



# Glenn Springs Holdings, Inc.

A subsidiary of Occidental Petroleum

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December 14, 2011

Reference No. 001431

Mr. Gregory P. Sutton  
New York State Department of Environmental Conservation  
270 Michigan Avenue  
Region 9  
Buffalo, NY 14203-2999

Dear Mr. Sutton:

Re: Analytical Results and QA/QC Review  
Semiannual Groundwater Sampling - October 2011  
102<sup>nd</sup> Street Landfill Site, Niagara Falls, New York

Pursuant to the requirements of the Consent Decree and the Operations and Maintenance (O&M) Manual, Glenn Springs Holdings, Inc. (GSH) is submitting the Analytical Results and Quality Assurance/Quality Control (QA/QC) Review for the Semiannual Groundwater Sampling performed at the 102<sup>nd</sup> Street Landfill Site (Site) in October 2011. An electronic copy is provided on the enclosed CD.

The quarterly groundwater quality monitoring that was required for the first 2 years of operation in accordance with the approved O&M Manual was completed in April 2004. As per the O&M Manual, monitoring is to be performed semiannually for the following 8 years after completion of the quarterly monitoring. Therefore, semiannual groundwater quality monitoring will continue through 2012.

A figure showing the orientation of the Site and the locations of the monitoring wells is included in this submittal as Figure 1.

Please contact me at 231-670-6809 should you have any questions or concerns.

Very truly yours,

GLENN SPRINGS HOLDINGS, INC.

Joseph Branch  
Project Manager  
231-670-6809

JB/EG/adh/12  
Encl.

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**CONESTOGA-ROVERS  
& ASSOCIATES**

E-Mail Date: November 30, 2011  
E-Mail To: Mike Bellotti; Clint Babcock; Dennis Hoyt; Jane Polovich; Eireann Good; Joseph Branch  
E-Mail and Hard Copy If Requested

ANALYTICAL RESULTS AND QA/QC REVIEW  
SEMI-ANNUAL GROUNDWATER SAMPLING  
102<sup>ND</sup> STREET LANDFILL  
NIAGARA FALLS, NEW YORK  
OCTOBER 2011

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## 1.0 INTRODUCTION

Groundwater samples were collected in support of the Operation and Maintenance Program at the 102<sup>nd</sup> Street Landfill (Site) in Niagara Falls, New York. The samples were collected in October 2011 and delivered to TestAmerica in Pittsburgh, Pennsylvania (TA) for analysis. Samples were analyzed for Site-Specific Parameter List (SSPL) volatile organic compounds (VOCs), SSPL semi-volatile organic compounds (SVOCs), SSPL pesticides, total mercury, and total arsenic. A sampling and analysis summary is presented in Table 1. The analytical results are summarized in Table 2 and the analytical methods used are summarized in Table 3. Copies of the Chain of Custody documents are included in Attachment A.

The final sample results and supporting quality assurance/quality control (QA/QC) results were reported by the laboratory in accordance with the requested deliverables. The QA/QC criteria by which these data were assessed are outlined in the analytical methods used and the following guidance documents:

- i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", October 1999
- ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", February 1994

All data were reviewed for the QA/QC information detailed in Section 2.0 by Paul McMahon of CRA, Inc.

A graphical presentation of the concentration of chemical constituents versus time for wells PCM-03, PCM-04, and PCM-05 is located in Attachment B.

## 2.0 QA/QC REVIEW

### Holding Times

The sample holding time criteria are specified in Table 3. All holding time criteria were met. All samples were properly preserved and were received chilled.

### Surrogate Spike Recoveries -VOCs/SVOCs/Pesticides

All samples and blanks analyzed for VOCs, SVOCs, and pesticides were spiked with surrogate compounds prior to sample extraction and/or analysis. Per the "Guidelines",

it is acceptable for one SVOC surrogate recovery per fraction to be outside of the limits provided the recovery is greater than 10 percent.

All surrogate spike recoveries were acceptable per the "Guidelines", indicating good analytical efficiency.

#### Laboratory Method Blank Analyses

Method blanks were extracted and/or analyzed with the investigative samples for all parameters. All methods blanks were non-detect for the analytes of interest.

#### Matrix Spike/Matrix Spike Duplicate/Duplicate (MS/MSD/Duplicate) Analyses

One sample was selected for MS/MSD analyses as specified in Table 1. Most recoveries and all relative percent differences (RPDs) were acceptable, demonstrating good analytical accuracy and precision. Low MS/MSD recoveries were reported for one SVOC, and the associated sample result was qualified as estimated (see Table 4).

#### Laboratory Control Sample (LCS) Analyses

LCSs were analyzed for all parameters. Some LCS analyses were performed in duplicate. All recoveries and RPDs were acceptable, indicating good analytical accuracy and precision.

#### Field Duplicate Analysis

One field duplicate sample was submitted "blind" to the laboratory for analyses as summarized in Table 1.

All field duplicate results showed acceptable reproducibility outside of estimated regions of detection, indicating good laboratory and sampling protocol precision.

#### Trip Blanks

Two trip blanks were collected for the program. The trip blanks were analyzed for VOCs, and all results were non-detect.

#### Pesticide Dual Column Variability

The laboratory qualified one detected pesticide result because there was some variability between the data reported from the dual column analyses. The result was qualified as estimated (see Table 5).

### 3.0 CONCLUSION

Based on this QA/QC review, the data presented in Table 2 are acceptable with the noted qualifications.

## TABLES



TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY  
SEMI-ANNUAL GROUNDWATER SAMPLING  
102ND STREET LANDFILL  
NIAGARA FALLS, NEW YORK  
OCTOBER 2011**

| Sample ID        | Location I.D. <sup>(1)</sup> | Collection Date | Collection Time | <u>Analysis/Parameters</u> |      |        |       | Depth to Water <sup>(2)</sup><br>(ft. BTOC) | Comment                   |
|------------------|------------------------------|-----------------|-----------------|----------------------------|------|--------|-------|---|---------------------------|
|                  |                              |                 |                 | BHCs                       | VOCs | Metals | SVOCs |   |                           |
| 102NDTRIP-101811 | -                            | 10/18/2011      | -               |                            | X    |        |       | -   | Trip Blank                |
| PCBM-02-1011     | PCBM-02                      | 10/18/2011      | 10:40:00 AM     | X                          | X    | X      | X     | 11.83                                       |                           |
| PCM-05-1011      | PCM-05                       | 10/18/2011      | 11:55:00 AM     | X                          | X    | X      | X     | 12.52                                       |                           |
| PCM-07R-1011     | PCM-07R                      | 10/18/2011      | 9:45:00 AM      | X                          | X    | X      | X     | 12.88                                       |                           |
| PCM-09-1011      | PCM-09                       | 10/18/2011      | 12:50:00 PM     | X                          | X    | X      | X     | 8.21  |                           |
| PCM-10-1011      | PCM-10                       | 10/18/2011      | 2:15:00 PM      | X                          | X    | X      | X     | 13.02                                       |                           |
| 102NDTRIP-101911 | -                            | 10/19/2011      | -               |                            | X    |        |       | -   | Trip Blank                |
| PCBM-01-1011     | PCBM-01                      | 10/19/2011      | 3:10:00 PM      | X                          | X    | X      | X     | 12.58                                       | MS/MSD/Duplicate          |
| PCBM-03-1011     | PCBM-03                      | 10/19/2011      | 10:00:00 AM     | X                          | X    | X      | X     | 15.98                                       |                           |
| PCM-12-1011      | PCBM-03                      | 10/19/2011      | 10:30:00 AM     | X                          | X    | X      | X     | 15.98                                       | Duplicate of PCBM-03-1011 |
| PCM-01-1011      | PCM-01                       | 10/19/2011      | 11:15:00 AM     | X                          | X    | X      | X     | 12.29                                       |                           |
| PCM-02-1011      | PCM-02                       | 10/19/2011      | 1:15:00 PM      | X                          | X    | X      | X     | 11.17                                       |                           |
| PCM-03-1011      | PCM-03                       | 10/19/2011      | 3:45:00 PM      | X                          | X    | X      | X     | 12.75                                       |                           |
| PCM-04-1011      | PCM-04                       | 10/19/2011      | 5:20:00 PM      | X                          | X    | X      | X     | 11.47                                       |                           |
| PCM-08-1011      | PCM-08                       | 10/19/2011      | 9:10:00 AM      | X                          | X    | X      | X     | 8.97  |                           |

## Notes:

- (1) Well PCM-06 was dry.
- (2) Niagara River water level for September 27, 2011 was 563.92 feet.
- Not applicable.
- BHCs Benzene Hexachlorides.
- ft. BTOC Feet Below Top of Casing.
- MS Matrix Spike.
- MSD Matrix Spike Duplicate.
- SVOCs Semi-Volatile Organic Compounds.
- VOCs Volatile Organic Compounds.

**TABLE 2**  
**ANALYTICAL RESULTS SUMMARY**  
**SEMI-ANNUAL GROUNDWATER SAMPLING**  
**102ND STREET LANDFILL**  
**NIAGARA FALLS, NEW YORK**  
**OCTOBER 2011**

|  |              | <i>PCBM-01</i>      | <i>PCBM-02</i>      | <i>PCBM-03</i>      | <i>PCBM-03</i>     | <i>PCM-01</i>      | <i>PCM-02</i>      | <i>PCM-03</i>      |
|--|--------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| <i>Sample Location:</i>                |              | <i>PCBM-01</i>      | <i>PCBM-02</i>      | <i>PCBM-03</i>      | <i>PCBM-03</i>     | <i>PCM-01</i>      | <i>PCM-02</i>      | <i>PCM-03</i>      |
| <i>Sample ID:</i>                      |              | <i>PCBM-01-1011</i> | <i>PCBM-02-1011</i> | <i>PCBM-03-1011</i> | <i>PCM-12-1011</i> | <i>PCM-01-1011</i> | <i>PCM-02-1011</i> | <i>PCM-03-1011</i> |
| <i>Sample Date:</i>                    |              | <i>10/19/2011</i>   | <i>10/18/2011</i>   | <i>10/19/2011</i>   | <i>10/19/2011</i>  | <i>10/19/2011</i>  | <i>10/19/2011</i>  | <i>10/19/2011</i>  |
|  |              |                     |                     |                     | <i>(Duplicate)</i> |                    |                    |                    |
| <i>Parameters</i>                      | <i>Units</i> |                     |                     |                     |                    |                    |                    |                    |
| <i>Volatile Organic Compounds</i>      |              |                     |                     |                     |                    |                    |                    |                    |
| 1,2,3-Trichlorobenzene                 | µg/L         | 1.0 U               | 1.0 U               | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              | 130 U              |
| 1,2,4-Trichlorobenzene                 | µg/L         | 1.0 U               | 1.0 U               | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              | 130 U              |
| 1,2-Dichlorobenzene                    | µg/L         | 1.0 U               | 1.0 U               | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              | 46 J               |
| 1,4-Dichlorobenzene                    | µg/L         | 1.0 U               | 1.0 U               | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              | 220                |
| 2-Chlorotoluene                        | µg/L         | 1.0 U               | 1.0 U               | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              | 130 U              |
| Benzene                                | µg/L         | 1.0 U               | 1.0 U               | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              | 34 J               |
| Chlorobenzene                          | µg/L         | 1.0 U               | 1.0 U               | 1.0 U               | 1.0 U              | 1.0 U              | 0.16 J             | 3000               |
| <i>Semi-volatile Organic Compounds</i> |              |                     |                     |                     |                    |                    |                    |                    |
| 1,2,4,5-Tetrachlorobenzene             | µg/L         | 9.5 U               | 9.6 U               | 48 U                | 9.6 U              | 9.6 U              | 9.7 U              | 9.6 U              |
| 2,4,5-Trichlorophenol                  | µg/L         | 9.5 U               | 9.6 U               | 48 U                | 9.6 U              | 9.6 U              | 9.7 U              | 9.6 U              |
| 2,4-Dichlorophenol                     | µg/L         | 9.5 U               | 9.6 U               | 48 U                | 9.6 U              | 9.6 U              | 9.7 U              | 9.6 U              |
| 2,5-Dichlorophenol                     | µg/L         | 9.5 UJ              | 9.6 U               | 48 U                | 9.6 U              | 9.6 U              | 9.7 U              | 9.6 U              |
| 2-Chlorophenol                         | µg/L         | 9.5 U               | 9.6 U               | 17 J                | 9.6 U              | 9.6 U              | 9.7 U              | 9.6 U              |
| 4-Chlorophenol                         | µg/L         | 9.5 U               | 9.6 U               | 48 U                | 9.6 U              | 9.6 U              | 9.7 U              | 9.6 U              |
| Phenol                                 | µg/L         | 9.5 U               | 9.6 U               | 48 U                | 9.6 U              | 9.6 U              | 9.7 U              | 9.6 U              |
| <i>Pesticides</i>                      |              |                     |                     |                     |                    |                    |                    |                    |
| alpha-BHC                              | µg/L         | 0.048 U             | 0.047 U             | 0.048 U             | 0.048 U            | 0.047 U            | 0.048 U            | 0.048 U            |
| beta-BHC                               | µg/L         | 0.048 U             | 0.047 U             | 0.054               | 0.048 U            | 0.047 U            | 0.048 U            | 0.048 U            |
| delta-BHC                              | µg/L         | 0.055               | 0.047 U             | 0.52                | 0.048 U            | 0.047 U            | 0.048 U            | 0.048 U            |
| gamma-BHC (lindane)                    | µg/L         | 0.048 U             | 0.047 U             | 0.048 U             | 0.048 U            | 0.047 U            | 0.048 U            | 0.048 U            |
| <i>Metals</i>                          |              |                     |                     |                     |                    |                    |                    |                    |
| Arsenic                                | µg/L         | 10 U                | 10 U                | 3.9 J               | 10 U               | 2.9 J              | 2.8 J              | 10 U               |
| Mercury                                | µg/L         | 0.20 U              | 0.20 U              | 0.20 U              | 0.20 U             | 0.20 U             | 0.20 U             | 0.20 U             |

**TABLE 2**  
**ANALYTICAL RESULTS SUMMARY**  
**SEMI-ANNUAL GROUNDWATER SAMPLING**  
**102ND STREET LANDFILL**  
**NIAGARA FALLS, NEW YORK**  
**OCTOBER 2011**

|  | <i>Sample Location:</i> | <i>PCM-04</i>      | <i>PCM-05</i>      | <i>PCM-07R</i>      | <i>PCM-08</i>      | <i>PCM-09</i>      | <i>PCM-10</i>      |
|--|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|
|  | <i>Sample ID:</i>       | <i>PCM-04-1011</i> | <i>PCM-05-1011</i> | <i>PCM-07R-1011</i> | <i>PCM-08-1011</i> | <i>PCM-09-1011</i> | <i>PCM-10-1011</i> |
|  | <i>Sample Date:</i>     | <i>10/19/2011</i>  | <i>10/18/2011</i>  | <i>10/18/2011</i>   | <i>10/19/2011</i>  | <i>10/18/2011</i>  | <i>10/18/2011</i>  |
| <i>Parameters</i>                      | <i>Units</i>            |                    |                    |                     |                    |                    |                    |
| <i>Volatile Organic Compounds</i>      |                         |                    |                    |                     |                    |                    |                    |
| 1,2,3-Trichlorobenzene                 | µg/L                    | 500 U              | 5.0 U              | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              |
| 1,2,4-Trichlorobenzene                 | µg/L                    | 500 U              | 5.0 U              | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              |
| 1,2-Dichlorobenzene                    | µg/L                    | 500 U              | 5.0 U              | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              |
| 1,4-Dichlorobenzene                    | µg/L                    | 200 J              | 5.0 U              | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              |
| 2-Chlorotoluene                        | µg/L                    | 500 U              | 5.0 U              | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              |
| Benzene                                | µg/L                    | 500 U              | 5.0 U              | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              |
| Chlorobenzene                          | µg/L                    | 8000               | 81                 | 1.0 U               | 1.0 U              | 1.0 U              | 1.0 U              |
| <i>Semi-volatile Organic Compounds</i> |                         |                    |                    |                     |                    |                    |                    |
| 1,2,4,5-Tetrachlorobenzene             | µg/L                    | 48 U               | 9.7 U              | 9.7 U               | 9.6 U              | 9.7 U              | 9.6 U              |
| 2,4,5-Trichlorophenol                  | µg/L                    | 48 U               | 9.7 U              | 9.7 U               | 9.6 U              | 9.7 U              | 9.6 U              |
| 2,4-Dichlorophenol                     | µg/L                    | 48 U               | 9.7 U              | 9.7 U               | 9.6 U              | 9.7 U              | 9.6 U              |
| 2,5-Dichlorophenol                     | µg/L                    | 48 U               | 9.7 U              | 9.7 U               | 9.6 U              | 9.7 U              | 9.6 U              |
| 2-Chlorophenol                         | µg/L                    | 39 J               | 9.7 U              | 9.7 U               | 9.6 U              | 9.7 U              | 9.6 U              |
| 4-Chlorophenol                         | µg/L                    | 48 U               | 2.8 J              | 9.7 U               | 9.6 U              | 9.7 U              | 9.6 U              |
| Phenol                                 | µg/L                    | 48 U               | 9.7 U              | 9.7 U               | 9.6 U              | 9.7 U              | 9.6 U              |
| <i>Pesticides</i>                      |                         |                    |                    |                     |                    |                    |                    |
| alpha-BHC                              | µg/L                    | 0.047 U            | 0.048 U            | 0.048 U             | 0.048 U            | 0.047 U            | 0.048 U            |
| beta-BHC                               | µg/L                    | 0.047 U            | 0.048 U            | 0.048 U             | 0.048 U            | 0.047 U            | 0.045 J            |
| delta-BHC                              | µg/L                    | 0.090              | 0.048 U            | 0.057 J             | 0.048 U            | 0.047 U            | 0.048 U            |
| gamma-BHC (lindane)                    | µg/L                    | 0.047 U            | 0.048 U            | 0.048 U             | 0.048 U            | 0.047 U            | 0.048 U            |
| <i>Metals</i>                          |                         |                    |                    |                     |                    |                    |                    |
| Arsenic                                | µg/L                    | 10 U               | 10 U               | 10 U                | 10 U               | 10 U               | 10 U               |
| Mercury                                | µg/L                    | 0.064 J            | 0.20 U             | 0.20 U              | 0.20 U             | 0.20 U             | 0.20 U             |

## Notes:

UJ - Non-detect; Estimated reporting limit.

U - Non-detect at the associated value.

J - Estimated.

TABLE 3

ANALYTICAL METHOD SUMMARY  
SEMI-ANNUAL GROUNDWATER SAMPLING  
102ND STREET LANDFILL  
NIAGARA FALLS, NEW YORK  
OCTOBER 2011

| <i>Analyses</i> | <i>Methodology</i> <sup>(1)</sup> | <i>Holding Time<br/>to Extraction<br/>(Days)</i> | <i>Holding Time<br/>to Analyses<br/>(Days)</i> |
|-----------------|-----------------------------------|--|--|
| VOCs            | SW-846 8260B                      | -  | 14   |
| SVOCs           | SW-846 8270C                      | 7  | 40   |
| Pesticides      | SW-846 8081A                      | 7  | 40   |
| Arsenic         | SW-846 6010B                      | -  | 180  |
| Mercury         | SW-846 7470A                      | -  | 28   |

## Notes:

<sup>(1)</sup> Referenced from "Test Methods for Evaluating Solid Waste", USEPA OSW, 3rd Edition, 1986.

SVOCs Semi-Volatile Organic Compounds.

VOCs Volatile Organic Compounds.

TABLE 4

**QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES  
SEMI-ANNUAL GROUNDWATER SAMPLING  
102ND STREET LANDFILL  
NIAGARA FALLS, NEW YORK  
OCTOBER 2011**

| <i>Parameter</i> | <i>Sample ID</i> | <i>Analyte</i>     | <i>MS</i>                 | <i>MSD</i>                | <i>RPD</i> | <i>Control Limits</i>     |                      | <i>Sample Result</i> | <i>Units</i> | <i>Qualifier</i> |
|------------------|------------------|--------------------|---------------------------|---------------------------|------------|---------------------------|----------------------|----------------------|--------------|------------------|
|                  |                  |                    | <i>Recovery (percent)</i> | <i>Recovery (percent)</i> |            | <i>Recovery (percent)</i> | <i>RPD (percent)</i> |                      |              |                  |
| SVOCs            | PCBM-01-1011     | 2,5-Dichlorophenol | 28                        | 29                        | 3          | 30-125                    | 0-25                 | 9.5 U                | µg/L         | UJ               |

## Notes:

- MS Matrix Spike.  
MSD Matrix Spike Duplicate.  
RPD Relative Percent Difference.  
SVOCs Semi-Volatile Organic Compounds.  
U Non-detect at the associated value.  
UJ Non-detect; Estimated reporting limit.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO DIFFERENCES IN DUAL COLUMN RESULTS  
SEMI-ANNUAL GROUNDWATER SAMPLING  
102ND STREET LANDFILL  
NIAGARA FALLS, NEW YORK  
OCTOBER 2011

| <i>Parameter</i> | <i>Compound</i> | <i>Associated<br/>Sample ID</i> | <i>%D</i> | <i>Qualified<br/>Sample<br/>Results</i> | <i>Units</i> |
|------------------|-----------------|---------------------------------|-----------|---|--------------|
| Pesticides       | delta-BHC       | PCM-07R-1011                    | >40%      | 0.057 J                                 | µg/L         |

## Notes:

%D    Percent difference.  
J       Estimated concentration.

ATTACHMENT A  
CHAIN OF CUSTODY DOCUMENTS

180-5137 15.1.6.2 #5

# EVENT COMPLETE

## CHAIN-OF-CUSTODY/Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| Client Information           |                                   |
|------------------------------|-----------------------------------|
| GSH                          | Report To: PMcMahon@craworld.com  |
| 805 97th Street              | Copy To:                          |
| Love Canal                   |                                   |
| Niagara Falls, NY 14304      | Invoice To: PMcMahon@craworld.com |
| Phone: 716-283-0111          | PO:                               |
| Fax:                         | Project Name: 102nd Street        |
| Email: PMcMahon@craworld.com | Project Number: 53716-05-03       |

| Lab Information   |         |
|---|---------|
| Laboratory: TEST AMERICA PITTSBURGH                       |         |
| Laboratory Location: 301 ALPHA DRIVE PITTSBURGH, PA 15238 |         |
| Laboratory Contact: DAVID DUNLAP                          |         |
| Requested Due Date:                                       | TAT: 10 |
| QA/QC Requirements:                                       |         |

| Event Information                  |  |
|------------------------------------|--|
| ID#: 102ND-SEMI-101911-1           |  |
| SSOW Ref#:                         |  |
| Sampler Name: <i>Shawn Gardner</i> |  |

| Sample Identification | Valid Matrix Code<br>WG Groundwater<br>WB Borehole Water<br>WS Surface Water<br>SO Soil<br>SE Sediment | Matrix Code | Date Collected | Time Collected | As/Mn/C(HNO3) | BHC(none) | SYOCs(none) | VOCs(HCl) | Remarks               | Sample Condition |     |
|-----------------------|--|-------------|----------------|----------------|---------------|-----------|-------------|-----------|-----------------------|------------------|-----|
|                       |  |             |                |                |               |           |             |           |                       | Temp in C        |     |
| 102NDTRIP-101911      |  | WG          | 10/19/2011     | 00:00          | 0             | 0         | 0           | 2         |                       |                  |     |
| PCBM-01-1011          |  | WG          | 10/19/2011     | 15:10          | 3             | 6         | 6           | 9         | MS/MSD                | Received on ice  | Y/N |
| PCBM-03-1011          |  | WG          | 10/19/2011     | 10:00          | 1             | 2         | 2           | 3         |                       | Sealed Cooler    | Y/N |
| PCM-01-1011           |  | WG          | 10/19/2011     | 11:15          | 1             | 2         | 2           | 3         |                       | Samples Intact   | Y/N |
| PCM-02-1011           |  | WG          | 10/19/2011     | 13:15          | 1             | 2         | 2           | 3         |                       |                  |     |
| PCM-03-1011           |  | WG          | 10/19/2011     | 15:45          | 1             | 2         | 2           | 3         |                       |                  |     |
| PCM-04-1011           |  | WG          | 10/19/2011     | 17:20          | 1             | 2         | 2           | 3         |                       |                  |     |
| PCM-08-1011           |  | WG          | 10/19/2011     | 09:10          | 1             | 2         | 2           | 3         |                       |                  |     |
| PCM-12-1011           |  | WG          | 10/19/2011     | 10:30          | 1             | 2         | 2           | 3         |                       |                  |     |
| <b>Total Bottles</b>  |  |             |                |                | 10            | 20        | 20          | 32        | <b>Grand Total:32</b> |                  |     |

| SHIPMENT METHOD | NO. OF COOLERS | RELINQUISHED BY:     | DATE     | TIME | RECIEVED BY:          | DATE     | TIME |
|-----------------|----------------|----------------------|----------|------|-----------------------|----------|------|
| FedEx           | 4              | <i>Shawn Gardner</i> | 10/20/11 | 0935 | <i>John O'Connell</i> | 10/20/11 | 1500 |
| AIRBILL#:       |                |                      |          |      |                       |          |      |



180-5058

, 3 . 8 #15

**CHAIN-OF-CUSTODY/Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| Client Information           |                                     |
|------------------------------|-------------------------------------|
| GSH                          | Report To:<br>PMcmahon@craworld.com |
| 805 97th Street              | Copy To:                            |
| Love Canal                   |                                     |
| Niagara Falls, NY 14304      | Invoice To: PMcmahon@craworld.com   |
| Phone: 716-283-0111          | PO:                                 |
| Fax:                         | Project Name: 102nd Street          |
| Email: PMcmahon@craworld.com | Project Number: 53716-05-03         |

| Lab Information  |         |
|--|---------|
| Laboratory: TEST AMERICA PITTSBURGH                          |         |
| Laboratory Location: 301 ALPHA DRIVE<br>PITTSBURGH, PA 15238 |         |
| Laboratory Contact: DAVID DUNLAP                             |         |
| Requested Due Date:  | TAT: 10 |
| QA/QC Requirements:  |         |

| Event Information                     |  |
|---------------------------------------|--|
| ID#: 102ND-SEMI-101811-1              |  |
| SSOW Ref#:                            |  |
| Sampler Name: <i>Shawn P. Hatcher</i> |  |

| Valid Matrix Code   | Matrix Code | Date Collected | Time Collected | As/MeC(HNO3) | BHC(none) | SVOCs(none) | VOCs(HCl) | Remarks |
|---|-------------|----------------|----------------|--------------|-----------|-------------|-----------|---------|
| WG Groundwater<br>WB Borehole Water<br>WS Surface Water<br>SO Soil<br>SE Sediment |             |                |                |              |           |             |           |         |

| Sample Condition |     |
|------------------|-----|
| Temp in C        |     |
| Received on ice  | Y/N |
| Sealed Cooler    | Y/N |
| Samples Intact   | Y/N |

| Sample Identification | Matrix Code | Date Collected | Time Collected | As/MeC(HNO3) | BHC(none) | SVOCs(none) | VOCs(HCl) | Remarks               |
|-----------------------|-------------|----------------|----------------|--------------|-----------|-------------|-----------|-----------------------|
| 102NDTRIP-101811      | WG          | 10/18/2011     | 00:00          | 0            | 0         | 0           | 2         |                       |
| PCBM-02-1011          | WG          | 10/18/2011     | 10:40          | 1            | 2         | 2           | 3         |                       |
| PCM-05-1011           | WG          | 10/18/2011     | 11:55          | 1            | 2         | 2           | 3         |                       |
| PCM-07R-1011          | WG          | 10/18/2011     | 09:45          | 1            | 1         | 1           | 3         |                       |
| PCM-09-1011           | WG          | 10/18/2011     | 12:50          | 1            | 1         | 1           | 3         |                       |
| PCM-10-1011           | WG          | 10/18/2011     | 14:15          | 1            | 2         | 2           | 3         |                       |
| <b>Total Bottles</b>  |             |                |                | <b>5</b>     | <b>8</b>  | <b>8</b>    | <b>17</b> | <b>Grand Total:38</b> |

| SHIPMENT METHOD | NO. OF COOLERS | RELINQUISHED BY:        | DATE     | TIME | RECIEVED BY:        | DATE     | TIME |
|-----------------|----------------|-------------------------|----------|------|---------------------|----------|------|
| FedEx           |                | <i>Shawn P. Hatcher</i> | 10/18/11 | 1635 | <i>B. A. Dunlap</i> | 10/19/11 | 1000 |
| AIRBILL#:       |                |                         |          |      |                     |          |      |

ATTACHMENT B

GRAPHICAL PRESENTATION  
CHEMICAL CONCENTRATION VERSUS TIME

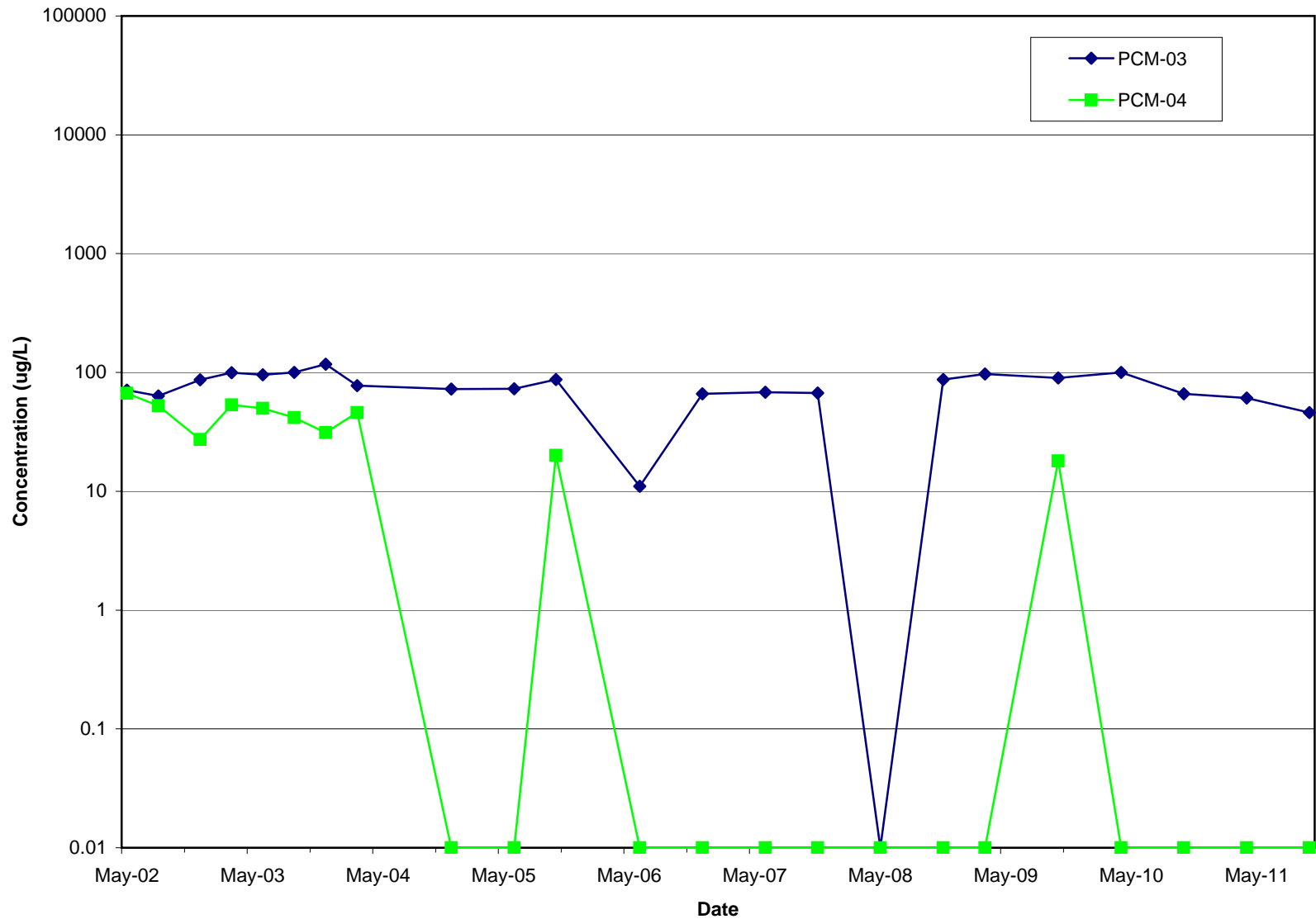


figure 1  
 CONCENTRATION OF 1,2-DICHLOROBENZENE vs. TIME  
 102ND STREET LANDFILL



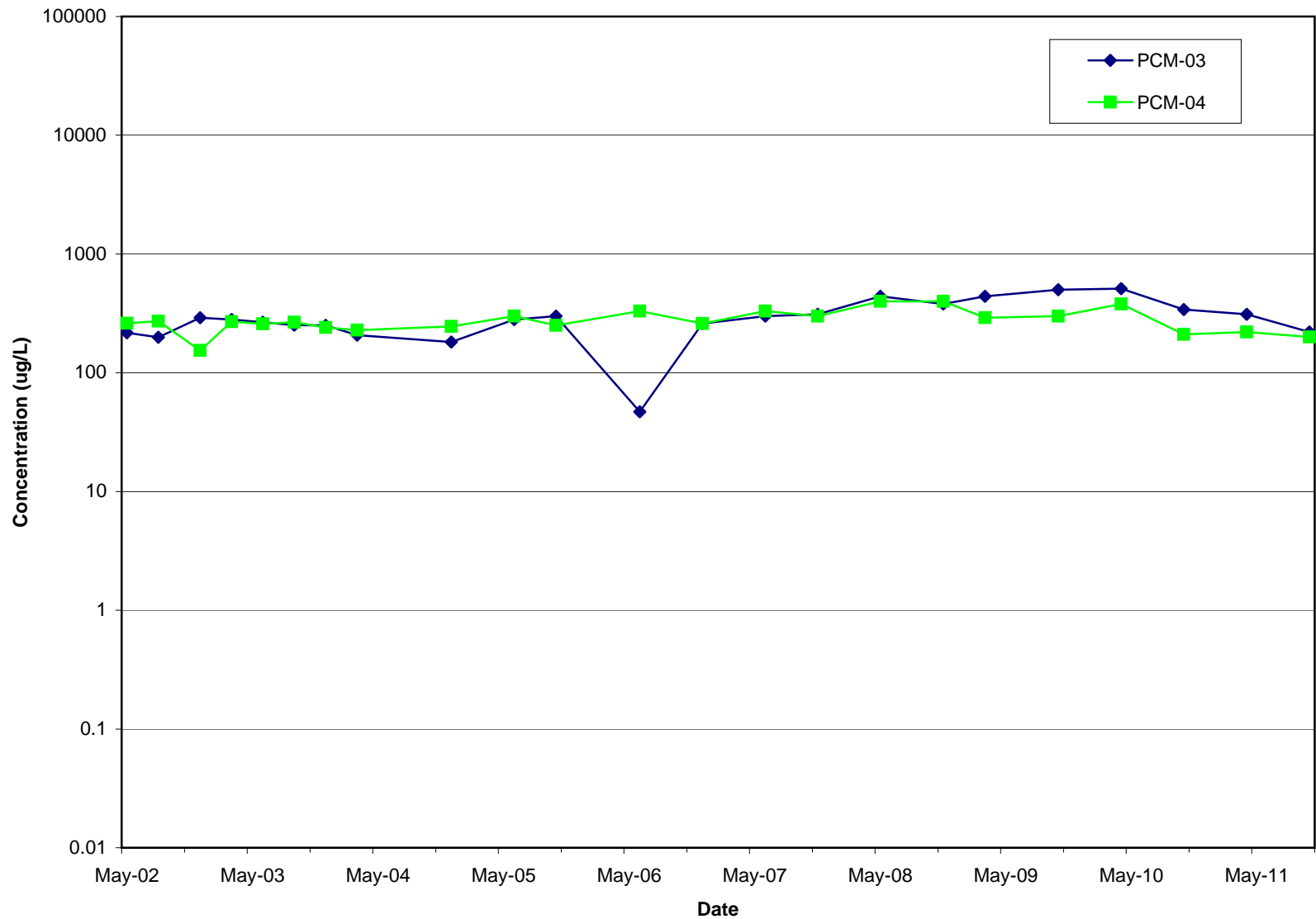


figure 2  
 CONCENTRATION OF 1,4-DICHLOROBENZENE vs. TIME  
 102ND STREET LANDFILL



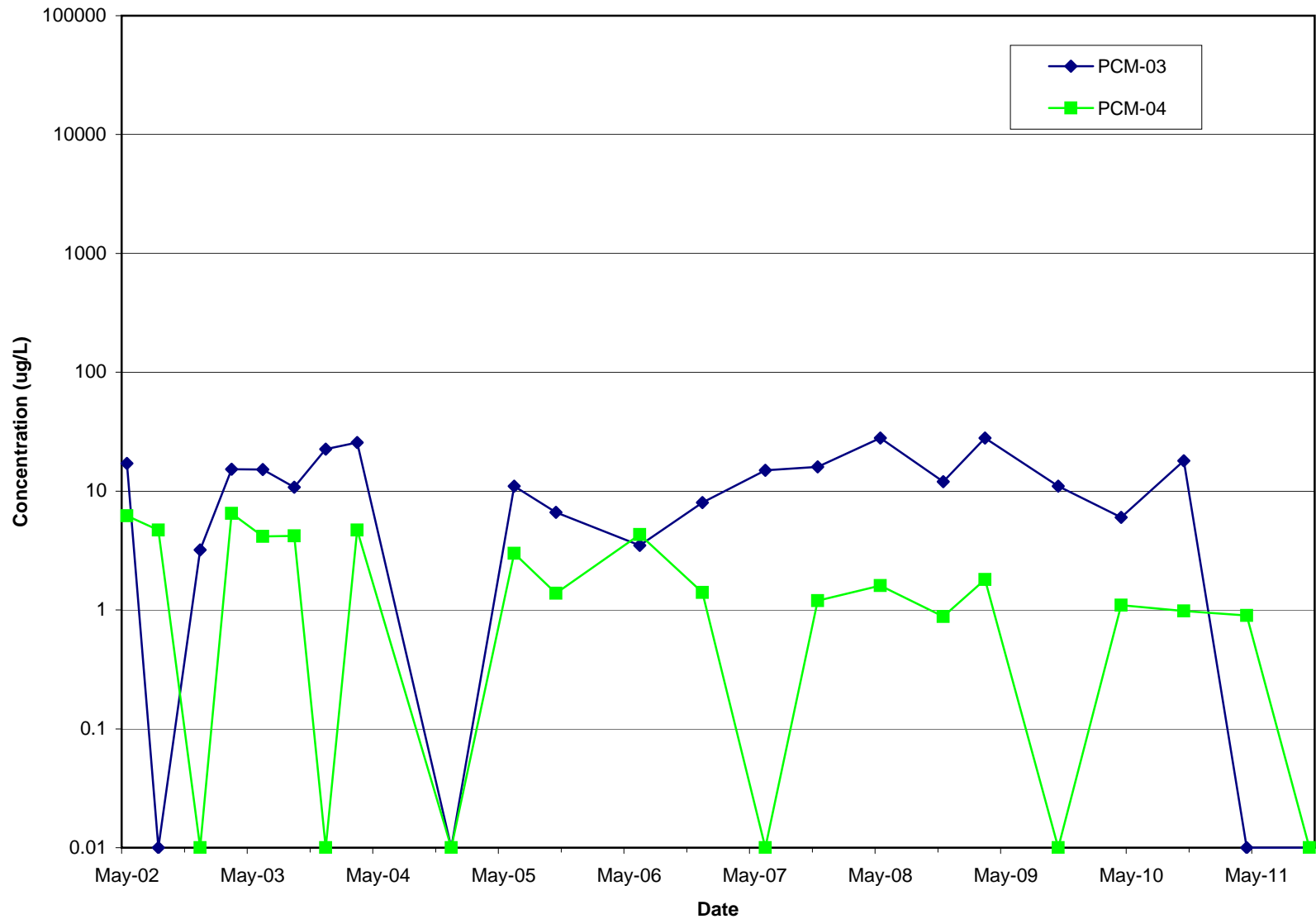


figure 3  
 CONCENTRATION OF 2,4-DICHLOROPHENOL vs. TIME  
 102ND STREET LANDFILL



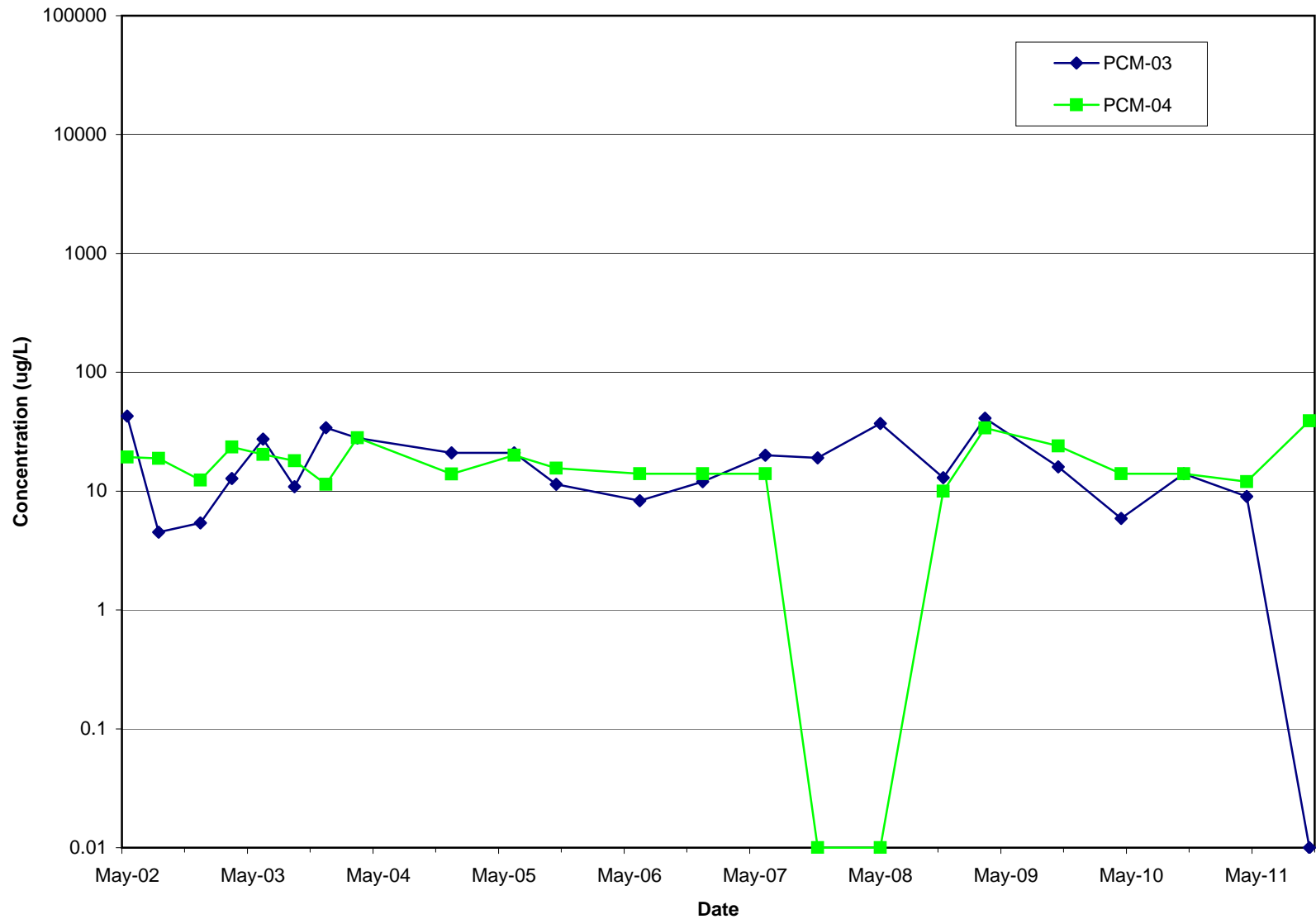


figure 4  
 CONCENTRATION OF 2-CHLOROPHENOL vs. TIME  
 102ND STREET LANDFILL



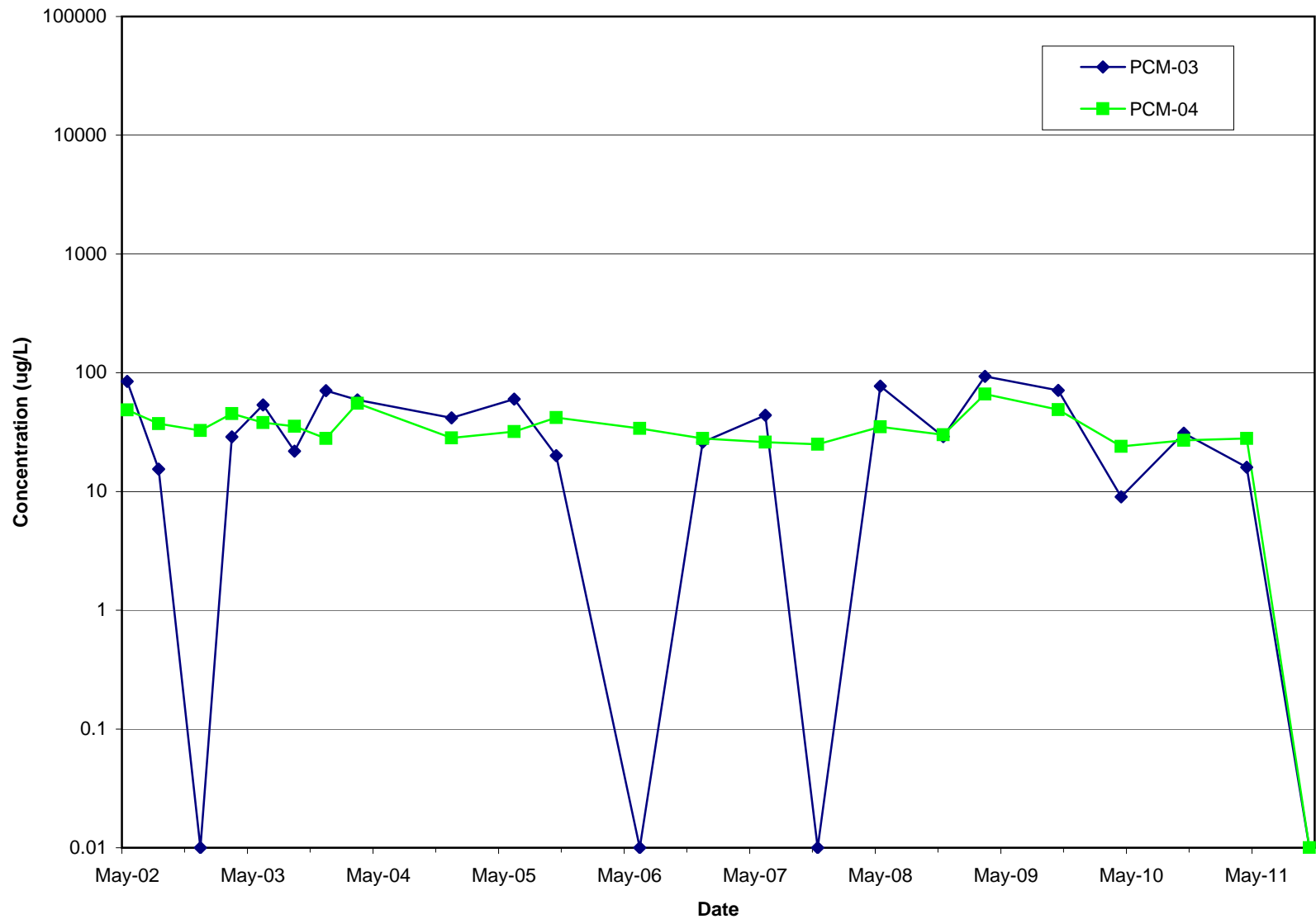


figure 5  
 CONCENTRATION OF 4-CHLOROPHENOL vs. TIME  
 102ND STREET LANDFILL



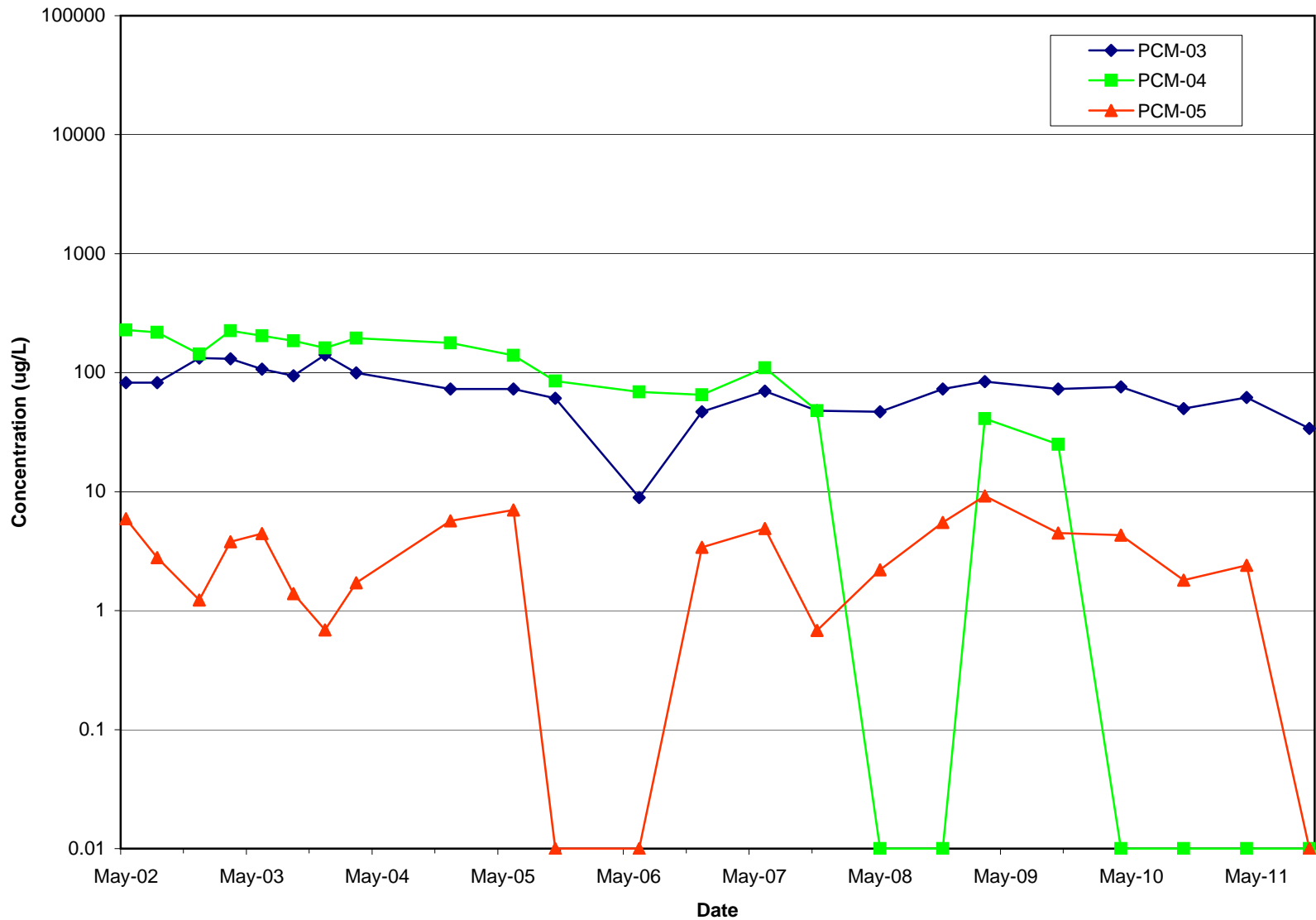


figure 6  
 CONCENTRATION OF BENZENE vs. TIME  
 102ND STREET LANDFILL





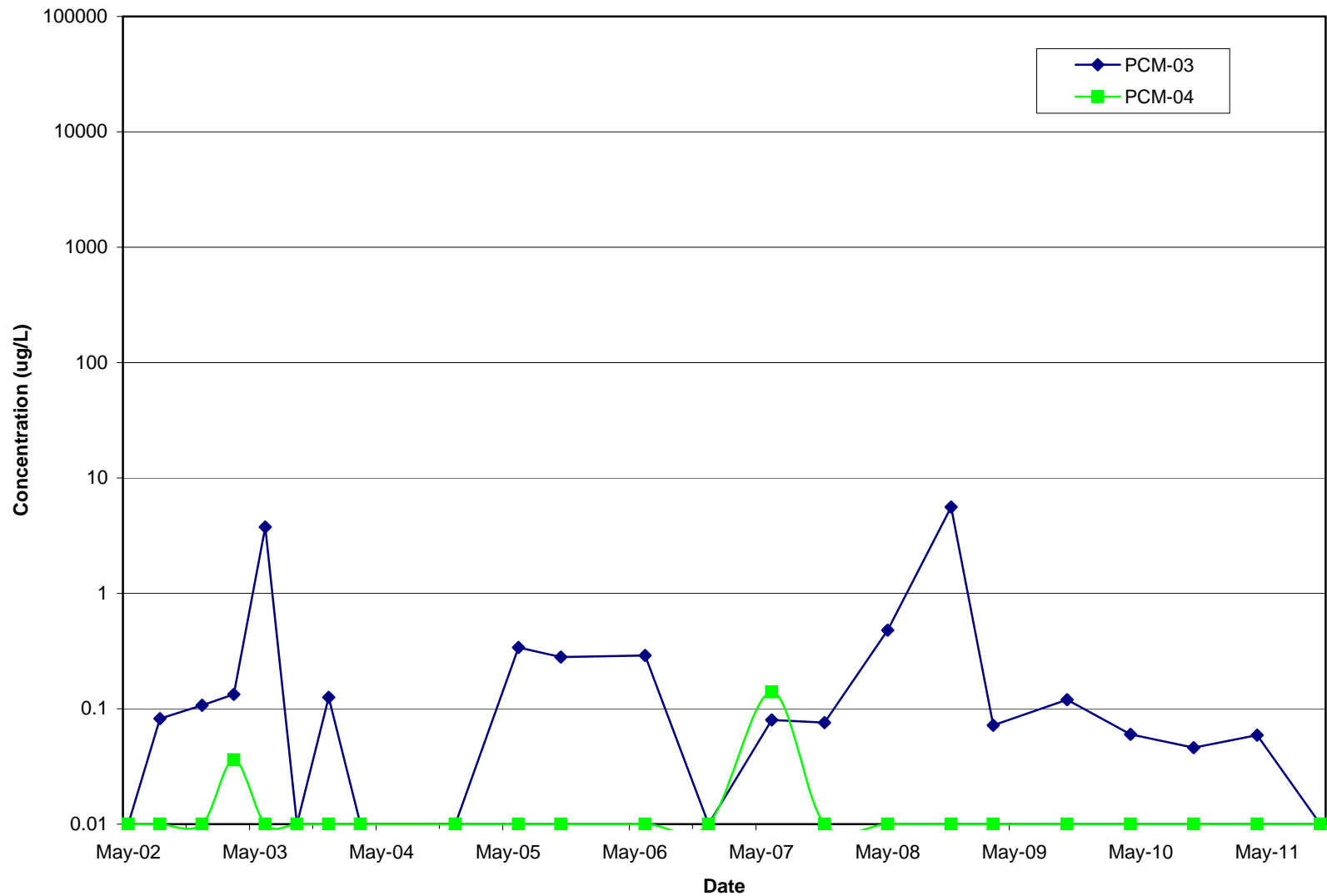


figure 7  
 CONCENTRATION OF BETA-BHC vs. TIME  
 102ND STREET LANDFILL



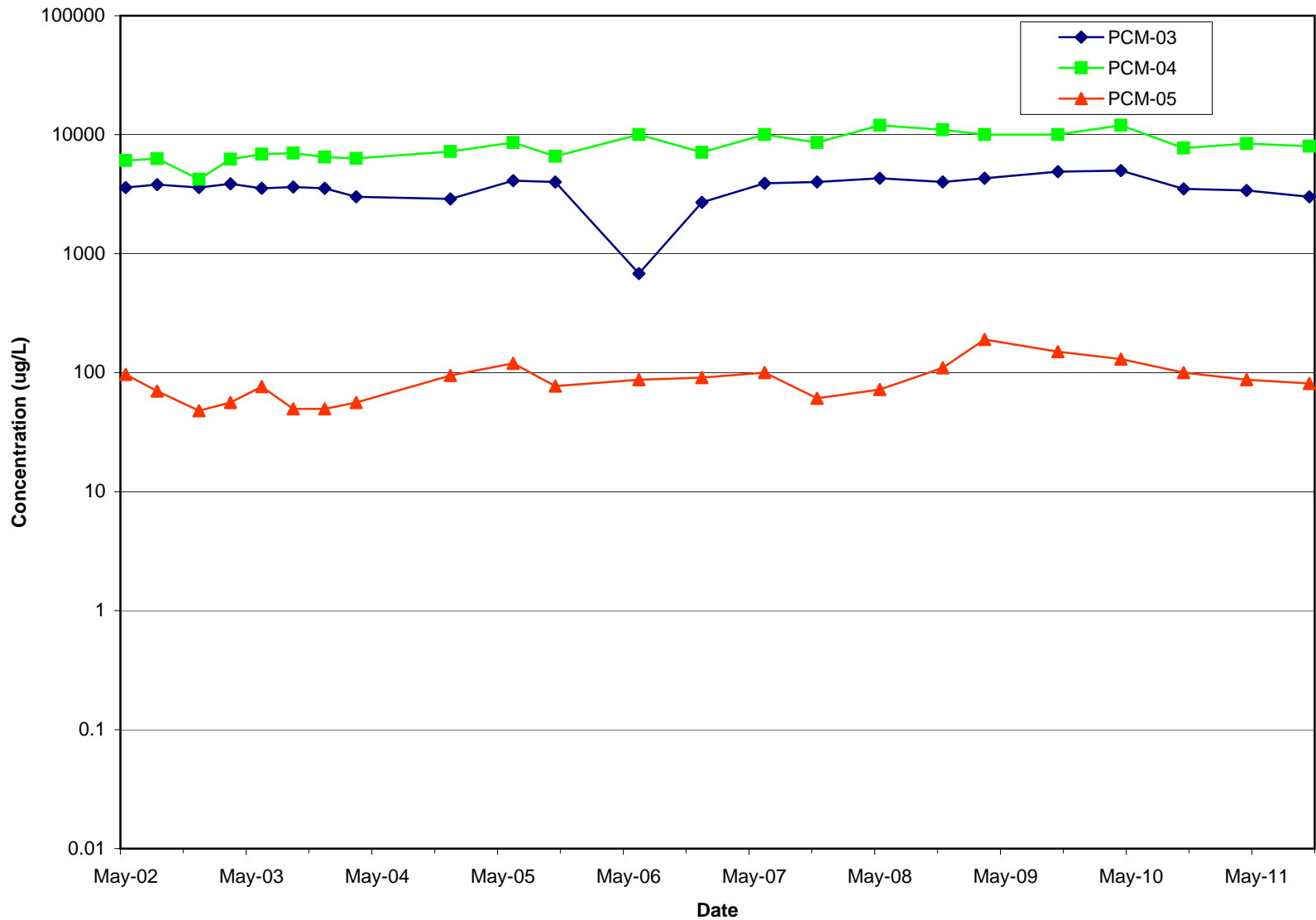


figure 8  
 CONCENTRATION OF CHLOROBENZENE vs. TIME  
 102ND STREET LANDFILL



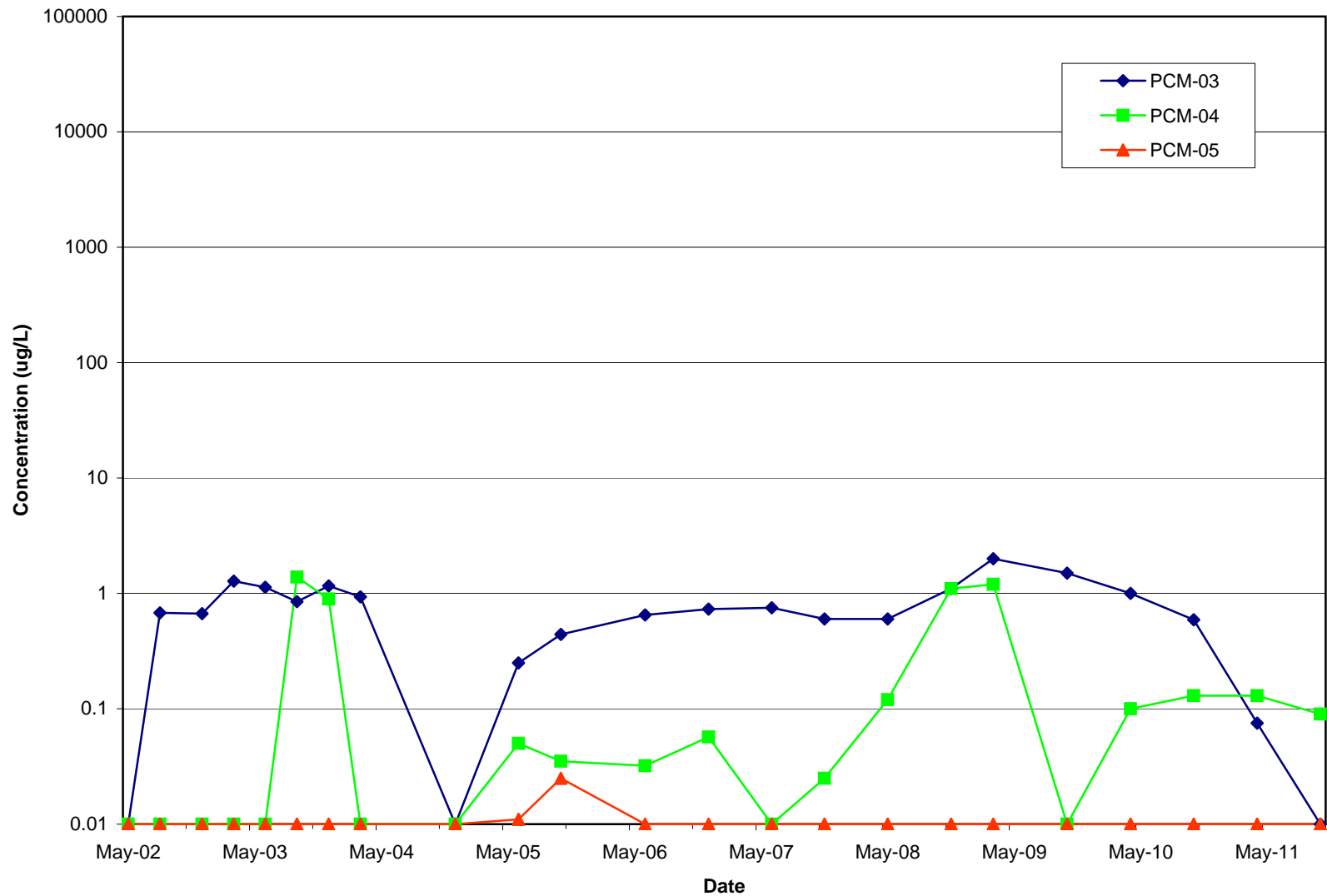


figure 9  
 CONCENTRATION OF DELTA-BHC vs. TIME  
 102ND STREET LANDFILL



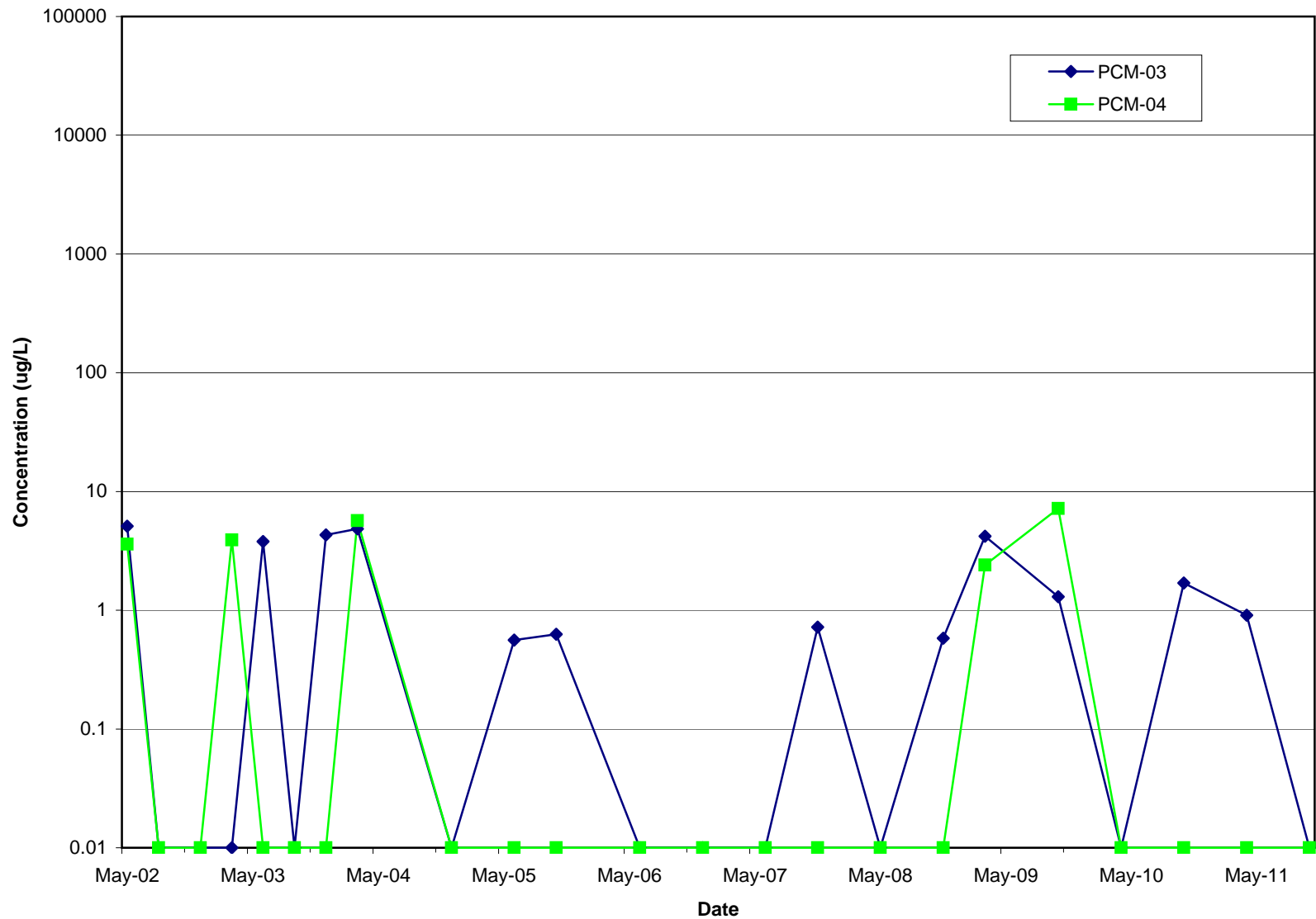


figure 10  
 CONCENTRATION OF PHENOL vs. TIME  
 102ND STREET LANDFILL

