

2008 POST-CLOSURE ANNUAL REPORT
Coakley Landfill
Operable Unit-1 and Operable Unit-2
North Hampton, New Hampshire

2008 POST-CLOSURE ANNUAL MONITORING REPORT

**COAKLEY LANDFILL
OPERABLE UNIT-1 and OPERABLE UNIT-2
NORTH HAMPTON, NEW HAMPSHIRE
NHDES SITE #198712001
EPA ID #NHD064424153**

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November 18, 2008

Project No. M8114

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DRAFT

1.0 INTRODUCTION

At the request of the Coakley Landfill Group, Provan & Lorber, Inc. has performed post-closure monitoring for the former Coakley Landfill site (the “Site”), located in North Hampton and Greenland, New Hampshire. The Site includes approximately 92-acres located within the towns of North Hampton and Greenland, New Hampshire. The actual landfill covers approximately 27 acres. The Site is located between about 400 to 800 feet west of Lafayette Road (U.S. Rt. 1), south of Breakfast Hill Rd, and about 2.5 miles northeast of the center of the Town of North Hampton, New Hampshire. The Greenland-Rye town line forms a major portion of the eastern boundary of the Site. The landfill borders farmland, undeveloped woodlands and wetlands to the north and west. Commercial and residential properties border the Site to the east and south. Background information has been summarized in numerous previous reports, including the Project Operations Plan (POP), prepared in September 2007 by Golder Associates. A Site Location Map is included as **Figure 1**.

Groundwater monitoring was performed in accordance with the Groundwater Management Permit (GMP) issued June 19, 2008 and in accordance with the Project Operations Plan (POP) and Environmental Monitoring Plan (EMP) dated September 2007, with the exceptions noted in section 2.1, below. The two sampling schedules are the same, with additional procedures outlined in the EMP and POP.

2.0 MONITORING AND SAMPLING PROCEDURES

2.1 Groundwater Sampling Procedures

Water levels were measured in selected monitoring wells using an electronic water-level indicator prior to sampling. The calculated groundwater elevations are summarized on **Table 1**.

Monitoring wells were purged and sampled following low flow sampling techniques using dedicated Teflon-lined polyethylene tubing and a peristaltic pump. Prior to sampling, wells were purged, at a rate of approximately 1 cup per minute for between 15 and 45 minutes, until stabilization of the following monitoring parameters: temperature, pH, specific conductance, oxidation reduction potential (ORP), dissolved oxygen, and turbidity. Final stabilization readings are included on **Tables 2 and 3**. Samples were also collected from domestic wells R-3 and R-5, located at 399 and 364 Breakfast Hill Road, respectively. The water was allowed to run for 10 to 15 minutes prior to sampling. Measurements were collected for the above-described stabilization parameters.

Upon collection, each water sample was placed in pre-cleaned laboratory glassware and plastic containers, preserved as appropriate for target compounds. Samples for analysis of dissolved metals were field filtered prior to preservation. Samples were packaged on ice in a shipping cooler and delivered to Eastern Analytical Inc. for laboratory analysis.

Samples were collected following the schedule outlined in the GMP and EMP, with the following exceptions. Well RMW-3, was found to be obstructed at 20 feet and could not be sampled. The depth to water in well MW-4 was too great to allow sampling using the peristaltic pump. Therefore, MW-4 was purged and sampled using a dedicated disposable bailer. Well GZ-109 could not be located and is believed to have been destroyed. A copy of the GMP is included in **Section 1**. Sample locations are illustrated on **Figure 2 – Site Plan**.

2.2 Surface Water and Sediment Sampling Procedures

Surface water and sediment samples were collected following the sampling schedule outlined in the GMP. A copy of the GMP is included **Section 1**.

Surface water and leachate samples were collected using a peristaltic pump. Sample tubing was decontaminated prior to collection of each sample. Measurements were collected for temperature, pH, specific conductance, ORP, dissolved oxygen, and turbidity. Samples were packaged on ice in a shipping cooler and delivered to Eastern Analytical Inc. for laboratory analysis.

Sediment samples were collected using a shovel. The shovel was decontaminated prior to collection of each sample. Plant material and rocks were removed from the soil and the sample was thoroughly mixed. Each sample was preserved, packaged on ice in a shipping cooler and delivered to Eastern Analytical Inc. for laboratory analysis.

Sediment and surface water sample locations are indicated on **Figure 2**.

2.3 Quality Control Samples

Duplicate samples were collected from MW-5S and GZ-123 and analyzed for volatile organic compounds (VOCs), total 23 TAL metals, and for dissolved iron and manganese.

Matrix spike (MS) and matrix spike duplicate (MSD) samples were also collected from MW-5S and GZ-123 for use in QA/QC for VOCs, total TAL metals, and for dissolved iron and manganese.

A duplicate sample was collected from the leachate (L-1) location and analyzed for COD, and ammonia. MS and MSD samples were also collected from L-1 for use in QA/QC for COD and ammonia.

Two field equipment blanks were collected from the non-dedicated tubing used for groundwater and surface water sample collection. Following collection of samples and decontamination procedures, deionized water was run through the tubing and preserved. Both samples were analyzed for VOCs, total 23 TAL metals, and for dissolved iron and manganese. One sample was also analyzed for ammonia and COD.

Duplicate and MS/MSD samples were collected for sediment sample SED-5 for metals.

Following collection of sediment samples and decontamination procedures, deionized water was used to collect an equipment blank sample from the shovel used to collect the sediment samples.

Each set of samples sent to the laboratory was accompanied by a trip blank that was analyzed for VOCs.

An EPA Region I, Tier I data validation was performed for the analytical laboratory data by *Environmental Data Validation, Inc.*

3.0 FINDINGS

3.1 Groundwater Results

The general groundwater flow direction was determined to be westerly to northwesterly in both the overburden and bedrock wells. Groundwater contours constructed from the August 2008 water table data for overburden wells and bedrock wells are illustrated in **Figures 3 and 4**, respectively.

Concentrations of arsenic exceeded the interim cleanup level (ICL) in Operable Unit 1 (OU-1) in the following wells: MW-4, MW-5S, MW-9, MW-11, OP-2, OP-5, and BP-4.

Concentrations of chromium, lead, and nickel exceeded the ICLs in OU-1 well MW-4.

Concentrations of manganese exceeded the ICL in OU-1 in the following wells: MW-4, MW-5S, MW-5D, MW-6, MW-8, MW-9, MW-10, MW-11, OP-2, OP-5, and BP-4.

The concentration of tetrahydrofuran exceeded the ICL in OU-1 well MW-8.

The concentration of benzene exceeded the ICL in OU-1 well MW-11.

Concentrations of arsenic exceeded the ICL in Operable Unit 2 (OU-2) in the following wells: FPC-5A, FPC-6B, FPC-9A, GZ-105, AE-1A, AE-2A, AE-2B, AE-3A, AE-3B, and AE-4A.

The concentration of beryllium exceeded the ICL in OU-2 well AE-3A.

Concentrations of manganese exceeded the ICL in OU-2 in the following wells: FPC-2A, FPC-6A, FPC-6B, FPC-7B, FPC-9A, FPC 11B, GZ-105, GZ-123, AE-1B, AE-2A, AE-2B, AE-3A, AE-3B, AE-4A, and AE-4B.

Concentrations of benzene exceeded the ICL in OU-2 wells GZ-105 and AE-2B.

Concentrations of dissolved manganese in FPC-7B and AE-4B were below the ICL, while total manganese exceeded the ICL. For the remaining well sampled for dissolved

iron and manganese, concentration of dissolved metals exceeded ICLs where concentrations of total metals exceeded ICLs.

Groundwater analytical results for OU-1 and OU-2 wells are summarized on **Tables 2 and 3**, respectively. Target compounds were not detected in the samples collected from the residential wells. Residential well results are summarized on **Table 4**. The laboratory reports are included in **Section 2**.

The lateral distributions of arsenic and manganese in overburden and bedrock wells are illustrated on **Figures 5 through 8**. Charts illustrating contaminant concentrations over time for arsenic, manganese, and benzene in selected wells are included in **Section 3**.

3.2 Surface Water Results

The concentration of aluminum exceeded the DES chronic and acute surface water standards at surface water location SW-4. The concentration of aluminum in sample L-1 exceeded the chronic surface water standard, but was below the acute surface water standard.

Concentrations of copper exceeded the DES chronic and acute surface water standards at surface water locations SW-4 and L-1.

Concentrations of iron exceeded the DES chronic surface water standard at surface water locations SW-4, SW-5/SW-3T, SW-103, and L-1.

Concentrations of zinc exceeded the DES acute and chronic surface water standards at surface water locations SW-4 and L-1.

Surface water analytical results are summarized on **Table 5**. Historic results for SW-5 are summarized on **Table 6**. Leachate results are summarized on **Table 7**. The laboratory reports are included in **Section 2**.

3.3 Sediment Sample Results

The concentration of arsenic exceeded the NHDES S-1 soil standard at sediment location SED-5/3T. A summary of sediment sample analytical results is included on **Table 8**. The laboratory reports are included in **Section 2**.

3.4 Quality Control Sample Results

Variations in duplicate, matrix spike, and matrix spike duplicate samples met accepted criteria.

VOCs were not detected in the tubing field blanks, the shovel equipment blank, or the trip blank samples. Ammonia and COD were not detected in the tubing field blank sample.

Arsenic, barium, calcium, magnesium, potassium, and sodium were detected in both of the tubing field blanks and the shovel equipment blank samples at similar concentrations. These compounds were also detected in the 2007 blank samples at similar concentrations.

Low concentrations of aluminum, iron, and manganese were detected in the shovel equipment blank sample. These compounds were detected at considerably higher concentrations in each of the sediment samples.

3.5 Data Validation Review

No problems or errors were identified during the Tier I data validation. The data validation reports are included in **Section 4**.

4.0 SUMMARY AND CONCLUSIONS

Based on data collected at the Site during 2008, Provan & Lorber concludes the following:

- Water samples were collected from 36 monitoring wells, 3 surface water locations, 1 leachate location, and 2 domestic wells. Two sediment soil samples were also collected.
- Groundwater flows in both overburden and bedrock wells were calculated to be westerly to northwesterly during the August 2008 monitoring event, consistent with previous monitoring events.
- An upward hydraulic gradient was observed at well pairs MW-5S/5D, FPC-2A/B, FPC-5A/B, AE-2A/B, AE-3A/B, AE-4A/B, and GZ-123/GZ-125. Downward hydraulic gradients were observed in the remaining six well pairs at the Site.
- Interim cleanup levels (ICLs) were exceeded in samples collected from all eleven (11) monitoring wells in Operational Unit #1. ICLs were exceeded in samples collected from sixteen (16) of twenty five (25) monitoring wells in Operational Unit #2. The most common exceedences were for arsenic and manganese. Exceedences were also noted for chromium, lead, nickel, beryllium, benzene, and tetrahydrofuran.
- Concentrations of target compounds were generally consistent with historical results. Concentrations have remained generally stable to decreasing at the Site with slight increasing trends in some wells and decreasing trends in others.
- NHDES surface water standards were exceeded in all three surface water samples and the leachate sample collected in 2008. Exceedences were noted for aluminum, copper, iron, lead, and zinc.
- NHDES S-1 soil standards were exceeded for arsenic in sediment samples collected from one (1) of the two (2) sample locations.
- Variations in duplicate, matrix spike, and matrix spike duplicate samples met accepted criteria.

- VOCs were not detected in the tubing field blanks, the shovel equipment blank, or the trip blank samples. Ammonia and COD were not detected in the tubing field blank sample.
- Arsenic, barium, calcium, magnesium, potassium, and sodium were detected in both of the tubing field blanks and the shovel equipment blank samples at similar concentrations. These compounds were also detected in the 2007 blank samples at similar concentrations. These compounds appear to be in the DI water supplied for preparing the equipment blank samples.
- Low concentrations of aluminum, iron, and manganese were detected in the shovel equipment blank sample. These compounds were detected at considerably higher concentrations in each of the sediment samples.
- Based on this data, cross contamination does not appear to be an issue for the Site. The presence of compounds in the blank samples does not appear to impact the conclusions for the Site.
- The data validation review indicated no problems or errors.
- No other significant quality control discrepancies were noted.

5.0 RECOMMENDATIONS

Based on data collected at the Site, Provan & Lorber recommends the following:

- In accordance with the current monitoring plan, the next monitoring event should be scheduled for August 2009.

If you have any questions, please do not hesitate to call us at (603) 746-3220.

Sincerely,

Ian R. Grady
Environmental Technician
 Provan & Lorber, Inc.

Kevin McKibben, P.G.
Environmental Department Manager
 Provan & Lorber, Inc.

FIGURES

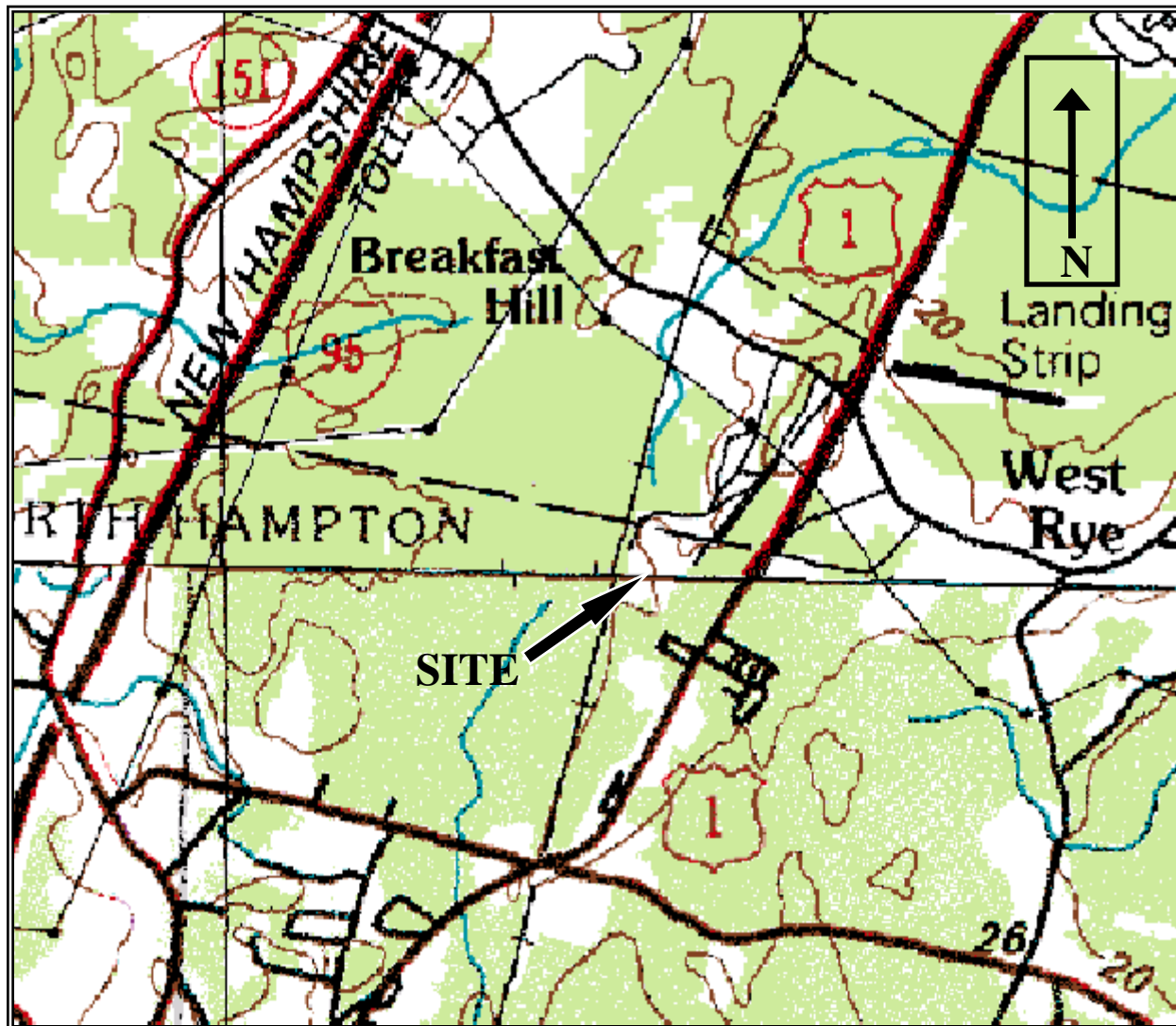
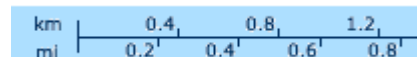


Image courtesy of the U.S. Geological Survey



Map Based on USGS
Dover, NH (1985)
and
Exeter, NH (1977)
Quadrangle Maps, 15' Series

Figure 1 LOCATION MAP

Coakley Landfill

North Hampton, NH

Provan & Lorber, Inc.
Project M8114 November 2008

LEGEND

- △ L-1 LEACHATE SAMPLING LOCATION
- WELL ID OVERBURDEN MONITORING WELL
- WELL ID BEDROCK MONITORING WELL
- △ SW-5 SURFACE WATER SAMPLING LOCATION
- SED-5 SEDIMENT SAMPLING LOCATION
- GROUNDWATER MANAGEMENT ZONE

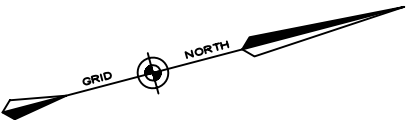
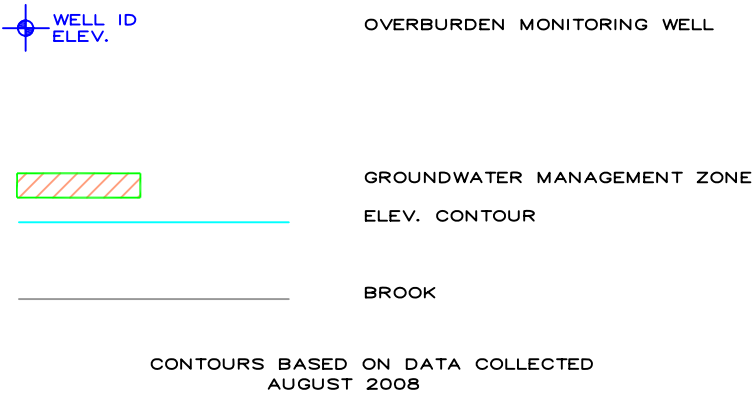
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LEGEND



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2. ADDITIONAL MONITORING WELL LOCATIONS BASED ON PLAN BY GOLDER ASSOCIATES TITLED "ENVIRONMENTAL MONITORING NETWORK" DATED 08/16/07.
3. SURFACE WATER AND SEDIMENT SAMPLE LOCATIONS BASED ON A SEPTEMBER 2007 PLAN FROM THE CITY OF PORTSMOUTH TITLED "SEDIMENT TOXICITY SAMPLE LOCATIONS".

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COAKLEY LANDFILL
NORTH HAMPTON, NH

OVERBURDEN GROUNDWATER
ELEVATION CONTOUR MAP
AUGUST 2008

DATE SEPTEMBER 2008	
ENG. BY IG	DRWN. BY DRWN
CHKD. BY KMM	PROJ. NO. M8114

FIGURE 3

LEGEND



WELL ID
ELEV.

BEDROCK MONITORING WELL



GROUNDWATER MANAGEMENT ZONE

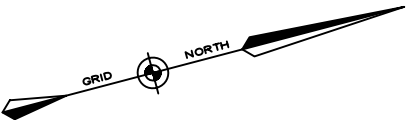


ELEV. CONTOUR



BROOK

CONTOURS BASED ON DATA COLLECTED
AUGUST 2008



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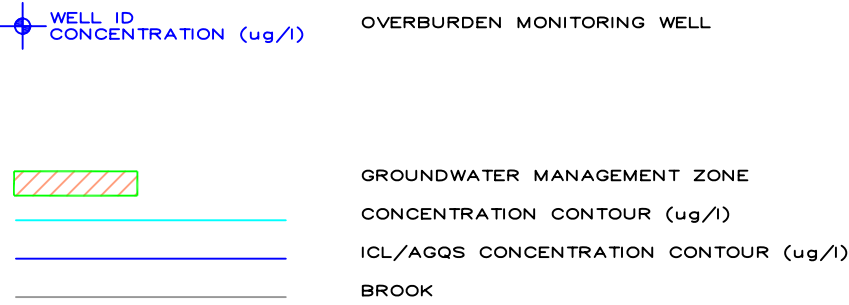
COAKLEY LANDFILL
NORTH HAMPTON, NH

BEDROCK GROUNDWATER
ELEVATION CONTOUR MAP
AUGUST 2008

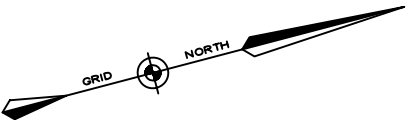
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CHKD. BY KMM	PROJ. NO. M8114

FIGURE 4

LEGEND



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COAKLEY LANDFILL
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ARSENIC CONCENTRATIONS
OVERBURDEN WELLS
AUGUST 2008


DATE SEPTEMBER 2008	
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CHKD. BY KMM	PROJ. NO. M8114


FIGURE 5


LEGEND


- 

WELL ID
CONCENTRATION (ug/l)
- 

OVERBURDEN MONITORING WELL
- 

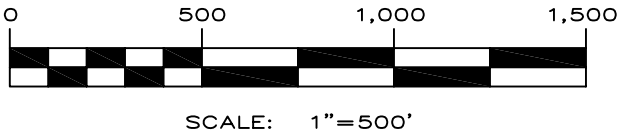
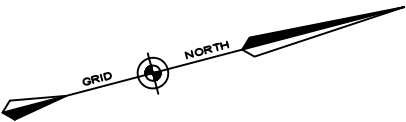
GROUNDWATER MANAGEMENT ZONE
- 

CONCENTRATION CONTOUR (ug/l)
- 

ICL/AGQS CONCENTRATION CONTOUR (ug/l)
- 

BROOK

CONTOURS BASED ON DATA COLLECTED
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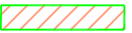



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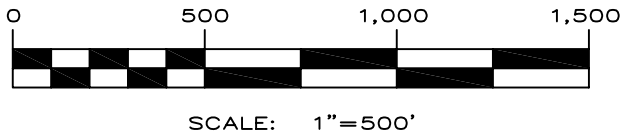
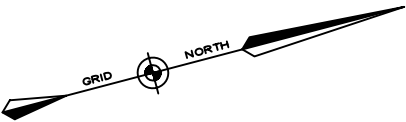
MANGANESE CONCENTRATIONS
OVERBURDEN WELLS
AUGUST 2008

DATE SEPTEMBER 2008	
ENG. BY IG	DRWN. BY DRWN
CHKD. BY KMM	PROJ. NO. M8114
FIGURE 6	

LEGEND

-  WELL ID
CONCENTRATION (ug/l)
-  BEDROCK MONITORING WELL
-  GROUNDWATER MANAGEMENT ZONE
-  CONCENTRATION CONTOUR (ug/l)
-  ICL/AGQS CONCENTRATION CONTOUR (ug/l)
-  BROOK

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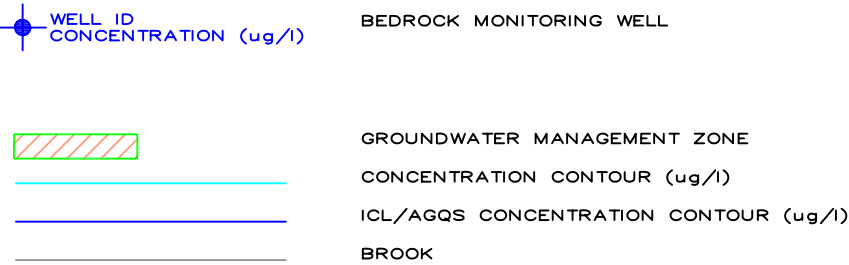
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ARSENIC CONCENTRATIONS
BEDROCK WELLS
AUGUST 2008

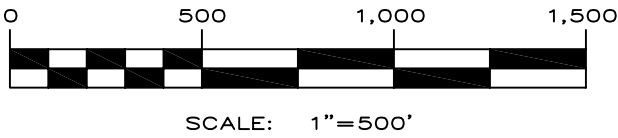
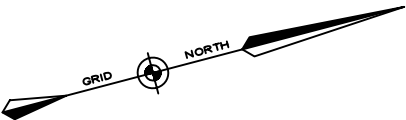
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FIGURE 7

LEGEND



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COAKLEY LANDFILL
NORTH HAMPTON, NH

MANGANESE CONCENTRATIONS
BEDROCK WELLS
AUGUST 2008

DATE SEPTEMBER 2008	
ENG. BY IG	DRWN. BY DRWN
CHKD. BY KMM	PROJ. NO. M8114

FIGURE 8

TABLES

TABLE 1

**SUMMARY OF GROUNDWATER ELEVATION DATA
2008 ANNUAL MONITORING REPORT
COAKLEY LANDFILL OU-1 AND OU-2
NORTH HAMPTON, NEW HAMPSHIRE**

MONITORING WELL IDENTIFICATION	Ref. Pt Elev. (FT. NGVD)	Apr-93 GW. EL. FT.	Dec-96 GW. EL. FT.	Apr-97 GW. EL. FT.	Sep-97 GW. EL. FT.	Dec-97 GW. EL. FT.	Jun-98 GW. EL. FT.	Aug-98 GW. EL. FT.	Apr-99 GW. EL. FT.	Aug-99 GW. EL. FT.	Nov-99 GW. EL. FT.	Apr-00 GW. EL. FT.	Aug-00 GW. EL. FT.	Nov-00 GW. EL. FT.	Apr-01 GW. EL. FT.	Aug-01 GW. EL. FT.	Jun-02 GW. EL. FT.	Aug-02 GW. EL. FT.	Aug-03 GW. EL. FT.	Aug-04 GW. EL. FT.	Aug-05 GW. EL. FT.	Aug-06 GW. EL. FT.	Nov-07 GW. EL. FT.	Aug-08 GW. EL. FT.	
BP-4	111.70		98.94	97.83	96.07	95.84	99.55	97.03	97.04	95.26	95.93	97.1	96.93	96.03	99.37	96.29	97.27	96.26	96.51	96.89	96.34	97.71	95.72	97.52	
MW-2	94.54															86.75	89.00				NM	NM	88.61	88.95	
MW-4	129.12	101.52							98.41	95.94	96.78	97.92	97.61	96.65	100.33	96.88	98.01	96.99	97.07	97.35	96.71	98.12	96.17	97.98	
MW-5S	98.42	93.69							88.35	84.27	87.42	87.96	87.57	87.70	88.70	85.79	87.92	85.24	85.17	87.35	85.00	87.88	86.00	87.93	
MW-5D	98.39								89.89	85.84	88.77	89.41	88.59	88.98	90.39	87.27	89.27	86.79	87.89	88.63	86.69	88.49	87.28	89.09	
MW-6	101.15	93.4	93.84	93.44	90.04	92.25	93.44	91.33	92.55	88.03	91.98	92.52	92.20	92.32	93.23	89.79	92.50	89.16	90.09	92.13	89.01	92.46	90.52	92.42	
MW-8	85.30		81.1	79.46	78.48	78.07	78.71	76.66	78.6	75.32	77.91	78.37	77.98	78.50	78.61	76.30	78.21	75.92	76.60	77.86	75.94	78.18	76.89	78.48	
MW-9	82.62		77.97	78.03	75.87	76.06	77.16	74.47	75.82	73.42	75.46	76.09	76.00	76.86	76.88	74.10	75.74	73.81	73.28	76.13	73.94	75.71	75.80	76.88	
MW-10	80.60		74.56	74.67	73.96	74.07	74.68	73.17	74.51	72.78	74.57	74.63	74.83	75.06	75.22	73.93	74.91	73.45	74.20	74.93	73.99	74.71	74.95	74.86	
MW-11	92.70		87.21	85.36	83.56	83.81	83.69	81.77	83.42	79.17	82.42	82.8	82.35	82.40	83.09	80.59	82.67	80.11	81.24	82.26	79.85	82.89	81.07	82.99	
OP-2	98.49	91.44	95.86	95.4				92.85	92.11	89.52	90.88	91.86	91.76	91.24	85.74	90.49	91.98	90.34	90.75	91.54	90.43	92.29	90.77	92.53	
OP-5	112.68	94.92	99.26	98.28	96.59	96.41	100.41	100.41	97.39	95.84	96.41	97.58	97.33	96.40	107.29	97.54	97.72	96.82	96.98	97.31	96.78	98.03	96.04	97.81	
RMW-3	117.61	95.03	99.81	98.45				90.96	89.61	87.25	88.15	89.3	89.17	88.32	91.58	88.59	89.82	88.60	88.58	88.62	88.73	obstructed	obstructed	obstructed	
FPC-2A	78.40											75.69	76.70	76.98	NR		76.66	78.40	76.24	76.31	75.66	76.32	75.90	76.30	
FPC-2B	77.98											77.47	77.30	77.71	77.78		77.38	76.37	76.81	77.28	76.45	77.30	76.90	77.46	
FPC-4B	75.83	71.83																	69.96	71.58	68.21	71.63	70.95	71.81	
FPC-5A	74.30	75.01	74.44	74.44	73.94		74.44	73.29	74.14	72.2	73.93	73.9	73.98	74.18	74.14	73.02	73.10	73.03	73.10	74.30	72.18	73.50	73.50	73.73	
FPC-5B	74.90	74.85	74.81	74.81	73.91	74.21	74.81	73.3	74.6	72.38	74.48	74.25	74.60	74.77	74.70	73.43	70.96	73.15	74.23	74.40	73.19	74.66	74.50	74.85	
FPC-6A	77.00	73.23							72.74		72.84	72.85	72.85	73.11	73.01		72.65			72.83	70.71	72.83	72.38	73.02	
FPC-6B	77.10	73.20							72.81	69.86	72.94		72.09	73.21	73.14	70.88	72.33	70.30	71.94	70.32	68.37	70.47	70.19	72.93	
FPC-7A	82.08	81.63							81.36										80.12	80.99	80.03	81.46	81.30	81.49	
FPC-7B	82.33	80.53							80.93										79.82	80.72	79.69	81.02	79.43	81.20	
FPC-8A	73.80	73.85	73.67	73.65	71.49	73.15	73.49	71.01	73.04	69.23	72.93	72.93	72.88	73.34	73.20	71.06	72.99	70.36	71.26	72.86	70.63	73.01	72.20	73.09	
FPC-8B	73.60	72.83	73.52	73.49	71.44	73.04	73.33	70.84	72.88	69.14	72.77	72.78	72.63	73.18	72.99	70.93	72.79	70.07	71.22	72.69	70.58	72.83	72.03	72.00	
FPC-9A	117.57	99.87							97.32	95.02	95.72	96.92	96.75	95.90	99.22	96.25	97.05	96.02	96.27	96.40	95.83	97.59	95.48	97.44	
FPC-9B	117.87	99.99							97.81	95.07	95.79	96.98	96.83	95.99	99.28	96.15	97.08	96.11	96.37	NM	NM	NM	95.14	97.41	
FPC-9C	117.75	100.45							97.87	95.77	96.33		97.25	96.50	99.62	NM	97.52		96.75	NM	NM	NM	96.08	97.62	
FPC-11A	117.95	100.4							97.7										96.65	97.01	96.51	97.71	95.81	97.58	
FPC-11B	117.90	96.5							97.74										96.70	96.90	96.34	97.69	95.54	97.57	
AE-1A	127.00								97.95	95.55	96.21	97.37	97.23	96.34	99.67	96.54	97.54	96.53	96.67	97.05	97.35	98.10	95.89	97.74	
AE-1B	126.80								97.91	95.51	96.13	97.35	97.19	96.31	99.65	96.43	97.51	96.51	96.65	97.09	96.49	98.09	95.87	97.73	
AE-2A	79.60									72.49	75.74	75.71	75.67	76.03	75.69	73.58	75.66	72.98	73.75	75.19	73.18	75.70	74.69	75.81	
AE-2B	79.50									72.59	75.79	75.79	75.44	76.04	75.78	73.49	75.65	73.16	74.42	75.33	73.60	75.61	74.22	75.94	
AE-3A	86.10								77.47	76.64	77.74	77.56	77.99	77.92	77.80	77.05	77.70	76.86	76.30	77.90	77.14	78.02	77.90	77.98	
AE-3B	87.30								78.55	77.19	78.38	78.35	78.47	78.61	78.64	78.30	78.49	77.47	77.90	78.58	76.86	78.66	78.47	78.50	
AE-4A	77.20																				73.47	70.75	73.75	72.91	73.10
AE-4B	77.50																				73.42	70.51	73.30	72.28	73.61
GZ-105	73.60	66.42							70.86	67.46	70.77	70.78	69.82	71.16	71.02	69.31	70.83	68.45	69.71	71.09	69.28	70.91	70.68	71.05	
GZ-109	119.36	99.49	98.8	98.01	95.84	95.68	99.08	96.99	97.39	94.91	94.59	96.81									NM				
GZ-123	87.49																						76.91	77.90	
GZ-125	88.77																						80.35	81.73	

NOTES:

1. Shaded data denotes a bedrock monitoring well.
2. A blank indicates data was not collected.
3. GW.EL. indicates groundwater elevation and FT. indicates measurements were in feet.
4. Casing elevation data for FPC-11A, FPC-11B, GZ-123, and GZ-125 not available.

TABLE 2

SUMMARY OF OU-1 GROUNDWATER ANALYTICAL RESULTS
2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT
COAKLEY LANDFILL OU-1 AND OU-2
NORTH HAMPTON, NEW HAMPSHIRE

CONTAMINANT OF CONCERN	INTERIM	MW-4	MW-4	MW-4	MW-4	MW-5S	MW-5S	MW-5S	MW-5D	MW-5D	MW-5D	MW-6	MW-6	MW-8	MW-8	MW-9	MW-9	MW-9	MW-9	MW-10	MW-10	MW-10	MW-10
DATE SAMPLED	CLEANUP	30-Aug-05	30-Aug-06	16-Nov-07	13-Aug-08	29-Aug-06	9-Nov-07	13-Aug-08	29-Aug-06	15-Nov-07	13-Aug-08	12-Nov-07	12-Aug-08	13-Nov-07	13-Aug-08	25-Aug-05	29-Aug-06	13-Nov-07	13-Aug-08	26-Aug-05	29-Aug-06	13-Nov-07	13-Aug-08
VOLATILE ORGANIC COMPOUNDS IN ug/l	LEVEL																						
Acetone	6,000	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
Benzene	5	BDL	NA	NA	NA	BDL	5	4	2	3	2	BDL	BDL	3	4	5	NA	NA	NA	BDL	NA	NA	NA
Chlorobenzene	100	4	NA	NA	NA	BDL	3	2	4	5	4	BDL	BDL	3	4	79	NA	NA	NA	BDL	NA	NA	NA
Chloroethane		BDL	NA	NA	NA	BDL	13	9	24	33	38	BDL	BDL	19	21	5	NA	NA	NA	BDL	NA	NA	NA
Chloromethane	30	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
1,4 Dichlorobenzene	75	BDL	NA	NA	NA	BDL	3	2	BDL	2	2	BDL	BDL	2	2	19	NA	NA	NA	BDL	NA	NA	NA
1,1 Dichloroethane	81	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
Ethylbenzene	700	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
Isopropylbenzene	800	BDL	NA	NA	NA	BDL	2	1	BDL	BDL	BDL	BDL	BDL	2	2	2	NA	NA	NA	BDL	NA	NA	NA
p - Isopropyltoluene	260	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
Naphthalene	20	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
Diethyl Ether	1,400	BDL	NA	NA	NA	BDL	52	45	89	130	120	BDL	BDL	130	110	BDL	NA	NA	NA	BDL	NA	NA	NA
Tetrahydrofuran	154	BDL	NA	NA	NA	BDL	60	40	110	110	110	BDL	BDL	180	180	84	NA	NA	NA	BDL	NA	NA	NA
Toluene	1,000	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
1,2,4 Trimethylbenzene	330	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2	1	BDL	NA	NA	NA	BDL	NA	NA	NA
1,3,5 Trimethylbenzene	330	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
o-Xylene		BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
m&p - Xylene		BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3	2	4	NA	NA	NA	BDL	NA	NA	NA
Methylethylketone (MEK)	200	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
Methylisobutylketone (MIBK)	2,000	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
Methyl-t-butyl Ether (MTBE)	13	BDL	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	5	BDL	BDL	BDL	BDL	NA	NA	NA	BDL	NA	NA	NA
Tertiary-butyl Alcohol (TBA)			NA	NA	NA		BDL	BDL		60	50	BDL	BDL	70	70		NA	NA	NA		NA	NA	NA
METALS IN ug/l																							
Aluminum		BDL	34,000	28,000	34,000	BDL	BDL	BDL	8	BDL	BDL	BDL	BDL	60	60	BDL	BDL	BDL	BDL	BDL	19	BDL	70
Arsenic	10	130	43	58	69	10	26	26	5	11	5	BDL	BDL	10	8	280	81	56	57	24	11	12	9
Barium		530	190	200	250	190	210	190	120	130	110	BDL	BDL	170	190	92	66	41	39	89	55	64	19
Cadmium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Calcium		120,000	66,000	88,000	80,000	54,000	45,000	43,000	48,000	30,000	31,000	13,000	11,000	31,000	36,000	86,000	55,000	27,000	35,000	81,000	53,000	52,000	17,000
Chromium	50	600	150	140	190	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Copper		170	38	71	78	BDL	BDL	BDL	BDL	BDL	BDL	2	1	1	BDL	3	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Iron (Total)		380,000	110,000	160,000	150,000	17,000	25,000	23,000	17,000	15	12,000	5,800	1,800	4,300	6,500	51,000	65,000	16,000	34,000	46,000	27,000	28,000	6,600
Dissolved Iron		17,000	27,000	24,000	50,000	19,000	23,000	21,000	NA	NA	NA	3,900	250	NA	NA	56,000	57,000	17,000	35,000		NA	NA	NA
Lead	15	100	23	37	43	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Magnesium		84,000	38,000	39,000	47,000	30,000	24,000	22,000	44,000	27,000	26,000	5,200	4,000	36,000	40,000	45,000	22,000	12,000	11,000	23,000	14,000	15,000	3,900
Mercury		BDL	BDL	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nickel	100	410	99	130	150	17	22	19	14	11	12	3	1	19	26	14	5	16	7	14	7	8	3
Potassium		60,000	39,000	44,000	49,000	27,000	22,000	22,000	30,000	22,000	23,000	1,700	1,500	12,000	14,000	25,000	15,000	6,800	7,300	20,000	9,400	12,000	5,200
Selenium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	4	BDL	2	BDL	BDL	BDL	3	6	BDL	BDL	BDL	3	BDL	BDL	BDL
Silver		BDL	BDL	BDL	BDL	BDL	2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sodium		52,000	56,000	39,000	43,000	76,000	110,000	87,000	140,000	170,000	160,000	12,000	10,000	240,000	210,000	98,000	35,000	38,000	28,000	110,000	35,000	90,000	14,000
Thallium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc		540	91	190	210	6	14	BDL	7	BDL	BDL	9	6	18	BDL	4	3	BDL	BDL	7	16	19	5
Cobalt		130	34	53	53	8	11	11	BDL	BDL	1	BDL	BDL	3	6	4	BDL	12	7	5	7	6	2
Beryllium	4	BDL	BDL	3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Manganese	300	13,000	4,500	5,900	5,800	3,700	4,400	3,900	890	860	780	740	520	1,600	1,900	710	2,400	1,200	3,500	3,500	3,200	2,800	760
Dissolved Manganese		1,500	1,300	1,300	2,600	3,700	4,200	4,300	NA	NA	NA	820	470	NA	NA	820	2,200	1,400	3,300	NA	NA	NA	NA
Antimony	6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Vanadium	260	350	63	82	91	BDL	BDL	BDL	BDL	1	1	BDL	BDL	1	2	7	BDL	BDL	BDL	4	BDL	BDL	BDL
Sulfate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13,000	NA	NA	NA	10,000	NA
Chloride		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30,000	NA	NA	NA	73,000	NA
Alkalinity Bicarb		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	220,000	NA	NA	NA	340,000	NA
Alkalinity Carbonate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BDL	NA	NA	NA	BDL	NA
FIELD PARAMETERS																							
Temperature Degrees C		18.55	17.10	13.20	18.36	12.25	9.79	13.30	11.33	11.48	12.37	10.38	11.22	10.46	13.51	15.34	14.9	10.66	15.67	15.32	16.3	10.22	17.40
pH		6.59	6.47	6.59	6.22	6.61	6.79	6.83	7.22	7.09	7.07	5.82	5.95	7.22	7.29	6.54	6.4	6.01	6.08	6.69	6.47	6.31	6.12
Conductivity in us/cm		544	1024	1029	1025	884	1203	1090	1146	1570	1451	196	148	1670	1570	1273	644.6	491	473	1033	464.4	960	220
Dissolved Oxygen in mg/l		3.41	3.68	1.68	3.24	3.34	0.45	0.65	1.32	0.49	0.18	0.98	0.58	1.15	0.96	0.78	622	0.68	0.42	2.26	735	0.48	0.52
Turbidity in NTU		1071.9		10.9	6000	10.9	1.1	79.0	10.0	3.33	103	17.0	315	13.9	100	28.8	13.3	2.48	81.9	12.2	9.8	2.28	19.0
Oxidation/Reduction Potential in mV		-43.0	-44.0	154	22	-82.0	-128	-91	-171.0	1	-127	95	120	45	-151	-101.5	-55	38	-19	-106.4	-65	37	9

- NOTES:
1. NA = Sample was not analyzed for indicated parameter
BDL = Below Detection Limit
Bolded wells denote bedrock wells.
 2. A blank indicates data was not collected.
 3. Bolded contaminants are site contaminants of concern for which interim cleanup standards (ICLs) have been established.
 4. Shaded values denote exceedance of an established interim cleanup level.
 5. Volatile organic compound and metals results are in micrograms per liter (ug/l).
 6. Field Parameter Units: us/cm = microsiemens per centimeter, mg/l = milligram per liter, NTU = nephelometric turbidity unit, mV = millivolt

TABLE 2

SUMMARY OF OU-1 GROUNDWATER ANALYTICAL RESULTS

2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT

COAKLEY LANDFILL OU-1 AND OU-2

NORTH HAMPTON, NEW HAMPSHIRE

CONTAMINANT OF CONCERN	INTERIM	MW-11	MW-11	MW-11	RMW-3	RMW-3	RMW-3	OP-2	OP-2	OP-2	OP-2	OP-5	OP-5	OP-5	OP-5	BP-4	BP-4	BP-4	BP-4
DATE SAMPLED	CLEANUP	29-Aug-06	8-Nov-07	13-Aug-08	26-Aug-05	8-Nov-07	11-Aug-08	26-Aug-05	29-Aug-06	9-Nov-07	13-Aug-08	26-Aug-05	30-Aug-06	9-Nov-07	13-Aug-08	26-Aug-05	30-Aug-06	9-Nov-07	13-Aug-08
VOLATILE ORGANIC COMPOUNDS IN ug/l	LEVEL																		
Acetone	6,000	BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Benzene	5	5	8	5	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Chlorobenzene	100	2	3	2	8			2	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Chloroethane		20	32	19	BDL			13	NA	NA	NA	BDL	NA	NA	NA	16	NA	NA	NA
Chloromethane	30	BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
1,4 Dichlorobenzene	75	BDL	2	1	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
1,1 Dichloroethane	81	BDL	BDL	BDL	BDL			3	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Ethylbenzene	700	BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Isopropylbenzene	800	BDL	4	2	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
p - Isopropyltoluene	260	BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Naphthalene	20	BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Diethyl Ether	1,400	47	75	37	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Tetrahydrofuran	154	50	60	30	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Toluene	1,000	BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
1,2,4 Trimethylbenzene	330	BDL	2	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
1,3,5 Trimethylbenzene	330	BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
o-Xylene		BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
m&p - Xylene		8	12	4	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Methylethylketone (MEK)	200	BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Methylisobutylketone (MIBK)	2,000	BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Methyl-t-butyl Ether (MTBE)	13	BDL	BDL	BDL	BDL			BDL	NA	NA	NA	BDL	NA	NA	NA	BDL	NA	NA	NA
Tertiary-butyl Alcohol (TBA)			BDL	BDL					NA	NA	NA		NA	NA	NA		NA	NA	NA
METALS IN ug/l																			
Aluminum		BDL	BDL	BDL	1,500			BDL	BDL	BDL	BDL	1500	BDL	BDL	BDL	77	BDL	BDL	BDL
Arsenic	10	10	15	13	110			25	200	190	170	25	27	33	17	11	26	30	23
Barium		96	95	89	46			21	19	19	20	25	13	23	15	63	53	55	43
Cadmium		BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Calcium		31,000	26,000	22,000	47,000			49,000	40,000	37,000	40,000	15,000	15,000	14,000	8,800	62,000	69,000	51,000	48,000
Chromium	50	BDL	BDL	BDL	3			BDL	BDL	BDL	BDL	7	BDL	BDL	BDL	15	BDL	BDL	BDL
Copper		BDL	BDL	BDL	NA			BDL	BDL	BDL	BDL	6	BDL	BDL	1	7	BDL	BDL	BDL
Iron (Total)		17,000	15,000	19,000	57,000			47,000	44,000	48,000	57,000	24,000	12,000	19,000	10,000	69,000	36,000	31,000	30,000
Dissolved Iron		NA	NA	NA				47,000	49,000	50,000	61,000	15,000	12,000	21,000	9,600	NA	NA	NA	NA
Lead	15	BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL	3	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Magnesium		25,000	19,000	19,000	14,000			130,000	12,000	9,300	10,000	4,500	3,600	3,200	2,200	31,000	3,800	21,000	22,000
Mercury		BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nickel	100	8	12	18	22			11	7	7	6	31	22	33	30	150	9	10	13
Potassium		10,000	9,300	8,800	19,000			28,000	23,000	17,000	21,000	2,800	2,800	2,300	1,900	23,000	30,000	21,000	21,000
Selenium		BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1
Silver		BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL	4	BDL	BDL	BDL	BDL	BDL	3	BDL
Sodium		110,000	140,000	110,000	18,000			17,000	17,000	12,000	16,000	9,900	8,600	10,000	9,000	110,000	9,200	140,000	110,000
Thallium		BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc		6	32	BDL	13			2	5	BDL	BDL	7	7	BDL	BDL	5	6	BDL	BDL
Cobalt		BDL	3	6	13			4	BDL	5	4	20	14	23	19	80	BDL	2	3
Beryllium	4	BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Manganese	300	450	410	440	2,900			390	470	620	580	3,800	2,500	3,800	2,300	1,700	1,300	1,200	1,100
Dissolved Manganese		NA	NA	NA	NA			450	480	650	550	3,500	2,600	4,000	2,200	NA	NA	NA	NA
Antimony	6	BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Vanadium	260	BDL	BDL	BDL	2			4	BDL	BDL	1	2	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sulfate		NA	NA	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride		NA	NA	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity Bicarb		NA	NA	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity Carbonate		NA	NA	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FIELD PARAMETERS																			
Temperature Degrees C		12.27	9.50	12.14	13.11			17.2	16.33	10.41	16.25	12.30	13.31	9.34	11.28	11.26	11.9	9.41	13.38
pH		6.89	6.72	6.88	6.22			6.33	6.55	6.17	6.12	5.94	5.79	5.64	5.58	6.88	6.6	6.89	7.00
Conductivity in us/cm		800.3	1420	830	287			671	480.9	675	669	196	150.6	253	169	1021	964.8	1204	1106
Dissolved Oxygen in mg/l		0.37	0.22	0.60	3.7			2.93	8.77	0.72	1.12	2.16	1.15	0.35	0.22	1.88	2.14	0.37	1.19
Turbidity in NTU		24.3	2.17	34.7	93.3			16.1	14.2	1.97	15.8	23.2	0.7	1.49	100	35.1	2.6	1.50	27.4
Oxidation/Reduction Potential in mV		-204	-30	-102	15.4			-54.1	-161	-11	-27	11.5	27	16	81	-107.8	-92	-85.0	-107

- NOTES:
1. NA = Sample was not analyzed for indicated parameter
BDL = Below Detection Limit
Bolded wells denote bedrock wells.
2. A blank indicates data was not collected.
3. Bolded contaminants are site contaminants of concern for which interim cleanup standards (ICLs) have been established.
4. Shaded values denote exceedance of an established interim cleanup level.
5. Volatile organic compound and metals results are in micrograms per liter (ug/l).
6. Field Parameter Units: us/cm = microsiemens per centimeter, mg/l = milligram per liter, NTU = nephelometric turbidity unit, mV = millivolt

TABLE 3

SUMMARY OF OU-2 GROUNDWATER ANALYTICAL RESULTS
2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT
COAKLEY LANDFILL OU-1 AND OU-2
NORTH HAMPTON, NEW HAMPSHIRE

SAMPLE IDENTIFICATION		INTERIM CLEANUP LEVEL	FPC-2A	FPC-2A	FPC-2A	FPC-2B	FPC-2B	FPC-2B	FPC-4B	FPC-4B	FPC-4B	FPC-5A	FPC-5A	FPC-5A	FPC-5B	FPC-5B	FPC-5B	FPC-6A	FPC-6A	FPC-6A	FPC-6B	FPC-6B	FPC-6B
DATE SAMPLED			29-Aug-06	16-Nov-07	12-Aug-08	29-Aug-06	16-Nov-07	12-Aug-08	28-Aug-06	14-Nov-07	11-Aug-08	28-Aug-06	14-Nov-07	13-Aug-08	25-Aug-05	15-Nov-07	13-Aug-08	28-Aug-06	14-Nov-07	13-Aug-08	28-Aug-06	14-Nov-07	13-Aug-08
VOLATILE ORGANIC COMPOUNDS IN ug/l																							
Acetone			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
Benzene		5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	2	BDL	BDL	2	1
Chlorobenzene		100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	3	5	BDL	3	7	4
Chloroethane			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	4	8	BDL	5	11	8
Chloromethane			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
1,4 Dichlorobenzene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	1	BDL	BDL	2	1
1,1 Dichloroethane			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
cis-1,2 Dichloroethene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
Ethylbenzene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
Isopropylbenzene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
p - Isopropyltoluene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
Diethyl Ether			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	20	8	BDL	23	15
Tetrahydrofuran			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
Toluene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4 Trimethylbenzene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
1,3,5 Trimethylbenzene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
o-Xylene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
m&p - Xylene			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
Methylethylketone (MEK)		200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
Methylisobutylketone (MIBK)			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
Methyl t-butyl ether (MTBE)			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL
METALS IN ug/l																							
Aluminum			BDL	60	BDL	27	BDL	14	BDL	70	220	14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	140	980	90
Arsenic		10	BDL	8	3	BDL	2	3	BDL	BDL	BDL	42	53	54	BDL	4	1	BDL	3	2	5	9	14
Barium			12	18	13	12	12	12	3	7	5	120	130	120	47	64	39	53	95	44	30	89	44
Cadmium			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Calcium			22,000	18,000	16,000	11,000	7,800	6,800	5,300	4,200	3,300	51,000	34,000	41,000	11,000	7,200	5,400	17,000	20,000	6,800	28,000	46,000	30,000
Chromium		100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3	2
Copper			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	6	1
Iron (Total)			3,200	14,000	5,600	100	120	260	100	110	650	9,200	8,300	11,000	360	330	280	5,500	9,000	7,400	1,600	1,800	1,700
Dissolved Iron			3,800	1,800	3,500	900	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	6,400	8,600	5,400	1,600	810	1,500
Lead		15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Magnesium			14,000	12,000	9,600	1,700	1,200	980	3,500	2,800	2,100	28,000	19,000	21,000	7,100	4,600	3,300	9,300	11,000	4,200	12,000	23,000	13,000
Mercury			BDL	BDL	BDL	BDL	0.2	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nickel		100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1	1	8	4	10	5	8	6	2	5	2	BDL	13	8
Potassium			48,000	6,000	4,200	6,000	5,900	4,700	2,200	1,900	1,500	27,000	22,000	25,000	9,600	7,100	6,500	6,000	6,600	4,300	6,600	10,000	8,100
Selenium			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2	BDL	BDL	2	BDL	BDL	BDL	BDL	BDL	BDL
Silver			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sodium			12,000	15,000	12,000	43,000	43,000	39,000	5,100	6,000	5,000	120,000	120,000	120,000	300,000	310,000	260,000	75,000	100,000	50,000	82,000	140,000	110,000
Thallium			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc			7	BDL	BDL	5	BDL	BDL	7	6	BDL	7	BDL	BDL	5	BDL	BDL	6	BDL	BDL	8	6	BDL
Cobalt			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	5	6
Beryllium		4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	23	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Manganese		300	670	800	620	18	BDL	23	BDL	31	66	140	110	110	88	95	74	410	500	360	2,100	3,100	3,000
Dissolved Manganese			660	860	570	BDL	BDL	21	BDL	23	6	NA	NA	NA	NA	NA	NA	400	530	340	2,300	3,400	2,800
Antimony		6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Vanadium		260	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1	BDL	1	1	BDL	BDL	BDL	BDL	3	BDL
Sulfate			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BDL	BDL	NA	BDL	NA	NA	5,000	NA	NA	1,000	NA
Chloride			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	110,000	NA	270,000	NA	NA	81,000	NA	NA	140,000	NA
Alkalinity Bicarbonate			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	410,000	410,000	NA	360,000	NA	NA	200,000	NA	NA	390,000	NA
Alkalinity Carbonate			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	BDL	BDL	NA	BDL	NA	NA	BDL	NA	NA	BDL	NA
FIELD PARAMETERS																							
Temperature Degrees C			14.1	8.94	13.79	13.1	9.11	13.87	12.87	9.90	10.17	10.5	9.55	12.82	11.6	11.83	13.67	11.1	10.73	11.72	15	11.05	15.19
pH			6.52	6.68	6.58	7.99	7.93	7.28	6.63	5.95	6.39	7.02	7.46	6.74	7.96	7.68	7.61	6.72	6.55	6.30	6.81	6.69	6.55
Conductivity in us/cm			214.6	274	242	184.3	201	162	52.5	95	62	501	1180	1108	466	1467	1174	143	610	319	401	1137	726
Dissolved Oxygen in mg/l			0.97	0.80	0.25	0.622	3.18	1.54	7.61	0.56	7.09	1.08	0.33	0.25	2.36	1.45	1.61	2.07	1.32	1.41	0.81	0.41	0.24
Turbidity in NTU			10.5	93	44.7	1.5	3.40	100.3	1.8	2.75	32.9												

- NOTES:
1. NA = Sample was not analyzed for indicated parameter
BDL = Below Detection Limit
 2. Bolded well denotes a bedrock groundwater monitoring well.
 3. Blank column indicates the well was not sampled.
 4. Potential ICLs are indicated for arsenic and maganese.
 5. Shaded values denote exceedance of an established interim cleanup level.
 6. Volatile organic compound and metals results are in micrograms per liter (ug/l).
 7. Field Parameter Units: us/cm = microsiemens per centimeter, mg/l = milligram per liter, NTU = nephelometric turbidity unit, mV = millivolt

TABLE 3

SUMMARY OF OU-2 GROUNDWATER ANALYTICAL RESULTS

2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT

COAKLEY LANDFILL OU-1 AND OU-2

NORTH HAMPTON, NEW HAMPSHIRE

SAMPLE IDENTIFICATION	INTERIM CLEANUP LEVEL	FPC-7A	FPC-7A	FPC-7A	FPC-7B	FPC-7B	FPC-7B	FPC-8A	FPC-8A	FPC-8A	FPC-8B	FPC-8B	FPC-8B	FPC-9A	FPC-9A	FPC-9A	FPC-11A	FPC-11A	FPC-11A
DATE SAMPLED		28-Aug-06	16-Nov-07	13-Aug-08	28-Aug-06	16-Nov-07	13-Aug-08	28-Aug-06	8-Nov-07	11-Aug-08	28-Aug-06	8-Nov-07	11-Aug-08	30-Aug-06	12-Nov-07	13-Aug-08	30-Aug-06	15-Nov-07	12-Aug-08
VOLATILE ORGANIC COMPOUNDS IN ug/l																			
Acetone		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Benzene	5	BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Chlorobenzene	100	BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Chloroethane		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Chloromethane		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
1,4 Dichlorobenzene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
1,1 Dichloroethane		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
cis-1,2 Dichloroethene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Ethylbenzene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Isopropylbenzene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
p - Isopropyltoluene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Naphthalene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Diethyl Ether		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Tetrahydrofuran		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Toluene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
1,2,4 Trimethylbenzene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
1,3,5 Trimethylbenzene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
o-Xylene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
m&p - Xylene		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Methylethylketone (MEK)	200	BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Methylisobutylketone (MIBK)		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
Methyl t-butyl ether (MTBE)		BDL	NA	NA	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	BDL	NA	NA
METALS IN ug/l																			
Aluminum		BDL	520	320	BDL	BDL	140	380	670	BDL	13	BDL	BDL	BDL	1,000	BDL	270	640	120
Arsenic	10	BDL	BDL	BDL	BDL	BDL	2	BDL	4	2	5	7	7	44	37	26	BDL	1	1
Barium		2	7	5	BDL	3	18	4	8	4	6	7	7	120	92	65	4	17	15
Cadmium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Calcium		20,000	13,000	13,000	14,000	16,000	14,000	26,000	21,000	24,000	30,000	20,000	21,000	66,000	47,000	54,000	7,400	28,000	25,000
Chromium	100	BDL	2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2	BDL	BDL	2	BDL
Copper		BDL	3	1	BDL	BDL	BDL	BDL	2	BDL	BDL	BDL	BDL	BDL	3	BDL	BDL	3	BDL
Iron (Total)		BDL	1,300	740	1,200	270	8,300	900	1,300	340	130	60	140	9,600	8,600	4,700	1,000	2,100	390
Dissolved Iron		BDL	BDL	BDL	BDL	BDL	70	NA	NA	NA	NA	BDL	60	NA	7,000	4,500	BDL	BDL	BDL
Lead	15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1	BDL	BDL	2	BDL
Magnesium		6,400	4,400	3,800	3,800	4,600	3,700	3,500	3,300	3,200	6,900	4,300	4,300	37,000	23,000	22,000	1,700	6,100	5,200
Mercury		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nickel	100	3	13	7	BDL	2	18	BDL	2	BDL	BDL	BDL	BDL	4	7	4	BDL	9	4
Potassium		2,700	2,800	2,100	2,000	2,400	1,900	2,400	2,000	2,100	3,600	2,600	3,000	14,000	8,600	8,100	28,000	3,800	3,000
Selenium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2	BDL	BDL	BDL	BDL
Silver		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sodium		9,800	9,000	8,000	7,800	10,000	9,000	11,000	12,000	13,000	18,000	16,000	17,000	94,000	100,000	78,000	28,000	20,000	39,000
Thallium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc		6	7	8	6	BDL	9	6	BDL	BDL	6	BDL	12	6	58	27	6	26	BDL
Cobalt		BDL	6	2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1	BDL	8	2	BDL
Beryllium	4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Manganese	300	6	110	34	200	76	1,800	150	150	62	21	29	28	270	410	520	22	500	36
Dissolved Manganese		BDL	BDL	BDL	BDL	BDL	36	NA	NA	NA	NA	33	25	NA	450	510	BDL	600	BDL
Antimony	6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Vanadium	260	BDL	2	BDL	BDL	BDL	BDL	BDL	1	BDL	BDL	BDL	BDL	BDL	3	BDL	BDL	3	1
Sulfate		NA	15,000	NA	NA	17,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride		NA	7,000	NA	NA	7,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity Bicarbonate		NA	49,000	NA	NA	51,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity Carbonate		NA	BDL	NA	NA	BDL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FIELD PARAMETERS																			
Temperature Degrees C		12.3	9.13	12.45	12.45	8.67	11.90	12.3	8.89	10.51	12.03	8.63	10.74	10.5	8.40	11.15	12.1	12.70	12.89
pH		6.36	6.97	5.93	6.61	6.47	6.12	6.36	6.80	6.66	7.26	7.81	8.02	7	7.01	6.82	6.82	5.93	6.00
Conductivity in us/cm		122	168	147	127	171	159	162	211	200	176	236	216	941	941	880	163.8	348	394
Dissolved Oxygen in mg/l		4.63	3.72	4.75	9.63	3.99	3.68	2.01	0.85	0.37	5.47	0.87	0.12	1.36	0.42	0.35	8.87	4.84	6.07
Turbidity in NTU		37.2	8.6	25.0	70.6	3.11	111	1.56	28.4	9.9	0.4	2.20	70.6	15.6	40.1	95	352.8	21.3	94.1
Oxidation/Reduction Potential in mV		94	169	151	105	105	169	96	-42	101	-61	0.81	-163	-113	26	-5	58	137	193

- NOTES:
1. NA = Sample was not analyzed for indicated parameter
 - BDL = Below Detection Limit
 2. Bolded well denotes a bedrock groundwater monitoring well.
 3. Blank column indicates the well was not sampled.
 4. Potential ICLs are indicated for arsenic and maganese.
 5. Shaded values denote exceedance of an established interim cleanup level.
 6. Volatile organic compound and metals results are in micrograms per liter (ug/l).
 7. Field Parameter Units: us/cm = microsiemens per centimeter, mg/l = milligram per liter, NTU = nephelometric turbidity unit, mV = millivolt

TABLE 3

SUMMARY OF OU-2 GROUNDWATER ANALYTICAL RESULTS
2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT
COAKLEY LANDFILL OU-1 AND OU-2
NORTH HAMPTON, NEW HAMPSHIRE

SAMPLE IDENTIFICATION	INTERIM CLEANUP LEVEL	FPC-11B	FPC-11B	FPC-11B	GZ-105	GZ-105	GZ-105	GZ-123	GZ-123	GZ-125	GZ-125	AE-1A	AE-1A	AE-1A	AE-1B	AE-2A	AE-2A	AE-2A
DATE SAMPLED		30-Aug-06	15-Nov-07	12-Aug-08	29-Aug-06	14-Nov-07	11-Aug-08	12-Nov-07	12-Aug-08	12-Nov-07	12-Aug-08	30-Aug-06	16-Nov-07	12-Aug-08	12-Aug-08	30-Aug-06	8-Nov-07	11-Aug-08
VOLATILE ORGANIC COMPOUNDS IN ug/l																		
Acetone		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
Benzene	5	BDL	NA	NA	6	6	6	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	2	BDL
Chlorobenzene	100	BDL	NA	NA	9	10	10	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	5	2
Chloroethane		BDL	NA	NA	7	9	11	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
Chloromethane		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
1,4 Dichlorobenzene		BDL	NA	NA	2	4	4	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	2	1
1,1 Dichloroethane		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
cis-1,2 Dichloroethene		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
Ethylbenzene		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
Isopropylbenzene		BDL	NA	NA	BDL	2	2	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
p - Isopropyltoluene		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
Naphthalene		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
Diethyl Ether		BDL	NA	NA	49	61	57	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	19	7
Tetrahydrofuran		BDL	NA	NA	83	80	70	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	20	BDL
Toluene		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
1,2,4 Trimethylbenzene		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
1,3,5 Trimethylbenzene		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
o-Xylene		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
m&p - Xylene		BDL	NA	NA	BDL	1	1	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
Methylethylketone (MEK)	200	BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
Methylisobutylketone (MIBK)		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
Methyl t-butyl ether (MTBE)		BDL	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	BDL	BDL	BDL
METALS IN ug/l																		
Aluminum		13,000	350	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	63	970	180	BDL	BDL	BDL	210
Arsenic	10	6	9	8	6	11	10	BDL	BDL	BDL	BDL	15	39	41	3	240	280	230
Barium		72	18	34	43	52	48	5	4	4	3	18	22	18	150	26	41	30
Cadmium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Calcium		64,000	54,000	75,000	65,000	44,000	49,000	11,000	12,000	14,000	13,000	45,000	14,000	11,000	22,000	21,000	29,000	23,000
Chromium	100	16	BDL	2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	5	BDL	BDL	BDL	BDL	BDL
Copper		4	2	BDL	BDL	BDL	BDL	1	BDL	BDL	BDL	BDL	9	3	2	BDL	BDL	BDL
Iron (Total)		13,000	1,900	3,200	6,200	5,100	3,700	3,900	1,800	350	790	340	3,100	140	620	12,000	19,000	16,000
Dissolved Iron		2,100	240	2,800	5,300	3,800	3,700	1,700	370	BDL	BDL	400	BDL	BDL	BDL	14,000	19,000	15,000
Lead	15	6	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	15	3	BDL	BDL	BDL	BDL
Magnesium		27,000	12,000	16,000	23,000	18,000	18,000	3,000	3,100	8,600	8,000	16,000	3,000	2,000	10,000	9,300	11,000	8,300
Mercury		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nickel	100	17	13	12	7	8	9	5	4	BDL	BDL	BDL	5	BDL	BDL	12	12	12
Potassium		6,500	3,600	5,300	7,500	5,700	6,200	2,100	1,900	2,800	2,600	4,900	4,300	3,100	10,000	16,000	21,000	17,000
Selenium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Silver		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2	BDL
Sodium		95,000	41,000	38,000	153,000	160,000	160,000	17,000	15,000	18,000	17,000	22,000	26,000	23,000	31,000	43,000	39,000	32,000
Thallium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc		19	31	13	4	BDL	BDL	8	BDL	6	8	10	45	9	7	6	BDL	BDL
Cobalt		21	6	4	BDL	BDL	BDL	5	3	BDL	BDL	16	3	BDL	BDL	8	13	11
Beryllium	4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Manganese	300	880	1,300	1,400	480	390	400	3,300	2,300	160	62	440	130	14	300	510	770	8300
Dissolved Manganese		770	1,500	1,300	510	470	400	3,600	1,900	170	53	450	6	BDL	BDL	510	830	560
Antimony	6	BDL	BDL	BDL	4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Vanadium	260	7	1	BDL	BDL	BDL	1	BDL	BDL	BDL	BDL	BDL	3	BDL	BDL	BDL	BDL	BDL
Sulfate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity Bicarbonate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity Carbonate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FIELD PARAMETERS																		
Temperature Degrees C		11.7	12.46	13.72	11.03	10.15	10.60	11.72	12.26	10.04	12.92	11.8	9.7	15.26	13.56	12.4	10.36	11.14
pH		6.67	6.65	6.96	8.48	7.16	7.95	5.57	5.63	5.75	5.93	8.77	8.78	8.82	7.82	6.47	6.69	6.54
Conductivity in us/cm		398	761	712	431.4	1145	512	220	183	276	240	227.1	208	175	387	321	743	514
Dissolved Oxygen in mg/l		6.55	0.79	0.31	1.65	0.28	0.17	0.77	2.41	2.95	3.12	3.55	2.31	3.16	6.19	3.93	0.35	0.14
Turbidity in NTU		2906	17.0	21.5	46.1	18.9	16.4	22.9	35.2	5.03	23.0	82.8	15.9	12.2	163	0.2	0.77	74.4
Oxidation/Reduction Potential in mV		-36	110	9	-190	29	-118	129	162	165	186	-50	88	82	113	-29	-102	-59

NOTES:

1. NA = Sample was not analyzed for indicated parameter
BDL = Below Detection Limit
2. Bolded well denotes a bedrock groundwater monitoring well.
3. Blank column indicates the well was not sampled.
4. Potential ICLs are indicated for arsenic and maganese.
5. Shaded values denote exceedance of an established interim cleanup level.
6. Volatile organic compound and metals results are in micrograms per liter (ug/l).
7. Field Parameter Units: us/cm = microsiemens per centimeter, mg/l = milligram per liter, NTU = nephelometric turbidity unit, mV = millivolt

TABLE 3

SUMMARY OF OU-2 GROUNDWATER ANALYTICAL RESULTS

2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT

COAKLEY LANDFILL OU-1 AND OU-2

NORTH HAMPTON, NEW HAMPSHIRE

SAMPLE IDENTIFICATION	INTERIM CLEANUP LEVEL	AE-2B	AE-2B	AE-2B	AE-3A	AE-3A	AE-3A	AE-3B	AE-3B	AE-3B	AE-4A	AE-4A	AE-4A	AE-4B	AE-4B	AE-4B
DATE SAMPLED		29-Aug-06	8-Nov-07	11-Aug-08	29-Aug-06	15-Nov-07	12-Aug-08	29-Aug-06	16-Nov-07	12-Aug-08	28-Aug-06	14-Nov-07	11-Aug-08	28-Aug-06	14-Nov-07	11-Aug-08
VOLATILE ORGANIC COMPOUNDS IN ug/l																
Acetone		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene	5	3	5	5	BDL	2	2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chlorobenzene	100	3	5	5	6	9	8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chloroethane		8	11	12	13	12	13	6	5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chloromethane		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,4 Dichlorobenzene		BDL	1	1	BDL	2	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1 Dichloroethane		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
cis-1,2 Dichloroethene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ethylbenzene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Isopropylbenzene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
p - Isopropyltoluene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Diethyl Ether		46	65	63	BDL	18	19	BDL	13	12	BDL	BDL	BDL	BDL	BDL	BDL
Tetrahydrofuran		69	60	70	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Toluene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4 Trimethylbenzene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3,5 Trimethylbenzene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
o-Xylene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
m&p - Xylene		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methylethylketone (MEK)	200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methylisobutylketone (MIBK)		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Methyl t-butyl ether (MTBE)		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
METALS IN ug/l																
Aluminum		BDL	BDL	BDL	BDL	BDL	100	BDL	BDL	BDL	240	70	470	1,500	1,200	1,200
Arsenic	10	24	20	19	100	130	150	91	82	95	BDL	3	10	BDL	1	BDL
Barium		200	190	170	65	86	85	180	130	150	11	15	20	8	28	19
Cadmium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Calcium		72,000	57,000	49,000	45,000	38,000	42,000	57,000	45,000	48,000	6,900	4,900	6,100	7,700	6,400	7,100
Chromium	100	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3	2
Copper		BDL	BDL	BDL	BDL	BDL	1	BDL	BDL	BDL	BDL	BDL	2	BDL	5	4
Iron (Total)		22,000	18,000	16,000	22,000	19,000	22,000	14,000	12,000	13,000	9,100	6,500	28,000	1,500	1,900	2,100
Dissolved Iron		25,000	18,000	15,000	19,000	19,000	20,000	17,000	16,000	12,000	3,700	160	2,900	BDL	BDL	400
Lead	15	BDL	BDL	BDL	BDL	BDL	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2	2
Magnesium		60,000	40,000	32,000	24,000	20,000	21,000	32,000	22,000	25,000	6,100	4,300	5,200	4,700	5,100	5,200
Mercury		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.3	0.1
Nickel	100	10	13	10	8	8	9	6	8	9	BDL	7	2	BDL	3	2
Potassium		16,000	13,000	13,000	24,000	22,000	22,000	25,000	20,000	21,000	2,300	2,300	2,400	5,000	4,200	4,600
Selenium		BDL	BDL	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Silver		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sodium		180,000	230,000	200,000	87,000	100,000	86,000	110,000	110,000	120,000	6,700	7,000	7,000	23,000	22,000	20,000
Thallium		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Zinc		6	BDL	BDL	3	BDL	7	5	BDL	BDL	BDL	BDL	8	6	8	8
Cobalt		BDL	4	2	BDL	3	3	BDL	1	1	BDL	3	1	BDL	2	1
Beryllium	4	BDL	BDL	BDL	BDL	BDL	85	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Manganese	300	2,400	2,100	1,700	690	840	850	1,000	570	480	310	290	400	220	1,100	600
Dissolved Manganese		2,300	2,200	1,500	660	890	800	1,000	760	430	300	330	330	90	84	250
Antimony	6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	8	BDL	BDL	BDL	BDL	BDL
Vanadium	260	BDL	BDL	BDL	BDL	BDL	1	BDL	BDL	BDL	BDL	BDL	2	BDL	3	2
Sulfate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity Bicarbonate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity Carbonate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FIELD PARAMETERS																
Temperature Degrees C		12.2	9.88	10.98	14.8	11.92	14.39	12.3	9.84	11.36	12.27	11.10	13.70	11.78	9.93	10.73
pH		6.72	7.07	6.84	6.77	7.25	6.64	7.23	7.20	7.15	6.41	6.89	6.56	6.74	7.30	6.79
Conductivity in us/cm		1269	1610	1366	925.8	1124	1076	968.6	1208	1126	111	118	129	155.7	207	176
Dissolved Oxygen in mg/l		1.45	1.01	0.67	1.71	0.31	0.24	1.37	0.54	0.16	1.24	3.98	108	1.43	0.51	0.62
Turbidity in NTU		3.1	0.60	27.2	4.8	3.94	28.2	5.4	16.3	87.9	3.89	81.6	490	6.1	49.4	115
Oxidation/Reduction Potential in mV		-127	-58	-102	-98	-109	-85	-149	90	-142	-83	78	-8	-37	92	115

NOTES:

1. NA = Sample was not analyzed for indicated parameter
BDL = Below Detection Limit
2. Bolded well denotes a bedrock groundwater monitoring well.
3. Blank column indicates the well was not sampled.
4. Potential ICLs are indicated for arsenic and maganese.
5. Shaded values denote exceedance of an established interim cleanup level.
6. Volatile organic compound and metals results are in micrograms per liter (ug/l).
7. Field Parameter Units: us/cm = microsiemens per centimeter, mg/l = milligram per liter, NTU = nephelometric turbidity unit, mV = millivolt

TABLE 4

**SUMMARY OF RESIDENTIAL WELL MONITORING RESULTS
2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT
COAKLEY LANDFILL OU-1 AND OU-2
NORTH HAMPTON, NEW HAMPSHIRE**

SAMPLE IDENTIFICATION	R-3	R-3	R-5	R-5
DATE SAMPLED	24-Jan-08	13-Aug-08	24-Jan-08	13-Aug-08
VOCs				
Methyl tert-butyl ether (MTBE)	1.6	<0.5	<0.5	<0.5
FIELD PARAMETERS				
Temperature Degrees C	13.51	12.51	14.22	14.00
pH	5.63	5.85	5.84	5.92
Conductivity in us/cm	316	423	243	281
Dissolved Oxygen in mg/l	4.16	3.72	6.43	8.04
Turbidity in NTU	2.0	15.4	1.4	12
Oxidation/Reduction Potential in mV	157	95	162	87

NOTES:

1. BDL = Below Method Detection Limit
2. Only contaminants detected in one or more groundwater samples are listed in this table.
3. Volatile organic compound results are in micrograms per liter (ug/l).

TABLE 5

SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT
COAKLEY LANDFILL OU-1 AND OU-2
NORTH HAMPTON, NEW HAMPSHIRE

SAMPLE IDENTIFICATION	DES SURFACE		SW-4	SW-4	SW-4	SW-5	SW-5/SW-3T	SW-5/SW-3T	SW-103	SW-103	SW-103	SW-1T	SW-2T	SW-5T	SW-6T							
DATE SAMPLED	WATER STANDARDS		29-Aug-06	15-Nov-07	14-Aug-08	30-Aug-06	15-Nov-07	14-Aug-08	28-Aug-06	13-Nov-07	14-Aug-08	13-Nov-07	13-Nov-07	13-Nov-07	13-Nov-07							
PARAMETER ANALYZED	ACUTE	CHRONIC																				
VOCS BY EPA METHOD 8260B IN ug/L																						
ACETONE				BDL	BDL		BDL	BDL		BDL	BDL	BDL	10	BDL	BDL							
BENZENE	5,300	NSE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL							
CHLOROBENZENE	250	50	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL							
METALS BY EPA METHOD 200.8 IN ug/L			Total	Total	Dissolved	Total	Total	Dissolved	Total	Total	Total	Total	Total	Dissolved	Total	Total	Dissolved	Total	Dissolved	Total	Dissolved	
ALUMINUM	750	87	740	90	100	1,700	3,300	150	BDL	BDL	200	BDL	BDL	BDL	1,900	BDL	BDL	BDL	90	100	140	120
ARSENIC (1)	340	150	BDL	2	3	4	17	6	8	2	4	5	6	2	7	1	1	1	1	2	2	2
BARIUM	NSE	NSE	12	23	24	50	70	29	33	53	38	40	45	29	29	10	17	22	15	20	9	9
CADMIUM (1)	0.95	0.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
CALCIUM	NSE	NSE	10,000	31,000	34,000	25,000	67,000	28,000	33,000	43,000	48,000	33,000	37,000	46,000	27,000	33,000	35,000	43,000	20,000	26,000	25,000	28,000
CHROMIUM	183	24	BDL	BDL	BDL	2	5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
COPPER	3.6	2.7	BDL	3	2	6	BDL	3	2	BDL	BDL	3	2	2	3	3	3	5	2	3	1	3
IRON (1)	NSE	1000	1,100	160	90	4,700	25,000	5,100	5,600	2,100	14,000	11,000	13,000	2,800	5,200	90	300	110	400	430	310	100
LEAD (1)	14	0.54	BDL	BDL	BDL	BDL	BDL	1	BDL	BDL	BDL	BDL	BDL	BDL	4	BDL	BDL	BDL	BDL	BDL	1	BDL
MAGNESIUM	NSE	NSE	4,700	13,000	15,000	5,600	19,000	8,200	9,600	10,000	12,000	8,900	9,900	10,000	9,200	10,000	9,800	13,000	6,800	8,800	8,900	10,000
MERCURY (1)	1.4	0.77	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NICKEL (1)	144.9	16.1	BDL	3	4	9	8	5	6	5	BDL	7	7	6	6	3	3	4	2	3	4	5
POTASSIUM	NSE	NSE	1,300	3,100	3,500	2,000	20,000	21,000	24,000	7,200	7,100	18,000	18,000	9,400	7,300	8,700	13,000	17,000	4,300	5,600	450	720
SELENIUM	NSE	5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
SILVER	0.32	NSE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
SODIUM	NSE	NSE	5,200	17,000	19,000	9,000	43,000	35,000	42,000	36,000	23,000	38,000	41,000	16,000	24,000	32,000	23,000	30,000	23,000	30,000	58,000	70,000
THALLIUM	1400	40	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
ZINC (1)	35.4	32.2	14	30	940	40	19	10	900	BDL	6	10	740	BDL	11	740	BDL	780	64	980	6	920
COBALT	NSE	NSE	BDL	BDL	BDL	11	3	3	3	2	BDL	7	9	BDL	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL
BERYLLIUM	130	5.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MANGANESE	NSE	NSE	350	470	360	1,900	2,800	1,200	1,500	1,300	1,600	1,400	1,600	590	460	150	260	350	400	540	58	38
ANTIMONY	9000	1600	4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
VANADIUM	NSE	NSE	BDL	1	1	12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	4	BDL	BDL	BDL	BDL	BDL	3	3
AMMONIA BY EPA METHOD 350.3 IN mg/l	36.1	3.08		BDL		0.14	5.8	2.9	BDL	0.2	0.44	0.81	BDL	3.1	BDL		BDL		BDL		BDL	
CYANIDE (Total)				BDL		NA		BDL	NA		BDL	NA	BDL	BDL			BDL		BDL		BDL	
FIELD PARAMETERS																						
Temperature Degrees C				11.94		18.34		7.46		18.10		7.71		17.84		7.00		6.87		8.98		6.51
pH				6.31		5.63		6.99		6.45		6.69		6.35		6.40		7.11		6.35		6.34
Conductivity in us/cm				372		126		675		451		603		388		230		517		364		499
Dissolved Oxygen in mg/l				2.98		2.49		0.50		3.29		1.30		2.85		5.84		4.11		1.94		3.70
Turbidity in NTU				7.51		16.80		12.6		8.4		2.44		7.40		48.7		2.67		0.62		7.31
Oxidation/Reduction Potential in mV				167		68		-70		73		-9		114		179		75		120		131

- NOTES:
- BDL = Below Method Detection Limit
 - Only contaminants detected in one or more surface water samples are listed in this table.
 - Bolded values indicates exceedance of NHDES acute surface water criteria.
 - Shaded values indicate exceedance of NHDES chronic surface water criteria.
 - Shaded and bolded values indicate exceedances of both NHDES acute and chronic criteria.
 - (1) = Criteria for these metals are expressed as a function of the water effect ratio (WER) as defined in 40 CFR
The values displayed in this table correspond to a WER of 1.0.
 - NSE indicates no standard has been established for the indicated parameter.
 - Volatile organic compound and metals results are in micrograms per liter (ug/l).

Field Parameter Units: us/cm = microsiemens per centimeter, mg/l = milligram per liter, NTU = nephelometric

TABLE 6

**SUMMARY OF HISTORICAL SURFACE WATER ANALYTICAL RESULTS
2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT
COAKLEY LANDFILL OU-1 AND OU-2
NORTH HAMPTON, NEW HAMPSHIRE**

SAMPLE IDENTIFICATION	DES SURFACE		SW-5	SW-5	SW5	SW-5	SW-5	SW-5	SW-5	SW-5	SW-5	SW-5
DATE SAMPLED	WATER STANDARDS		27-Apr-99	26-Apr-01	16-Aug-01	27-Aug-03	26-Aug-04	29-Aug-05	30-Aug-06	15-Nov-07	14-Aug-08	
PARAMETER ANALYZED	ACUTE	CHRONIC										
VOCs BY EPA METHOD 8260B IN ug/L												
BENZENE	5,300	NSE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
CHLOROBENZENE	250	50	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TOLUENE	NSE	NSE	2	BDL	BDL					BDL		BDL
METALS BY EPA METHOD 200.8 IN ug/L												
			Total	Total	Total	Total	Total	Total	Total	Total	Dissolved	Total
ALUMINUM	750	87	19,000	40	5,600 (H)	200	240,000	9,100	3,300	150	BDL	BDL
ARSENIC (1)	340	150	BDL (2)	2	25	3	720	1200	17	6	8	2
BARIUM	NSE	NSE	190	26	180	40	6100	360	70	29	33	53
CADMIUM (1)	0.95	0.8	1	BDL	BDL	BDL	10	BDL	BDL	BDL	BDL	BDL
CALCIUM	NSE	NSE	51,000	74,000	38,000	83,000	310,000	54,000	67,000	28,000	33,000	43,000
CHROMIUM	183	24	71	BDL	16	3	380	30	5	BDL	BDL	BDL
COPPER	3.6	2.7	34	3	11	BDL	140	BDL	BDL	3	2	BDL
IRON (1)	NSE	1000	35,000	600	13,000	1,600	1,200,000	250,000	25,000	5,100	5,600	2,100
LEAD (1)	14	0.54	22	BDL	9	BDL	440	10	BDL	1	BDL	BDL
MAGNESIUM	NSE	NSE	29,000	29,000	38,000	35,000	90,000	18,000	19,000	8,200	9,600	10,000
MERCURY (1)	1.4	0.77	BDL	BDL	BDL	BDL	2	BDL	BDL	BDL	BDL	BDL
NICKEL (1)	144.9	16.1	52	11	25	11	270	20	8	5	6	5
POTASSIUM	NSE	NSE	26,000	29,000	68,000	40,000	50,000	20,000	20,000	21,000	24,000	7,200
SELENIUM	NSE	5	BDL	BDL	6	BDL	9	BDL	BDL	BDL	BDL	BDL
SILVER	0.32	NSE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
SODIUM	NSE	NSE	88,000	70,000	220,000	160,000	22,000	21,000	43,000	35,000	42,000	36,000
THALLIUM	1400	40	2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
ZINC (1)	35.4	32.2	83	11	49	8	530	50	19	10	900	BDL
COBALT	NSE	NSE	19	BDL	BDL	BDL	200	10	3	3	3	2
BERYLLIUM	130	5.3	1	BDL	BDL	BDL	11	BDL	BDL	BDL	BDL	BDL
MANGANESE	NSE	NSE	3,300	140	3,500	790	200,000	5,800	2,800	1,200	1,500	1,300
ANTIMONY	9000	1600	BDL	BDL	8	BDL	BDL	BDL	BDL	BDL	BDL	BDL
VANADIUM	NSE	NSE	49	1	11	BDL	360	19	BDL	BDL	BDL	BDL

NOTES:

- BDL = Below Method Detection Limit
- Bolded values indicates exceedance of NHDES acute surface water criteria.
- Shaded values indicate exceedance of NHDES chronic surface water criteria.
- Shaded and bolded values indicate exceedances of both NHDES acute and chronic criteria.
- (1) = Criteria for these metals are expressed as a function of the water effect ratio (WER)
The values displayed in this table correspond to a WER of 1.0.
- NSE indicates no standard has been established for the indicated parameter.
- H = Duplicate sample indicates possible heterogeneity.
- Volatile organic compound and metals results are in micrograms per liter (ug/l).

TABLE 7

**SUMMARY OF LEACHATE ANALYTICAL RESULTS
2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT
COAKLEY LANDFILL OU-1 AND OU-2
NORTH HAMPTON, NEW HAMPSHIRE**

SAMPLE IDENTIFICATION	DES SURFACE		L-1	L-1	L-1	L-1	L-1	L-1	L-1	L-1
DATE SAMPLED	WATER STANDARDS		16-Aug-01	7-Aug-02	27-Aug-03	25-Aug-04	25-Aug-05	30-Nov-06	13-Nov-07	12-Aug-08
COMMENTS	ACUTE CHRONIC							ID 104240		
PARAMETER ANALYZED										
VOCs BY EPA METHOD 8260BC IN ug/L										
BENZENE	5300	NSE	3	2	2	BDL	2	2	3	BDL
CHLOROBENZENE	250	50	27	15	18	12	20	18	22	BDL
CHLOROETHANE	NSE	NSE	8	6	6	3	6	BDL	6	BDL
CHLOROFORM	28.9	1240	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,4 DICHLOROBENZENE	1120	763	BDL	3	2	BDL	3	2	3	BDL
1,2 DICHLOROBENZENE									1	BDL
ISOPROPYLBENZENE	NSE	NSE	BDL	BDL	BDL	BDL	BDL	2	2	BDL
DIETHYL ETHER	NSE	NSE	31	BDL	BDL	BDL	BDL	BDL	23	BDL
TETRAHYDROFURAN	NSE	NSE	32	BDL	BDL	BDL	BDL	BDL	20	BDL
METALS BY EPA METHOD 6020 IN ug/L			Total	Total	Total	Total	Total		Total	Dissolved
ALUMINUM	750	87	3200	4100	9,500	29,000	18,000		BDL	BDL
ARSENIC	340	150	83	23	67	150	300		7	6
BARIIUM	NSE	NSE	1300	260	610	2200	4600		97	99
CADMIUM	0.95	0.80	BDL	BDL	BDL	BDL	BDL		BDL	BDL
CALCIUM	NSE	NSE	120,000	97,000	100,000	140,000	150,000		50,000	62,000
CHROMIUM	183	24	20	13	27	55	70		BDL	BDL
COPPER	3.6	2.7	BDL	5	13	36	40		BDL	1
IRON	NSE	1,000	350,000	130,000	330,000	1,000,000	1,100,000		30,000	27,000
LEAD	14	0.54	BDL	2	8	34	BDL		BDL	BDL
MAGNESIUM	NSE	NSE	49,000	43,000	36,000	34,000	43,000		20,000	25,000
MERCURY	1.4	0.77	BDL	BDL	BDL	BDL	BDL		BDL	BDL
NICKEL	144.9	16.1	22	18	28	32	40		7	8
POTASSIUM	NSE	NSE	66	55	46,000	38,000	50,000		34,000	40
SELENIUM	NSE	5	7	8	4	3	BDL		BDL	BDL
SILVER	0.32	NSE	BDL	BDL (2)	2	BDL	BDL		BDL	BDL
SODIUM	NSE	NSE	220,000	200,000	160,000	140,000	150,000		130,000	150,000
THALLIUM	1,400	40	BDL	BDL	BDL	BDL	BDL		BDL	BDL
ZINC	36.2	36.5	45	51	140	390	690		BDL	650
COBALT	NSE	NSE	BDL	3	6	11	10		BDL	1
BERYLLIUM	130	5.3	3	BDL	BDL	3	BDL		BDL	BDL
MANGANESE	NSE	NSE	7,600	5,700	5,900	10,000	9,800		2,700	3,200
ANTIMONY	9,000	1,600	6	BDL	BDL	BDL	BDL		BDL	BDL
VANADIUM	NSE	NSE	46	13	36	89	220		1	1
CHEMICAL OXYGEN DEMAND BY EPA METHOD 410.4 IN mg/l	NSE	NSE	190	178	560	282	377		70	50
CYANIDE (Total)									BDL	NA
AMMONIA BY EPA METHOD 350.3 IN mg/l	36.1	3.08	44.0	41.0	44.8	56.8	79.0		33	0.62

NOTES:

1. BDL = Below Method Detection Limit
2. Only contaminants detected in one or more leachate samples are listed in this table.
3. Acute surface water standard shown for ammonia is for a surface water with a pH of 7.0.
4. (1) = Criteria for these metals are expressed as a function of the water effect ration (WER) as defined in 40 CFR 131.36 c, the values displayed in this table correspond to a WER of 1.0.
5. A bold entry indicates the parameter exceeded the acute surface water standard.
6. Shaded values indicate the parameter exceeded the chronic surface water standard.
7. Bold and shaded values indicate exceedances of both NHDES acute and chronic criteria.
7. NSE indicates no standard has been established for the indicated parameter.
8. Volatile organic compounds and metals results are in micrograms per liter (µg/l).

FIELD PARAMETERS

Temperature Degrees C	11.81	17.73
pH	6.19	6.57
Conductivity in us/cm	1600	176
Dissolved Oxygen in mg/l	2.23	4.94
Turbidity in NTU	17.9	90
Oxidation/Reduction Potential in mV	138	42

TABLE 8

**SUMMARY OF SEDIMENT ANALYTICAL RESULTS
2008 ANNUAL MONITORING PLAN DATA ASSESSMENT REPORT
COAKLEY LANDFILL OU-1 AND OU-2
NORTH HAMPTON, NEW HAMPSHIRE**

SAMPLE IDENTIFICATION	NHDES	SED-4	SED-4	SED-4	SED-5	SED-5	SED-5/3T	SED-5/3T	SED-103	SED-1T	SED-2T	SED-4T	SED-5T	SED-6T
DATE SAMPLED	S-1 Soil	29-Aug-06	15-Nov-07	14-Aug-08	29-Aug-05	30-Aug-06	15-Nov-07	14-Aug-08	13-Nov-07	13-Nov-07	13-Nov-07	15-Nov-07	13-Nov-07	13-Nov-07
METALS BY EPA METHOD 6020 IN mg/kg	Standard													
ALUMINUM	NE	6,700	3,800	12,000	6,600	34,000	9,900	11,000	6200	10,000	19,000	8,700	10,000	14,000
ARSENIC	11	BDL	4.2	2.1	310	17	15	16	1.5	13	17	19	4.7	3.2
BARIUM	1000	49	68	71	270	150	110	49	18	78	110	54	60	82
CADMIUM	33	BDL	0.8	BDL	BDL	BDL	2.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL
CALCIUM	NE	12,000	15,000	2,000	8,900	3,600	8,700	1,700	1400	5,300	2,300	8,200	11,000	2,600
CHROMIUM	1000	BDL	4.0	14	13	69	39	23	13	32	44	11	17	28
COPPER	NE	20	17	2.5	6	45	55	16	1.9	12	27	7.2	12	9
IRON	NE	2,400	3,100	2,100	210,000	40,000	54,000	13,000	5600	8,400	25,000	8,400	4,100	6,600
LEAD	400	110	68	10	20	23	4,000	10	4.1	15	23	39	11	13
MAGNESIUM	NE	2,400	2,000	900	3,200	10,000	4,500	3,800	1600	2,200	6,500	1,500	1,600	2,000
MERCURY	6	BDL	0.5	BDL	0.5	BDL	0.9	0.2	BDL	BDL	BDL	0.3	0.2	BDL
NICKEL	400	BDL	7.4	6.3	9	53	32	14	7.0	16	33	6.8	11	18
POTASSIUM	NE	340	300	1,700	1,300	8,200	1,600	1,300	500	1,300	4,700	1,000	1,100	1,500
SELENIUM	180	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
SILVER	89	BDL	BDL	BDL	BDL	BDL	1.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL
SODIUM	NE	1100	300	200	240	800	400	200	300	300	500	400	500	300
THALLIUM	10	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
ZINC	1000	74	110	8.3	38	130	700	28	15	26	70	28	35	29
COBALT	NE	BDL	2.3	1.2	6	14	9.7	5.1	2.2	5.1	9.4	3.8	2	3
BERYLLIUM	1	BDL	BDL	0.6	BDL	BDL	BDL	BDL	BDL	0.9	1.0	0.7	BDL	BDL
MANGANESE	5200	160	910	63	2,500	500	600	240	97	350	400	760	250	73
ANTIMONY	9	BDL	1.0	BDL	BDL	BDL	1.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL
VANADIUM	NE	29	14	14	17	55	24	25	10	18	38	17	13	17
CYANIDE	100		1.3	NA			1.2	NA	BDL	BDL	BDL	0.6	BDL	BDL

NOTES:

1. BDL = Below Method Detection Limit
2. Results are in milligrams per kilogram (mg/kg).

SECTION 1



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner



June 19, 2008

Peter Britz
Environmental Planner
City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801

**SUBJECT: North Hampton – Coakley Landfill Superfund Site, 480 Breakfast Hill Road
Groundwater Management Permit, DES Site # 198712001, Project RSN # 431**

Groundwater Management Permit Application, prepared by Hancock &
Associates, dated May 14, 2008

Dear Mr. Britz:

Please find enclosed Groundwater Management Permit Number GWP-198712001-N-001, approved by the Department of Environmental Services (Department). This permit is issued for a period of 5 years to monitor the effects of past discharges of contaminants of concern, as defined in Table 12 of the 1994 Site Record of Decision.

All monitoring summaries and all required sampling results must be submitted to the Groundwater Management Permits Coordinator at the address below. All correspondence shall contain a cover letter that clearly shows the Department identification number for the site (DES Site # 198712001). **Please note that upon issuance of this permit, it is only necessary to submit monitoring results to the “Groundwater Management Permits Coordinator” and not to my attention.**

Please note that Condition # 9 requires the permit holder to provide notice of the permit by certified mail, within 30 days of permit issuance, to all owners of lots of record within the Groundwater Management Zone. Documentation of the notification, in the form of a copy of the notice with return receipt(s), shall be submitted to the Department within 60 days of permit issuance.

Also, please note that Condition # 10 requires the permit holder to record “Notice” of the permit (not the permit), within 60 days of issuance, at the registry of deeds in the chain of title for each lot within the Groundwater Management Zone. An example Notice is enclosed for your use. A copy of each recorded Notice shall be submitted to the Department within 30 days of recordation.

Peter Britz
DES Site # 198712001
June 19, 2008
Page 2 of 2

Should you have any questions, please contact me at the Waste Management Division.

Sincerely,

A handwritten signature in black ink, appearing to be 'A. Hoffman', with a large loop at the start and a horizontal stroke at the end.

Andrew Hoffman, P.E.
State Project Coordinator
Hazardous Waste Remediation Bureau
Tel: (603) 271-6778
Fax: (603) 271-2181
Email: Andrew.Hoffman@des.nh.gov

Enclosure(s): Groundwater Management Permit No. GWP-198712004-N-001
Sample Recordation Notice

cc: Daniel MacRitchie, Hancock Associates
Kim McNamara, City Health Officer
Richard Pease, Federal Sites, Supervisor
Karlee Kenison, HWRB-GR&P, Supervisor
Peter Roth, NH DoJ



The
NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
hereby issues
GROUNDWATER MANAGEMENT PERMIT NO. GWP-198712001-N-001
to the permittee
COAKLEY LANDFILL GROUP
to monitor the past discharge of
Contaminants of Concern, as identified in Table 12 of the 1994 Record of Decision
at
COAKLEY LANDFILL
(480 Breakfast Hill Road)
in NORTH HAMPTON, N.H.
via the groundwater monitoring system comprised of
12 OU-1 monitoring wells, 25 OU-2 monitoring wells, 3 surface water, and 2 sediment and 1
leachate sampling station(s)
as depicted on the Site Plan entitled
"Environmental Monitoring Network"

dated August 16, 2007, prepared by Golder & Associates, Inc. of Manchester, New Hampshire

TO: COAKLEY LANDFILL GROUP
1 JUNKINS AVENUE
PORTSMOUTH, NEW HAMPSHIRE 03801

Date of Issuance: June 19, 2008

Date of Expiration: June 18, 2013

Pursuant to authority in N.H. RSA 485-C:6-a, the New Hampshire Department of Environmental Services (Department), hereby grants this permit to monitor past discharges to the groundwater at the above described location for five years subject to the following conditions:

(continued)

STANDARD MANAGEMENT PERMIT CONDITIONS

1. The permittee shall not violate Ambient Groundwater Quality Standards adopted by the Department (N.H. Admin. Rules Env-Or 600) in groundwater outside the boundaries of the Groundwater Management Zone, as shown on the referenced site plan.
2. The permittee shall not cause groundwater degradation that results in a violation of surface water quality standards (N.H. Admin. Rules Env-Ws 1700) in any surface water body.
3. The permittee shall allow any authorized staff of the Department, or its agent, to enter the property covered by this permit for the purpose of collecting information, examining records, collecting samples, or undertaking other action associated with this permit.
4. The permittee shall apply for the renewal of this permit at least 90 days prior to its expiration date.
5. This permit is transferable only upon written request to, and approval of, the Department. Compliance with the existing Permit shall be established prior to permit transfer. Transfer requests shall include the name and address of the person to whom the permit transfer is requested, signature of the current and future permittee, and a summary of all monitoring results to date.
6. The Department reserves the right, under N.H. Admin. Rules Env-Or 600, to require additional hydrogeologic studies and/or remedial measures if the Department receives information indicating the need for such work.
7. The permittee shall maintain a water quality monitoring program and submit monitoring results inclusive with the annual report to the Department's Groundwater Management Permits Coordinator no later than 120 days after sampling. Samples shall be taken from on-site monitoring wells and surface water sampling points as shown and labeled on the referenced site plan and other sampling points listed on the following table in accordance with the schedule outlined herein:

**Monitoring
Locations**

MW-5S, MW-6, FPC-2A,
FPC-2B, FPC-4B, FPC-6A,
FPC-6B, FPC-8B, GZ-105,
GZ-123, GZ-125, AE-2A,
AE-2B, AE-3A, AE-3B, AE-
4A, AE-4B
MW-4, MW-9, OP-2, OP-5,
FPC-7A, FPC-7B, FPC-9A,
FPC-11A, FPC-11B, AE-1A,
AE-1B
MW-5D, MW-8, MW-
11, FPC-8A
MW-10, RMW-3, BP-4,
FPC-5A, FPC-5B

**Sampling
Frequency**

August each year

August each year

August each year

August each year

Parameters

Field parameters, dissolved iron &
manganese, target analyte list
(TAL) metals (total), NHDES
Waste Management Division Full
List of Analytes for Volatile
Organics (Full List VOCs).
Field parameters, dissolved iron &
manganese, TAL metals (total).

Field parameters, TAL metals
(total), Full List VOCs.
Field parameters, TAL metals
(total).

(continued)

GWP-198712001-N-001

<u>Monitoring Locations</u>	<u>Sampling Frequency</u>	<u>Parameters</u>
R-3, R-5	August each year	Field parameters, Full List VOCs.
SW-4, SW-5, SW-103	August each year	Field parameters, ammonia, TAL metals (total), Full List VOCs.
SED-4, SED-5	August each year	TAL metals (total).
L-1	August each year	Field parameters, COD, ammonia, TAL metals (total), Full List VOCs.

Sampling shall be performed in accordance with the documents listed in Env-Or 610.02 (e). Samples shall be analyzed by a laboratory certified by the U.S. Environmental Protection Agency or the New Hampshire Department of Environmental Services. All overburden groundwater samples collected for metal analyses (iron, manganese, and Drinking Water Metals) shall be analyzed for dissolved metals; and thus must be field filtered (with a 0.45-micron filter) and acidified after filtration in the field. Surface water samples and samples collected from bedrock or water supply wells shall be analyzed for total metals, and shall not be filtered. Surface water samples shall be collected and analyzed in accordance with 40 CFR 136. As referred to herein, the term "Target Analyte Metals (TAL)" refers to aluminum, arsenic, barium, cadmium, calcium, chromium, copper, iron, lead, magnesium, mercury, nickel, potassium, selenium, silver, sodium, thallium, zinc, cobalt, beryllium, manganese, antimony and vanadium.

Summaries of water quality shall be submitted annually in December to the Department's Waste Management Division, attention Groundwater Management Permits Coordinator, using a format acceptable to the Department. The Summary Report shall include the information listed in Env-Or 607.04 (a), as applicable.

The Annual Summary Report shall be prepared and stamped by a professional engineer or professional geologist licensed in the State of New Hampshire.

8. Issuance of this permit is based on the Groundwater Management Permit Application dated May 14, 2008, and the historical documents found in the Department file DES Site # 198712001. The Department may require additional hydrogeologic studies and/or remedial measures if invalid or inaccurate data are submitted.
9. Within 30 days of the date of Department approval of this Groundwater Management Permit, the permittee shall provide notice of the permit by certified mail, return receipt requested, to all owners of lots of record within the Groundwater Management Zone. The permittee shall submit documentation of this notification to the Department within 60 days of permit issuance.
10. Within 60 days of the date of Department approval of this Groundwater Management Permit, the permit holder shall record notice of the permit in the registry of deeds in the chain of title for each lot within the Groundwater Management Zone. **This recordation requires that the registry be provided with the name of current property owner and associated book and page numbers for the deed of each lot encumbered by this permit. Portions of State/Town/City roadways and associated right-of-way properties within the Groundwater Management Zone do not require recordation.** A copy of each recorded notice shall be submitted to the Department within 30 days of recordation.

11. Within 30 days of discovery of a violation of an ambient groundwater quality standard at or beyond the Groundwater Management Zone boundary, the permittee shall notify the Department in writing. Within 60 days of discovery, the permittee shall submit recommendations to correct the violation. The Department shall approve the recommendations if the Department determines that they will correct the violation.

SPECIAL CONDITIONS FOR THIS PERMIT

12. Recorded property within the Groundwater Management Zone shall include the lots as listed and described in the following table:

Tax Map/ Lot #	Property Address	Owner Name and Address	Deed Reference (Book/Page)
Map 10 Lot 11	355 Lafayette Road Rye	First & Ten Property Management PO Box 1058 Rye 03843	Book 3294 Page 2953
Map 17 Lot 72	67 North Road North Hampton	Joan Nordstrom 67 North Road North Hampton 03862	Book 2416 Page 583
Map 17 Lot 73	65 North Road North Hampton	Yolanda Fitzgerald PO Box 626 North Hampton 03862	Book 3007 Page 2807
Map 17 Lot 82	160 Lafayette Rd North Hampton	Luck Enterprises 115 Lafayette Road North Hampton 03862	Book 2473 Page 1659
Map 17 Lot 86	180 Lafayette Rd North Hampton	Christopher & Ricardo Fucci 180 Lafayette Road North Hampton 03862	Book 3319 Page 952
Map 17 Lot 87	186 Lafayette Rd North Hampton	Lori Lessard, Trustee 186 Lafayette Road North Hampton 03862	Book 2760 Page 2101
Map 21 Lot 8	188 Lafayette Rd North Hampton	Helen McKittrick 188 Lafayette Road North Hampton 03862	Book 2641 Page 2656
Map 21 Lot 10	8A Lafayette Terrace North Hampton	Darleena Wylie 8 Lafayette Terrace North Hampton 03862	Book 3219 Page 2588
Map 21 Lot 11	12A Lafayette Terrace North Hampton	Susan Laffey 12 Lafayette Terrace North Hampton 03862	Book 2964 Page 2565
Map 21 Lot 12	16A Lafayette Terrace North Hampton	Christine Adinolfo 16 Lafayette Terrace North Hampton 03862	Book 2963 Page 1721
Map 21 Lot 14	20 Lafayette Terrace North Hampton	Joseph Hanley 20 Lafayette Terrace North Hampton 03862	Book 4682 Page 1265

(continued)

GWP-198712001-N-001

Tax Map/ Lot #	Property Address	Owner Name and Address	Deed Reference (Book/Page)
Map 21 Lot 14-1	40-42 Lafayette Terrace North Hampton	James Jones 207 Atlantic Avenue North Hampton 03862	Book 4451 Page 1104
Map 21 Lot 15	44 Lafayette Terrace North Hampton	Bridget Conner 44 Lafayette Terrace North Hampton 03862	Book 4183 Page 1638
Map 21 Lot 16	46 Lafayette Terrace North Hampton	Rodney Booker 46 Lafayette Terrace North Hampton 03862	Book 4275 Page 902
Map 21 Lot 17	1 Lafayette Terrace North Hampton	Bernard Tracey 257 Washington Road Rye 03870	Book 2450 Page 687
Map 21 Lot 18	3 Lafayette Terrace North Hampton	Kathleen Tracey 3 Lafayette Terrace North Hampton 03862	Book 1243 Page 317
Map 21 Lot 19	5 Lafayette Terrace North Hampton	Kimberly Bartlett 5 Lafayette Terrace North Hampton NH 03862	Book 3824 Page 2799
Map 21 Lot 20	9 Lafayette Terrace North Hampton	Alexis Perron 9 Lafayette Terrace North Hampton NH 03862	Book 3088 Page 1774
Map 21 Lot 21	15 Lafayette Terrace North Hampton	Tracy Margeson 15 Lafayette Terrace North Hampton NH 03862	Book 3121 Page 1606
Map 21 Lot 22	15 Lafayette Terrace North Hampton	Anita Gabree 15 Lafayette Terrace North Hampton 03862	Book 3013 Page 2221
Map 21 Lot 23	15 Lafayette Terrace North Hampton	Tracy Margeson 15 Lafayette Terrace North Hampton NH 03862	Book 3121 Page 1606
Map 21 Lot 24	43 Lafayette Terrace North Hampton	William Warman 380 Lafayette Rd, 11-102 Seabrook NH 03874	Book 4374 Page 1365
Map 21 Lot 25	45 Lafayette Terrace North Hampton	ZCCMMXIIIV0000IIII/5 NH Ltd Partnership PO Box 65 Portsmouth NH 03802	Book 2530 Page 1863
Map 21 Lot 26	198 Lafayette Road North Hampton	Gozinta LLC 198 Lafayette Road North Hampton NH 03862	Book 4275 Page 902
Map 21 Lot 27	206 Lafayette Road North Hampton	206 Lafayette Road LLC 206 Lafayette Road North Hampton NH 03862	Book 4785 Page 379
Map 21 Lot 27-1	200 Lafayette Road North Hampton	Derek Burt 8774 Mustic Circle Northport FL 34287	Book 2491 Page 339

(continued)

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Tax Map/ Lot #	Property Address	Owner Name and Address	Deed Reference (Book/Page)
Map 21 Lot 28	216 Lafayette Road North Hampton	Stella Ciborosi PO Box 443 Concord, NH 03301	Book 2366 Page 1127
Map 21 Lot 28-1	216 Lafayette Road North Hampton	Leo Crotty, Jr. 216 Lafayette Road North Hampton NH 03862	Book 2475 Page 1278
Map 21 Lot 29	212 Lafayette Road North Hampton	S&L Realty Trust PO Box 4276 Portsmouth NH 03802	Book 3666 Page 1199
Map 21 Lot 31	224 Lafayette Road North Hampton	MA NEGM, LLC 302 Main Street Somersworth MA 03878	Book 4649 Page 2366
Map 21 Lot 41	North Road Rear North Hampton	Elmer Sewell 340 Breakfast Hill Road Greenland NH 03840	Book 1340 Page 524
Map 21 Lot 46	8A Lafayette Terrace, North Hampton	Darleena Wylie 8 Lafayette Terrace North Hampton NH 03862	Book 3219 Page 2588
*Map R1 Lot 13	340 Breakfast Hill Rd Greenland	Elmer Sewell, Rev. Tr. 96 340 Breakfast Hill Road, Greenland NH 03840	Book 3159 Page 928
Map R1 Lot 9B	560 Breakfast Hill Rd Greenland	Town of Greenland PO Box 100 Greenland NH 03840	Book 3454 Page 1131

*A portion of the Sewall parcel (Tax Map R1, Lot #13) is included as within the GMZ and is described as follows:

Commencing at a point at the intersection of the westerly sideline of the Boston and Maine Railroad right of way and the town line of Greenland and North Hampton, thence; N80°19'25"W four hundred sixty-six and fourteen hundredths feet (466.14') by the town line of North Hampton to a point, thence; N79°55'00"W eighteen and ninety-nine hundredths feet (18.99') by the town line of North Hampton to a point, thence; N17°29'30"E one thousand ninety-seven and eighty hundredths feet (1097.80') by other land of the Barbara E. Sewall Revocable Trust to a point, thence; S76°51'30"E four hundred thirty-four and zero hundredths feet (434.00') by other land of the Barbara E. Sewall Revocable Trust to a point, thence; S13°08'30"W one hundred sixty-three and twenty-one hundredths feet (163.21') by land of the Boston and Maine Railroad right of way to a point, thence; S35°09'35"W eighty-eight and two hundredths feet (88.02') by land of the Boston and Maine Railroad right of way to a point, thence; S13°08'30"W eight hundred twenty and sixty-four hundredths feet (820.64') by land of the Boston and Maine Railroad right of way to the point of beginning.

13. All monitoring wells at the site shall be properly maintained and secured from unauthorized access or surface water infiltration.

14. UNDEVELOPED LOTS WITHIN THE GROUNDWATER MANAGEMENT ZONE:

- A) Consistent with Env-Or 607.06(d), for each undeveloped lot which is included (in whole or part) in the groundwater management zone and which lacks access to a public water system, the permittee shall inquire of the property owner at least once each year as to whether there are any new drinking water supply well(s) on the property. The permittee shall include a report on this inquiry in the Annual Summary Report required in Standard Permit Condition # 7.
- B) Upon discovery of a new drinking water supply well(s), whether as a result of the annual inquiry, upon notice from the lot owner or by any other means, the permittee shall provide written notification to the Department and, to ensure compliance with Env-Or 607.06(a), prepare a contingency plan to provide potable drinking water in the event a well is or becomes contaminated above the drinking water standards. The potable water supply shall meet applicable federal and state water quality criteria. This plan shall be submitted to the Department for approval within 15 days of the date of discovery.
- C) Consistent with Env-Or 607.06(e), the permittee shall cause all new drinking water supply well(s) to be sampled within 30 days of discovery. The well(s) shall be sampled for all the parameters included in Standard Condition # 7, unless otherwise specified in writing by the Department. The permittee shall forward all analytical results to the Department and the owner of the drinking water supply well within 7 days of receipt of the results.

Based on the results:

- i. If the new well is not contaminated as defined in Env-Or 603.01, the permittee shall continue to sample the new wells annually as part of the permit.
- ii. If analytical results indicate the water is contaminated above applicable federal and state water quality criteria, the permittee shall:
 - a. Notify the owner immediately;
 - b. Obtain a confirmation set of analytical samples within 14 days of receipt of the original results indicating a groundwater quality standard exceedence; and
 - c. Following confirmation of groundwater quality standard exceedence, immediately implement the contingency plan submitted for approval pursuant to Special Permit Condition # 14B, above.



Carl W. Baxter, P.E., Administrator
Hazardous Waste Remediation Bureau
Waste Management Division

Under RSA 21-0:14 and 21-0:9-V, any person aggrieved by any terms or conditions of this permit may appeal to the Waste Management Council in accordance with RSA 541-A and N.H. Admin. Rules, Env-WMC 200. Such appeal must be made to the Council within 30 days and must be addressed to the Chairman of the Waste Management Council, c/o Appeals Clerk, Department of Environmental Services Legal Unit, 29 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095.

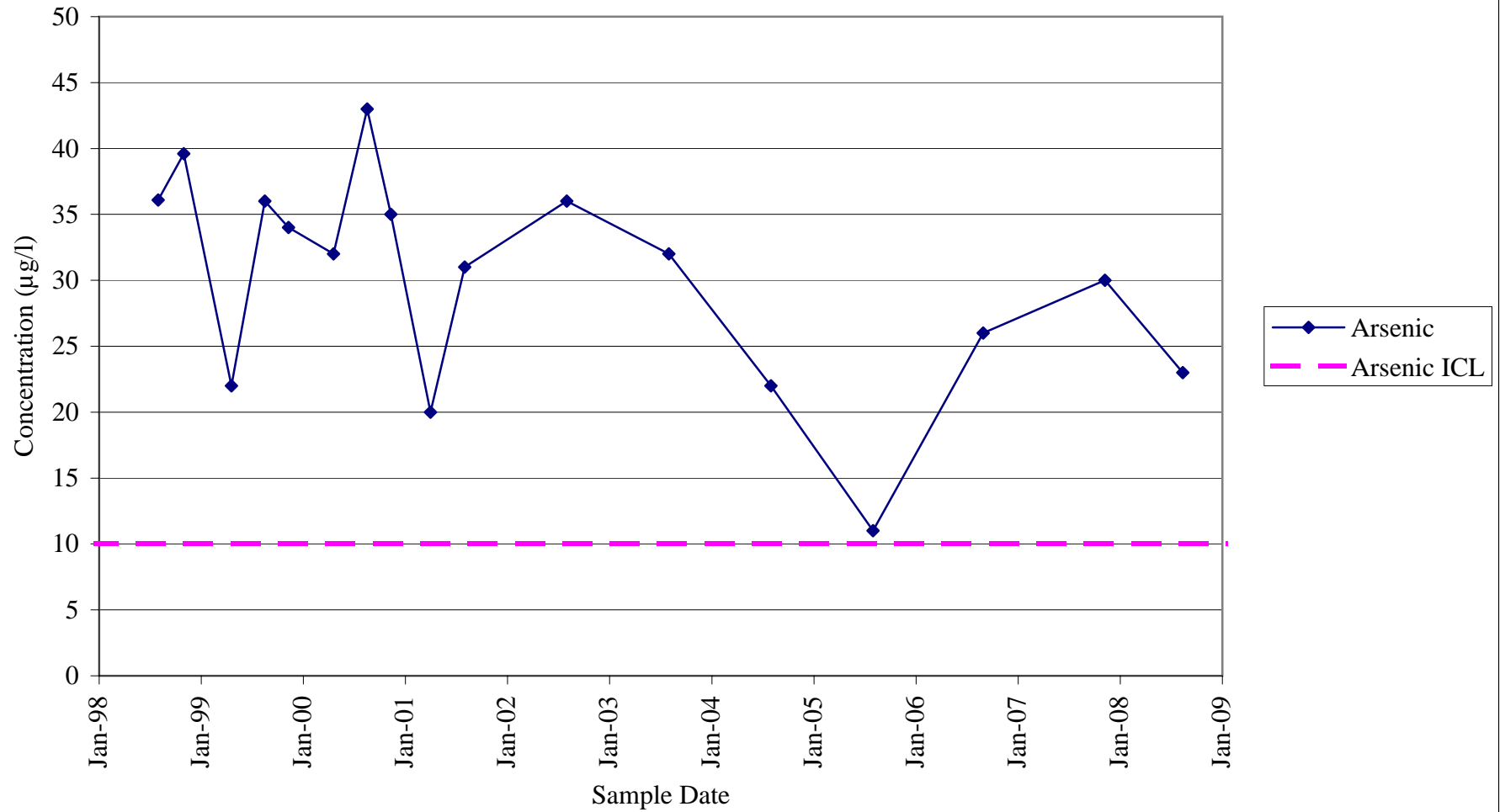
GWP-198712001-N-001

SECTION 2

SECTION 3

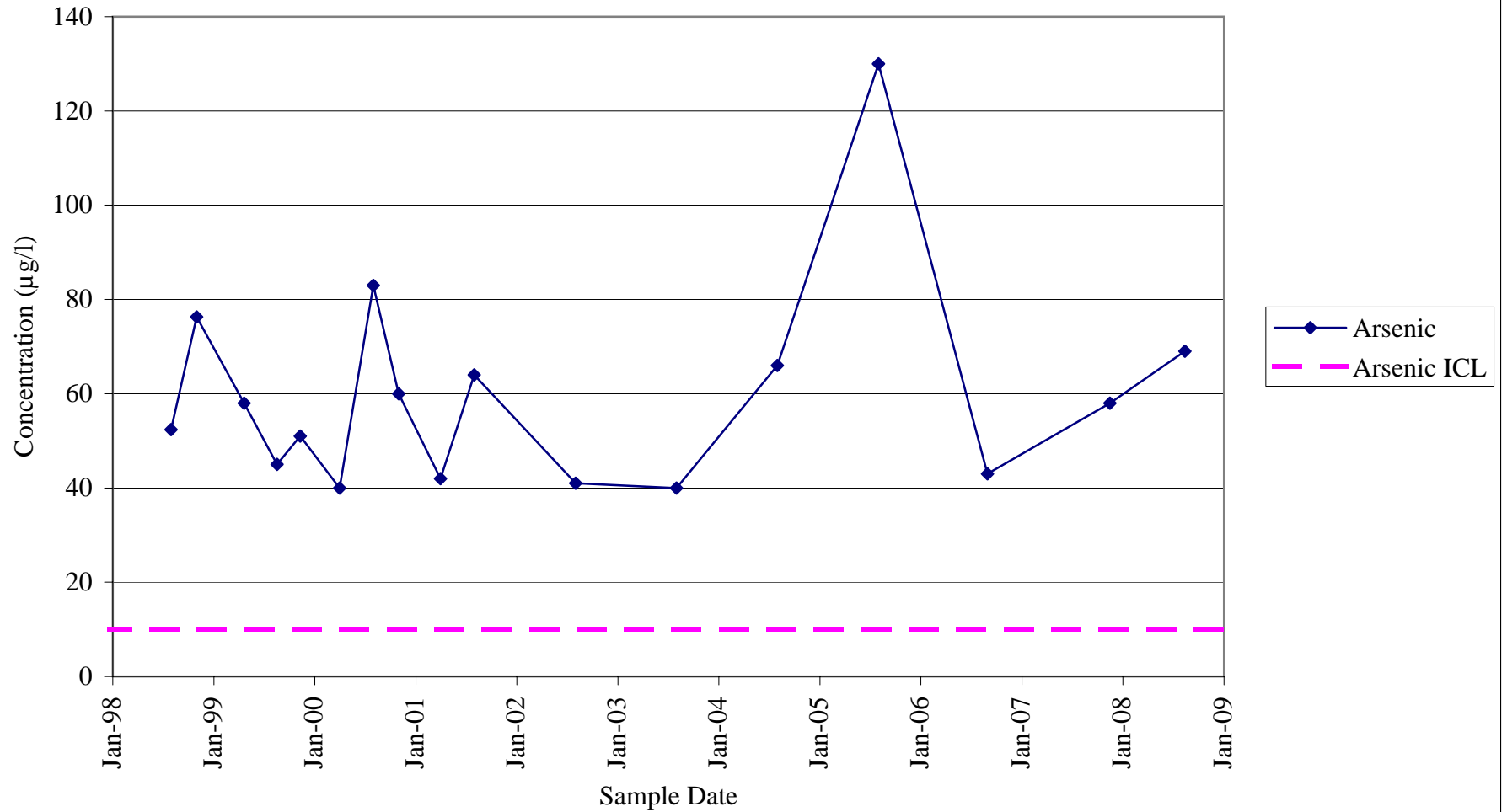
BP-4

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH

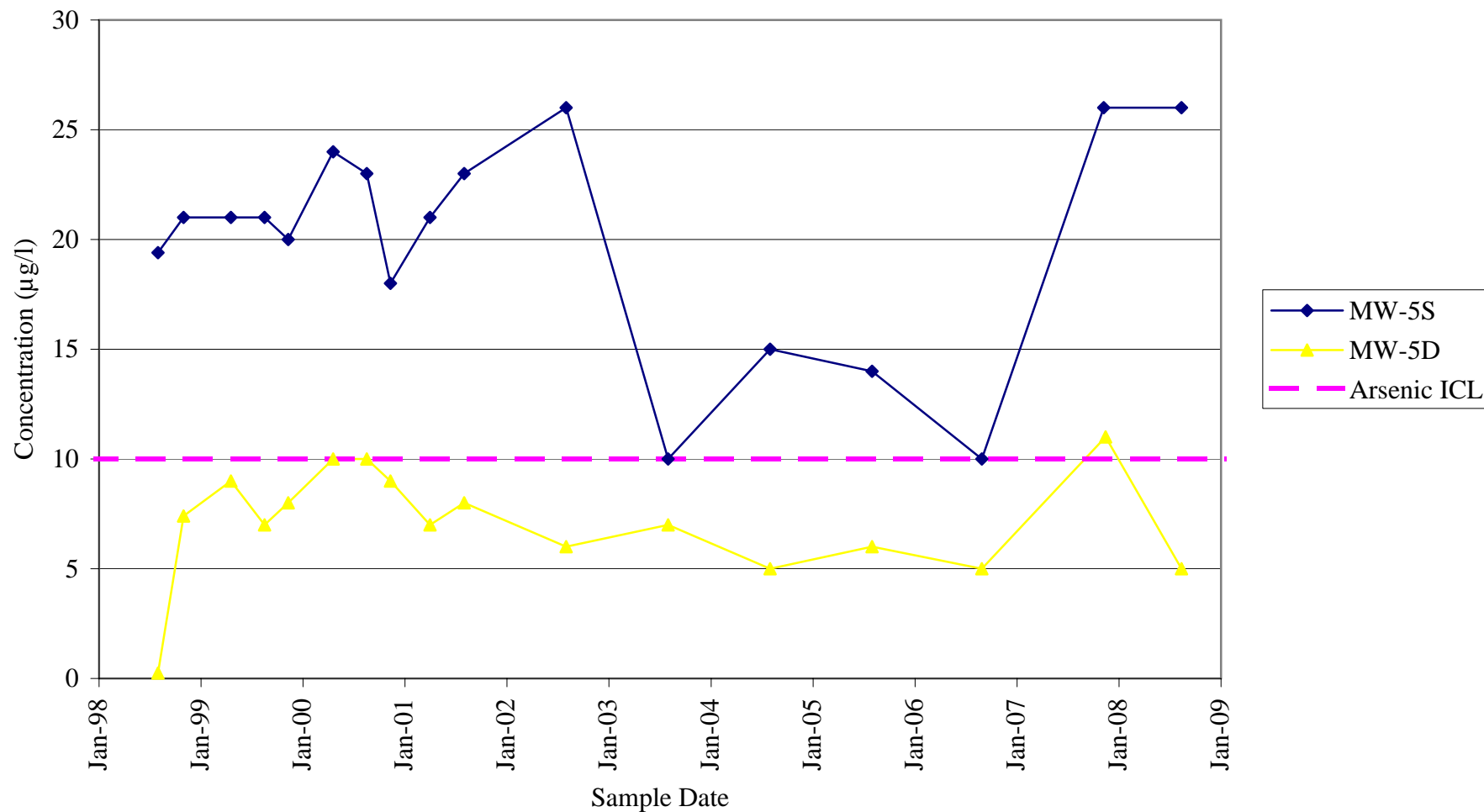


MW-4

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH

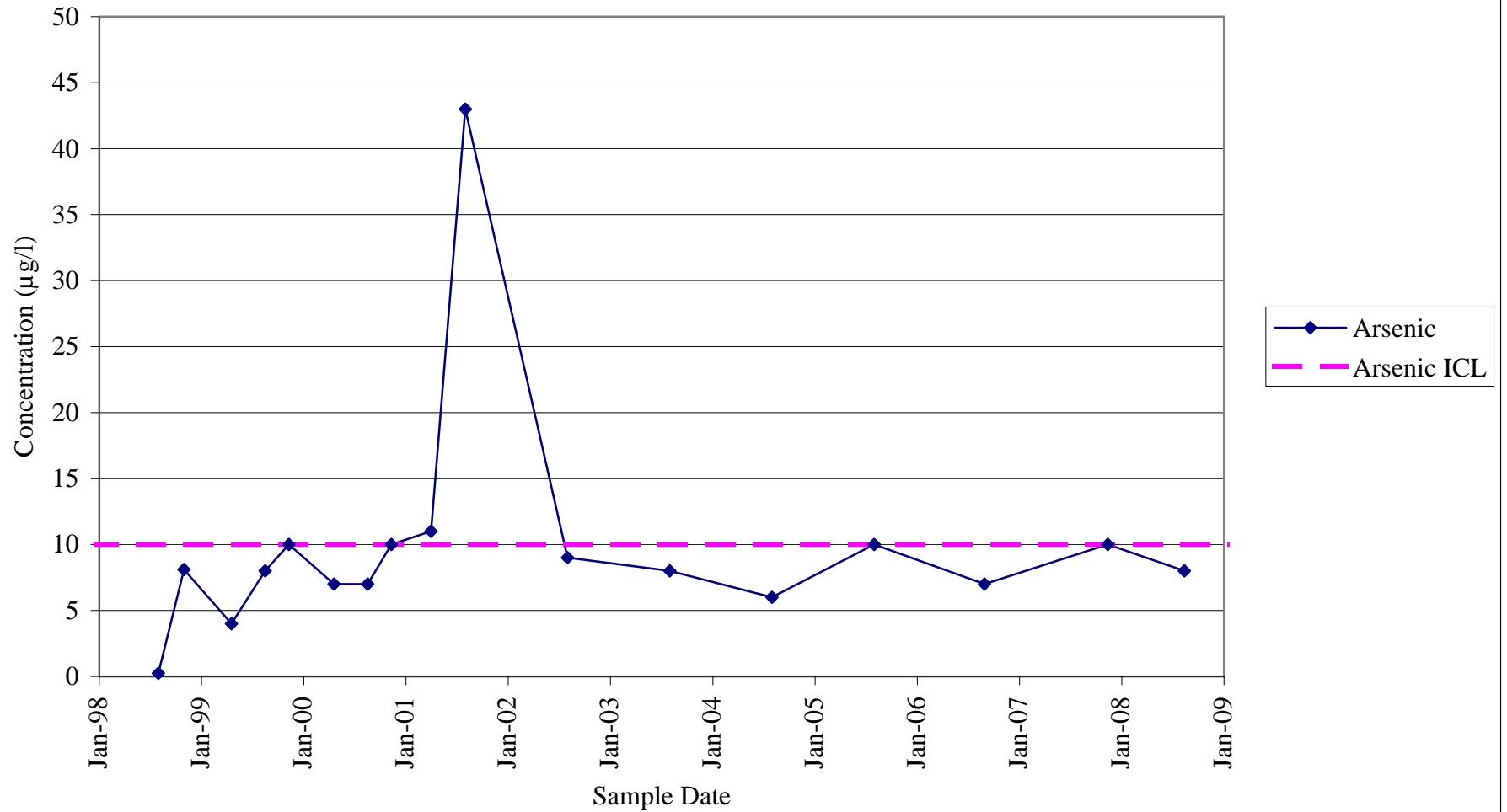


MW-5S & MW-5D
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



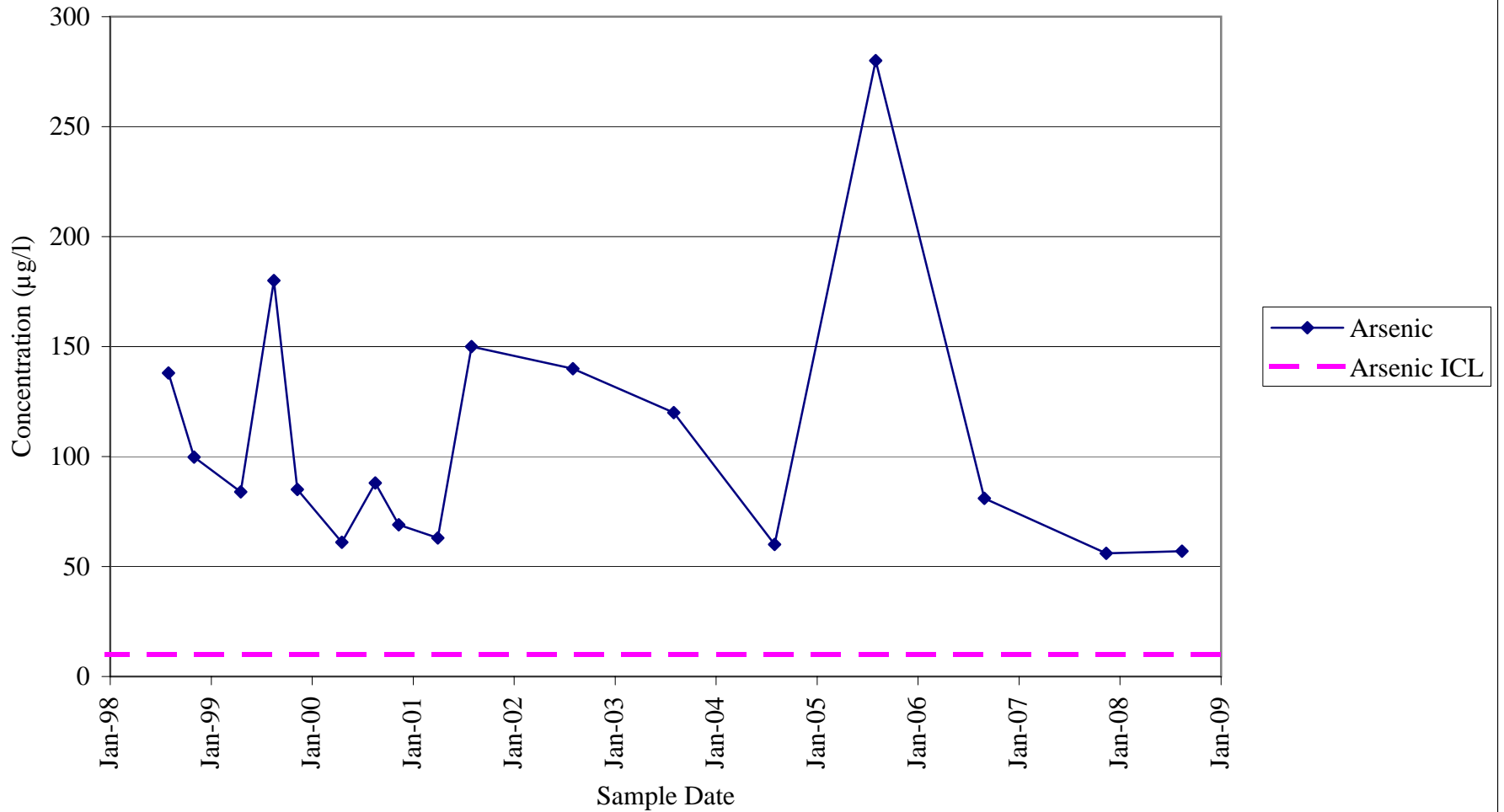
MW-8

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



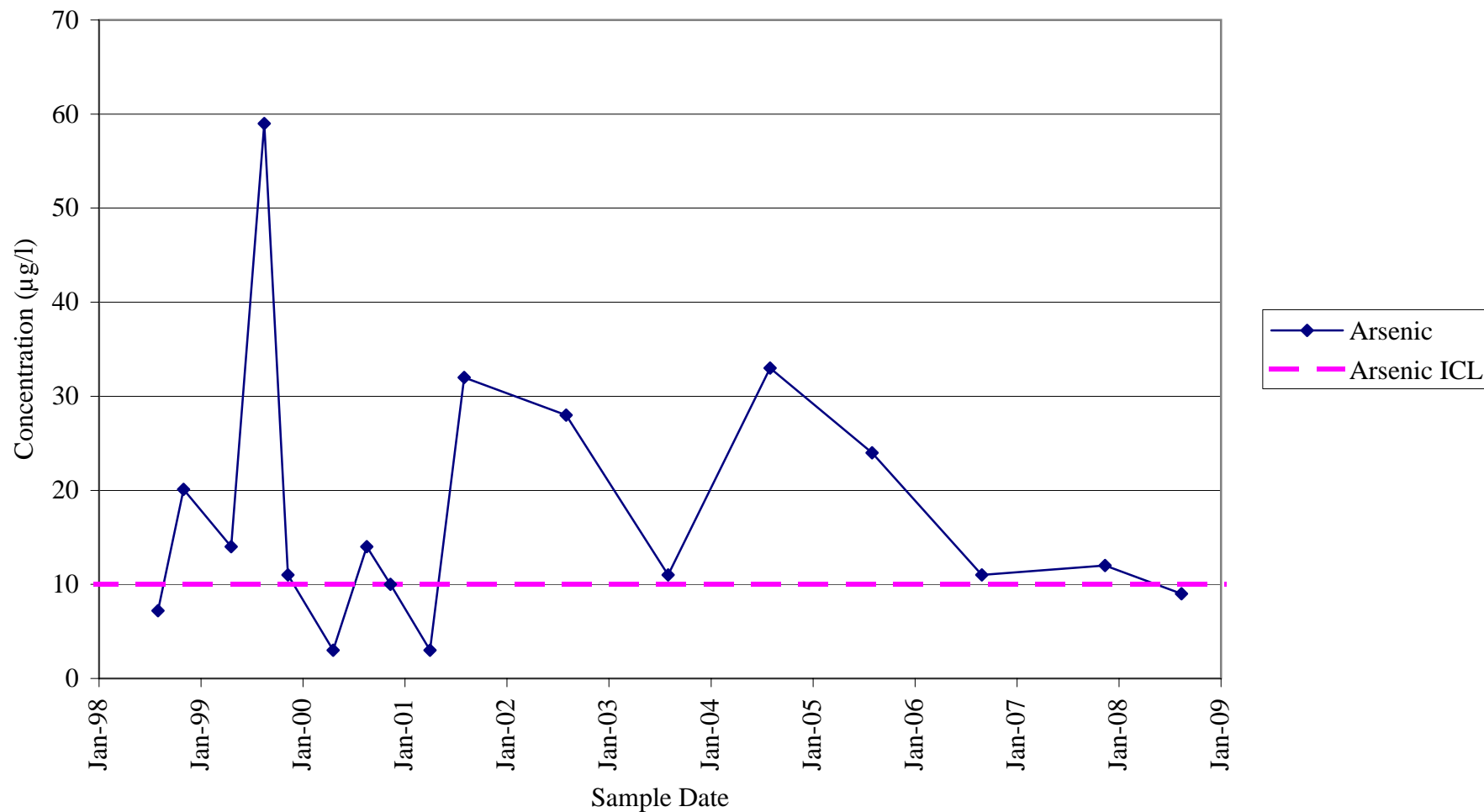
MW-9

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



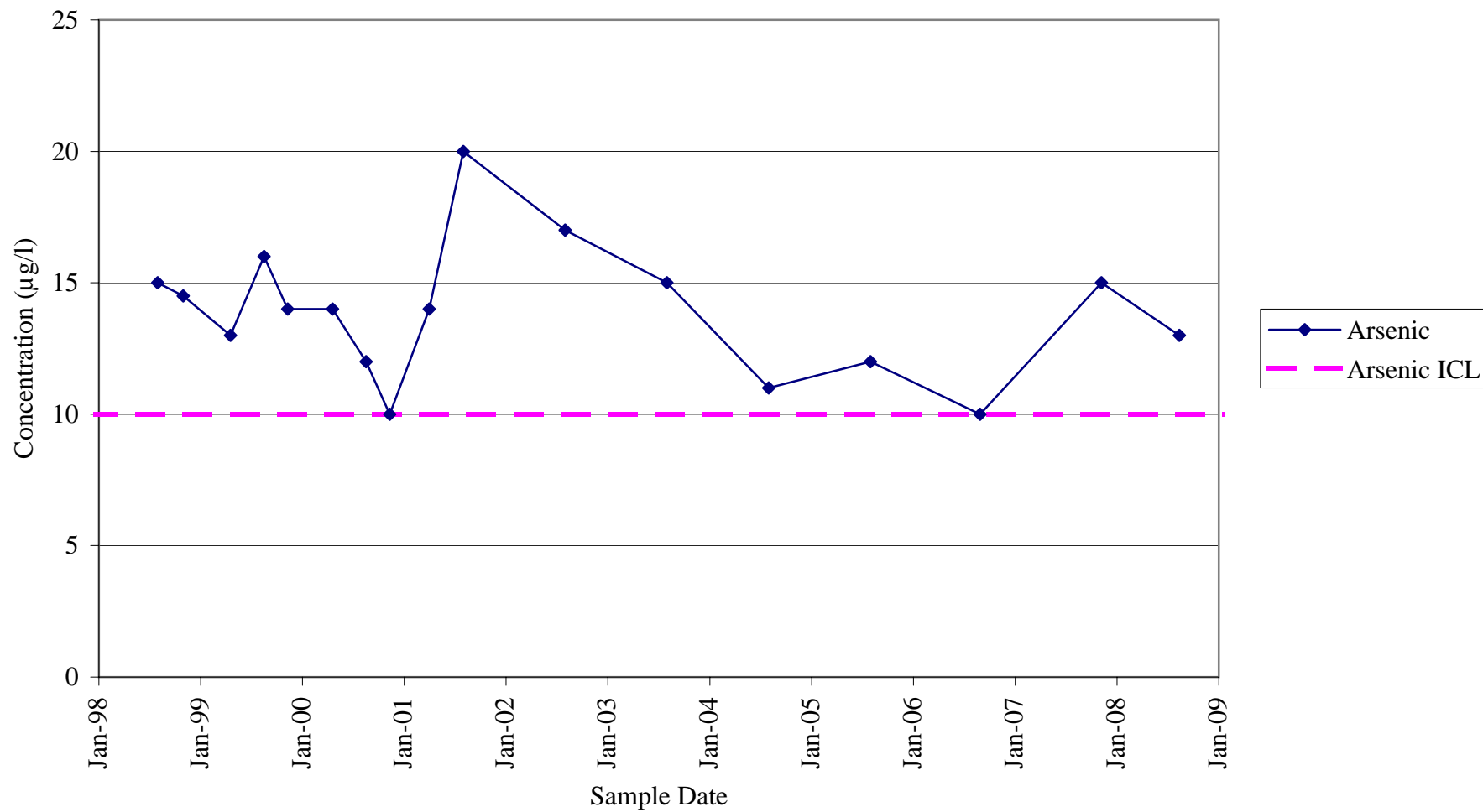
MW-10

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



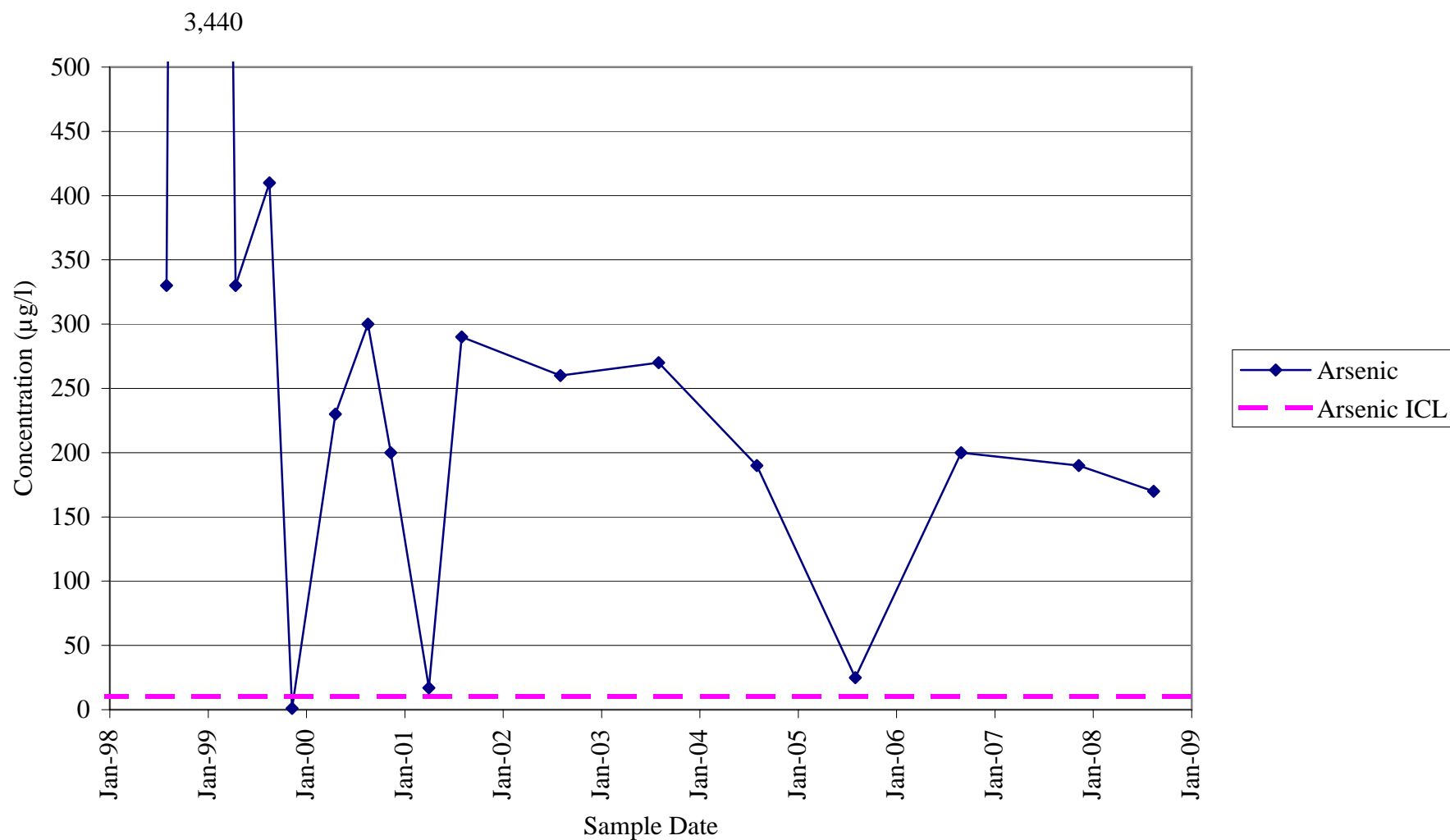
MW-11

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



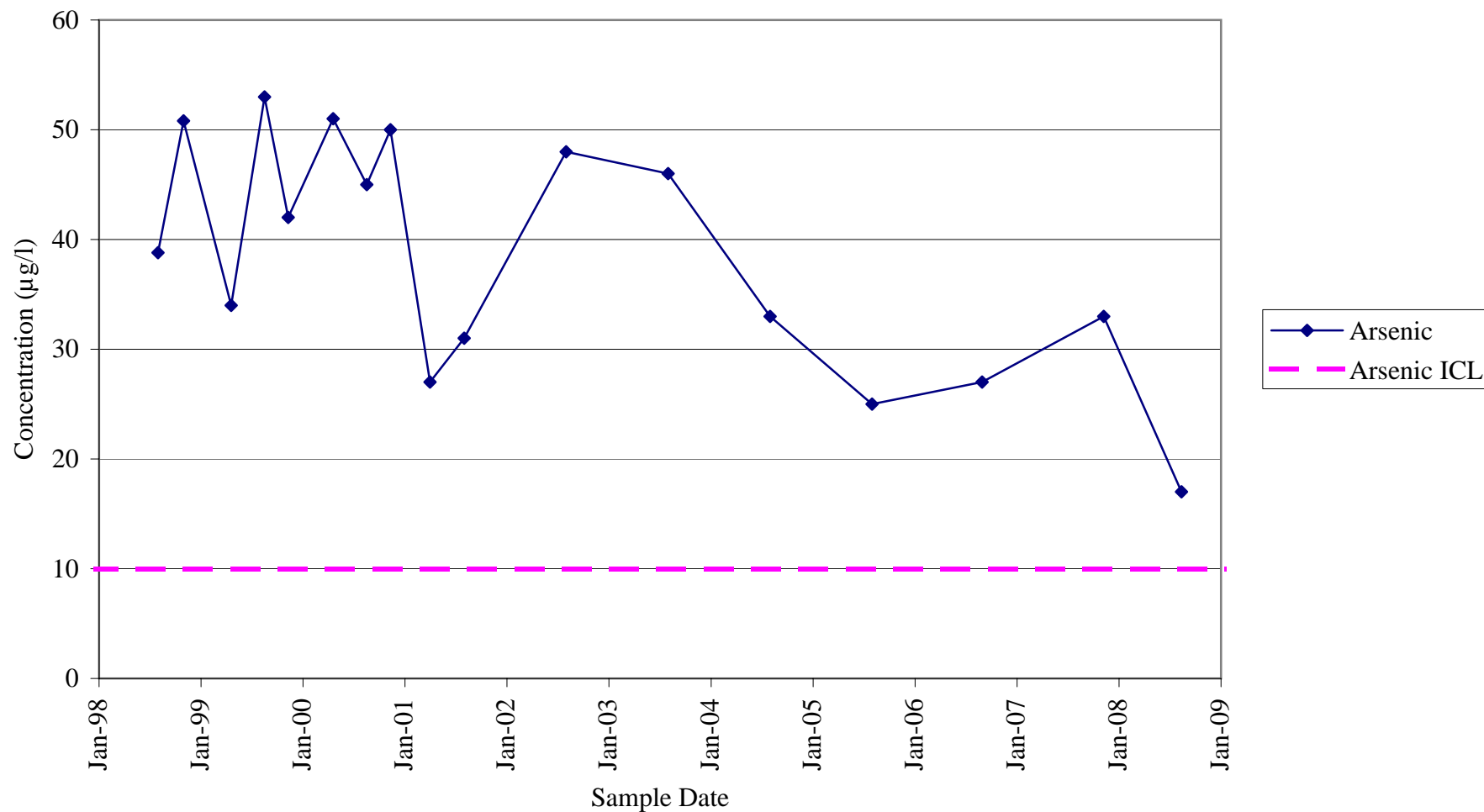
OP-2

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



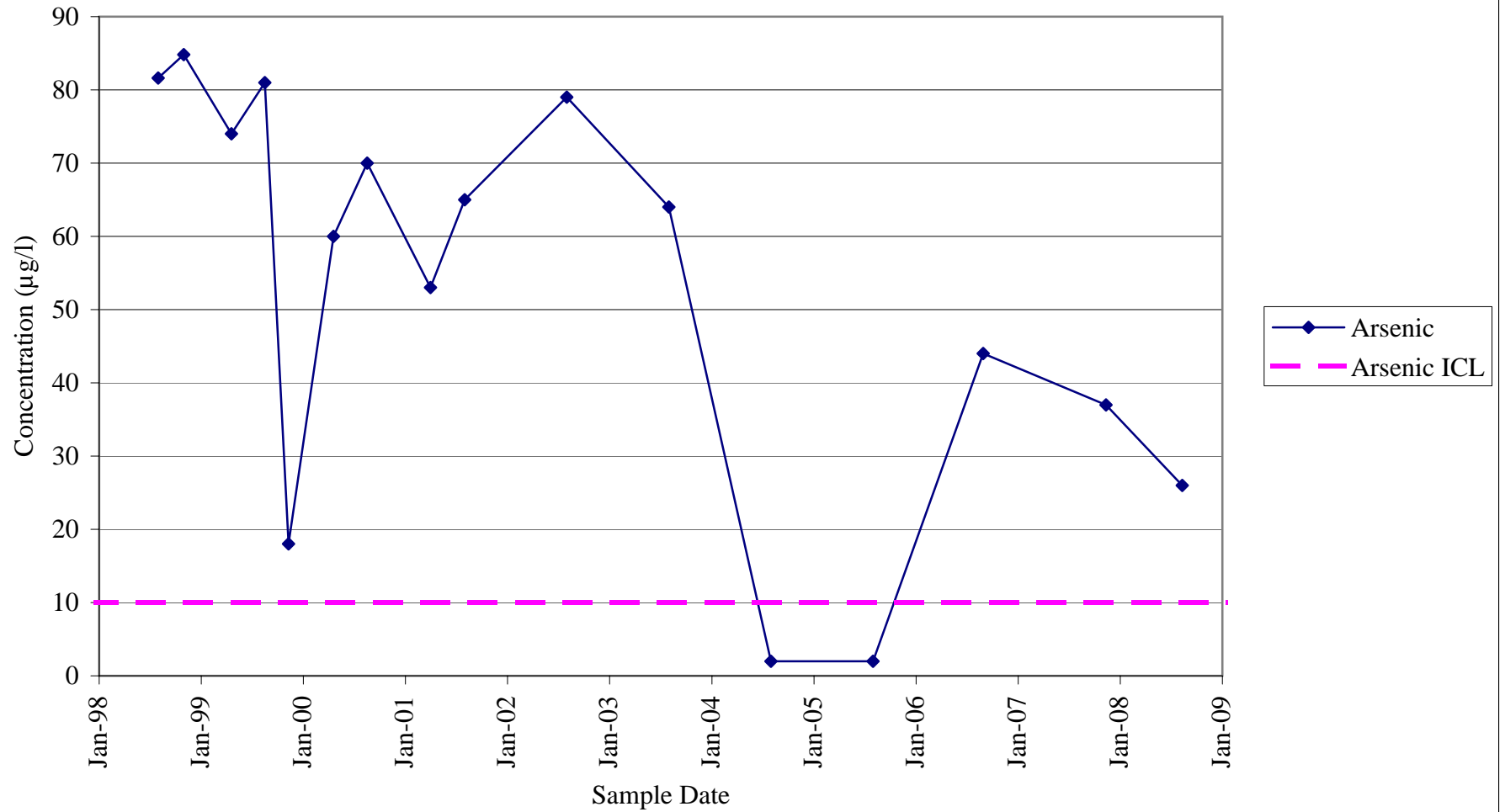
OP-5

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



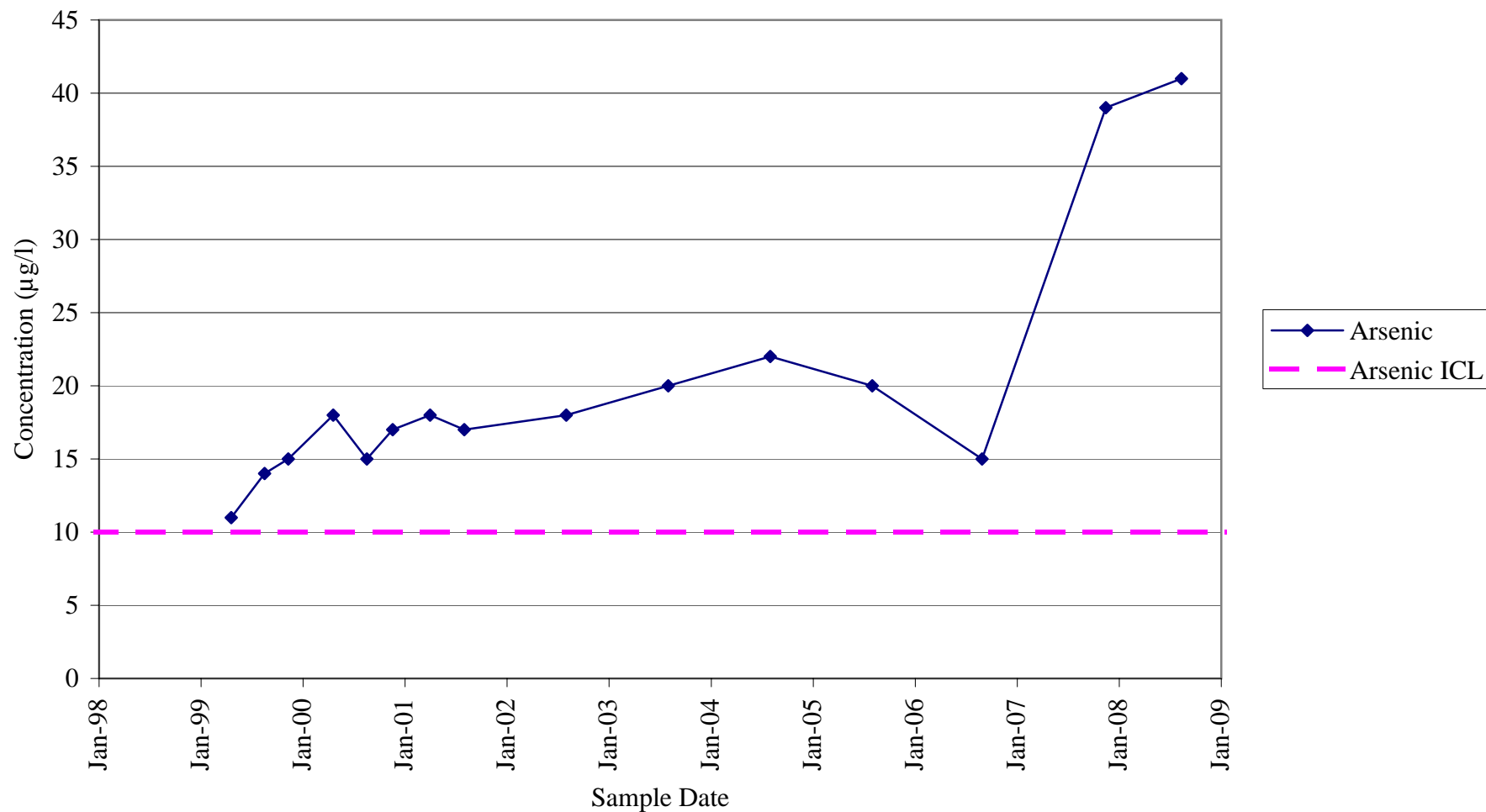
FPC-9A

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH

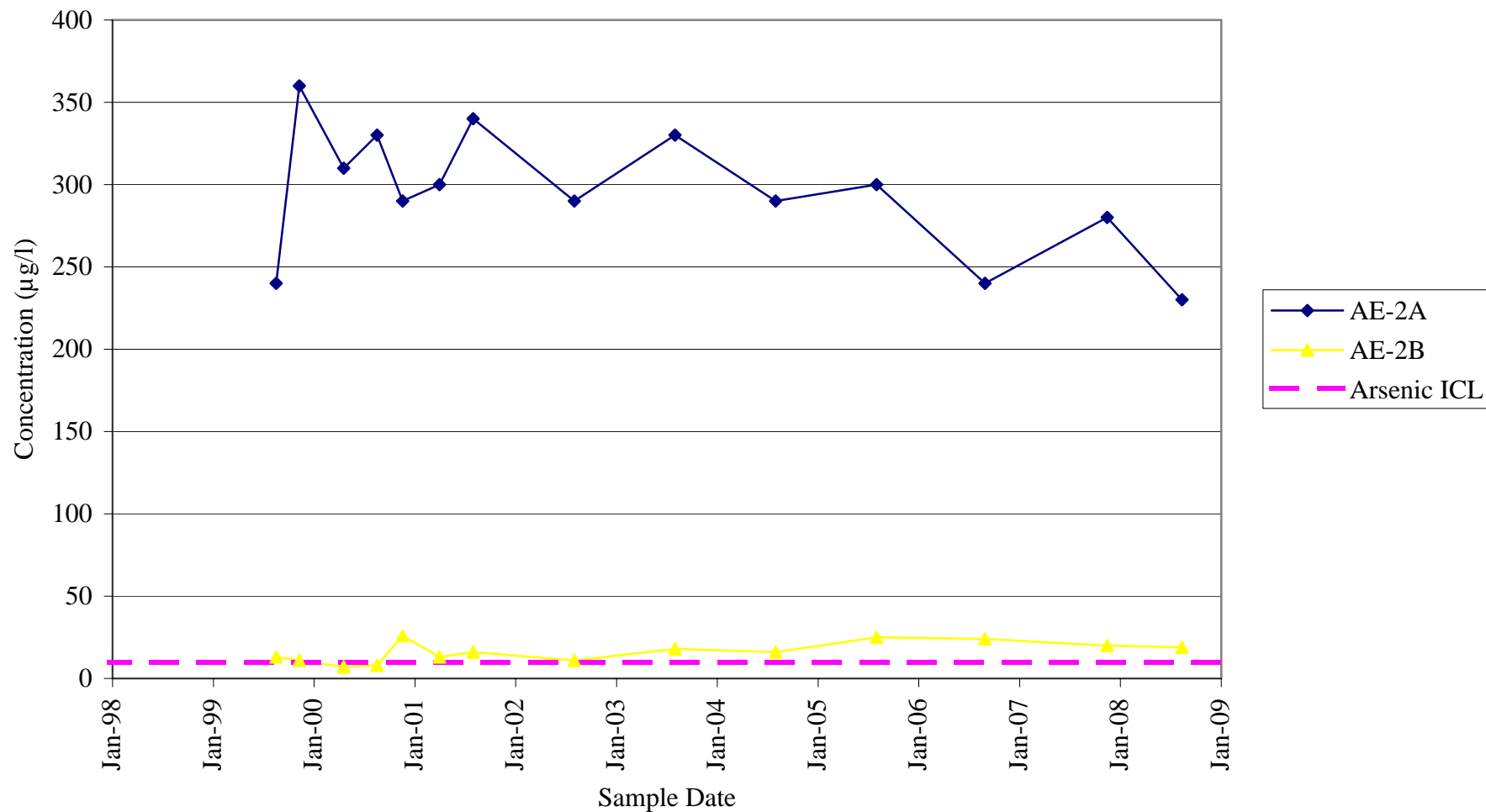


AE-1A

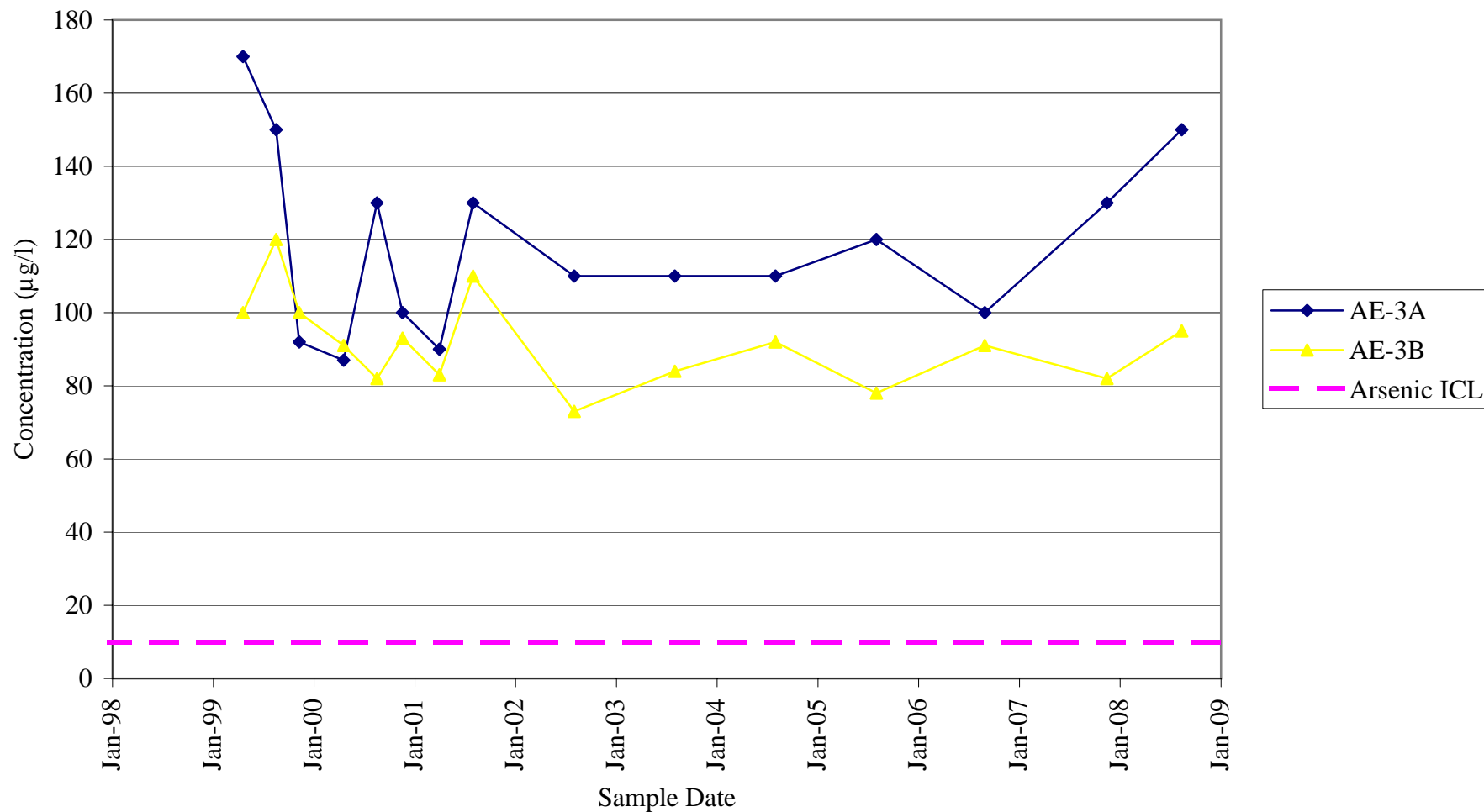
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



AE-2A & AE-2B
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH

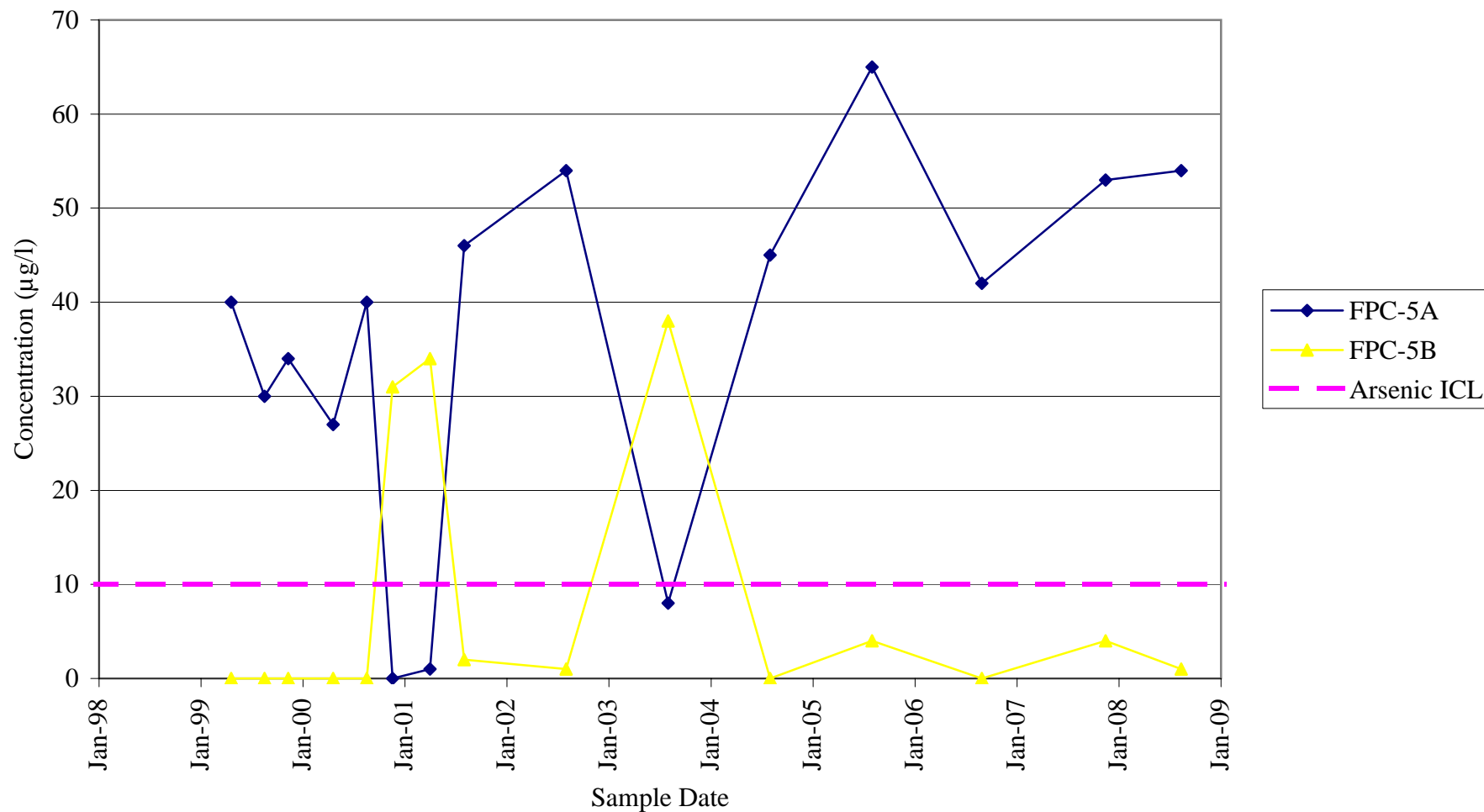


AE-3A & AE-3B
Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



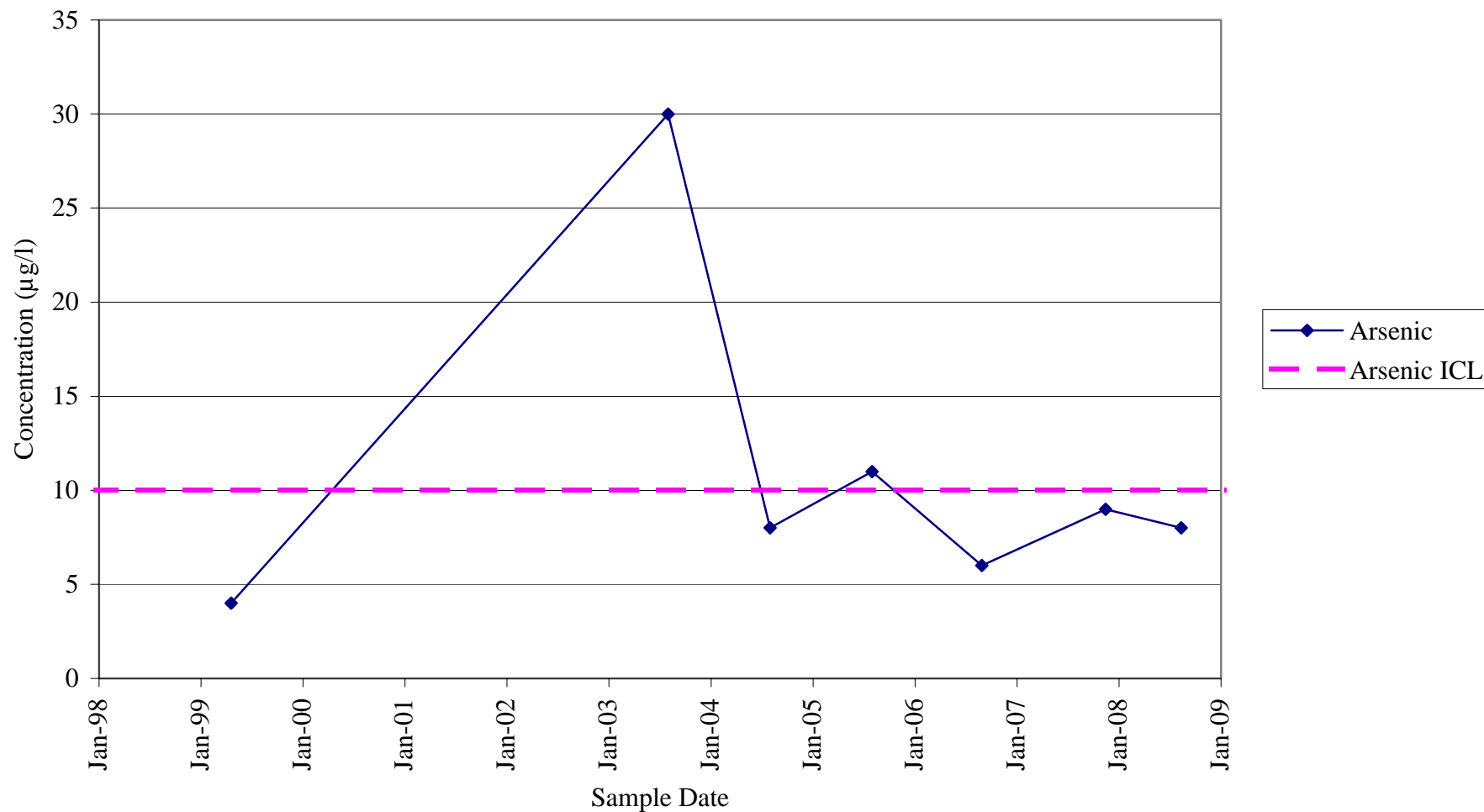
FPC-5A & FPC-5B

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



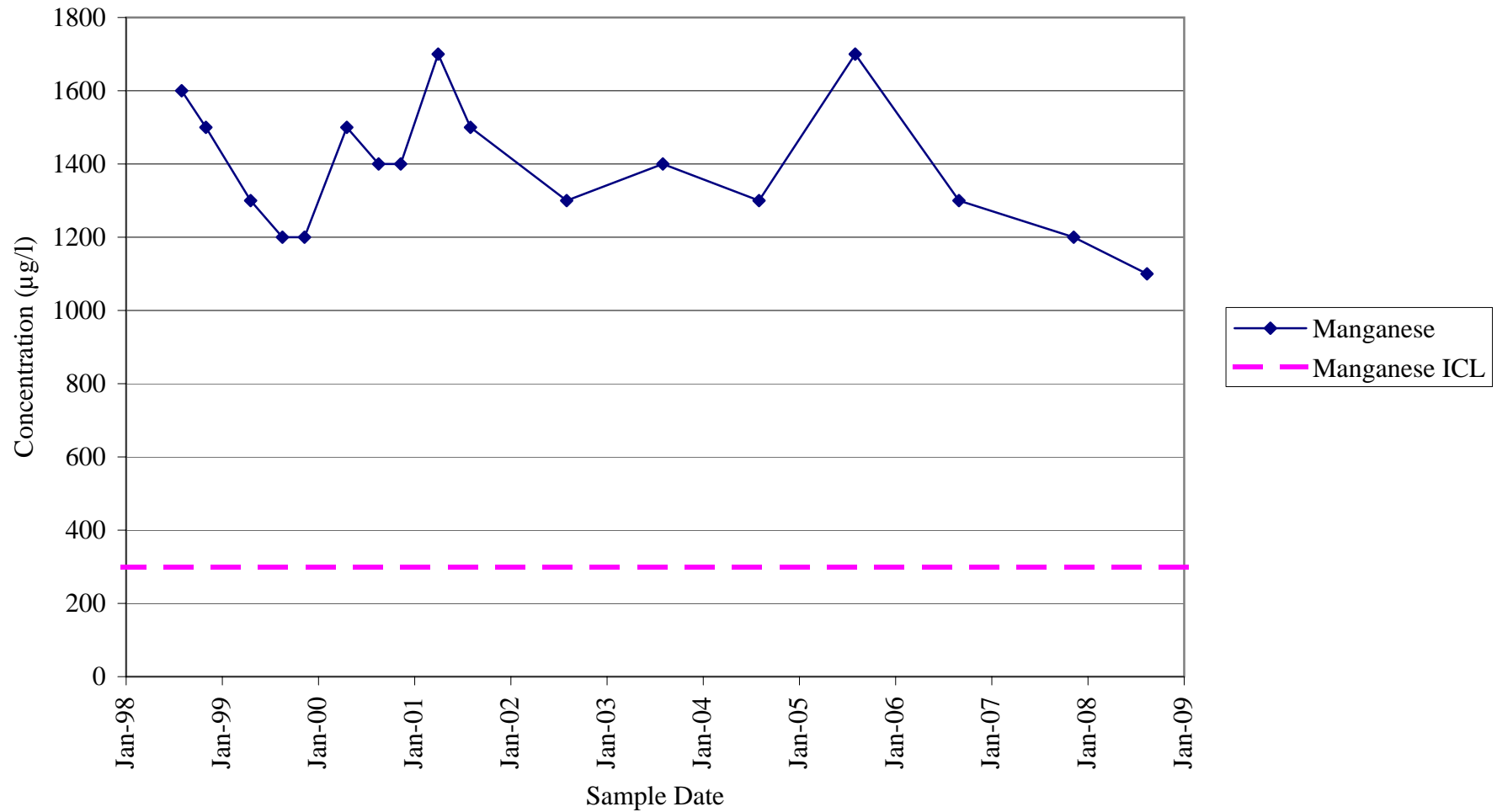
FPC-11B

Arsenic Concentrations vs. Time
Coakley Landfill, North Hampton, NH



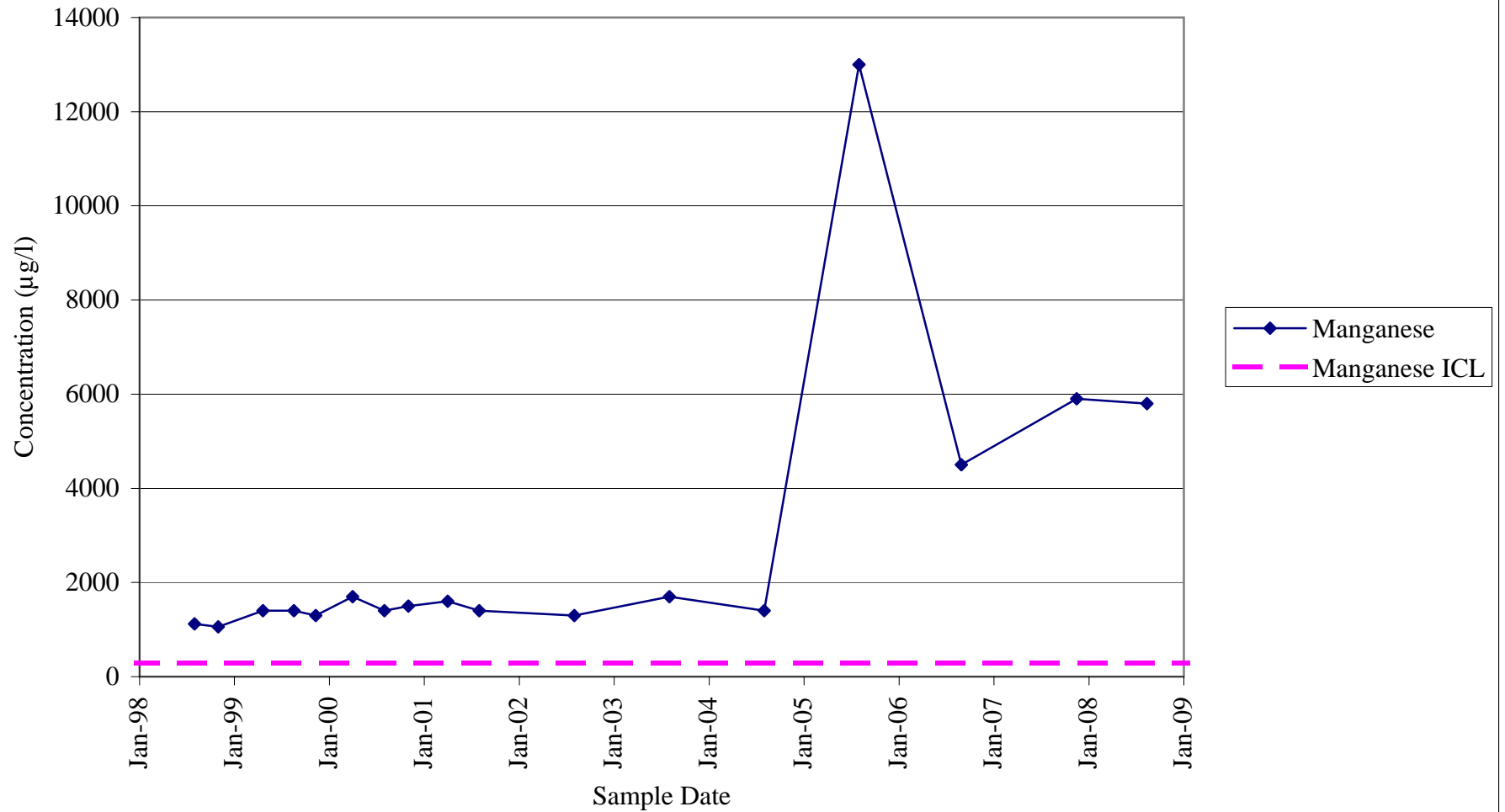
BP-4

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



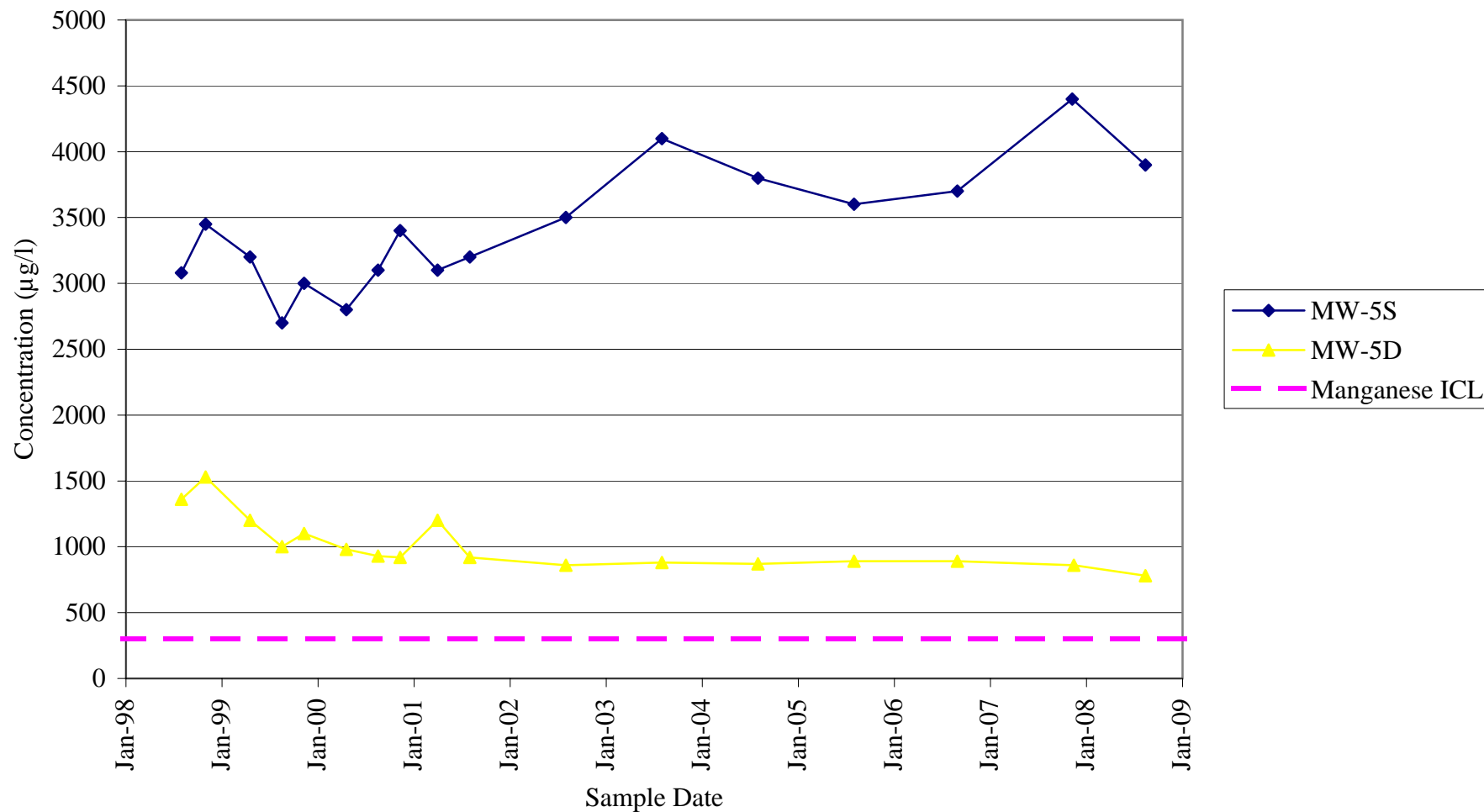
MW-4

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



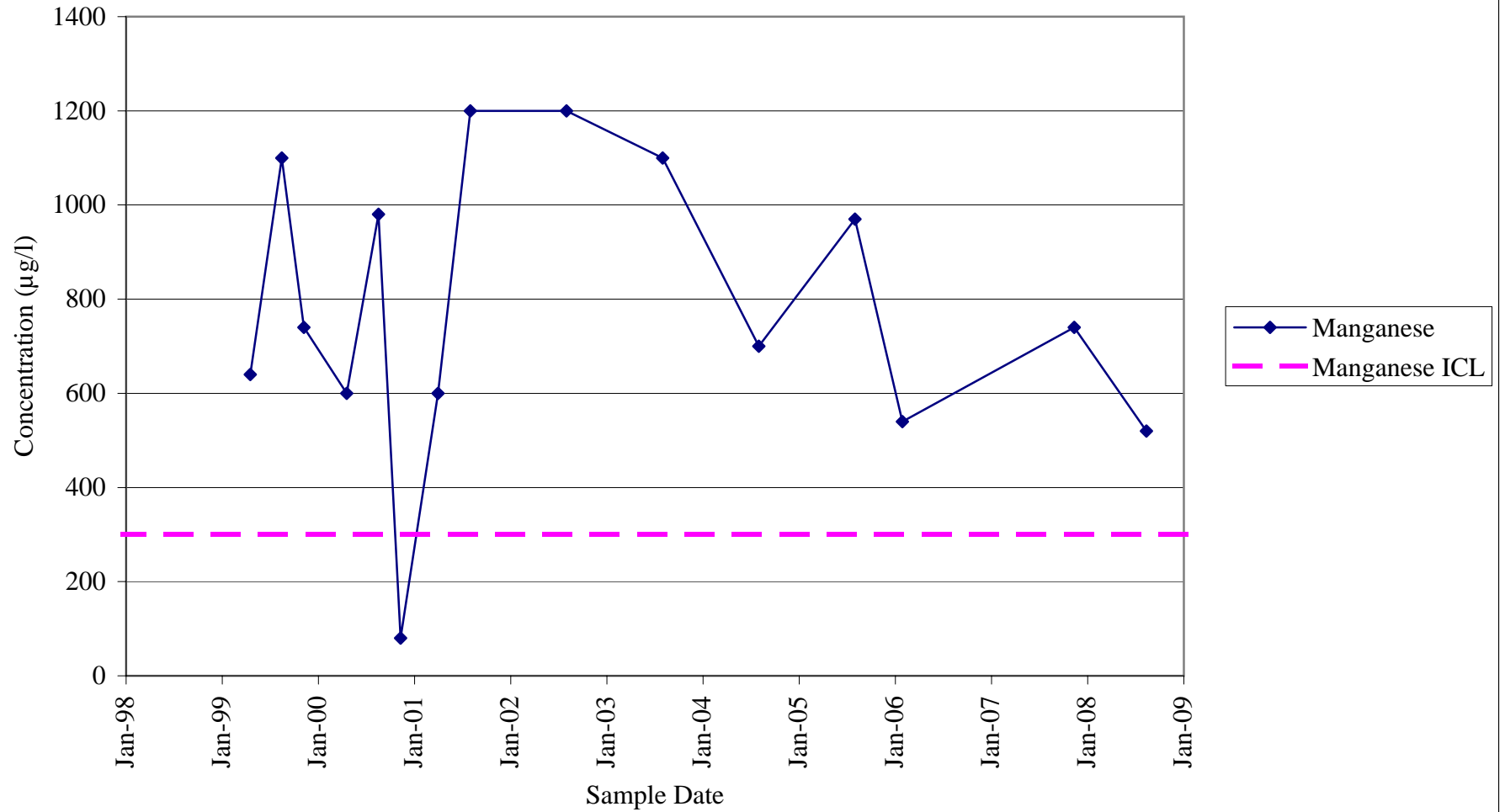
MW-5S & MW-5D

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



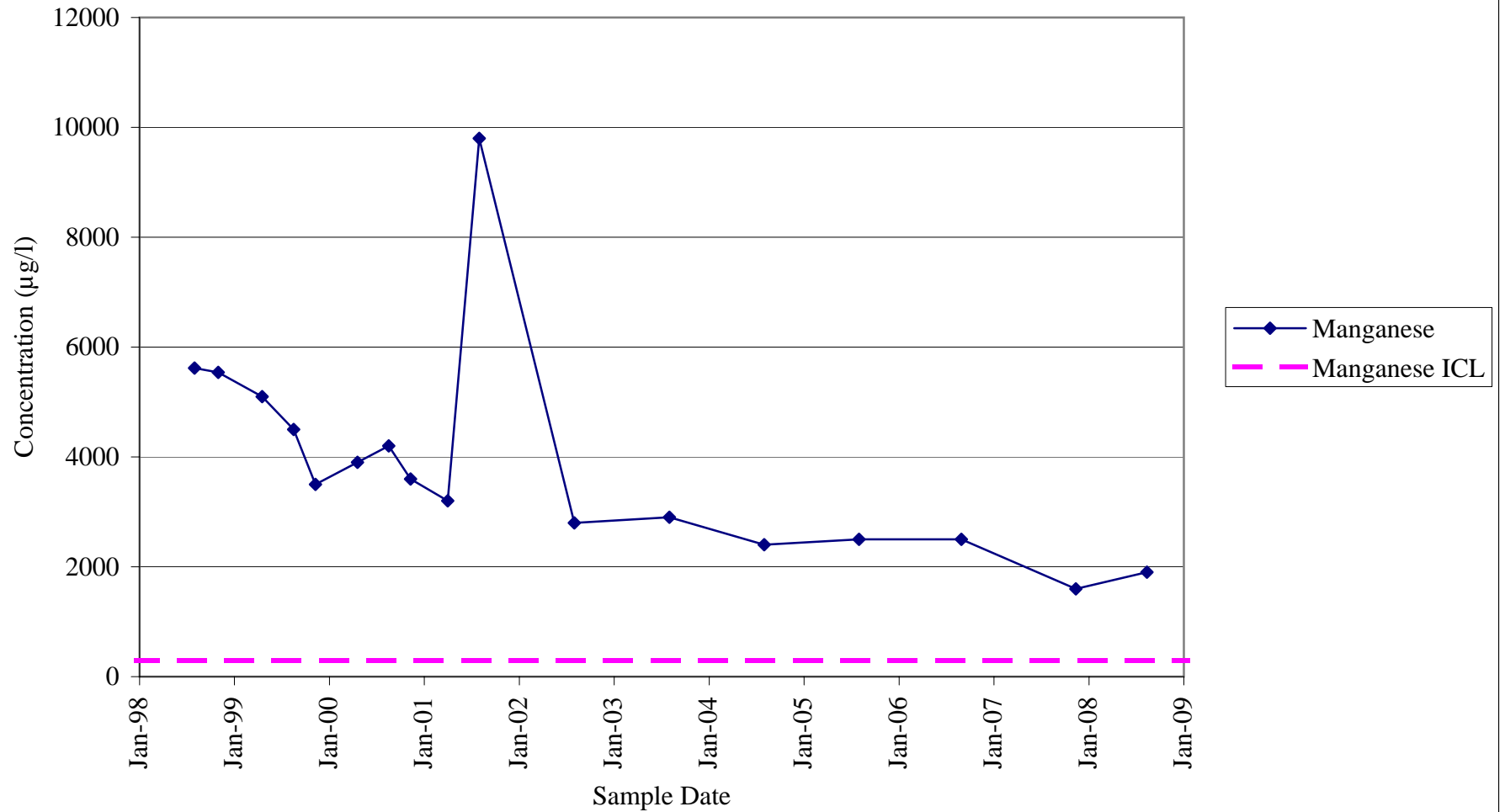
MW-6

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



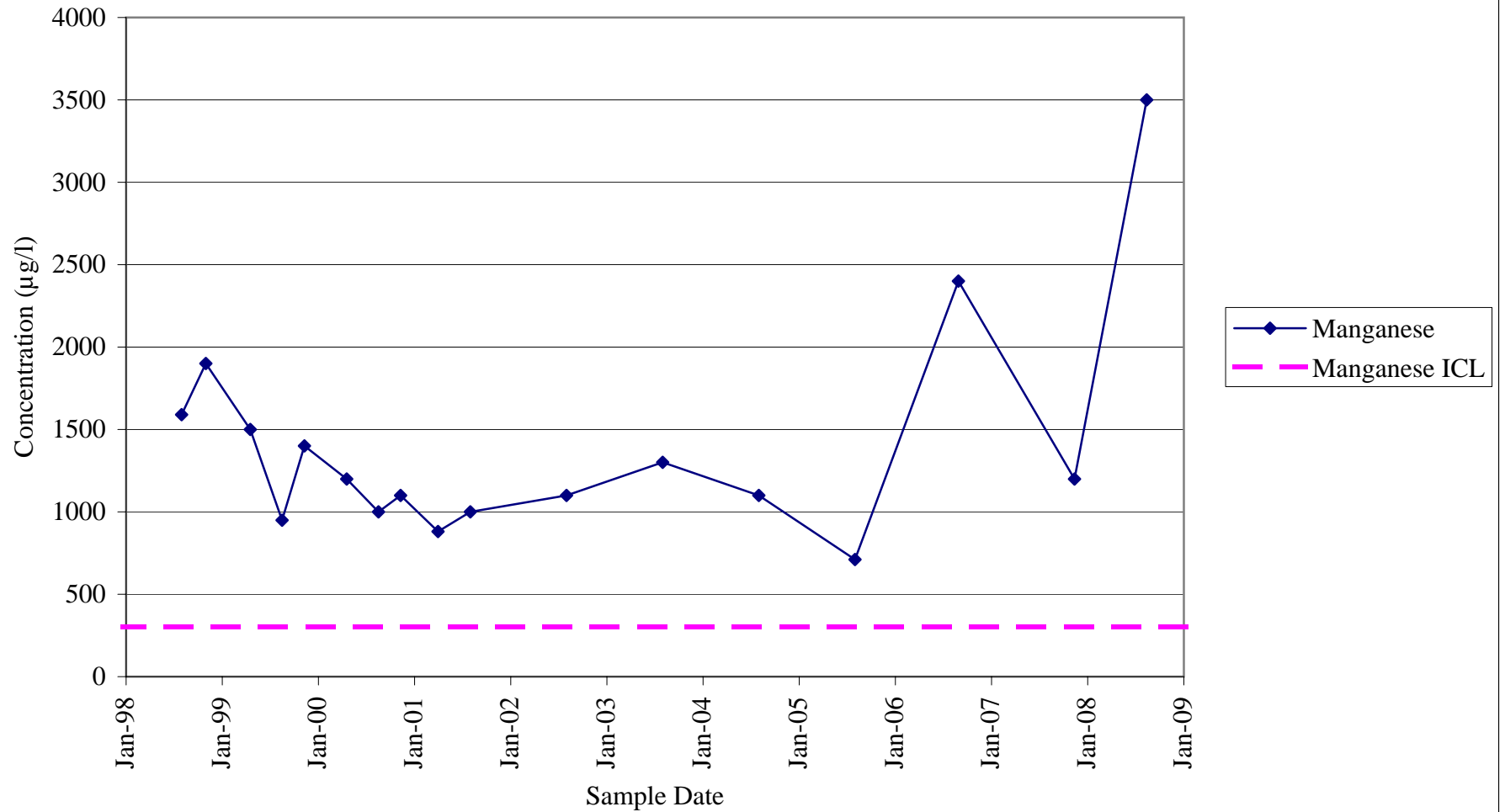
MW-8

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



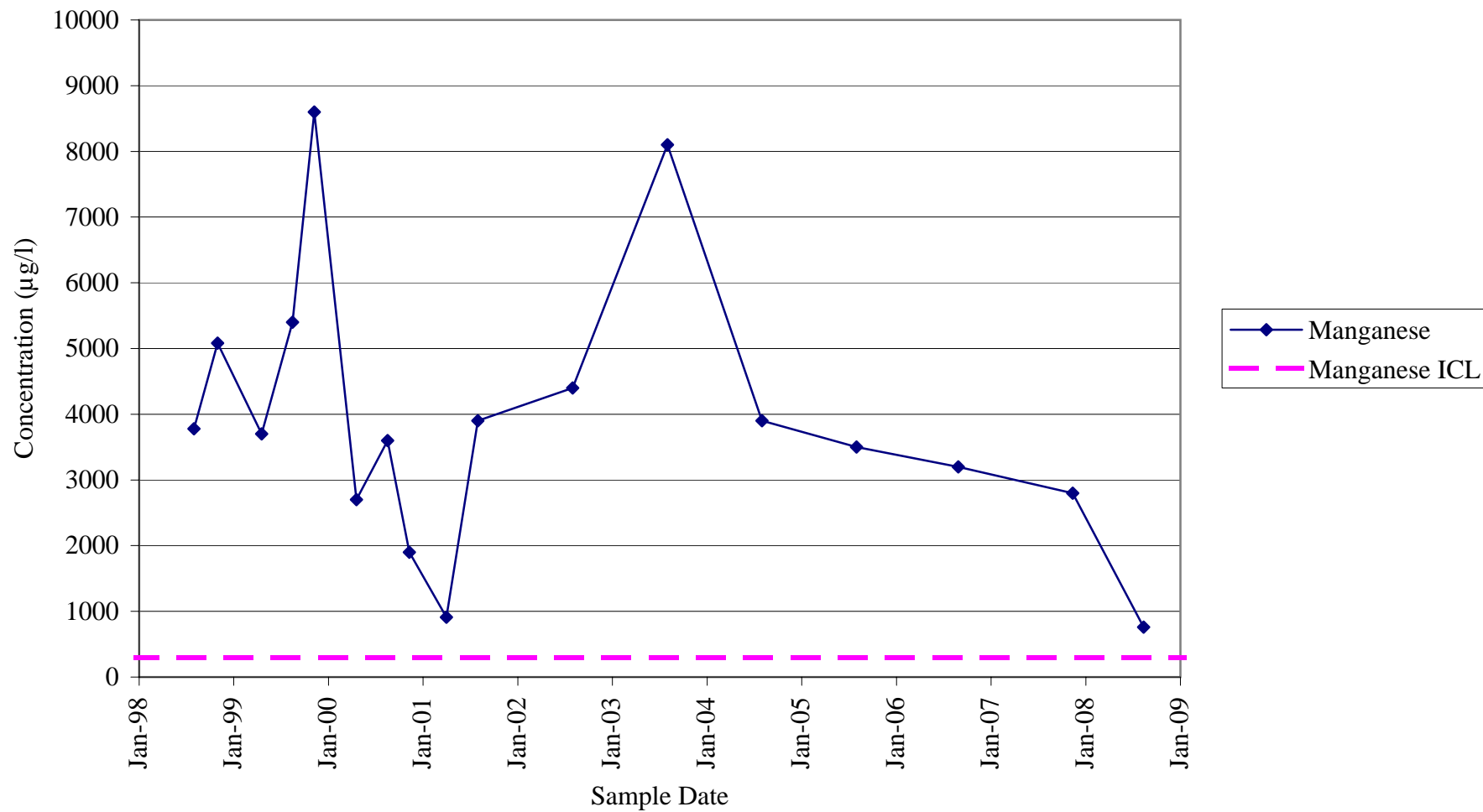
MW-9

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



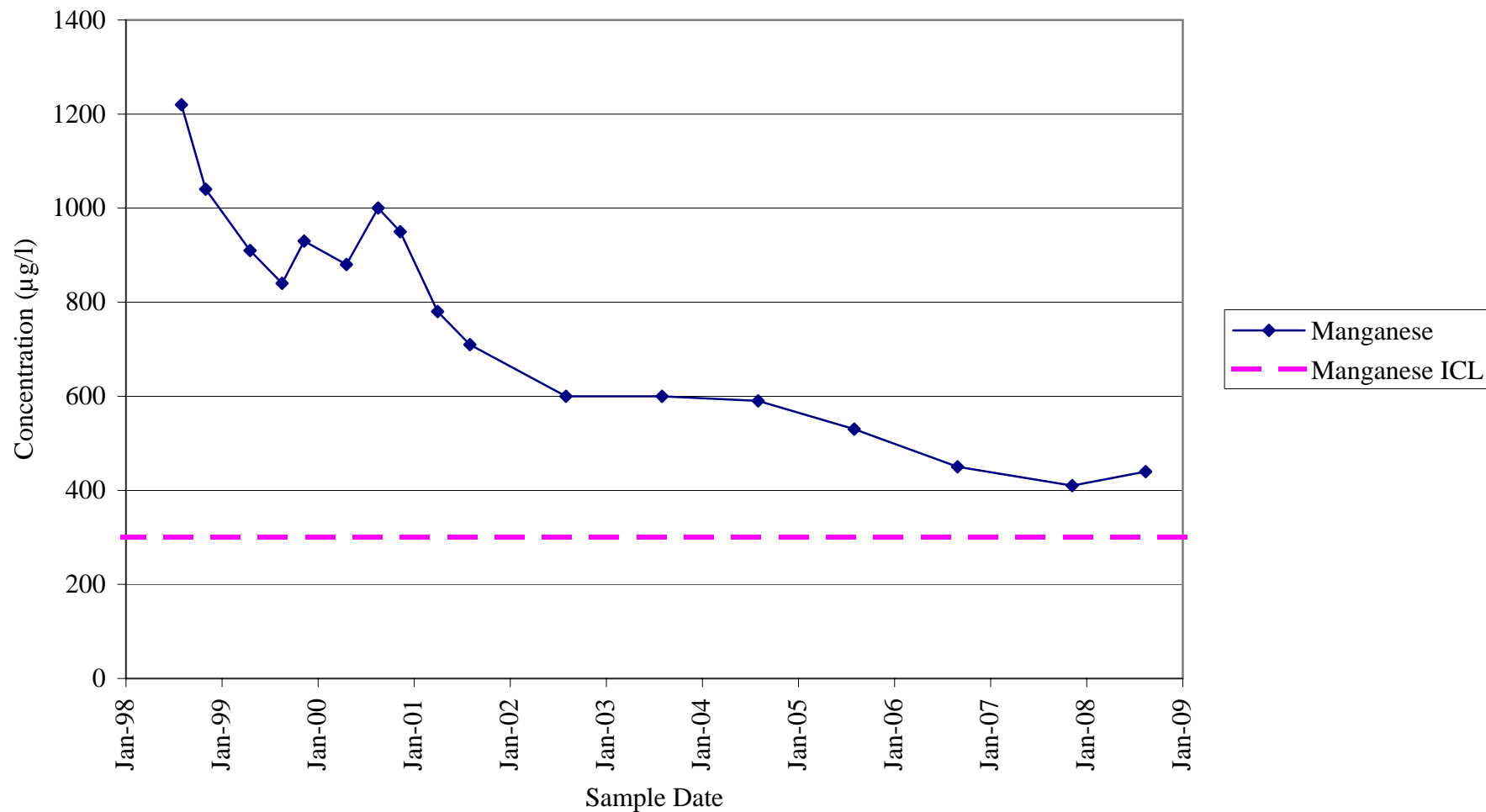
MW-10

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



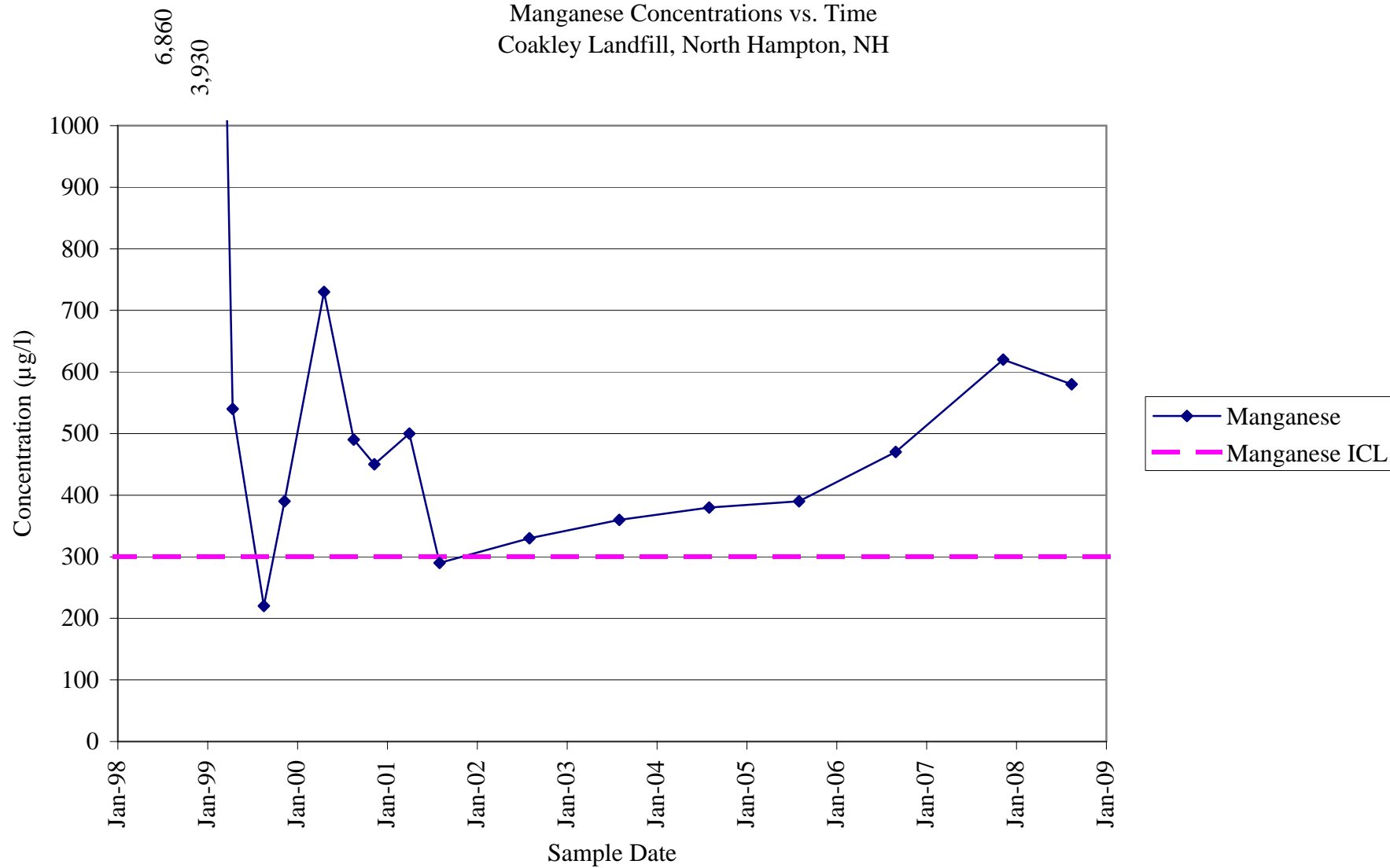
MW-11

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



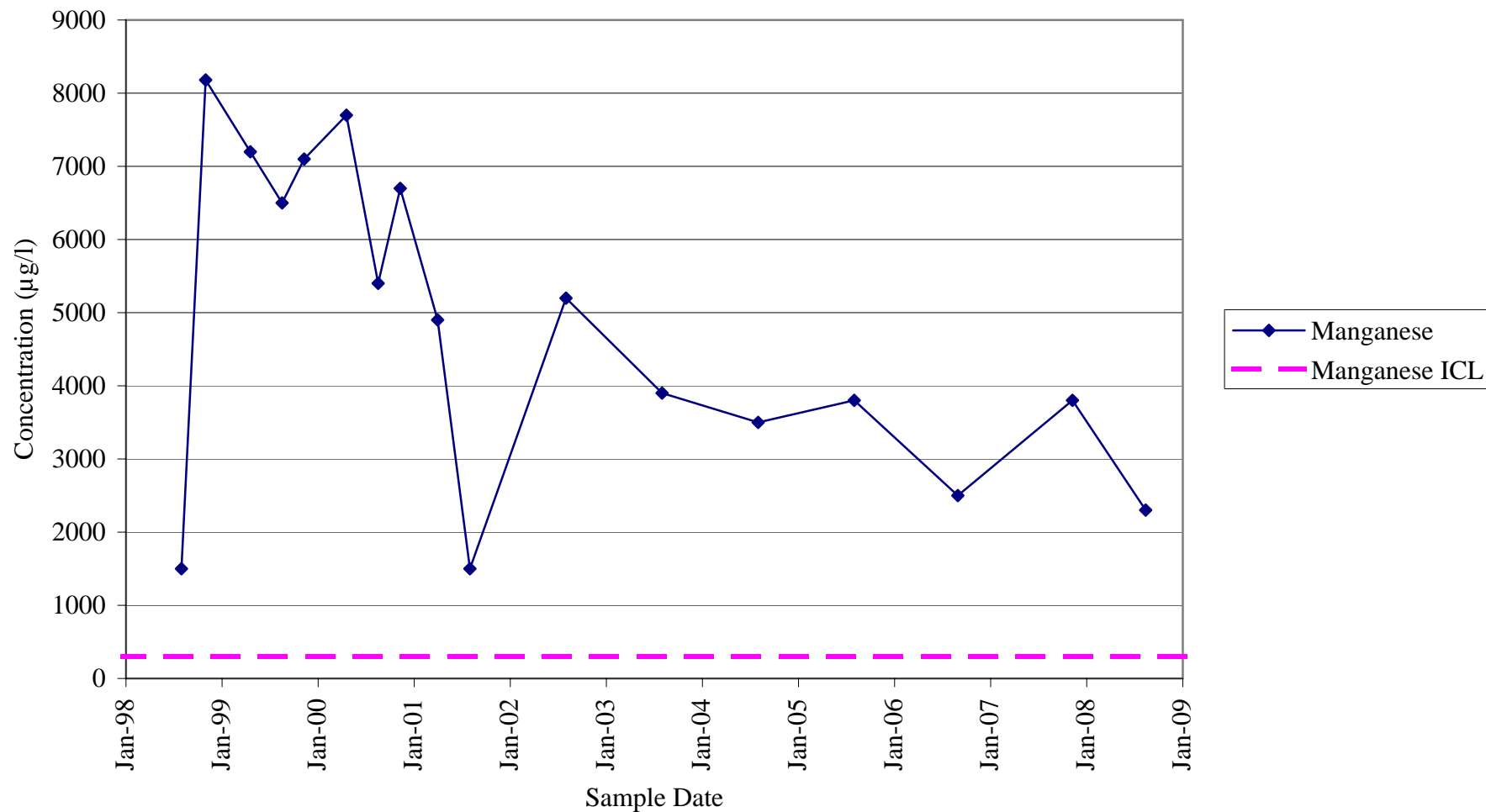
OP-2

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



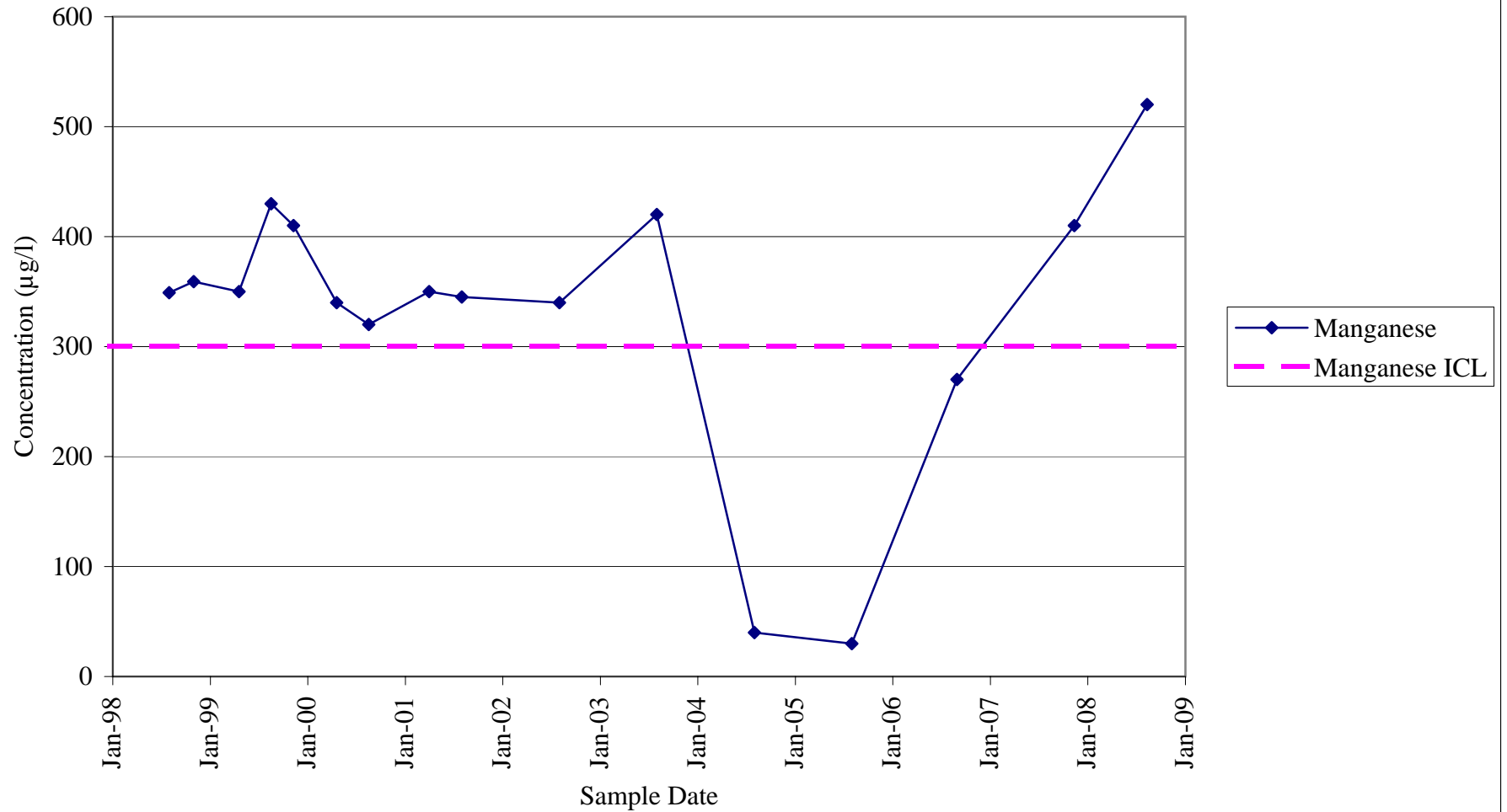
OP-5

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



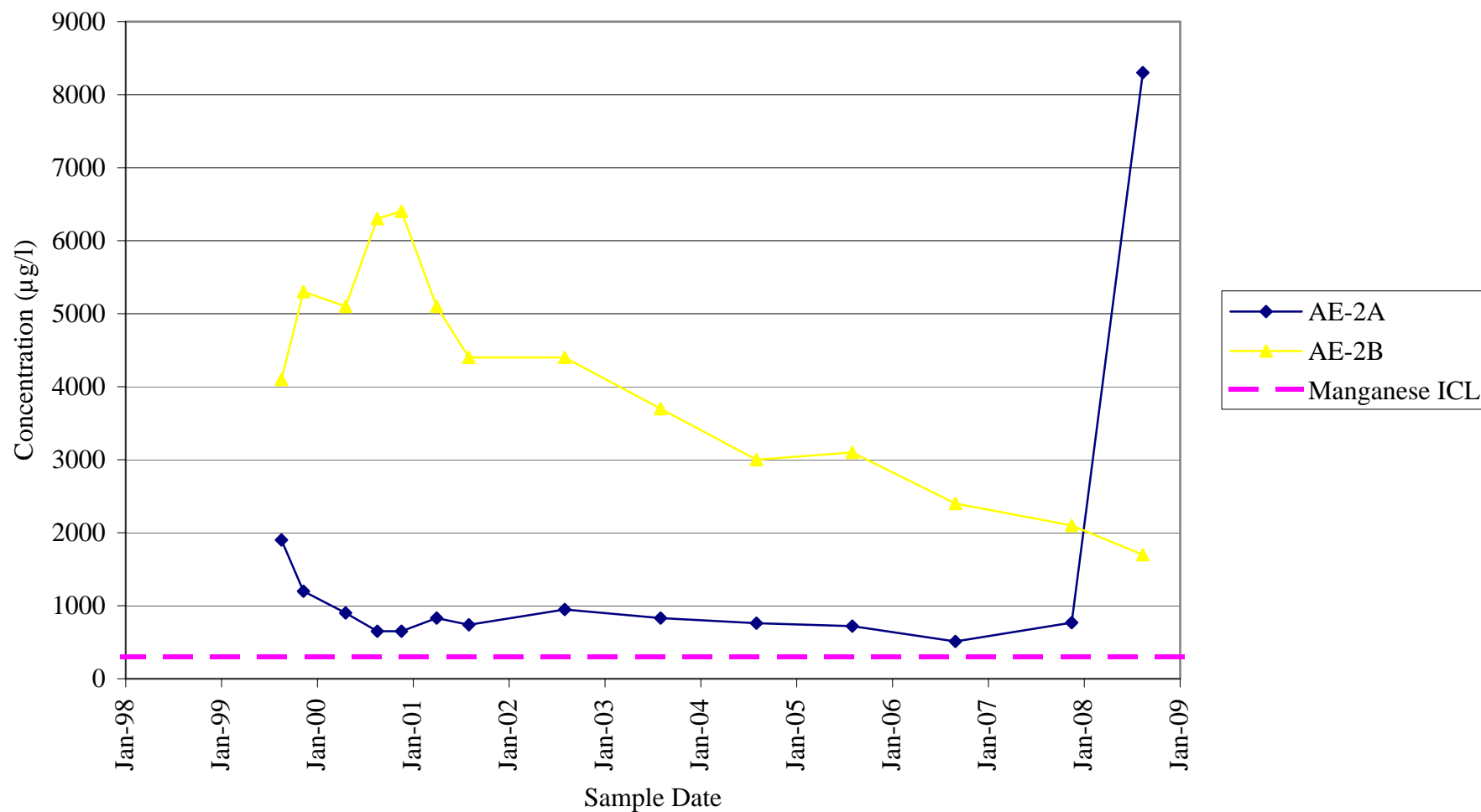
FPC-9A

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



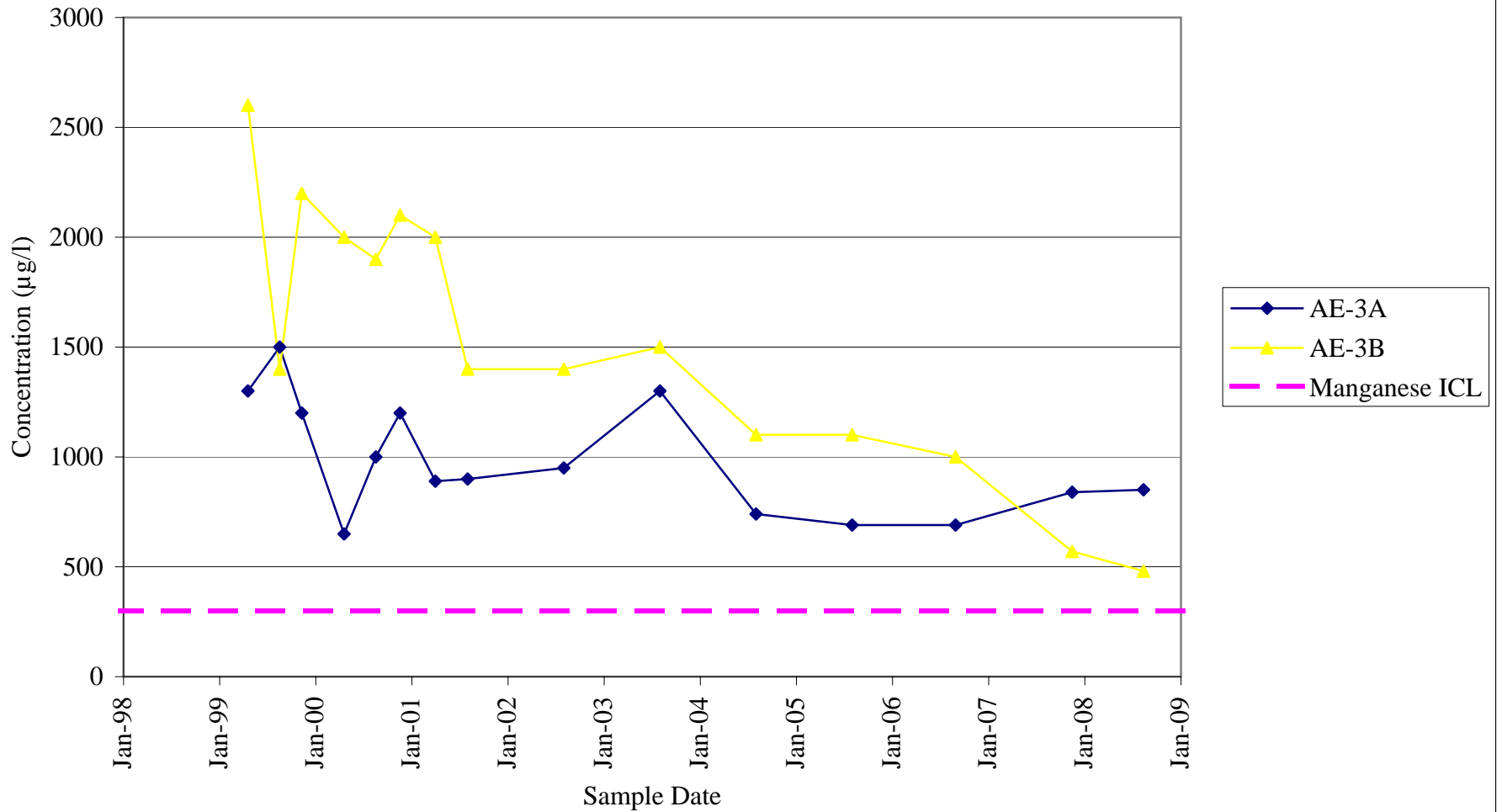
AE-2A & AE-2B

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



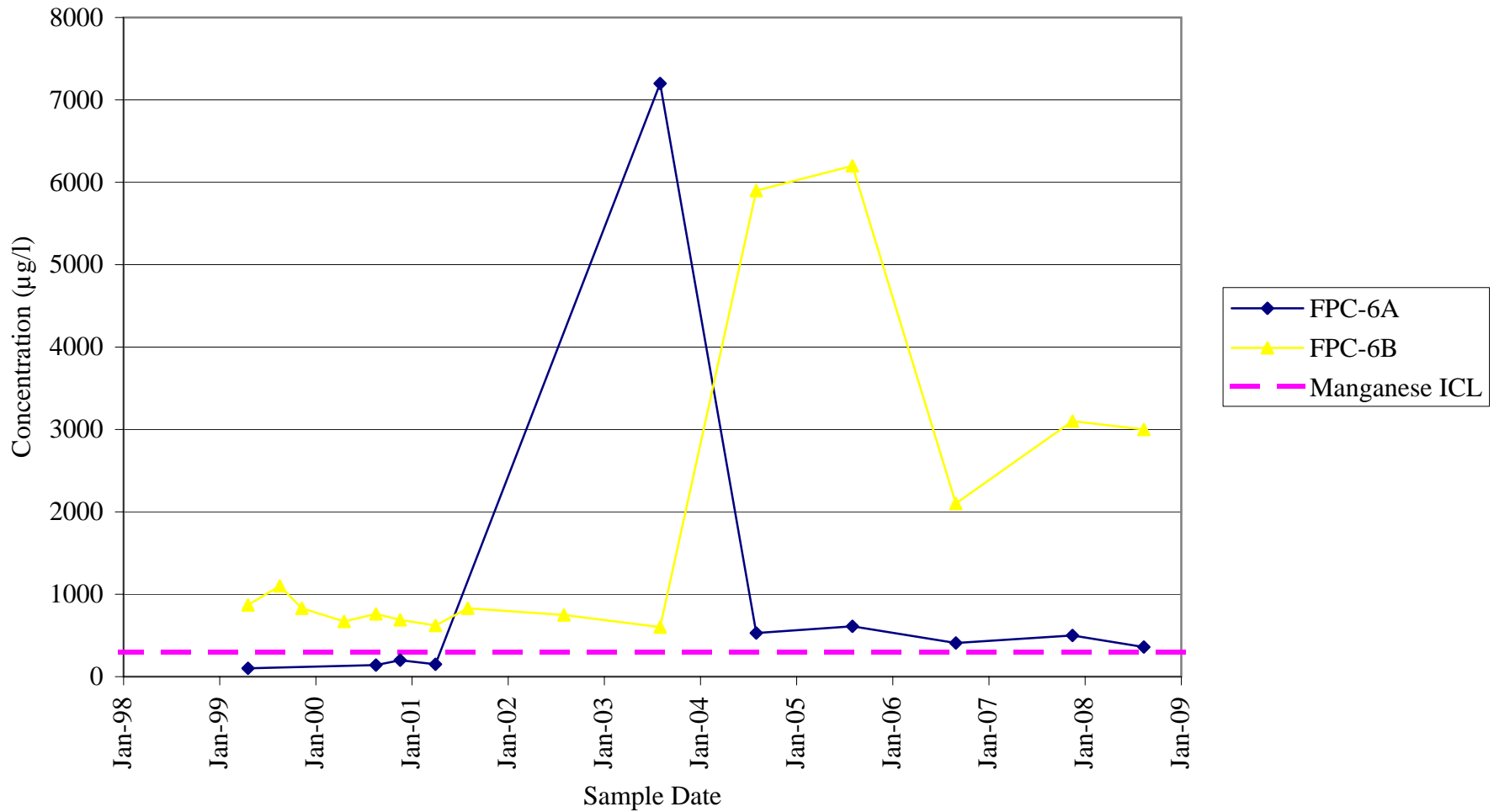
AE-3A & AE-3B

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH



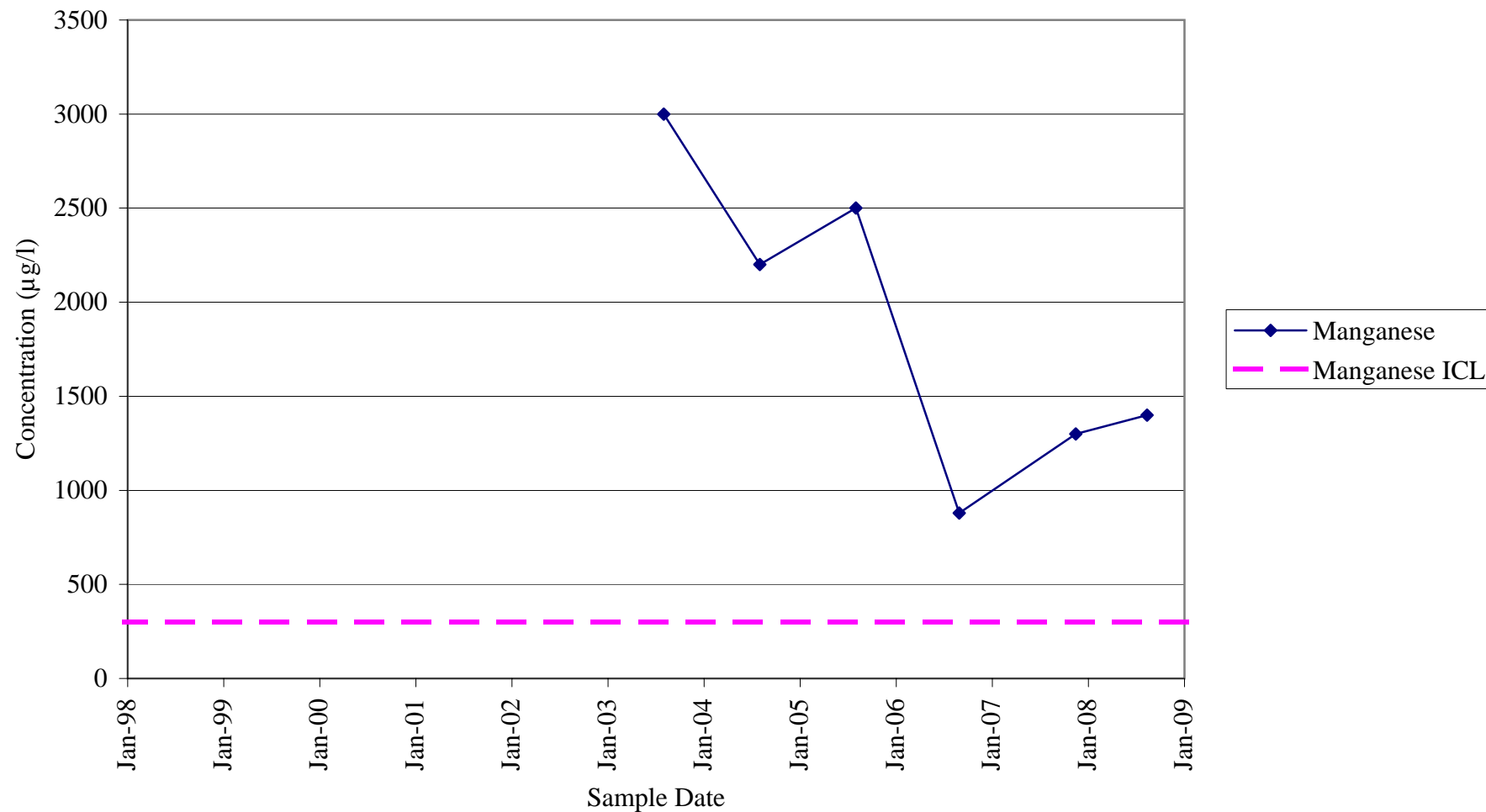
FPC-6A & FPC-6B

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH

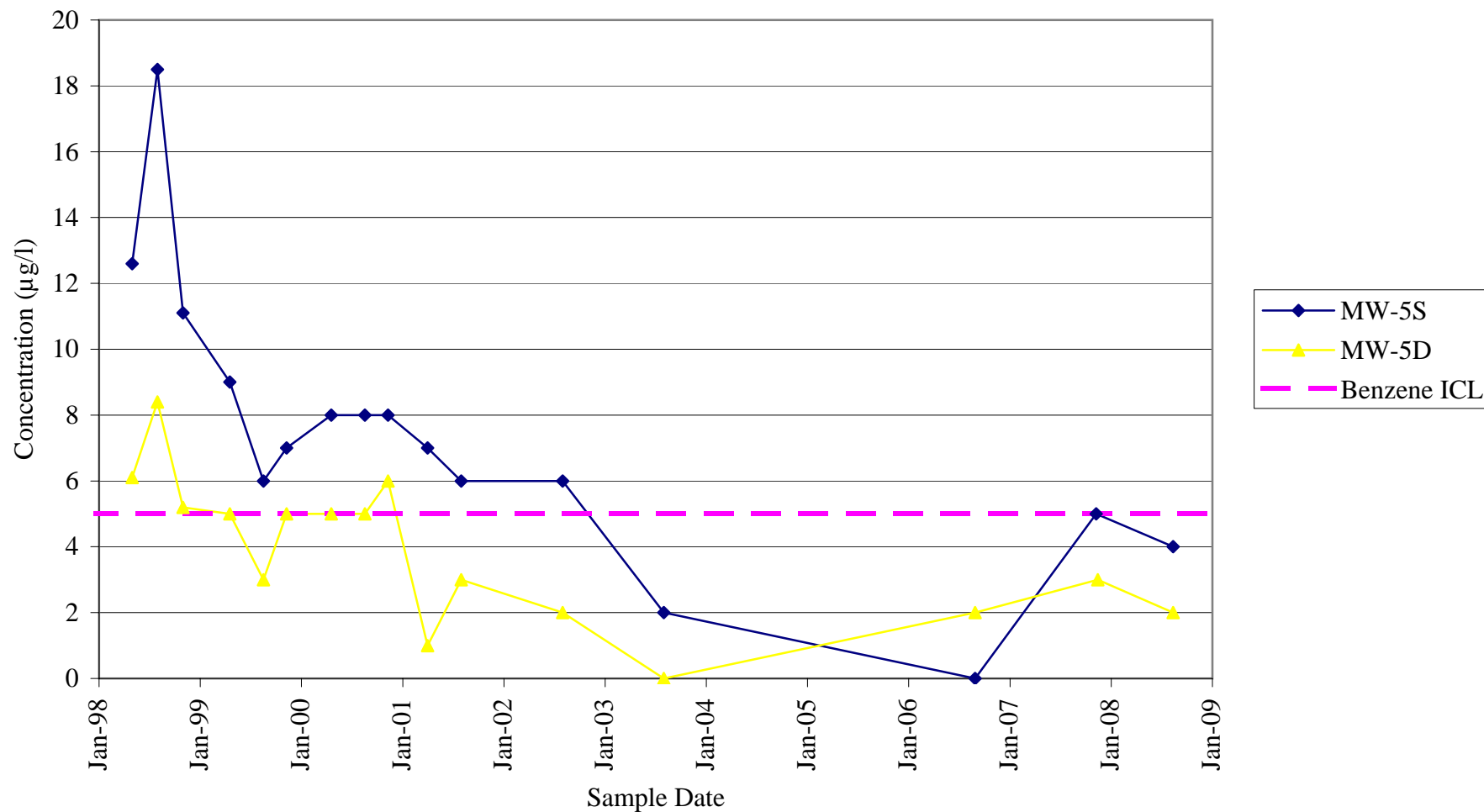


FPC-11B

Manganese Concentrations vs. Time
Coakley Landfill, North Hampton, NH

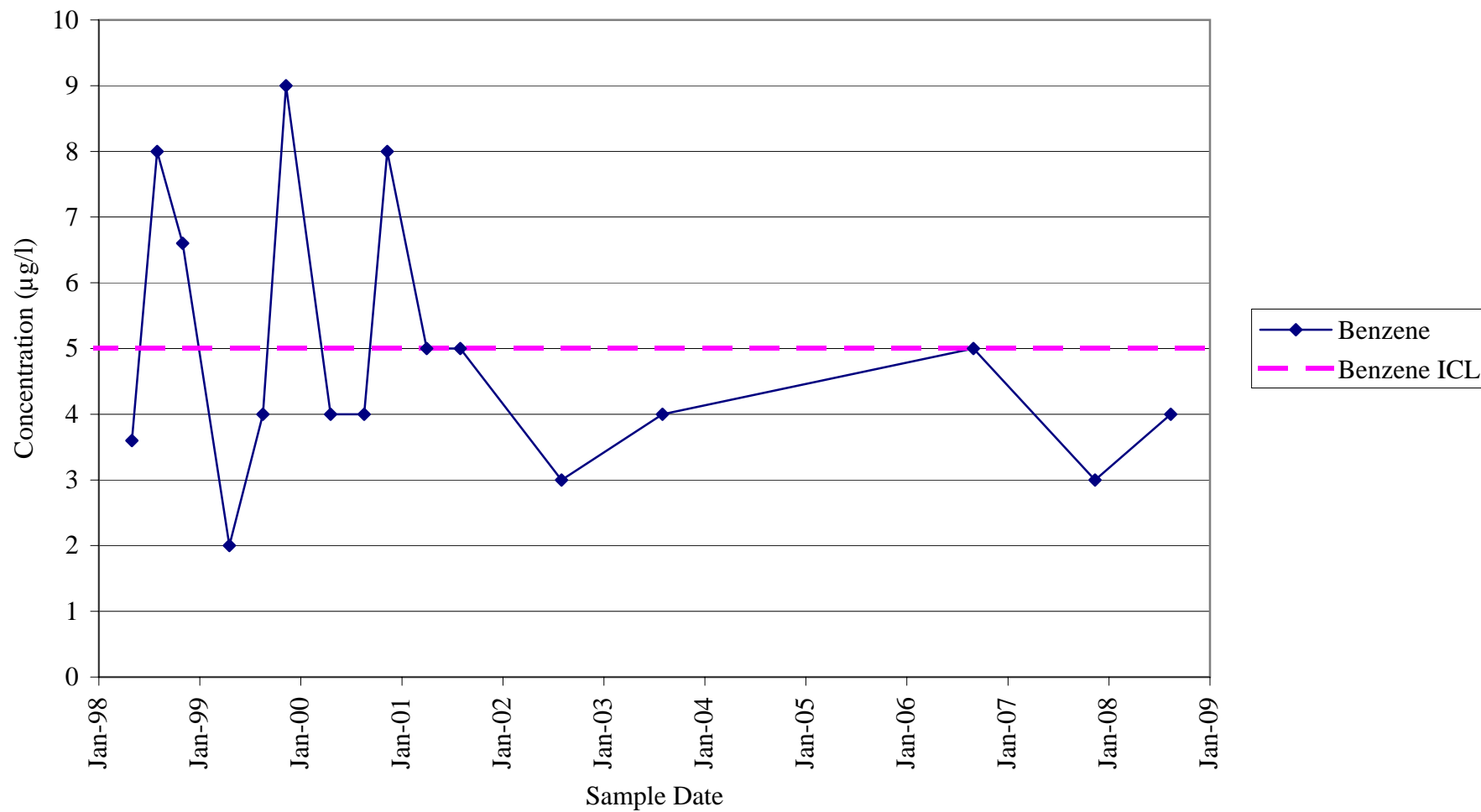


MW-5S & MW-5D
Benzene Concentrations vs. Time
Coakley Landfill, North Hampton, NH



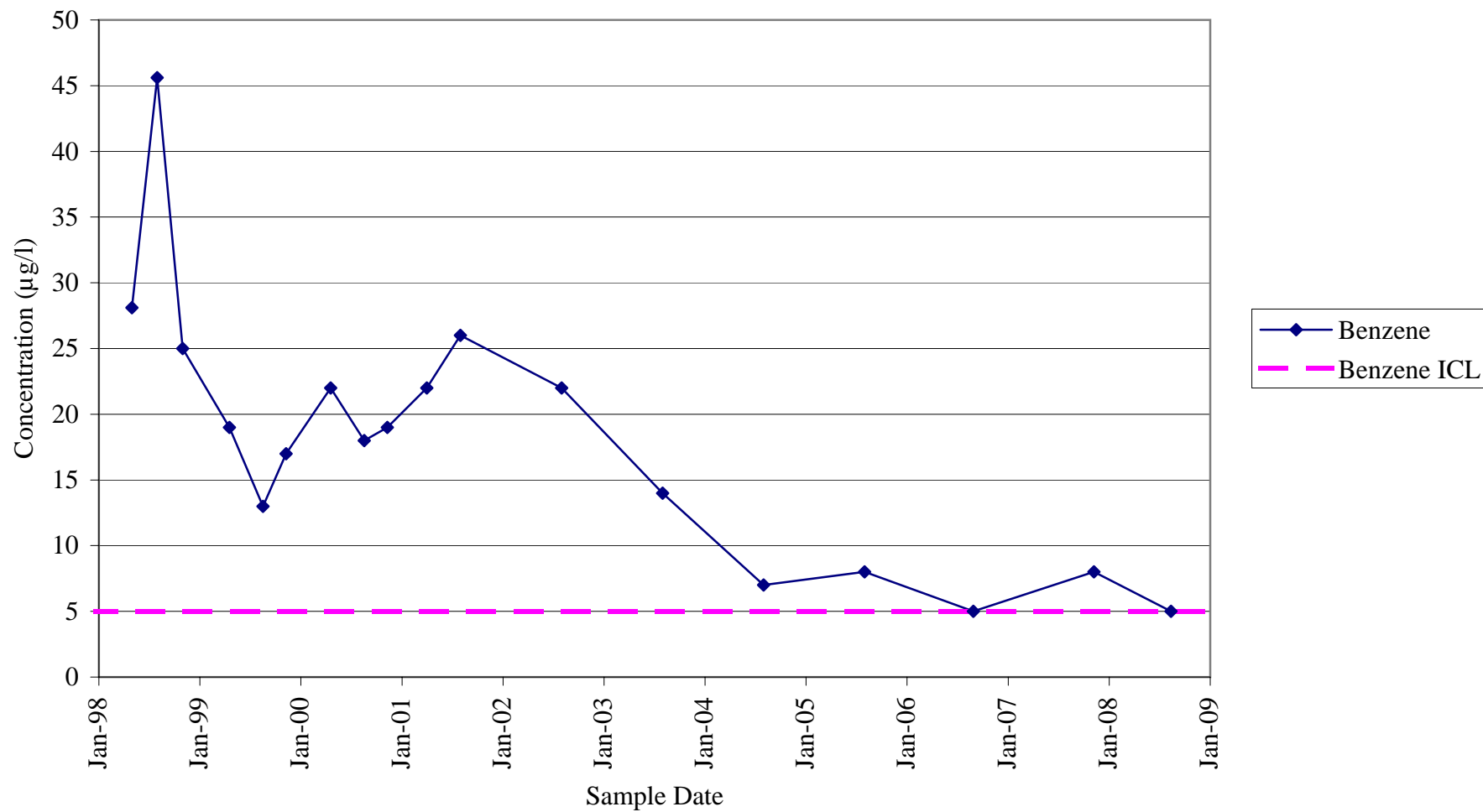
MW-8

Benzene Concentrations vs. Time
Coakley Landfill, North Hampton, NH



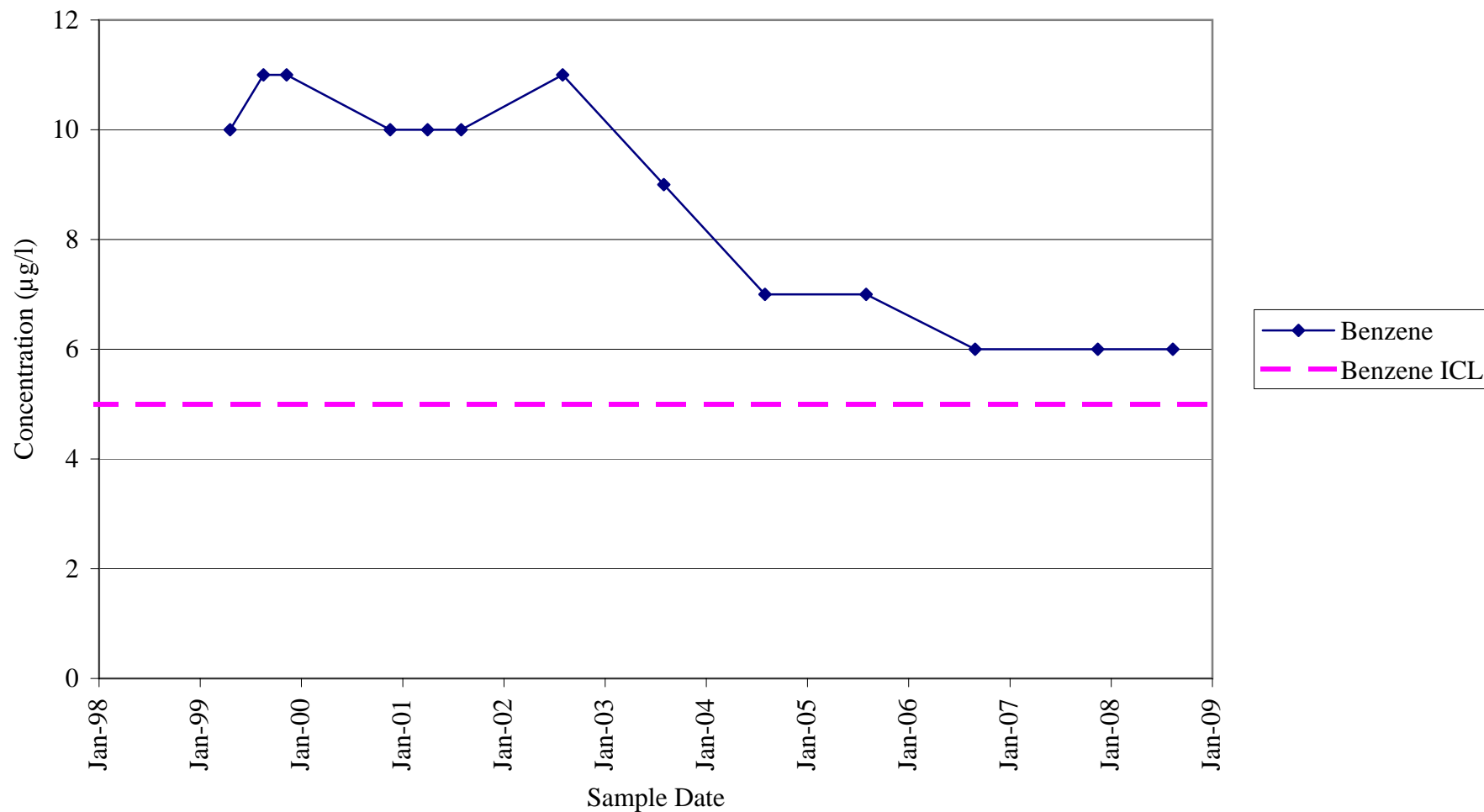
MW-11

Benzene Concentrations vs. Time
Coakley Landfill, North Hampton, NH



GZ-105

Benzene Concentrations vs. Time
Coakley Landfill, North Hampton, NH



SECTION 4

DATA USABILITY SUMMARY REPORT
Organics and Inorganics
USEPA REGION I

Site: Coakley L.F/M8144

SDG #: 72135

Client: Provan & Lorber (CO)

Date: October 30, 2008

Laboratory: Eastern Analytical

Reviewer: L. Wright

Client ID	Laboratory ID	Matrix
GW-AE-2A-0808	72135.01	Aqueous
GW-AE-2B-0808	72135.02	Aqueous
GW-AE-4A-0808	72135.03	Aqueous
GW-FPC-4B-0808	72135.04	Aqueous
GW-FPC-4B-0808	72135.05	Aqueous
GW-FPC-8A-0808	72135.06	Aqueous
GW-FPC-8B-0808	72135.07	Aqueous
GW-GZ-105-0808	72135.08	Aqueous
GW-GZ-123-0808	72135.09	Aqueous
GW-GZ-123-0808 DUP	72135.10	Aqueous
GW-GZ-125-0808	72135.11	Aqueous
GW-FPC-2B-0808	72135.12	Aqueous
GW-FPC-2A-0808	72135.13	Aqueous
GW-FPC-2B-FB-0808	72135.14	Aqueous
GW-MW-6-0808	72135.15	Aqueous
GW-FPC-11A-0808	72135.16	Aqueous
GW-FPB-11B-0808	72135.17	Aqueous
GW-AF-1A-0808	72135.18	Aqueous
GW-AE-1B-0808	72135.19	Aqueous
GW-AE-3A-0808	72135.20	Aqueous
GW-AE-3B-0808	72135.21	Aqueous
SW-L1-0808	72135.22	Aqueous
SW-L1-0808 DUP	72135.23	Aqueous
TB	72135.24	Aqueous

The data package contained twenty four (24) aqueous samples which were collected on 8/11/08 and 08/12/08. The samples were analyzed for volatile, metals and wet chemistry parameters via SW-846 and USEPA Test Methods. A tier 1 data validation was done. The adherence of laboratory analytical performance to this method's Analytical Specifications was evaluated. The data package was evaluated for its completeness as defined by "Region I Tiered Organic and Inorganic Data Validation Guidelines", July 1, 1993.

Cover letter, Narrative and Data Reporting Forms (Form 1s): All were present.

Chain of Custody (COC) and Traffic Report: COC was included.

Calibration Quality Control: Calibration information was present.

DATA USABILITY SUMMARY REPORT
Organics and Inorganics
USEPA REGION I

Matrix Spike: Matrix spike information was present.

Duplicate Results: Duplicate results were present.

Laboratory Control Sample (LCS): LCS information was present.

Completeness: All the required information was present.

DATA USABILITY SUMMARY REPORT
Organics and Inorganics
USEPA REGION I

Site: Coakley L.F/M8114

SDG #: 72200

Client: Provan & Lorber (CO)

Date: October 30, 2008

Laboratory: Eastern Analytical

Reviewer: L. Wright

Client ID	Laboratory ID	Matrix
GW-FPC-7B-0808	72200.01	Aqueous
GW-FPC-7A-0808	72200.02	Aqueous
GW-FPC-9A-0808	72200.03	Aqueous
GW-MW-5D-0808	72200.04	Aqueous
GW-MW-5S-0808	72200.05	Aqueous
GW-MW-5S-0808DUP	72200.06	Aqueous
GW-MW-11-0808	72200.07	Aqueous
GW-MW-8-0808	72200.08	Aqueous
GW-MW-10-0808	72200.09	Aqueous
GW-OP-2-0808	72200.10	Aqueous
GW-BP-4-0808	72200.11	Aqueous
GW-OP-5-0808	72200.12	Aqueous
GW-MW-4-0808	72200.13	Aqueous
GW-FPC-5B-0808	72200.14	Aqueous
GW-FPC-5A-0808	72200.15	Aqueous
GW-MW-9-0808	72200.16	Aqueous
GW-FPC-6A-0808	72200.17	Aqueous
GW-FPC-6B-0808	72200.18	Aqueous
GW-6A-FB-0808	72200.19	Aqueous
DW-R3-0808	72200.20	Aqueous
DW-R5-0808	72200.21	Aqueous
TB	72200.22	Aqueous
SW-SW-103-0808	72200.23	Aqueous
SW-SW5/3T-0808	72200.24	Aqueous
SW-SW-4-0808	72200.25	Aqueous
S-SED-5-0808	72200.26	Soil
S-SED-5-0808 DUP	72200.27	Soil
S-SED-4-0808	72200.28	Soil
Equipment Blank	72200.29	Aqueous
Trip Blank	72200.30	Aqueous

The data package contained twenty seven (27) aqueous and three (3) soil samples which were collected on 7/21/08 and 8/13/08 to 08/14/08. The samples were analyzed for volatile, metals and wet chemistry parameters via SW-846 and USEPA Test Methods. A tier 1 data validation was done. The adherence of laboratory analytical performance to this method's Analytical Specifications was evaluated. The data

DATA USABILITY SUMMARY REPORT
Organics and Inorganics
USEPA REGION I

package was evaluated for its completeness as defined by "Region I Tiered Organic and Inorganic Data Validation Guidelines", July 1, 1993.

Cover letter, Narrative and Data Reporting Forms (Form 1s): All were present.

Chain of Custody (COC) and Traffic Report: COC was included.

Calibration Quality Control: Calibration information was present.

Matrix Spike: Matrix spike information was present.

Duplicate Results: Duplicate results were present.

Laboratory Control Sample (LCS): LCS information was present.

Completeness: All the required information was present.