1-                | 75-34-3         | 0.65                      | 0.065                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| DICHLOROETHANE, 1, 2-                | 107-06-2        | 0.10                      | 0.01                  | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| DICHLOROETHYLENE, 1, 1-              | 75-35-4         | 0.19                      | 0.019                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| DICHLOROETHYLENE, CIS-1, 2-*         | 156-59-2        | 1.6                       | 0.16                  | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| DICHLOROETHYLENE, TRANS-1, 2-        | 156-60-5        | 2.3                       | 0.23                  | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | 75-09-2         | 0.076                     | 0.0076                | 0.0196   | Above W            | 0.013              | Above W            | 0.0147           | Above W    | 0.0139           | Above W    |  |
| DICHLOROPROPANE, 1, 2-               | 78-87-5         | 0.11                      | 0.011                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| DICHLOROPROPENE, CIS-1,3-            | 10061-01-5      | NA                        | NA                    | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| DICHLOROPROPENE, TRANS-1,3-          | 10061-02-6      | NA                        | NA                    | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| DICHLOROPROPENE, 1,3- (TOTAL)        | 542-75-6        | 0.12                      | 0.012                 | < 0.0049                                       | Below W            | < 0.0039           | Below W            | < 0.0035         | Below W    | < 0.0027         | Below W    |  |
| TETRACHLOROETHANE, 1, 1, 2, 2-       | 79-34-5         | 0.0093                    | 0.005                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| TETRACHLOROETHYLENE (PCE)            | 127-18-4        | 0.43                      | 0.043                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| TRICHLOROETHANE, 1, 1, 1-            | 71-55-6         | 7.20                      | 0.72                  | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| TRICHLOROETHANE, 1, 1, 2-            | 79-00-5         | 0.15                      | 0.015                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| TRICHLOROETHYLENE (TCE)              | 79-01-6         | 0.17                      | 0.017                 | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| ETHYL BENZENE                        | 100-41-4        | 46                        | 4.6                   | < 0.0025                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |
| 2-HEXANONE                           | 591-78-6        | NA                        | NA                    | < 0.0123                                       | Below W            | < 0.0097           | Below W            | < 0.0087         | Below W    | < 0.0066         | Below W    |  |
| 4-METHYL-2-PENTANONE (MIBK)          | 108-10-1        | 2.90                      | 0.29                  | < 0.0123                                       | Below W            | < 0.0097           | Below W            | < 0.0087         | Below W    | < 0.0066         | Below W    |  |
| STYRENE                              | 100-42-5        | 24                        | 2.4                   | < 0.0059                                       | Below W            | < 0.0019           | Below W            | < 0.0017         | Below W    | < 0.0013         | Below W    |  |

This information has been compiled and provided to assist in the review of the analytical results.  
Refer to the original laboratory Certificate of Analysis for official analytical results.

| TABLES FP-1a & FP-1b            |               |                       |                                 | GRAB SAMPLE IDENTIFICATION AND RESULTS (mg/kg) |   |                                 |   |                                 |   |                                 |   |                                 |   |        |         |
|---------------------------------|---------------|-----------------------|---------------------------------|--|---|---------------------------------|---|---------------------------------|---|---------------------------------|---|---------------------------------|---|--------|---------|
| PROJECT SITE:                   |               | ALSI<br>CAS<br>Number | Clean Fill<br>Total<br>Analysis | Clean Fill<br>Water<br>Zone                    | H & K Sample ID:<br>GRAB NB76+00-78+00<br>ALS ID:<br>9908870001 |                                 | H & K Sample ID:<br>GRAB NB78+00-81+00<br>ALS ID:<br>9908870003 |                                 | H & K Sample ID:<br>GRAB NB80+00-83+00<br>ALS ID:<br>9908870005 |                                 | H & K Sample ID:<br>GRAB NB82+00-86+00<br>ALS ID:<br>9908870007 |                                 |   |        |         |
| NE PA TURNPIKE EXT (CLEAN FILL) |               |                       |                                 |  | Result  | Evaluation                      | Result  | Evaluation                      | Result  | Evaluation                      | Result  | Evaluation                      |   |        |         |
| PARAMETER:                      |               | (mg/kg)               | (mg/kg)                         |  |   |                                 |   |                                 |   |                                 |   |                                 |   |        |         |
| PPL VOCS (Continued)            |               |                       |                                 |  |   |                                 |   |                                 |   |                                 |   |                                 |   |        |         |
| TOLUENE                         | 108-88-3      | 44                    | 4.4                             |  | 0.0285  | Below W                         | <   | 0.0019                          | Below W   | <                               | 0.0017  | Below W                         | < | 0.0013 | Below W |
| VINYL CHLORIDE                  | 75-01-4       | 0.03                  | 0.002                           | <  | 0.0025  | Below W                         | <   | 0.0019                          | Below W   | <                               | 0.0017  | Below W                         | < | 0.0013 | Below W |
| mp-XYLENE                       | 108383/106423 | NA                    | NA                              |  | 0.0091  | Below W                         | <   | 0.0039                          | Below W   | <                               | 0.0035  | Below W                         | < | 0.0027 | Below W |
| o-XYLENE                        | 95-47-6       | NA                    | NA                              |  | 0.0028  | Below W                         | <   | 0.0019                          | Below W   | <                               | 0.0017  | Below W                         | < | 0.0013 | Below W |
| TOTAL XYLENES                   | 1330-20-7     | 990                   | 99                              |  | 0.0119  | Below W                         | <   | 0.0058                          | Below W   | <                               | 0.0052  | Below W                         | < | 0.004  | Below W |
| GRAB SAMPLES FINAL EVALUATION:  |               |                       |                                 | May place above the Water Table                |   | May place above the Water Table |   | May place above the Water Table |   | May place above the Water Table |   | May place above the Water Table |   |        |         |

This information has been compiled and provided to assist in the review of the analytical results.  
Refer to the original laboratory Certificate of Analysis for official analytical results.

| TABLES FP-1a & FP-1b            |                 |                           |                       | COMPOSITE SAMPLE IDENTIFICATION AND RESULTS (mg/kg) |                    |                                     |                    |                                     |            |                                     |            |
|---------------------------------|-----------------|---------------------------|-----------------------|---|--------------------|-------------------------------------|--------------------|-------------------------------------|------------|-------------------------------------|------------|
| PROJECT SITE:                   | ALSI CAS Number | Clean Fill Total Analysis | Clean Fill Water Zone | H & K Sample ID: COMP NB76+00-78+00                 |                    | H & K Sample ID: COMP NB78+00-81+00 |                    | H & K Sample ID: COMP NB80+00-83+00 |            | H & K Sample ID: COMP NB82+00-86+00 |            |
| NE PA TURNPIKE EXT (CLEAN FILL) |                 |                           |                       | ALS ID: 9908870002                                  | ALS ID: 9908870004 | ALS ID: 9908870006                  | ALS ID: 9908870008 |                                     |            |                                     |            |
| PARAMETER:                      |                 | (mg/kg)                   | (mg/kg)               | Result  | Evaluation         | Result                              | Evaluation         | Result                              | Evaluation | Result                              | Evaluation |
| PPL SVOCs                       |                 |                           |                       |   |                    |                                     |                    |                                     |            |                                     |            |
| ACENAPHTHENE                    | 83-32-9         | 2700                      | 270                   | < 0.0551  | Below W            | < 0.0547                            | Below W            | < 0.0571                            | Below W    | < 0.0574                            | Below W    |
| ACENAPHTHYLENE                  | 208-96-8        | 2500                      | 250                   | < 0.0551  | Below W            | < 0.0547                            | Below W            | < 0.0571                            | Below W    | < 0.0574                            | Below W    |
| ANTHRACENE                      | 120-12-7        | 350                       | 35                    | < 0.0551  | Below W            | < 0.0547                            | Below W            | < 0.0571                            | Below W    | < 0.0574                            | Below W    |
| BENZO[A]ANTHRACENE              | 56-55-3         | 25                        | 2.5                   | < 0.0551  | Below W            | < 0.0547                            | Below W            | < 0.0571                            | Below W    | < 0.0574                            | Below W    |
| BENZO[A]PYRENE                  | 50-32-8         | 2.5                       | 0.25                  | < 0.0551  | Below W            | < 0.0547                            | Below W            | < 0.0571                            | Below W    | 0.0618                              | Below W    |
| BENZO[B]FLUORANTHENE            | 205-99-2        | 25                        | 2.5                   | < 0.0551  | Below W            | < 0.0547                            | Below W            | < 0.0571                            | Below W    | < 0.0574                            | Below W    |
| BENZO[GHI]PERYLENE              | 191-24-2        | 180                       | 18                    | < 0.0551  | Below W            | < 0.0547                            | Below W            | < 0.0571                            | Below W    | < 0.0574                            | Below W    |
| BENZO[K]FLUORANTHENE            | 207-08-9        | 250                       | 25                    | < 0.0551  | Below W            | < 0.0547                            | Below W            | < 0.0571                            | Below W    | 0.058                               | Below W    |
| BIS(2-CHLOROETHOXY)METHANE      | 111-91-1        | NA                        | NA                    | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| BIS(2-CHLOROETHYL)ETHER         | 111-44-4        | 0.100                     | 0.100                 | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| BIS(2-CHLORO-ISOPROPYL)ETHER    | 108-60-1        | 8.00                      | 0.8                   | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| BIS[2-ETHYLHEXYL]PHTHALATE      | 117-81-7        | 130                       | 13                    | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| 4-BROMOPHENYL-PHENYL ETHER      | 101-55-3        | NA                        | NA                    | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| BUTYLBENZYL PHTHALATE           | 85-68-7         | 10000                     | 1000                  | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| CARBAZOLE                       | 86-74-8         | 21                        | 2.1                   | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| CHLOROANILINE, 4-               | 106-47-8        | 19.00                     | 1.9                   | < 0.298   | Below W            | < 0.295                             | Below W            | < 0.308                             | Below W    | < 0.31                              | Below W    |
| 4-CHLORO-3-METHYL PHENOL        | 59-50-7         | 37                        | 3.7                   | < 0.298   | Below W            | < 0.295                             | Below W            | < 0.308                             | Below W    | < 0.31                              | Below W    |
| 4-CHLOROPHENYL-PHENYL ETHER     | 7005-72-3       | NA                        | NA                    | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| CHLORONAPHTHALENE, 2-           | 91-58-7         | 6200                      | 620                   | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| CHLOROPHENOL, 2-                | 95-57-8         | 4.40                      | 0.44                  | < 0.298   | Below W            | < 0.295                             | Below W            | < 0.308                             | Below W    | < 0.31                              | Below W    |
| CHRYSENE                        | 218-01-9        | 230                       | 23                    | < 0.0551  | Below W            | < 0.0547                            | Below W            | < 0.0571                            | Below W    | < 0.0574                            | Below W    |
| mp-CRESOL                       | 108394/106445   | NA                        | NA                    | < 0.298   | Below W            | < 0.295                             | Below W            | < 0.308                             | Below W    | < 0.31                              | Below W    |
| o-CRESOL                        | 95-48-7         | 64                        | 6.4                   | < 0.298   | Below W            | < 0.295                             | Below W            | < 0.308                             | Below W    | < 0.31                              | Below W    |
| DIBENZO[A,H]ANTHRACENE          | 53-70-3         | 2.50                      | 0.25                  | < 0.0661  | Below W            | < 0.0656                            | Below W            | < 0.0685                            | Below W    | < 0.0688                            | Below W    |
| DIBENZOFURAN                    | 132-64-9        | NA                        | NA                    | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| DICHLOROBENZENE, 1, 2-          | 95-50-1         | 59                        | 5.9                   | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| DICHLOROBENZENE, 1, 3-          | 541-73-1        | 61                        | 6.1                   | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| DICHLOROBENZENE, P-             | 106-46-7        | 10                        | 1                     | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| DICHLOROBENZIDINE, 3, 3'-       | 91-94-1         | 8.3                       | 0.83                  | < 0.595   | Below W            | < 0.591                             | Below W            | < 0.617                             | Below W    | < 0.62                              | Below W    |
| DICHLOROPHENOL, 2, 4-           | 120-83-2        | 1                         | 0.270                 | < 0.298   | Below W            | < 0.295                             | Below W            | < 0.308                             | Below W    | < 0.31                              | Below W    |
| DIETHYL PHTHALATE               | 84-66-2         | 160                       | 16                    | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| DIMETHYLPHENOL, 2, 4-           | 105-67-9        | 32                        | 3.2                   | < 0.298   | Below W            | < 0.295                             | Below W            | < 0.308                             | Below W    | < 0.31                              | Below W    |
| DIMETHYL PHTHALATE              | 131-11-3        | NA                        | NA                    | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| DI-N-BUTYLPHTHALATE, N-         | 84-74-2         | 1500                      | 150                   | < 0.11  | Below W            | < 0.109                             | Below W            | < 0.114                             | Below W    | < 0.115                             | Below W    |
| DINITROPHENOL, 2, 4-            | 51-28-5         | 0.540                     | 0.540                 | < 0.595   | Below W            | < 0.591                             | Below W            | < 0.617                             | Below W    | < 0.62                              | Below W    |

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| TABLES FP-1a & FP-1b                        |                 |                           |                       | COMPOSITE SAMPLE IDENTIFICATION AND RESULTS (mg/kg) |                    |                                     |                    |                                     |            |                                     |            |         |            |        |         |
|---|-----------------|---------------------------|-----------------------|---|--------------------|-------------------------------------|--------------------|-------------------------------------|------------|-------------------------------------|------------|---------|------------|--------|---------|
| PROJECT SITE:                               | ALSI CAS Number | Clean Fill Total Analysis | Clean Fill Water Zone | H & K Sample ID: COMP NB76+00-78+00                 |                    | H & K Sample ID: COMP NB78+00-81+00 |                    | H & K Sample ID: COMP NB80+00-83+00 |            | H & K Sample ID: COMP NB82+00-86+00 |            |         |            |        |         |
| NE PA TURNPIKE EXT (CLEAN FILL)             |                 |                           |                       | ALS ID: 9908870002                                  | ALS ID: 9908870004 | ALS ID: 9908870006                  | ALS ID: 9908870008 | Result                              | Evaluation | Result                              | Evaluation | Result  | Evaluation |        |         |
| PARAMETER:                                  |                 | (mg/kg)                   | (mg/kg)               |   |                    |                                     |                    |                                     |            |                                     |            |         |            |        |         |
| <b>PPL SVOCs (Continued)</b>                |                 |                           |                       |   |                    |                                     |                    |                                     |            |                                     |            |         |            |        |         |
| DINITROTOLUENE, 2, 4-                       | 121-14-2        | 0.100                     | 0.100                 | <   | 0.11               | Below W                             | <                  | 0.109                               | Below W    | <                                   | 0.114      | Below W | <          | 0.115  | Below W |
| DINITROTOLUENE, 2, 6, - (2, 6-DNT)          | 606-20-2        | 1.10                      | 0.110                 | <   | 0.11               | Below W                             | <                  | 0.109                               | Below W    | <                                   | 0.114      | Below W | <          | 0.115  | Below W |
| OCTYL PHTHALATE, DI-N-                      | 117-84-0        | 4400                      | 440                   | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| FLUORANTHENE                                | 206-44-0        | 3200                      | 320                   | <   | 0.0551             | Below W                             | <                  | 0.0547                              | Below W    | <                                   | 0.0571     | Below W | <          | 0.0574 | Below W |
| FLUORENE                                    | 86-73-7         | 3000                      | 300                   | <   | 0.0551             | Below W                             | <                  | 0.0547                              | Below W    | <                                   | 0.0571     | Below W | <          | 0.0574 | Below W |
| HEXACHLOROBENZENE                           | 118-74-1        | 0.96                      | 0.100                 | <   | 0.11               | Below W                             | <                  | 0.109                               | Below W    | <                                   | 0.114      | Below W | <          | 0.115  | Below W |
| HEXACHLOROBUTADIENE                         | 87-68-3         | 1.20                      | 0.120                 | <   | 0.11               | Below W                             | <                  | 0.109                               | Below W    | <                                   | 0.114      | Below W | <          | 0.115  | Below W |
| HEXACHLOROCYCLOPENTADIENE                   | 77-47-4         | 91                        | 9.1                   | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| HEXACHLOROETHANE                            | 67-72-1         | 0.560                     | 0.100                 | <   | 0.11               | Below W                             | <                  | 0.109                               | Below W    | <                                   | 0.114      | Below W | <          | 0.115  | Below W |
| INDENO[1,2,3-CD]PYRENE                      | 193-39-5        | 25                        | 2.5                   | <   | 0.0551             | Below W                             | <                  | 0.0547                              | Below W    | <                                   | 0.0571     | Below W | <          | 0.0574 | Below W |
| ISOPHORONE                                  | 78-59-1         | 1.90                      | 0.190                 | <   | 0.11               | Below W                             | <                  | 0.109                               | Below W    | <                                   | 0.114      | Below W | <          | 0.115  | Below W |
| 2-METHYL-4,6-DINITROPHENOL                  | 534-52-1        | NA                        | NA                    | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| METHYLNAPHTHALENE, 2-                       | 91-57-6         | 2900                      | 290                   | <   | 0.0551             | Below W                             | <                  | 0.0547                              | Below W    | <                                   | 0.0571     | Below W | <          | 0.0574 | Below W |
| NAPHTHALENE*                                | 91-20-3         | 25                        | 2.5                   | <   | 0.0551             | Below W                             | <                  | 0.0547                              | Below W    | <                                   | 0.0571     | Below W | <          | 0.0574 | Below W |
| NITROANILINE, 2-                            | 88-74-4         | 0.270                     | 0.270                 | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| NITROANILINE, 3-                            | 99-09-2         | 0.270                     | 0.270                 | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| NITROANILINE, 4-                            | 100-01-6        | 0.270                     | 0.270                 | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| NITROBENZENE                                | 98-95-3         | 0.79                      | 0.120                 | <   | 0.132              | Below W                             | <                  | 0.131                               | Below W    | <                                   | 0.137      | Below W | <          | 0.138  | Below W |
| NITROPHENOL, 2-                             | 88-75-5         | 5.90                      | 0.590                 | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| NITROPHENOL, 4-                             | 100-02-7        | 4.1                       | 0.41                  | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| NITROSODI-N-PROPYLAMINE, N-                 | 621-64-7        | 0.100                     | 0.100                 | <   | 0.11               | Below W                             | <                  | 0.109                               | Below W    | <                                   | 0.114      | Below W | <          | 0.115  | Below W |
| NITROSODIPHENYLAMINE, N-                    | 86-30-6         | 20.00                     | 2.000                 | <   | 0.11               | Below W                             | <                  | 0.109                               | Below W    | <                                   | 0.114      | Below W | <          | 0.115  | Below W |
| PENTACHLOROPHENOL                           | 87-86-5         | 5.00                      | 0.540                 | <   | 0.595              | Below W                             | <                  | 0.591                               | Below W    | <                                   | 0.617      | Below W | <          | 0.62   | Below W |
| PHENANTHRENE                                | 85-01-8         | 10000                     | 1000                  | <   | 0.0551             | Below W                             | <                  | 0.0547                              | Below W    | <                                   | 0.0571     | Below W | <          | 0.0574 | Below W |
| PHENOL                                      | 108-95-2        | 66.00                     | 6.6                   | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| PYRENE                                      | 129-00-0        | 2200                      | 220                   | <   | 0.0551             | Below W                             | <                  | 0.0547                              | Below W    | <                                   | 0.0571     | Below W | <          | 0.0574 | Below W |
| TRICHLOROBENZENE, 1, 2, 4-                  | 120-82-1        | 27                        | 2.7                   | <   | 0.11               | Below W                             | <                  | 0.109                               | Below W    | <                                   | 0.114      | Below W | <          | 0.115  | Below W |
| TRICHLOROPHENOL, 2, 4, 5-                   | 95-95-4         | 2300                      | 230                   | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| TRICHLOROPHENOL, 2, 4, 6-                   | 88-06-2         | 3.1                       | 0.31                  | <   | 0.298              | Below W                             | <                  | 0.295                               | Below W    | <                                   | 0.308      | Below W | <          | 0.31   | Below W |
| <b>PPL HERBICIDES</b>                       |                 |                           |                       |   |                    |                                     |                    |                                     |            |                                     |            |         |            |        |         |
| DICHLOROPHENOXYLACETIC ACID, 2, 4- (2, 4-D) | 94-75-7         | 1.8                       | 0.18                  | <   | 0.0166             | Below W                             | <                  | 0.0166                              | Below W    | <                                   | 0.0175     | Below W | <          | 0.0172 | Below W |
| 2,4-DB                                      | 94-82-6         | NA                        | NA                    | <   | 0.0166             | Below W                             | <                  | 0.0166                              | Below W    | <                                   | 0.0175     | Below W | <          | 0.0172 | Below W |
| DICHLOROPROPIONIC ACID (DALAPON), 2,2-      | 75-99-0         | 5.30                      | 0.530                 | <   | 0.0498             | Below W                             | <                  | 0.0497                              | Below W    | <                                   | 0.0526     | Below W | <          | 0.0515 | Below W |
| DICAMBA                                     | 1918-00-9       | NA                        | NA                    | <   | 0.0166             | Below W                             | <                  | 0.0166                              | Below W    | <                                   | 0.0175     | Below W | <          | 0.0172 | Below W |
| DICHLOROPROP                                | 120-36-5        | NA                        | NA                    | <   | 0.0166             | Below W                             | <                  | 0.0166                              | Below W    | <                                   | 0.0175     | Below W | <          | 0.0172 | Below W |

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| TABLES FP-1a & FP-1b                                 |                 |                           |                       | COMPOSITE SAMPLE IDENTIFICATION AND RESULTS (mg/kg) |                    |                                     |                    |                                     |            |                                     |            |         |            |        |         |
|--|-----------------|---------------------------|-----------------------|---|--------------------|-------------------------------------|--------------------|-------------------------------------|------------|-------------------------------------|------------|---------|------------|--------|---------|
| PROJECT SITE:  | ALSI CAS Number | Clean Fill Total Analysis | Clean Fill Water Zone | H & K Sample ID: COMP NB76+00-78+00                 |                    | H & K Sample ID: COMP NB78+00-81+00 |                    | H & K Sample ID: COMP NB80+00-83+00 |            | H & K Sample ID: COMP NB82+00-86+00 |            |         |            |        |         |
| NE PA TURNPIKE EXT (CLEAN FILL)                      |                 |                           |                       | ALS ID: 9908870002                                  | ALS ID: 9908870004 | ALS ID: 9908870006                  | ALS ID: 9908870008 | Result                              | Evaluation | Result                              | Evaluation | Result  | Evaluation |        |         |
| PARAMETER:   |                 | (mg/kg)                   | (mg/kg)               |   |                    |                                     |                    |                                     |            |                                     |            |         |            |        |         |
| <b>PPL HERBICIDES (Continued)</b>                    |                 |                           |                       |   |                    |                                     |                    |                                     |            |                                     |            |         |            |        |         |
| DINOSEB  | 88-85-7         | 0.290                     | 0.0300                | <   | 0.0332             | Below W                             | <                  | 0.0331                              | Below W    | <                                   | 0.0351     | Below W | <          | 0.0343 | Below W |
| PENTACHLOROPHENOL                                    | 87-86-5         | 5.00                      | 0.500                 |   |                    |                                     |                    |                                     |            |                                     |            |         |            |        |         |
| TRICHLOROPHENOXYACETIC ACID 2, 4, 5- (2, 4, 5-T)     | 93-76-5         | 1.50                      | 0.15                  | <   | 0.0166             | Below W                             | <                  | 0.0166                              | Below W    | <                                   | 0.0175     | Below W | <          | 0.0172 | Below W |
| TRICHLOROPHENOXYPROPIONIC ACID,2,4,5-(2,4,5-TP)(SILV | 93-72-1         | 22                        | 2.2                   | <   | 0.0166             | Below W                             | <                  | 0.0166                              | Below W    | <                                   | 0.0175     | Below W | <          | 0.0172 | Below W |
| <b>PPL PESTICIDES</b>                                |                 |                           |                       |   |                    |                                     |                    |                                     |            |                                     |            |         |            |        |         |
| ALDRIN   | 309-00-2        | 0.10                      | 0.01                  | <   | 0.0018             | Below W                             | <                  | 0.0018                              | Below W    | <                                   | 0.0019     | Below W | <          | 0.0094 | Below W |
| BHC, ALPHA-  | 319-84-6        | 0.046                     | 0.0046                | <   | 0.0018             | Below W                             | <                  | 0.0018                              | Below W    | <                                   | 0.0019     | Below W | <          | 0.0094 | Above W |
| BHC, BETA-   | 319-85-7        | 0.22                      | 0.022                 | <   | 0.0018             | Below W                             | <                  | 0.0018                              | Below W    | <                                   | 0.0019     | Below W | <          | 0.0094 | Below W |
| BHC, DELTA-  | 319-86-8        | 11                        | 1.1                   | <   | 0.0018             | Below W                             | <                  | 0.0018                              | Below W    | <                                   | 0.0019     | Below W | <          | 0.0094 | Below W |
| BHC, GAMMA (LINDANE)                                 | 58-89-9         | 0.072                     | 0.0072                | <   | 0.0018             | Below W                             | <                  | 0.0018                              | Below W    | <                                   | 0.0019     | Below W | <          | 0.0094 | Above W |
| CHLORDANE (ALPHA)                                    | 5103-71-9       | 49                        | 4.9                   | <   | 0.0018             | Below W                             | <                  | 0.0018                              | Below W    | <                                   | 0.0019     | Below W | <          | 0.0094 | Below W |
| CHLORDANE (GAMMA)                                    | 5103-74-2       | 49                        | 4.9                   | <   | 0.0018             | Below W                             | <                  | 0.0018                              | Below W    | <                                   | 0.0019     | Below W | <          | 0.0094 | Below W |
| DDD, 4, 4'-  | 72-54-8         | 6.8                       | 0.68                  | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Below W |
| DDE, 4, 4'-  | 72-55-9         | 41                        | 4.1                   | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Below W |
| DDT, 4, 4'-  | 50-29-3         | 53                        | 5.3                   | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Below W |
| DIELDRIN   | 60-57-1         | 0.11                      | 0.011                 | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Above W |
| ENDOSULFAN I (ALPHA)                                 | 959-98-8        | 110                       | 11                    | <   | 0.0018             | Below W                             | <                  | 0.0018                              | Below W    | <                                   | 0.0019     | Below W | <          | 0.0094 | Below W |
| ENDOSULFAN II (BETA)                                 | 33213-65-9      | 130                       | 13                    | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Below W |
| ENDOSULFAN SULFATE                                   | 1031-07-8       | 70                        | 7                     | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Below W |
| ENDRIN   | 72-20-8         | 5.5                       | 0.55                  | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Below W |
| ENDRIN ALDEHYDE                                      | 7421-93-4       | NA                        | NA                    | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Below W |
| ENDRIN KETONE  | 53494-70-5      | NA                        | NA                    | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Below W |
| HEPTACHLOR   | 76-44-8         | 0.68                      | 0.068                 | <   | 0.0018             | Below W                             | <                  | 0.0018                              | Below W    | <                                   | 0.0019     | Below W | <          | 0.0094 | Below W |
| HEPTACHLOR EPOXIDE                                   | 1024-57-3       | 1.1                       | 0.11                  | <   | 0.0018             | Below W                             | <                  | 0.0018                              | Below W    | <                                   | 0.0019     | Below W | <          | 0.0094 | Below W |
| METHOXYCHLOR   | 72-43-5         | 630                       | 63                    | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Below W |
| MIREX  | 2385-85-5       | NA                        | NA                    | <   | 0.0035             | Below W                             | <                  | 0.0036                              | Below W    | <                                   | 0.0038     | Below W | <          | 0.0183 | Below W |
| TOXAPHENE  | 8001-35-2       | 1.20                      | 0.12                  | <   | 0.0752             | Below W                             | <                  | 0.0761                              | Below W    | <                                   | 0.0802     | Below W | <          | 0.387  | Above W |
| <b>PCBs</b>  |                 |                           |                       |   |                    |                                     |                    |                                     |            |                                     |            |         |            |        |         |
| PCB-1016 (AROCLOR)                                   | 12674-11-2      | 15                        | 1.5                   | <   | 0.036              | Below W                             | <                  | 0.036                               | Below W    | <                                   | 0.039      | Below W | <          | 0.038  | Below W |
| PCB-1221 (AROCLOR)                                   | 11104-28-2      | 0.63                      | 0.063                 | <   | 0.036              | Below W                             | <                  | 0.036                               | Below W    | <                                   | 0.039      | Below W | <          | 0.038  | Below W |
| PCB-1232 (AROCLOR)                                   | 11141-16-5      | 0.50                      | 0.050                 | <   | 0.036              | Below W                             | <                  | 0.036                               | Below W    | <                                   | 0.039      | Below W | <          | 0.038  | Below W |
| PCB-1242 (AROCLOR)                                   | 53469-21-9      | 16                        | 1.6                   | <   | 0.036              | Below W                             | <                  | 0.036                               | Below W    | <                                   | 0.039      | Below W | <          | 0.038  | Below W |
| PCB-1248 (AROCLOR)                                   | 12672-29-6      | 9.90                      | 0.990                 | <   | 0.036              | Below W                             | <                  | 0.036                               | Below W    | <                                   | 0.039      | Below W | <          | 0.038  | Below W |
| PCB-1254 (AROCLOR)                                   | 11097-69-1      | 4.40                      | 0.440                 | <   | 0.036              | Below W                             | <                  | 0.036                               | Below W    | <                                   | 0.039      | Below W | <          | 0.038  | Below W |
| PCB-1260 (AROCLOR)                                   | 11096-82-5      | 30                        | 3.0                   | <   | 0.036              | Below W                             | <                  | 0.036                               | Below W    | <                                   | 0.039      | Below W | <          | 0.038  | Below W |

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| TABLES FP-1a & FP-1b                |           |                       |                                 | COMPOSITE SAMPLE IDENTIFICATION AND RESULTS (mg/kg) |   |                                 |   |                                 |   |                                 |   |                                 |         |      |         |         |
|-------------------------------------|-----------|-----------------------|---------------------------------|---|---|---------------------------------|---|---------------------------------|---|---------------------------------|---|---------------------------------|---------|------|---------|---------|
| PROJECT SITE:                       |           | ALSI<br>CAS<br>Number | Clean Fill<br>Total<br>Analysis | Clean Fill<br>Water<br>Zone                         | H & K Sample ID:<br>COMP NB76+00-78+00<br>ALS ID:<br>9908870002 |                                 | H & K Sample ID:<br>COMP NB78+00-81+00<br>ALS ID:<br>9908870004 |                                 | H & K Sample ID:<br>COMP NB80+00-83+00<br>ALS ID:<br>9908870006 |                                 | H & K Sample ID:<br>COMP NB82+00-86+00<br>ALS ID:<br>9908870008 |                                 |         |      |         |         |
| NE PA TURNPIKE EXT (CLEAN FILL)     |           |                       |                                 |   | Result  | Evaluation                      | Result  | Evaluation                      | Result  | Evaluation                      | Result  | Evaluation                      |         |      |         |         |
| PARAMETER:                          |           |                       | (mg/kg)                         | (mg/kg)   |   |                                 |   |                                 |   |                                 |   |                                 |         |      |         |         |
| PCBs (Continued)                    |           |                       |                                 |   |   |                                 |   |                                 |   |                                 |   |                                 |         |      |         |         |
| TOTAL POLYCHLORINATED BIPHENYLS     |           | TOTALPCBS             | NA                              | NA  | <   | 0.036                           | Below W   | <                               | 0.036   | Below W                         | <   | 0.039                           | Below W | <    | 0.038   | Below W |
| RCRA METALS                         |           |                       |                                 |   |   |                                 |   |                                 |   |                                 |   |                                 |         |      |         |         |
| ARSENIC                             | 7440-38-2 | 12                    | 5                               | <   | 2.2   | Below W                         |   | 2.2                             | Below W   | <                               | 1.9   | Below W                         |         | 2.8  | Below W |         |
| BARIUM                              | 7440-39-3 | 8200                  | 820                             |   | 29.3  | Below W                         |   | 40.6                            | Below W   |                                 | 27.8  | Below W                         |         | 20.6 | Below W |         |
| CADMIUM                             | 7440-43-9 | 38                    | 3.8                             | <   | 0.55  | Below W                         | <   | 0.47                            | Below W   | <                               | 0.49  | Below W                         | <       | 0.5  | Below W |         |
| CHROMIUM (TOTAL)                    | 7440-47-3 | 190000                | 19000                           |   | 3.8   | Below W                         |   | 7.9                             | Below W   |                                 | 7.6   | Below W                         |         | 12.5 | Below W |         |
| LEAD                                | 7439-92-1 | 450                   | 45                              |   | 4.4   | Below W                         |   | 22.7                            | Below W   |                                 | 8.1   | Below W                         |         | 6.5  | Below W |         |
| MERCURY                             | 7439-97-6 | 10                    | 1                               | <   | 0.19  | Below W                         | <   | 0.19                            | Below W   | <                               | 0.22  | Below W                         | <       | 0.2  | Below W |         |
| SELENIUM                            | 7782-49-2 | 26                    | 2.6                             | <   | 5.5   | Above W                         | <   | 4.7                             | Above W   | <                               | 4.9   | Above W                         | <       | 5    | Above W |         |
| SILVER                              | 7440-22-4 | 84                    | 8.4                             | <   | 0.55  | Below W                         | <   | 0.47                            | Below W   | <                               | 0.49  | Below W                         | <       | 0.5  | Below W |         |
| COMPOSITE SAMPLES FINAL EVALUATION: |           |                       |                                 | May place above the Water Table                     |   | May place above the Water Table |   | May place above the Water Table |   | May place above the Water Table |   | May place above the Water Table |         |      |         |         |

This information has been compiled and provided to assist in the review of the analytical results.  
Refer to the original laboratory Certificate of Analysis for official analytical results.

June 22, 2011

Mr. Andrew Curtis  
Haines & Kibblehouse Inc.  
2052 Lucon Road  
P.O. Box 196  
Skipack, PA 19474

## Certificate of Analysis

|  |   |
|--|---|
| Project Name: <b>NE PA TURNPIKE EXT (CLEAN</b> | Workorder: <b>9908870</b>                           |
| Purchase Order:                                | Workorder ID: <b>NE PA TURNPIKE EXT (CLEAN FILL</b> |

Dear Mr. Curtis,

Enclosed are the analytical results for samples received by the laboratory on Monday, June 06, 2011.

The ALS Environmental laboratory in Middletown, Pennsylvania (formerly Analytical Laboratory Services, Inc.) is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Tonya Hironimus (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at [www.analyticallab.com](http://www.analyticallab.com) for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

CC: Mr. Scott Drumbore, H&K RCA Access, Mr. Eric Gehman

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Anna G Milliken  
Technical Manager

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### SAMPLE SUMMARY

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Discard Date: 07/06/2011

| Lab ID     | Sample ID          | Matrix | Date Collected | Date Received | Collected By |
|------------|--------------------|--------|----------------|---------------|--------------|
| 9908870001 | Grab NB76+00-78+00 | Solid  | 6/2/11 11:10   | 6/6/11 19:06  | Customer     |
| 9908870002 | Comp NB76+00-78+00 | Solid  | 6/2/11 11:10   | 6/6/11 19:06  | Customer     |
| 9908870003 | Grab NB78+00-81+00 | Solid  | 6/2/11 11:45   | 6/6/11 19:06  | Customer     |
| 9908870004 | Comp NB78+00-81+00 | Solid  | 6/2/11 11:45   | 6/6/11 19:06  | Customer     |
| 9908870005 | Grab NB80+00-83+00 | Solid  | 6/2/11 12:10   | 6/6/11 19:06  | Customer     |
| 9908870006 | Comp NB80+00-83+00 | Solid  | 6/2/11 12:10   | 6/6/11 19:06  | Customer     |
| 9908870007 | Grab NB82+00-86+00 | Solid  | 6/2/11 12:20   | 6/6/11 19:06  | Customer     |
| 9908870008 | Comp NB82+00-86+00 | Solid  | 6/2/11 12:20   | 6/6/11 19:06  | Customer     |

#### Workorder Comments:

#### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.

#### Standard Acronyms/Flags

|        |  |
|--------|--|
| J, B   | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte |
| U      | Indicates that the analyte was Not Detected (ND)   |
| N      | Indicates presumptive evidence of the presence of a compound   |
| MDL    | Method Detection Limit   |
| PQL    | Practical Quantitation Limit   |
| RDL    | Reporting Detection Limit  |
| ND     | Not Detected - indicates that the analyte was Not Detected at the RDL  |
| Cntr   | Analysis was performed using this container  |
| RegLmt | Regulatory Limit   |
| LCS    | Laboratory Control Sample  |
| MS     | Matrix Spike   |
| MSD    | Matrix Spike Duplicate   |
| DUP    | Sample Duplicate   |
| %Rec   | Percent Recovery   |
| RPD    | Relative Percent Difference  |

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870001**  
Sample ID: **Grab NB76+00-78+00**

Date Collected: 6/2/2011 11:10 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results | Flag | Units | RDL  | Method    | Prepared | By  | Analyzed      | By  | Cntr |
|-----------------------------|---------|------|-------|------|-----------|----------|-----|---------------|-----|------|
| <b>VOLATILE ORGANICS</b>    |         |      |       |      |           |          |     |               |     |      |
| Acetone                     | ND      |      | ug/kg | 12.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Benzene                     | 28.3    |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Bromochloromethane          | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Bromodichloromethane        | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Bromoform                   | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Bromomethane                | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 2-Butanone                  | ND      |      | ug/kg | 12.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Carbon Disulfide            | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Carbon Tetrachloride        | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Chlorobenzene               | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Chlorodibromomethane        | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Chloroethane                | ND      |      | ug/kg | 6.1  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Chloroform                  | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Chloromethane               | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 1,2-Dibromo-3-chloropropane | ND      |      | ug/kg | 6.1  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 1,2-Dibromoethane           | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 1,1-Dichloroethane          | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 1,2-Dichloroethane          | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 1,1-Dichloroethene          | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| cis-1,2-Dichloroethene      | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| trans-1,2-Dichloroethene    | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 1,2-Dichloropropane         | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| cis-1,3-Dichloropropene     | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| trans-1,3-Dichloropropene   | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 1,3-Dichloropropene, Total  | ND      |      | ug/kg | 4.9  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Ethylbenzene                | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 2-Hexanone                  | ND      |      | ug/kg | 12.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 4-Methyl-2-Pentanone(MIBK)  | ND      |      | ug/kg | 12.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Methylene Chloride          | 19.6    | 1    | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Styrene                     | 5.9     |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 1,1,2,2-Tetrachloroethane   | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Tetrachloroethene           | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Toluene                     | 28.5    |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Total Xylenes               | 11.9    |      | ug/kg | 7.4  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 1,1,1-Trichloroethane       | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| 1,1,2-Trichloroethane       | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Trichloroethene             | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| Vinyl Chloride              | ND      |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |
| o-Xylene                    | 2.8     |      | ug/kg | 2.5  | 8260/5035 | 6/2/11   | MES | 6/16/11 07:58 | MES | B    |

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**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870001**

Date Collected: 6/2/2011 11:10

Matrix: Solid

Sample ID: **Grab NB76+00-78+00**

Date Received: 6/6/2011 19:06

| Parameters                  | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| mp-Xylene                   | 9.1            |             | ug/kg        | 4.9           | 8260/5035     | 6/2/11          | MES       | 6/16/11 07:58   | MES       | B           |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 1,2-Dichloroethane-d4 (S)   | 82             |             | %            | 56-124        | 8260/5035     | 6/2/11          | MES       | 6/16/11 07:58   | MES       | B           |
| 4-Bromofluorobenzene (S)    | 80.4           |             | %            | 51-128        | 8260/5035     | 6/2/11          | MES       | 6/16/11 07:58   | MES       | B           |
| Dibromofluoromethane (S)    | 84             |             | %            | 62-123        | 8260/5035     | 6/2/11          | MES       | 6/16/11 07:58   | MES       | B           |
| Toluene-d8 (S)              | 86             |             | %            | 59-131        | 8260/5035     | 6/2/11          | MES       | 6/16/11 07:58   | MES       | B           |

**WET CHEMISTRY**

|              |      |  |   |     |             |  |  |              |     |   |
|--------------|------|--|---|-----|-------------|--|--|--------------|-----|---|
| Moisture     | 10.2 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |
| Total Solids | 89.8 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |

**Sample Comments:**
  
Anna G Milliken  
Technical Manager

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### ANALYTICAL RESULTS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870002**  
Sample ID: **Comp NB76+00-78+00**

Date Collected: 6/2/2011 11:10 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results | Flag | Units | RDL  | Method      | Prepared | By  | Analyzed      | By  | Cntr |
|-----------------------------|---------|------|-------|------|-------------|----------|-----|---------------|-----|------|
| <b>SEMIVOLATILES</b>        |         |      |       |      |             |          |     |               |     |      |
| Acenaphthene                | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Acenaphthylene              | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Anthracene                  | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Benzo(a)anthracene          | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Benzo(a)pyrene              | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Benzo(b)fluoranthene        | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Benzo(g,h,i)perylene        | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Benzo(k)fluoranthene        | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 4-Bromophenyl-phenylether   | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Butylbenzylphthalate        | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Carbazole                   | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 4-Chloro-3-methylphenol     | ND      |      | ug/kg | 298  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 4-Chloroaniline             | ND      |      | ug/kg | 298  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| bis(2-Chloroethoxy)methane  | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| bis(2-Chloroethyl)ether     | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| bis(2-Chloroisopropyl)ether | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 2-Chloronaphthalene         | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 2-Chlorophenol              | ND      |      | ug/kg | 298  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 4-Chlorophenyl-phenylether  | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Chrysene                    | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| mp-Cresol                   | ND      |      | ug/kg | 298  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| o-Cresol                    | ND      |      | ug/kg | 298  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Di-n-Butylphthalate         | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Di-n-Octylphthalate         | ND      |      | ug/kg | 298  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Dibenzo(a,h)anthracene      | ND      |      | ug/kg | 66.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Dibenzofuran                | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 1,2-Dichlorobenzene         | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 1,3-Dichlorobenzene         | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 1,4-Dichlorobenzene         | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 3,3-Dichlorobenzidine       | ND      |      | ug/kg | 595  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 2,4-Dichlorophenol          | ND      |      | ug/kg | 298  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Diethylphthalate            | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 2,4-Dimethylphenol          | ND      |      | ug/kg | 298  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Dimethylphthalate           | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 2,4-Dinitrophenol           | ND      |      | ug/kg | 595  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 2,4-Dinitrotoluene          | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| 2,6-Dinitrotoluene          | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| bis(2-Ethylhexyl)phthalate  | ND      |      | ug/kg | 110  | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Fluoranthene                | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |
| Fluorene                    | ND      |      | ug/kg | 55.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 00:59 | CGS | A5   |

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870002**  
Sample ID: **Comp NB76+00-78+00**

Date Collected: 6/2/2011 11:10 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Hexachlorobenzene           | ND             |             | ug/kg        | 110           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Hexachlorobutadiene         | ND             |             | ug/kg        | 110           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Hexachlorocyclopentadiene   | ND             | 2           | ug/kg        | 298           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Hexachloroethane            | ND             |             | ug/kg        | 110           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Indeno(1,2,3-cd)pyrene      | ND             |             | ug/kg        | 55.1          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Isophorone                  | ND             |             | ug/kg        | 110           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 2-Methyl-4,6-dinitrophenol  | ND             |             | ug/kg        | 298           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 2-Methylnaphthalene         | ND             |             | ug/kg        | 55.1          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Naphthalene                 | ND             |             | ug/kg        | 55.1          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 2-Nitroaniline              | ND             |             | ug/kg        | 298           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 3-Nitroaniline              | ND             |             | ug/kg        | 298           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 4-Nitroaniline              | ND             |             | ug/kg        | 298           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Nitrobenzene                | ND             |             | ug/kg        | 132           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 2-Nitrophenol               | ND             |             | ug/kg        | 298           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 4-Nitrophenol               | ND             |             | ug/kg        | 298           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| N-Nitroso-di-n-propylamine  | ND             |             | ug/kg        | 110           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| N-Nitrosodiphenylamine      | ND             | 3           | ug/kg        | 110           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Pentachlorophenol           | ND             |             | ug/kg        | 595           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Phenanthrene                | ND             |             | ug/kg        | 55.1          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Phenol                      | ND             |             | ug/kg        | 298           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Pyrene                      | ND             |             | ug/kg        | 55.1          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 1,2,4-Trichlorobenzene      | ND             |             | ug/kg        | 110           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 2,4,5-Trichlorophenol       | ND             |             | ug/kg        | 298           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 2,4,6-Trichlorophenol       | ND             |             | ug/kg        | 298           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 2,4,6-Tribromophenol (S)    | 96.7           |             | %            | 37-123        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 2-Fluorobiphenyl (S)        | 75.1           |             | %            | 45-105        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| 2-Fluorophenol (S)          | 92.7           |             | %            | 35-104        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Nitrobenzene-d5 (S)         | 88.6           |             | %            | 41-110        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Phenol-d5 (S)               | 93.5           |             | %            | 40-100        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |
| Terphenyl-d14 (S)           | 96.5           |             | %            | 38-113        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 00:59   | CGS       | A5          |

**PCBs**

|                                |    |  |       |       |             |         |     |               |     |    |
|--------------------------------|----|--|-------|-------|-------------|---------|-----|---------------|-----|----|
| Total Polychlorinated Biphenyl | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:21 | KJH | A8 |
| Aroclor-1016                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:21 | KJH | A8 |
| Aroclor-1221                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:21 | KJH | A8 |
| Aroclor-1232                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:21 | KJH | A8 |
| Aroclor-1242                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:21 | KJH | A8 |
| Aroclor-1248                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:21 | KJH | A8 |
| Aroclor-1254                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:21 | KJH | A8 |

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**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870002**  
Sample ID: **Comp NB76+00-78+00**

Date Collected: 6/2/2011 11:10 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Aroclor-1260                | ND             |             | mg/kg        | 0.036         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 05:21   | KJH       | A8          |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| Decachlorobiphenyl (S)      | 117            |             | %            | 46-120        | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 05:21   | KJH       | A8          |
| Tetrachloro-m-xylene (S)    | 151            | 4           | %            | 52-115        | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 05:21   | KJH       | A8          |

**PESTICIDES**

|                             |                |             |              |               |               |                 |           |                 |           |             |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Aldrin                      | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| alpha-BHC                   | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| beta-BHC                    | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| delta-BHC                   | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| gamma-BHC                   | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| alpha-Chlordane             | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| gamma-Chlordane             | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| 4,4'-DDD                    | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| 4,4'-DDE                    | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| 4,4'-DDT                    | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Dieldrin                    | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Endosulfan I                | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Endosulfan II               | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Endosulfan Sulfate          | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Endrin                      | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Endrin Aldehyde             | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Endrin Ketone               | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Heptachlor                  | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Heptachlor Epoxide          | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Methoxychlor                | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Mirex                       | ND             |             | ug/kg        | 3.5           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Toxaphene                   | ND             |             | ug/kg        | 75.2          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| Decachlorobiphenyl (S)      | 66.4           |             | %            | 30-117        | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |
| Tetrachloro-m-xylene (S)    | 65.9           |             | %            | 30-89         | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:03   | KJH       | A2          |

**HERBICIDES**

|              |    |  |       |      |             |         |     |               |     |    |
|--------------|----|--|-------|------|-------------|---------|-----|---------------|-----|----|
| 2,4-D        | ND |  | ug/kg | 16.6 | SW846 8151A | 6/15/11 | LEH | 6/21/11 20:53 | KJH | A7 |
| 2,4-DB       | ND |  | ug/kg | 16.6 | SW846 8151A | 6/15/11 | LEH | 6/21/11 20:53 | KJH | A7 |
| Dalapon      | ND |  | ug/kg | 49.8 | SW846 8151A | 6/15/11 | LEH | 6/21/11 20:53 | KJH | A7 |
| Dicamba      | ND |  | ug/kg | 16.6 | SW846 8151A | 6/15/11 | LEH | 6/21/11 20:53 | KJH | A7 |
| Dichloroprop | ND |  | ug/kg | 16.6 | SW846 8151A | 6/15/11 | LEH | 6/21/11 20:53 | KJH | A7 |
| Dinoseb      | ND |  | ug/kg | 33.2 | SW846 8151A | 6/15/11 | LEH | 6/21/11 20:53 | KJH | A7 |

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### ANALYTICAL RESULTS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870002**  
Sample ID: **Comp NB76+00-78+00**

Date Collected: 6/2/2011 11:10 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                        | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| 2,4,5-T                           | ND             |             | ug/kg        | 16.6          | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 20:53   | KJH       | A7          |
| 2,4,5-TP                          | ND             |             | ug/kg        | 16.6          | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 20:53   | KJH       | A7          |
| <i>Surrogate Recoveries</i>       | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 2,4-Dichlorophenylacetic acid (S) | 109            |             | %            | 77-139        | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 20:53   | KJH       | A7          |

**WET CHEMISTRY**

|              |      |  |   |     |             |  |  |              |     |   |
|--------------|------|--|---|-----|-------------|--|--|--------------|-----|---|
| Moisture     | 9.9  |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |
| Total Solids | 90.1 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |

**METALS**

|                 |      |  |       |      |             |         |     |               |     |    |
|-----------------|------|--|-------|------|-------------|---------|-----|---------------|-----|----|
| Arsenic, Total  | ND   |  | mg/kg | 2.2  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:23 | SRT | A1 |
| Barium, Total   | 29.3 |  | mg/kg | 1.1  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:23 | SRT | A1 |
| Cadmium, Total  | ND   |  | mg/kg | 0.55 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:23 | SRT | A1 |
| Chromium, Total | 3.8  |  | mg/kg | 1.1  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:23 | SRT | A1 |
| Lead, Total     | 4.4  |  | mg/kg | 2.2  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:23 | SRT | A1 |
| Mercury, Total  | ND   |  | mg/kg | 0.19 | SW846 7471B | 6/14/11 | MNP | 6/14/11 13:17 | MNP | A4 |
| Selenium, Total | ND   |  | mg/kg | 5.5  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:23 | SRT | A1 |
| Silver, Total   | ND   |  | mg/kg | 0.55 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:23 | SRT | A1 |

**Sample Comments:**
  
Anna G Milliken  
Technical Manager

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**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870003**

Date Collected: 6/2/2011 11:45

Matrix: Solid

Sample ID: **Grab NB78+00-81+00**

Date Received: 6/6/2011 19:06

| Parameters                  | Results | Flag | Units | RDL | Method    | Prepared | By  | Analyzed      | By  | Cntr |
|-----------------------------|---------|------|-------|-----|-----------|----------|-----|---------------|-----|------|
| <b>VOLATILE ORGANICS</b>    |         |      |       |     |           |          |     |               |     |      |
| Acetone                     | 29.2    |      | ug/kg | 9.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Benzene                     | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Bromochloromethane          | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Bromodichloromethane        | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Bromoform                   | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Bromomethane                | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 2-Butanone                  | ND      |      | ug/kg | 9.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Carbon Disulfide            | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Carbon Tetrachloride        | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Chlorobenzene               | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Chlorodibromomethane        | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Chloroethane                | ND      |      | ug/kg | 4.8 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Chloroform                  | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Chloromethane               | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 1,2-Dibromo-3-chloropropane | ND      |      | ug/kg | 4.8 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 1,2-Dibromoethane           | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 1,1-Dichloroethane          | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 1,2-Dichloroethane          | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 1,1-Dichloroethene          | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| cis-1,2-Dichloroethene      | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| trans-1,2-Dichloroethene    | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 1,2-Dichloropropane         | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| cis-1,3-Dichloropropene     | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| trans-1,3-Dichloropropene   | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 1,3-Dichloropropene, Total  | ND      |      | ug/kg | 3.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Ethylbenzene                | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 2-Hexanone                  | ND      |      | ug/kg | 9.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 4-Methyl-2-Pentanone(MIBK)  | ND      |      | ug/kg | 9.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Methylene Chloride          | 13.0    | 1    | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Styrene                     | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 1,1,2,2-Tetrachloroethane   | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Tetrachloroethene           | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Toluene                     | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Total Xylenes               | ND      |      | ug/kg | 5.8 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 1,1,1-Trichloroethane       | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| 1,1,2-Trichloroethane       | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Trichloroethene             | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| Vinyl Chloride              | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |
| o-Xylene                    | ND      |      | ug/kg | 1.9 | 8260/5035 | 6/2/11   | MES | 6/16/11 08:27 | MES | B    |

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

### ANALYTICAL RESULTS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870003**

Date Collected: 6/2/2011 11:45

Matrix: Solid

Sample ID: **Grab NB78+00-81+00**

Date Received: 6/6/2011 19:06

| Parameters                  | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| mp-Xylene                   | ND             |             | ug/kg        | 3.9           | 8260/5035     | 6/2/11          | MES       | 6/16/11 08:27   | MES       | B           |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 1,2-Dichloroethane-d4 (S)   | 87.5           |             | %            | 56-124        | 8260/5035     | 6/2/11          | MES       | 6/16/11 08:27   | MES       | B           |
| 4-Bromofluorobenzene (S)    | 76.8           |             | %            | 51-128        | 8260/5035     | 6/2/11          | MES       | 6/16/11 08:27   | MES       | B           |
| Dibromofluoromethane (S)    | 91.8           |             | %            | 62-123        | 8260/5035     | 6/2/11          | MES       | 6/16/11 08:27   | MES       | B           |
| Toluene-d8 (S)              | 85.8           |             | %            | 59-131        | 8260/5035     | 6/2/11          | MES       | 6/16/11 08:27   | MES       | B           |

**WET CHEMISTRY**

|              |      |  |   |     |             |  |  |              |     |   |
|--------------|------|--|---|-----|-------------|--|--|--------------|-----|---|
| Moisture     | 8.4  |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |
| Total Solids | 91.6 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |

**Sample Comments:**
  
Anna G Milliken  
Technical Manager

**ALS Environmental Laboratory Locations Across North America**

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

### ANALYTICAL RESULTS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870004**  
Sample ID: **Comp NB78+00-81+00**

Date Collected: 6/2/2011 11:45 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results | Flag | Units | RDL  | Method      | Prepared | By  | Analyzed      | By  | Cntr |
|-----------------------------|---------|------|-------|------|-------------|----------|-----|---------------|-----|------|
| <b>SEMIVOLATILES</b>        |         |      |       |      |             |          |     |               |     |      |
| Acenaphthene                | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Acenaphthylene              | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Anthracene                  | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Benzo(a)anthracene          | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Benzo(a)pyrene              | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Benzo(b)fluoranthene        | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Benzo(g,h,i)perylene        | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Benzo(k)fluoranthene        | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 4-Bromophenyl-phenylether   | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Butylbenzylphthalate        | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Carbazole                   | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 4-Chloro-3-methylphenol     | ND      |      | ug/kg | 295  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 4-Chloroaniline             | ND      |      | ug/kg | 295  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| bis(2-Chloroethoxy)methane  | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| bis(2-Chloroethyl)ether     | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| bis(2-Chloroisopropyl)ether | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 2-Chloronaphthalene         | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 2-Chlorophenol              | ND      |      | ug/kg | 295  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 4-Chlorophenyl-phenylether  | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Chrysene                    | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| mp-Cresol                   | ND      |      | ug/kg | 295  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| o-Cresol                    | ND      |      | ug/kg | 295  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Di-n-Butylphthalate         | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Di-n-Octylphthalate         | ND      |      | ug/kg | 295  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Dibenzo(a,h)anthracene      | ND      |      | ug/kg | 65.6 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Dibenzofuran                | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 1,2-Dichlorobenzene         | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 1,3-Dichlorobenzene         | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 1,4-Dichlorobenzene         | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 3,3-Dichlorobenzidine       | ND      |      | ug/kg | 591  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 2,4-Dichlorophenol          | ND      |      | ug/kg | 295  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Diethylphthalate            | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 2,4-Dimethylphenol          | ND      |      | ug/kg | 295  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Dimethylphthalate           | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 2,4-Dinitrophenol           | ND      |      | ug/kg | 591  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 2,4-Dinitrotoluene          | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| 2,6-Dinitrotoluene          | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| bis(2-Ethylhexyl)phthalate  | ND      |      | ug/kg | 109  | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Fluoranthene                | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |
| Fluorene                    | ND      |      | ug/kg | 54.7 | SW846 8270D | 6/14/11  | GMG | 6/16/11 01:48 | CGS | A5   |

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**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870004**  
Sample ID: **Comp NB78+00-81+00**

Date Collected: 6/2/2011 11:45 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Hexachlorobenzene           | ND             |             | ug/kg        | 109           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Hexachlorobutadiene         | ND             |             | ug/kg        | 109           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Hexachlorocyclopentadiene   | ND             |             | ug/kg        | 295           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Hexachloroethane            | ND             |             | ug/kg        | 109           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Indeno(1,2,3-cd)pyrene      | ND             |             | ug/kg        | 54.7          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Isophorone                  | ND             |             | ug/kg        | 109           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 2-Methyl-4,6-dinitrophenol  | ND             |             | ug/kg        | 295           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 2-Methylnaphthalene         | ND             |             | ug/kg        | 54.7          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Naphthalene                 | ND             |             | ug/kg        | 54.7          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 2-Nitroaniline              | ND             |             | ug/kg        | 295           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 3-Nitroaniline              | ND             |             | ug/kg        | 295           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 4-Nitroaniline              | ND             |             | ug/kg        | 295           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Nitrobenzene                | ND             |             | ug/kg        | 131           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 2-Nitrophenol               | ND             |             | ug/kg        | 295           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 4-Nitrophenol               | ND             |             | ug/kg        | 295           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| N-Nitroso-di-n-propylamine  | ND             |             | ug/kg        | 109           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| N-Nitrosodiphenylamine      | ND             |             | ug/kg        | 109           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Pentachlorophenol           | ND             |             | ug/kg        | 591           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Phenanthrene                | ND             |             | ug/kg        | 54.7          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Phenol                      | ND             |             | ug/kg        | 295           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Pyrene                      | ND             |             | ug/kg        | 54.7          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 1,2,4-Trichlorobenzene      | ND             |             | ug/kg        | 109           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 2,4,5-Trichlorophenol       | ND             |             | ug/kg        | 295           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 2,4,6-Trichlorophenol       | ND             |             | ug/kg        | 295           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 2,4,6-Tribromophenol (S)    | 91.6           |             | %            | 37-123        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 2-Fluorobiphenyl (S)        | 67             |             | %            | 45-105        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| 2-Fluorophenol (S)          | 82.2           |             | %            | 35-104        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Nitrobenzene-d5 (S)         | 79.6           |             | %            | 41-110        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Phenol-d5 (S)               | 82.5           |             | %            | 40-100        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |
| Terphenyl-d14 (S)           | 89.5           |             | %            | 38-113        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 01:48   | CGS       | A5          |

**PCBs**

|                                |    |  |       |       |             |         |     |               |     |    |
|--------------------------------|----|--|-------|-------|-------------|---------|-----|---------------|-----|----|
| Total Polychlorinated Biphenyl | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:51 | KJH | A8 |
| Aroclor-1016                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:51 | KJH | A8 |
| Aroclor-1221                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:51 | KJH | A8 |
| Aroclor-1232                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:51 | KJH | A8 |
| Aroclor-1242                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:51 | KJH | A8 |
| Aroclor-1248                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:51 | KJH | A8 |
| Aroclor-1254                   | ND |  | mg/kg | 0.036 | SW846 8082A | 6/16/11 | CJG | 6/17/11 05:51 | KJH | A8 |

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**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870004**  
Sample ID: **Comp NB78+00-81+00**

Date Collected: 6/2/2011 11:45 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Aroclor-1260                | ND             |             | mg/kg        | 0.036         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 05:51   | KJH       | A8          |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| Decachlorobiphenyl (S)      | 118            |             | %            | 46-120        | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 05:51   | KJH       | A8          |
| Tetrachloro-m-xylene (S)    | 162            | 5           | %            | 52-115        | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 05:51   | KJH       | A8          |

**PESTICIDES**

|                             |                |             |              |               |               |                 |           |                 |           |             |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Aldrin                      | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| alpha-BHC                   | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| beta-BHC                    | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| delta-BHC                   | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| gamma-BHC                   | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| alpha-Chlordane             | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| gamma-Chlordane             | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| 4,4'-DDD                    | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| 4,4'-DDE                    | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| 4,4'-DDT                    | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Dieldrin                    | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Endosulfan I                | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Endosulfan II               | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Endosulfan Sulfate          | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Endrin                      | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Endrin Aldehyde             | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Endrin Ketone               | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Heptachlor                  | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Heptachlor Epoxide          | ND             |             | ug/kg        | 1.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Methoxychlor                | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Mirex                       | ND             |             | ug/kg        | 3.6           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Toxaphene                   | ND             |             | ug/kg        | 76.1          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| Decachlorobiphenyl (S)      | 77.8           |             | %            | 30-117        | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |
| Tetrachloro-m-xylene (S)    | 45.2           |             | %            | 30-89         | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:15   | KJH       | A2          |

**HERBICIDES**

|              |    |  |       |      |             |         |     |               |     |    |
|--------------|----|--|-------|------|-------------|---------|-----|---------------|-----|----|
| 2,4-D        | ND |  | ug/kg | 16.6 | SW846 8151A | 6/15/11 | LEH | 6/21/11 21:31 | KJH | A7 |
| 2,4-DB       | ND |  | ug/kg | 16.6 | SW846 8151A | 6/15/11 | LEH | 6/21/11 21:31 | KJH | A7 |
| Dalapon      | ND |  | ug/kg | 49.7 | SW846 8151A | 6/15/11 | LEH | 6/21/11 21:31 | KJH | A7 |
| Dicamba      | ND |  | ug/kg | 16.6 | SW846 8151A | 6/15/11 | LEH | 6/21/11 21:31 | KJH | A7 |
| Dichloroprop | ND |  | ug/kg | 16.6 | SW846 8151A | 6/15/11 | LEH | 6/21/11 21:31 | KJH | A7 |
| Dinoseb      | ND |  | ug/kg | 33.1 | SW846 8151A | 6/15/11 | LEH | 6/21/11 21:31 | KJH | A7 |

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870004**  
Sample ID: **Comp NB78+00-81+00**

Date Collected: 6/2/2011 11:45 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                        | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| 2,4,5-T                           | ND             |             | ug/kg        | 16.6          | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 21:31   | KJH       | A7          |
| 2,4,5-TP                          | ND             |             | ug/kg        | 16.6          | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 21:31   | KJH       | A7          |
| <i>Surrogate Recoveries</i>       | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 2,4-Dichlorophenylacetic acid (S) | 107            |             | %            | 77-139        | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 21:31   | KJH       | A7          |

**WET CHEMISTRY**

|              |      |  |   |     |             |  |  |              |     |   |
|--------------|------|--|---|-----|-------------|--|--|--------------|-----|---|
| Moisture     | 10.4 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |
| Total Solids | 89.6 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |

**METALS**

|                 |      |  |       |      |             |         |     |               |     |    |
|-----------------|------|--|-------|------|-------------|---------|-----|---------------|-----|----|
| Arsenic, Total  | 2.2  |  | mg/kg | 1.9  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:27 | SRT | A1 |
| Barium, Total   | 40.6 |  | mg/kg | 0.93 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:27 | SRT | A1 |
| Cadmium, Total  | ND   |  | mg/kg | 0.47 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:27 | SRT | A1 |
| Chromium, Total | 7.9  |  | mg/kg | 0.93 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:27 | SRT | A1 |
| Lead, Total     | 22.7 |  | mg/kg | 1.9  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:27 | SRT | A1 |
| Mercury, Total  | ND   |  | mg/kg | 0.19 | SW846 7471B | 6/14/11 | MNP | 6/14/11 13:18 | MNP | A4 |
| Selenium, Total | ND   |  | mg/kg | 4.7  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:27 | SRT | A1 |
| Silver, Total   | ND   |  | mg/kg | 0.47 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:27 | SRT | A1 |

**Sample Comments:**
  
Anna G Milliken  
Technical Manager

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870005**

Date Collected: 6/2/2011 12:10

Matrix: Solid

Sample ID: **Grab NB80+00-83+00**

Date Received: 6/6/2011 19:06

| Parameters                  | Results | Flag | Units | RDL | Method    | Prepared | By  | Analyzed      | By  | Cntr |
|-----------------------------|---------|------|-------|-----|-----------|----------|-----|---------------|-----|------|
| <b>VOLATILE ORGANICS</b>    |         |      |       |     |           |          |     |               |     |      |
| Acetone                     | 99.6    |      | ug/kg | 8.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Benzene                     | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Bromochloromethane          | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Bromodichloromethane        | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Bromoform                   | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Bromomethane                | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 2-Butanone                  | ND      |      | ug/kg | 8.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Carbon Disulfide            | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Carbon Tetrachloride        | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Chlorobenzene               | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Chlorodibromomethane        | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Chloroethane                | ND      |      | ug/kg | 4.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Chloroform                  | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Chloromethane               | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 1,2-Dibromo-3-chloropropane | ND      |      | ug/kg | 4.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 1,2-Dibromoethane           | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 1,1-Dichloroethane          | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 1,2-Dichloroethane          | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 1,1-Dichloroethene          | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| cis-1,2-Dichloroethene      | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| trans-1,2-Dichloroethene    | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 1,2-Dichloropropane         | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| cis-1,3-Dichloropropene     | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| trans-1,3-Dichloropropene   | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 1,3-Dichloropropene, Total  | ND      |      | ug/kg | 3.5 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Ethylbenzene                | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 2-Hexanone                  | ND      |      | ug/kg | 8.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 4-Methyl-2-Pentanone(MIBK)  | ND      |      | ug/kg | 8.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Methylene Chloride          | 14.7    | 6,7  | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Styrene                     | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 1,1,2,2-Tetrachloroethane   | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Tetrachloroethene           | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Toluene                     | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Total Xylenes               | ND      |      | ug/kg | 5.2 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 1,1,1-Trichloroethane       | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| 1,1,2-Trichloroethane       | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Trichloroethene             | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| Vinyl Chloride              | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |
| o-Xylene                    | ND      |      | ug/kg | 1.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 19:38 | DJB | C    |

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### ANALYTICAL RESULTS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870005**

Date Collected: 6/2/2011 12:10

Matrix: Solid

Sample ID: **Grab NB80+00-83+00**

Date Received: 6/6/2011 19:06

| Parameters                  | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| mp-Xylene                   | ND             |             | ug/kg        | 3.5           | 8260/5035     | 6/2/11          | MES       | 6/16/11 19:38   | DJB       | C           |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 1,2-Dichloroethane-d4 (S)   | 68.4           |             | %            | 56-124        | 8260/5035     | 6/2/11          | MES       | 6/16/11 19:38   | DJB       | C           |
| 4-Bromofluorobenzene (S)    | 75.1           |             | %            | 51-128        | 8260/5035     | 6/2/11          | MES       | 6/16/11 19:38   | DJB       | C           |
| Dibromofluoromethane (S)    | 70.9           |             | %            | 62-123        | 8260/5035     | 6/2/11          | MES       | 6/16/11 19:38   | DJB       | C           |
| Toluene-d8 (S)              | 75.2           |             | %            | 59-131        | 8260/5035     | 6/2/11          | MES       | 6/16/11 19:38   | DJB       | C           |

**WET CHEMISTRY**

|              |      |  |   |     |             |  |  |              |     |   |
|--------------|------|--|---|-----|-------------|--|--|--------------|-----|---|
| Moisture     | 15.5 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |
| Total Solids | 84.5 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |

**Sample Comments:**
  
Anna G Milliken  
Technical Manager

**ALS Environmental Laboratory Locations Across North America**

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### ANALYTICAL RESULTS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870006**  
Sample ID: **Comp NB80+00-83+00**

Date Collected: 6/2/2011 12:10 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results | Flag | Units | RDL  | Method      | Prepared | By  | Analyzed      | By  | Cntr |
|-----------------------------|---------|------|-------|------|-------------|----------|-----|---------------|-----|------|
| <b>SEMIVOLATILES</b>        |         |      |       |      |             |          |     |               |     |      |
| Acenaphthene                | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Acenaphthylene              | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Anthracene                  | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Benzo(a)anthracene          | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Benzo(a)pyrene              | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Benzo(b)fluoranthene        | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Benzo(g,h,i)perylene        | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Benzo(k)fluoranthene        | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 4-Bromophenyl-phenylether   | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Butylbenzylphthalate        | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Carbazole                   | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 4-Chloro-3-methylphenol     | ND      |      | ug/kg | 308  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 4-Chloroaniline             | ND      |      | ug/kg | 308  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| bis(2-Chloroethoxy)methane  | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| bis(2-Chloroethyl)ether     | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| bis(2-Chloroisopropyl)ether | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 2-Chloronaphthalene         | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 2-Chlorophenol              | ND      |      | ug/kg | 308  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 4-Chlorophenyl-phenylether  | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Chrysene                    | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| mp-Cresol                   | ND      |      | ug/kg | 308  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| o-Cresol                    | ND      |      | ug/kg | 308  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Di-n-Butylphthalate         | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Di-n-Octylphthalate         | ND      |      | ug/kg | 308  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Dibenzo(a,h)anthracene      | ND      |      | ug/kg | 68.5 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Dibenzofuran                | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 1,2-Dichlorobenzene         | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 1,3-Dichlorobenzene         | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 1,4-Dichlorobenzene         | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 3,3-Dichlorobenzidine       | ND      |      | ug/kg | 617  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 2,4-Dichlorophenol          | ND      |      | ug/kg | 308  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Diethylphthalate            | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 2,4-Dimethylphenol          | ND      |      | ug/kg | 308  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Dimethylphthalate           | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 2,4-Dinitrophenol           | ND      |      | ug/kg | 617  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 2,4-Dinitrotoluene          | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| 2,6-Dinitrotoluene          | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| bis(2-Ethylhexyl)phthalate  | ND      |      | ug/kg | 114  | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Fluoranthene                | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |
| Fluorene                    | ND      |      | ug/kg | 57.1 | SW846 8270D | 6/14/11  | GMG | 6/16/11 02:44 | CGS | A5   |

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

### ANALYTICAL RESULTS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870006**  
Sample ID: **Comp NB80+00-83+00**

Date Collected: 6/2/2011 12:10 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                     | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|--------------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Hexachlorobenzene              | ND             |             | ug/kg        | 114           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Hexachlorobutadiene            | ND             |             | ug/kg        | 114           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Hexachlorocyclopentadiene      | ND             |             | ug/kg        | 308           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Hexachloroethane               | ND             |             | ug/kg        | 114           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Indeno(1,2,3-cd)pyrene         | ND             |             | ug/kg        | 57.1          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Isophorone                     | ND             |             | ug/kg        | 114           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 2-Methyl-4,6-dinitrophenol     | ND             |             | ug/kg        | 308           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 2-Methylnaphthalene            | ND             |             | ug/kg        | 57.1          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Naphthalene                    | ND             |             | ug/kg        | 57.1          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 2-Nitroaniline                 | ND             |             | ug/kg        | 308           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 3-Nitroaniline                 | ND             |             | ug/kg        | 308           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 4-Nitroaniline                 | ND             |             | ug/kg        | 308           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Nitrobenzene                   | ND             |             | ug/kg        | 137           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 2-Nitrophenol                  | ND             |             | ug/kg        | 308           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 4-Nitrophenol                  | ND             |             | ug/kg        | 308           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| N-Nitroso-di-n-propylamine     | ND             |             | ug/kg        | 114           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| N-Nitrosodiphenylamine         | ND             |             | ug/kg        | 114           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Pentachlorophenol              | ND             |             | ug/kg        | 617           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Phenanthrene                   | ND             |             | ug/kg        | 57.1          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Phenol                         | ND             |             | ug/kg        | 308           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Pyrene                         | ND             |             | ug/kg        | 57.1          | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 1,2,4-Trichlorobenzene         | ND             |             | ug/kg        | 114           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 2,4,5-Trichlorophenol          | ND             |             | ug/kg        | 308           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 2,4,6-Trichlorophenol          | ND             |             | ug/kg        | 308           | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| <i>Surrogate Recoveries</i>    | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 2,4,6-Tribromophenol (S)       | 96.3           |             | %            | 37-123        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 2-Fluorobiphenyl (S)           | 73.1           |             | %            | 45-105        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| 2-Fluorophenol (S)             | 86             |             | %            | 35-104        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Nitrobenzene-d5 (S)            | 85.5           |             | %            | 41-110        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Phenol-d5 (S)                  | 86.9           |             | %            | 40-100        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| Terphenyl-d14 (S)              | 96.4           |             | %            | 38-113        | SW846 8270D   | 6/14/11         | GMG       | 6/16/11 02:44   | CGS       | A5          |
| <b>PCBs</b>                    |                |             |              |               |               |                 |           |                 |           |             |
| Total Polychlorinated Biphenyl | ND             |             | mg/kg        | 0.039         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:06   | KJH       | A7          |
| Aroclor-1016                   | ND             |             | mg/kg        | 0.039         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:06   | KJH       | A7          |
| Aroclor-1221                   | ND             |             | mg/kg        | 0.039         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:06   | KJH       | A7          |
| Aroclor-1232                   | ND             |             | mg/kg        | 0.039         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:06   | KJH       | A7          |
| Aroclor-1242                   | ND             |             | mg/kg        | 0.039         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:06   | KJH       | A7          |
| Aroclor-1248                   | ND             |             | mg/kg        | 0.039         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:06   | KJH       | A7          |
| Aroclor-1254                   | ND             |             | mg/kg        | 0.039         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:06   | KJH       | A7          |

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 Vancouver Waterloo · Winnipeg · Yellowknife   
**United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York   
**Mexico:** Monterrey

### ANALYTICAL RESULTS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870006**  
Sample ID: **Comp NB80+00-83+00**

Date Collected: 6/2/2011 12:10 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Aroclor-1260                | ND             |             | mg/kg        | 0.039         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:06   | KJH       | A7          |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| Decachlorobiphenyl (S)      | 114            |             | %            | 46-120        | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:06   | KJH       | A7          |
| Tetrachloro-m-xylene (S)    | 150            | 8           | %            | 52-115        | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:06   | KJH       | A7          |

#### PESTICIDES

|                             |                |             |              |               |               |                 |           |                 |           |             |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Aldrin                      | ND             |             | ug/kg        | 1.9           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| alpha-BHC                   | ND             |             | ug/kg        | 1.9           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| beta-BHC                    | ND             |             | ug/kg        | 1.9           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| delta-BHC                   | ND             |             | ug/kg        | 1.9           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| gamma-BHC                   | ND             |             | ug/kg        | 1.9           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| alpha-Chlordane             | ND             |             | ug/kg        | 1.9           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| gamma-Chlordane             | ND             |             | ug/kg        | 1.9           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| 4,4'-DDD                    | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| 4,4'-DDE                    | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| 4,4'-DDT                    | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Dieldrin                    | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Endosulfan I                | ND             |             | ug/kg        | 1.9           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Endosulfan II               | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Endosulfan Sulfate          | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Endrin                      | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Endrin Aldehyde             | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Endrin Ketone               | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Heptachlor                  | ND             |             | ug/kg        | 1.9           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Heptachlor Epoxide          | ND             |             | ug/kg        | 1.9           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Methoxychlor                | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Mirex                       | ND             |             | ug/kg        | 3.8           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Toxaphene                   | ND             |             | ug/kg        | 80.2          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| Decachlorobiphenyl (S)      | 72.1           |             | %            | 30-117        | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |
| Tetrachloro-m-xylene (S)    | 78.6           |             | %            | 30-89         | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 23:27   | KJH       | A2          |

#### HERBICIDES

|              |    |  |       |      |             |         |     |               |     |    |
|--------------|----|--|-------|------|-------------|---------|-----|---------------|-----|----|
| 2,4-D        | ND |  | ug/kg | 17.5 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:08 | KJH | A6 |
| 2,4-DB       | ND |  | ug/kg | 17.5 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:08 | KJH | A6 |
| Dalapon      | ND |  | ug/kg | 52.6 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:08 | KJH | A6 |
| Dicamba      | ND |  | ug/kg | 17.5 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:08 | KJH | A6 |
| Dichloroprop | ND |  | ug/kg | 17.5 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:08 | KJH | A6 |
| Dinoseb      | ND |  | ug/kg | 35.1 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:08 | KJH | A6 |

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**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870006**  
Sample ID: **Comp NB80+00-83+00**

Date Collected: 6/2/2011 12:10 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                        | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| 2,4,5-T                           | ND             |             | ug/kg        | 17.5          | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 22:08   | KJH       | A6          |
| 2,4,5-TP                          | ND             |             | ug/kg        | 17.5          | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 22:08   | KJH       | A6          |
| <i>Surrogate Recoveries</i>       | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 2,4-Dichlorophenylacetic acid (S) | 110            |             | %            | 77-139        | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 22:08   | KJH       | A6          |

**WET CHEMISTRY**

|              |      |  |   |     |             |  |  |              |     |   |
|--------------|------|--|---|-----|-------------|--|--|--------------|-----|---|
| Moisture     | 14.5 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |
| Total Solids | 85.5 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |

**METALS**

|                 |      |  |       |      |             |         |     |               |     |    |
|-----------------|------|--|-------|------|-------------|---------|-----|---------------|-----|----|
| Arsenic, Total  | ND   |  | mg/kg | 1.9  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:30 | SRT | A1 |
| Barium, Total   | 27.8 |  | mg/kg | 0.97 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:30 | SRT | A1 |
| Cadmium, Total  | ND   |  | mg/kg | 0.49 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:30 | SRT | A1 |
| Chromium, Total | 7.6  |  | mg/kg | 0.97 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:30 | SRT | A1 |
| Lead, Total     | 8.1  |  | mg/kg | 1.9  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:30 | SRT | A1 |
| Mercury, Total  | ND   |  | mg/kg | 0.22 | SW846 7471B | 6/14/11 | MNP | 6/14/11 13:21 | MNP | A4 |
| Selenium, Total | ND   |  | mg/kg | 4.9  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:30 | SRT | A1 |
| Silver, Total   | ND   |  | mg/kg | 0.49 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:30 | SRT | A1 |

**Sample Comments:**
  
Anna G Milliken  
Technical Manager

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870007**

Date Collected: 6/2/2011 12:20

Matrix: Solid

Sample ID: **Grab NB82+00-86+00**

Date Received: 6/6/2011 19:06

| Parameters                  | Results | Flag | Units | RDL | Method    | Prepared | By  | Analyzed      | By  | Cntr |
|-----------------------------|---------|------|-------|-----|-----------|----------|-----|---------------|-----|------|
| <b>VOLATILE ORGANICS</b>    |         |      |       |     |           |          |     |               |     |      |
| Acetone                     | 14.0    |      | ug/kg | 6.6 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Benzene                     | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Bromochloromethane          | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Bromodichloromethane        | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Bromoform                   | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Bromomethane                | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 2-Butanone                  | ND      |      | ug/kg | 6.6 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Carbon Disulfide            | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Carbon Tetrachloride        | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Chlorobenzene               | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Chlorodibromomethane        | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Chloroethane                | ND      |      | ug/kg | 3.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Chloroform                  | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Chloromethane               | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 1,2-Dibromo-3-chloropropane | ND      |      | ug/kg | 3.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 1,2-Dibromoethane           | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 1,1-Dichloroethane          | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 1,2-Dichloroethane          | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 1,1-Dichloroethene          | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| cis-1,2-Dichloroethene      | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| trans-1,2-Dichloroethene    | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 1,2-Dichloropropane         | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| cis-1,3-Dichloropropene     | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| trans-1,3-Dichloropropene   | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 1,3-Dichloropropene, Total  | ND      |      | ug/kg | 2.7 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Ethylbenzene                | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 2-Hexanone                  | ND      |      | ug/kg | 6.6 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 4-Methyl-2-Pentanone(MIBK)  | ND      |      | ug/kg | 6.6 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Methylene Chloride          | 13.9    | 1    | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Styrene                     | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 1,1,2,2-Tetrachloroethane   | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Tetrachloroethene           | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Toluene                     | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Total Xylenes               | ND      |      | ug/kg | 4.0 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 1,1,1-Trichloroethane       | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| 1,1,2-Trichloroethane       | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Trichloroethene             | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| Vinyl Chloride              | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |
| o-Xylene                    | ND      |      | ug/kg | 1.3 | 8260/5035 | 6/2/11   | MES | 6/16/11 09:26 | MES | B    |

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870007**

Date Collected: 6/2/2011 12:20

Matrix: Solid

Sample ID: **Grab NB82+00-86+00**

Date Received: 6/6/2011 19:06

| Parameters                  | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| mp-Xylene                   | ND             |             | ug/kg        | 2.7           | 8260/5035     | 6/2/11          | MES       | 6/16/11 09:26   | MES       | B           |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 1,2-Dichloroethane-d4 (S)   | 75.6           |             | %            | 56-124        | 8260/5035     | 6/2/11          | MES       | 6/16/11 09:26   | MES       | B           |
| 4-Bromofluorobenzene (S)    | 65.5           |             | %            | 51-128        | 8260/5035     | 6/2/11          | MES       | 6/16/11 09:26   | MES       | B           |
| Dibromofluoromethane (S)    | 75.2           |             | %            | 62-123        | 8260/5035     | 6/2/11          | MES       | 6/16/11 09:26   | MES       | B           |
| Toluene-d8 (S)              | 73.7           |             | %            | 59-131        | 8260/5035     | 6/2/11          | MES       | 6/16/11 09:26   | MES       | B           |

**WET CHEMISTRY**

|              |      |  |   |     |             |  |  |              |     |   |
|--------------|------|--|---|-----|-------------|--|--|--------------|-----|---|
| Moisture     | 13.8 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |
| Total Solids | 86.2 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |

**Sample Comments:**
  
Anna G Milliken  
Technical Manager

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

### ANALYTICAL RESULTS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870008**  
Sample ID: **Comp NB82+00-86+00**

Date Collected: 6/2/2011 12:20 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results | Flag | Units | RDL  | Method      | Prepared | By  | Analyzed      | By  | Cntr |
|-----------------------------|---------|------|-------|------|-------------|----------|-----|---------------|-----|------|
| <b>SEMIVOLATILES</b>        |         |      |       |      |             |          |     |               |     |      |
| Acenaphthene                | ND      |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Acenaphthylene              | ND      |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Anthracene                  | ND      |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Benzo(a)anthracene          | ND      |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Benzo(a)pyrene              | 61.8    |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Benzo(b)fluoranthene        | ND      |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Benzo(g,h,i)perylene        | ND      |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Benzo(k)fluoranthene        | 58.0    |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 4-Bromophenyl-phenylether   | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Butylbenzylphthalate        | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Carbazole                   | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 4-Chloro-3-methylphenol     | ND      |      | ug/kg | 310  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 4-Chloroaniline             | ND      |      | ug/kg | 310  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| bis(2-Chloroethoxy)methane  | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| bis(2-Chloroethyl)ether     | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| bis(2-Chloroisopropyl)ether | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 2-Chloronaphthalene         | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 2-Chlorophenol              | ND      |      | ug/kg | 310  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 4-Chlorophenyl-phenylether  | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Chrysene                    | ND      |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| mp-Cresol                   | ND      |      | ug/kg | 310  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| o-Cresol                    | ND      |      | ug/kg | 310  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Di-n-Butylphthalate         | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Di-n-Octylphthalate         | ND      |      | ug/kg | 310  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Dibenzo(a,h)anthracene      | ND      |      | ug/kg | 68.8 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Dibenzofuran                | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 1,2-Dichlorobenzene         | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 1,3-Dichlorobenzene         | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 1,4-Dichlorobenzene         | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 3,3-Dichlorobenzidine       | ND      |      | ug/kg | 620  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 2,4-Dichlorophenol          | ND      |      | ug/kg | 310  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Diethylphthalate            | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 2,4-Dimethylphenol          | ND      |      | ug/kg | 310  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Dimethylphthalate           | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 2,4-Dinitrophenol           | ND      |      | ug/kg | 620  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 2,4-Dinitrotoluene          | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| 2,6-Dinitrotoluene          | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| bis(2-Ethylhexyl)phthalate  | ND      |      | ug/kg | 115  | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Fluoranthene                | ND      |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |
| Fluorene                    | ND      |      | ug/kg | 57.4 | SW846 8270D | 6/14/11  | GMG | 6/18/11 06:04 | CGS | A5   |

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**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870008**  
Sample ID: **Comp NB82+00-86+00**

Date Collected: 6/2/2011 12:20 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                     | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|--------------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Hexachlorobenzene              | ND             |             | ug/kg        | 115           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Hexachlorobutadiene            | ND             |             | ug/kg        | 115           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Hexachlorocyclopentadiene      | ND             |             | ug/kg        | 310           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Hexachloroethane               | ND             |             | ug/kg        | 115           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Indeno(1,2,3-cd)pyrene         | ND             |             | ug/kg        | 57.4          | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Isophorone                     | ND             |             | ug/kg        | 115           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 2-Methyl-4,6-dinitrophenol     | ND             |             | ug/kg        | 310           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 2-Methylnaphthalene            | ND             |             | ug/kg        | 57.4          | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Naphthalene                    | ND             |             | ug/kg        | 57.4          | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 2-Nitroaniline                 | ND             |             | ug/kg        | 310           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 3-Nitroaniline                 | ND             |             | ug/kg        | 310           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 4-Nitroaniline                 | ND             |             | ug/kg        | 310           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Nitrobenzene                   | ND             |             | ug/kg        | 138           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 2-Nitrophenol                  | ND             |             | ug/kg        | 310           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 4-Nitrophenol                  | ND             |             | ug/kg        | 310           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| N-Nitroso-di-n-propylamine     | ND             |             | ug/kg        | 115           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| N-Nitrosodiphenylamine         | ND             |             | ug/kg        | 115           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Pentachlorophenol              | ND             |             | ug/kg        | 620           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Phenanthrene                   | ND             |             | ug/kg        | 57.4          | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Phenol                         | ND             |             | ug/kg        | 310           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Pyrene                         | ND             |             | ug/kg        | 57.4          | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 1,2,4-Trichlorobenzene         | ND             |             | ug/kg        | 115           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 2,4,5-Trichlorophenol          | ND             |             | ug/kg        | 310           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 2,4,6-Trichlorophenol          | ND             |             | ug/kg        | 310           | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| <i>Surrogate Recoveries</i>    | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 2,4,6-Tribromophenol (S)       | 93.6           |             | %            | 37-123        | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 2-Fluorobiphenyl (S)           | 74.2           |             | %            | 45-105        | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| 2-Fluorophenol (S)             | 60.4           |             | %            | 35-104        | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Nitrobenzene-d5 (S)            | 78             |             | %            | 41-110        | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Phenol-d5 (S)                  | 55.5           |             | %            | 40-100        | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| Terphenyl-d14 (S)              | 85.5           |             | %            | 38-113        | SW846 8270D   | 6/14/11         | GMG       | 6/18/11 06:04   | CGS       | A5          |
| <b>PCBs</b>                    |                |             |              |               |               |                 |           |                 |           |             |
| Total Polychlorinated Biphenyl | ND             |             | mg/kg        | 0.038         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:22   | KJH       | A7          |
| Aroclor-1016                   | ND             |             | mg/kg        | 0.038         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:22   | KJH       | A7          |
| Aroclor-1221                   | ND             |             | mg/kg        | 0.038         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:22   | KJH       | A7          |
| Aroclor-1232                   | ND             |             | mg/kg        | 0.038         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:22   | KJH       | A7          |
| Aroclor-1242                   | ND             |             | mg/kg        | 0.038         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:22   | KJH       | A7          |
| Aroclor-1248                   | ND             |             | mg/kg        | 0.038         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:22   | KJH       | A7          |
| Aroclor-1254                   | ND             |             | mg/kg        | 0.038         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:22   | KJH       | A7          |

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**ANALYTICAL RESULTS**

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870008**  
Sample ID: **Comp NB82+00-86+00**

Date Collected: 6/2/2011 12:20 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                  | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Aroclor-1260                | ND             |             | mg/kg        | 0.038         | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:22   | KJH       | A7          |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| Decachlorobiphenyl (S)      | 126            | 10          | %            | 46-120        | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:22   | KJH       | A7          |
| Tetrachloro-m-xylene (S)    | 157            | 9           | %            | 52-115        | SW846 8082A   | 6/16/11         | CJG       | 6/17/11 06:22   | KJH       | A7          |

**PESTICIDES**

|                             |                |             |              |               |               |                 |           |                 |           |             |
|-----------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| Aldrin                      | ND             |             | ug/kg        | 9.4           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| alpha-BHC                   | ND             |             | ug/kg        | 9.4           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| beta-BHC                    | ND             |             | ug/kg        | 9.4           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| delta-BHC                   | ND             |             | ug/kg        | 9.4           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| gamma-BHC                   | ND             |             | ug/kg        | 9.4           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| alpha-Chlordane             | ND             |             | ug/kg        | 9.4           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| gamma-Chlordane             | ND             |             | ug/kg        | 9.4           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| 4,4'-DDD                    | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| 4,4'-DDE                    | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| 4,4'-DDT                    | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Dieldrin                    | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Endosulfan I                | ND             |             | ug/kg        | 9.4           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Endosulfan II               | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Endosulfan Sulfate          | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Endrin                      | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Endrin Aldehyde             | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Endrin Ketone               | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Heptachlor                  | ND             |             | ug/kg        | 9.4           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Heptachlor Epoxide          | ND             |             | ug/kg        | 9.4           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Methoxychlor                | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Mirex                       | ND             |             | ug/kg        | 18.3          | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Toxaphene                   | ND             |             | ug/kg        | 387           | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| <i>Surrogate Recoveries</i> | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| Decachlorobiphenyl (S)      | 59.5           |             | %            | 30-117        | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |
| Tetrachloro-m-xylene (S)    | 60.4           |             | %            | 30-89         | SW846 8081B   | 6/10/11         | CJG       | 6/13/11 20:56   | KJH       | A2          |

**HERBICIDES**

|              |    |  |       |      |             |         |     |               |     |    |
|--------------|----|--|-------|------|-------------|---------|-----|---------------|-----|----|
| 2,4-D        | ND |  | ug/kg | 17.2 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:46 | KJH | A6 |
| 2,4-DB       | ND |  | ug/kg | 17.2 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:46 | KJH | A6 |
| Dalapon      | ND |  | ug/kg | 51.5 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:46 | KJH | A6 |
| Dicamba      | ND |  | ug/kg | 17.2 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:46 | KJH | A6 |
| Dichloroprop | ND |  | ug/kg | 17.2 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:46 | KJH | A6 |
| Dinoseb      | ND |  | ug/kg | 34.3 | SW846 8151A | 6/15/11 | LEH | 6/21/11 22:46 | KJH | A6 |

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### ANALYTICAL RESULTS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

Lab ID: **9908870008**  
Sample ID: **Comp NB82+00-86+00**

Date Collected: 6/2/2011 12:20 Matrix: Solid  
Date Received: 6/6/2011 19:06

| Parameters                        | Results        | Flag        | Units        | RDL           | Method        | Prepared        | By        | Analyzed        | By        | Cntr        |
|-----------------------------------|----------------|-------------|--------------|---------------|---------------|-----------------|-----------|-----------------|-----------|-------------|
| 2,4,5-T                           | ND             |             | ug/kg        | 17.2          | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 22:46   | KJH       | A6          |
| 2,4,5-TP                          | ND             |             | ug/kg        | 17.2          | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 22:46   | KJH       | A6          |
| <i>Surrogate Recoveries</i>       | <i>Results</i> | <i>Flag</i> | <i>Units</i> | <i>Limits</i> | <i>Method</i> | <i>Prepared</i> | <i>By</i> | <i>Analyzed</i> | <i>By</i> | <i>Cntr</i> |
| 2,4-Dichlorophenylacetic acid (S) | 114            |             | %            | 77-139        | SW846 8151A   | 6/15/11         | LEH       | 6/21/11 22:46   | KJH       | A6          |

**WET CHEMISTRY**

|              |      |  |   |     |             |  |  |              |     |   |
|--------------|------|--|---|-----|-------------|--|--|--------------|-----|---|
| Moisture     | 13.1 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |
| Total Solids | 86.9 |  | % | 0.1 | SM20-2540 G |  |  | 6/7/11 10:30 | KAK | A |

**METALS**

|                 |      |  |       |      |             |         |     |               |     |    |
|-----------------|------|--|-------|------|-------------|---------|-----|---------------|-----|----|
| Arsenic, Total  | 2.8  |  | mg/kg | 2.0  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:34 | SRT | A1 |
| Barium, Total   | 20.6 |  | mg/kg | 1.0  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:34 | SRT | A1 |
| Cadmium, Total  | ND   |  | mg/kg | 0.50 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:34 | SRT | A1 |
| Chromium, Total | 12.5 |  | mg/kg | 1.0  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:34 | SRT | A1 |
| Lead, Total     | 6.5  |  | mg/kg | 2.0  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:34 | SRT | A1 |
| Mercury, Total  | ND   |  | mg/kg | 0.20 | SW846 7471B | 6/14/11 | MNP | 6/14/11 13:22 | MNP | A4 |
| Selenium, Total | ND   |  | mg/kg | 5.0  | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:34 | SRT | A1 |
| Silver, Total   | ND   |  | mg/kg | 0.50 | SW846 6010C | 6/9/11  | KMK | 6/10/11 03:34 | SRT | A1 |

**Sample Comments:**

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

  
Anna G Milliken  
Technical Manager

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## ANALYTICAL RESULTS QUALIFIERS/FLAGS

Workorder: 9908870 NE PA TURNPIKE EXT (CLEAN FILL)

### PARAMETER QUALIFIERS/FLAGS

- [1] The QC sample type LCSD for method 8260/5035 was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 136 and the control limits were 68 to 133.
- [2] The QC sample type MS for method SW846 8270D was outside the control limits for the analyte Hexachlorocyclopentadiene. The % Recovery was reported as 39.3 and the control limits were 42 to 111.
- [3] The QC sample type MS for method SW846 8270D was outside the control limits for the analyte N-Nitrosodiphenylamine. The % Recovery was reported as 109 and the control limits were 62 to 107.
- [4] The surrogate Tetrachloro-m-xylene for method SW846 8082A was outside of control limits. The % Recovery was reported as 151 and the control limits were 52 to 115. This result was reported at a dilution of 1.
- [5] The surrogate Tetrachloro-m-xylene for method SW846 8082A was outside of control limits. The % Recovery was reported as 162 and the control limits were 52 to 115. This result was reported at a dilution of 1.
- [6] The QC sample type LCS for method 8260/5035 was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 216 and the control limits were 68 to 133.
- [7] The QC sample type LCSD for method 8260/5035 was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 198 and the control limits were 68 to 133.
- [8] The surrogate Tetrachloro-m-xylene for method SW846 8082A was outside of control limits. The % Recovery was reported as 150 and the control limits were 52 to 115. This result was reported at a dilution of 1.
- [9] The surrogate Tetrachloro-m-xylene for method SW846 8082A was outside of control limits. The % Recovery was reported as 157 and the control limits were 52 to 115. This result was reported at a dilution of 1.
- [10] The surrogate Decachlorobiphenyl for method SW846 8082A was outside of control limits. The % Recovery was reported as 126 and the control limits were 46 to 120. This result was reported at a dilution of 1.

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Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey



**CHAIN OF CUSTODY/  
 REQUEST FOR ANALYSIS**

Page \_\_\_ of \_\_\_

Courier: \_\_\_\_\_

Tracking #: \_\_\_\_\_

COC# \_\_\_\_\_

34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

**ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.**

**Co. Name:** Haines and Kibblehouse Inc.  
**Contact (Report to):** Andrew Curtis **Phone:** \_\_\_\_\_  
**Address:** 2052 Lucon Road  
 P.O. Box 196  
 Skippack, PA 19474

**Bill to (if different than Report to):** \_\_\_\_\_ **PO#:** \_\_\_\_\_  
 Accounts Payable  
 PO Box 196, Skippack, PA 19474  
**Project Name/#:** NE PA Turnpike Ext (Clean Fill) **ALSI Quote #:** 229270

**TAT:**  Normal-Standard TAT is 10-12 business days. **Date Required:** \_\_\_\_\_  
 Rush-Subject to ALSI approval and surcharges. **Approved By:** \_\_\_\_\_

**Email?**  -Y acurtis@hkgroup.com  
**Fax?**  -Y No.:

|                   |       |        |       |       |  |  |  |  |  |  |  |  |  |  |  |
|-------------------|-------|--------|-------|-------|--|--|--|--|--|--|--|--|--|--|--|
| ***Container Type | Vial  | Vial   | 4oz   | 16oz  |  |  |  |  |  |  |  |  |  |  |  |
| ***Container Size | Glass | Glass  | Glass | Glass |  |  |  |  |  |  |  |  |  |  |  |
| ***Preservative   | MeOH  | NaHSO4 | None  | None  |  |  |  |  |  |  |  |  |  |  |  |

**ANALYSES/METHOD REQUESTED**

|          | TCL VOC (8260) | TCL VOC (8260) | Dry Weight | TCL SVOC (8270) | Herbicides (8151) | TCL Pesticides (8081) | PCB (8082) | RCRA Metals (6010) |  |  |  |  |  |  |  |
|----------|----------------|----------------|------------|-----------------|-------------------|-----------------------|------------|--------------------|--|--|--|--|--|--|--|
| *G or C  |                |                |            |                 |                   |                       |            |                    |  |  |  |  |  |  |  |
| **Matrix |                |                |            |                 |                   |                       |            |                    |  |  |  |  |  |  |  |

**Enter Number of Containers Per Analysis**

| Sample Description/Location<br><small>(as it will appear on the lab report)</small> | COC Comments | Sample Date | Military Time | *G or C | **Matrix |   |   |   |   |   |   |   |   |  |  |
|---|--------------|-------------|---------------|---------|----------|---|---|---|---|---|---|---|---|--|--|
| 1 Grab NB76+00-78+00  |              | 6/2/2011    | 1110          | G       | S        | 1 | 2 | 1 |   |   |   |   |   |  |  |
| 2 Comp NB76+00-78+00  |              | 6/2/2011    | 1110          | C       | S        |   |   |   | 1 | X | X | X | X |  |  |
| 3 Grab NB78+00-81+00  |              | 6/2/2011    | 1145          | G       | S        | 1 | 2 | 1 |   |   |   |   |   |  |  |
| 4 Comp NB78+00-81+00  |              | 6/2/2011    | 1145          | C       | S        |   |   |   | 1 | X | X | X | X |  |  |
| 5 Grab NB80+00-83+00  |              | 6/2/2011    | 1210          | G       | S        | 1 | 2 | 1 |   |   |   |   |   |  |  |
| 6 Comp NB80+00-83+00  |              | 6/2/2011    | 1210          | C       | S        |   |   |   | 1 | X | X | X | X |  |  |
| 7 Grab NB82+00-86+00  |              | 6/2/2011    | 1220          | G       | S        | 1 | 2 | 1 |   |   |   |   |   |  |  |
| 8 Comp NB82+00-86+00  |              | 6/2/2011    | 1220          | C       | S        |   |   |   | 1 | X | X | X | X |  |  |

**Receipt Information**  
(Completed by Sample Receiver)

**Performed by:** \_\_\_\_\_ **INITIAL HERE**  
**Cooler Temp:** \_\_\_\_\_  
**Therm. ID:** \_\_\_\_\_  
**No. of Coolers:** \_\_\_\_\_

**Notes:**

|                               |   |   |   |   |                            |
|-------------------------------|---|---|---|---|----------------------------|
|                               | N | N | N | N | Circle appropriate Y or N. |
| Correct containers?           | Y | Y | Y | Y |                            |
| Correct sample volume?        | N | N | N | N |                            |
| Correct preservation?         | Y | Y | Y | Y |                            |
| Correct preservation?         | Y | Y | Y | Y |                            |
| Headspace/Volatiles?          | N | N | N | N |                            |
| Custody seals Present?        | Y | Y | Y | Y |                            |
| (if present) Seals intact?    | Y | Y | Y | Y |                            |
| Received on ice?              | Y | Y | Y | Y |                            |
| COC Labels complete/accurate? | Y | Y | Y | Y |                            |
| Container in good condition?  | Y | Y | Y | Y |                            |

**SAMPLED BY (Please Print):**  
 Aaron Hottenstein

**LOGGED BY (signature):** \_\_\_\_\_ **DATE:** \_\_\_\_\_ **TIME:** \_\_\_\_\_  
**REVIEWED BY (signature):** \_\_\_\_\_ **DATE:** \_\_\_\_\_ **TIME:** \_\_\_\_\_

| Relinquished By / Company Name | Date | Time | Received By / Company Name | Date | Time |
|--------------------------------|------|------|----------------------------|------|------|
|                                |      |      |                            | 2    |      |
|                                |      |      |                            | 4    |      |
|                                |      |      |                            | 6    |      |
|                                |      |      |                            | 8    |      |
|                                |      |      |                            | 10   |      |

**Data Deliverables**  
 Standard  
 CLP-like  
 NJ-Reduced  
 NJ-Full  
 (other) \_\_\_\_\_  
**EDDs Required?**  If yes, format type: **Special H&K**  
**DOD Criteria Required?** \_\_\_\_\_

**SDWA Forms?**  
 yes   
 yes   
 yes   
 yes   
 Other \_\_\_\_\_  
**PWSID** \_\_\_\_\_

**State Samples Collected In?**  
 MD   
 NJ   
 NY   
 PA

**ALSI FIELD SERVICES**

Pickup  
 Labor  
 Composite Sampling  
 Rental Equipment  
 Other: \_\_\_\_\_