

*PAS Oswego Superfund Site – 2012 Annual Report*

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- A-2 Site Inspection Checklist and Leachate Disposal Checklist
- A-3 Quarterly POTW Discharge Reports – 3<sup>rd</sup> Quarter 2011

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- B-1 Groundwater Elevation Data
- B-2 Site Inspection Checklist and Leachate Disposal Checklist
- B-3 Quarterly POTW Discharge Reports – 4<sup>th</sup> Quarter 2011
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II - C 1<sup>st</sup> Quarter 2011

- C-1 Groundwater Elevation Data
- C-2 Site Inspection Checklist and Leachate Disposal Checklist
- C-3 Quarterly POTW Discharge Reports – 1<sup>st</sup> Quarter 2012

II - D 2<sup>nd</sup> Quarter 2011

- D-1 Groundwater Elevation Data
- D-2 Site Inspection Checklist and Leachate Disposal Checklist
- D-3 Quarterly POTW Discharge Reports – 2<sup>nd</sup> Quarter 2012
- D-4 Semi-Annual Leachate and Groundwater Monitoring (May 2012)

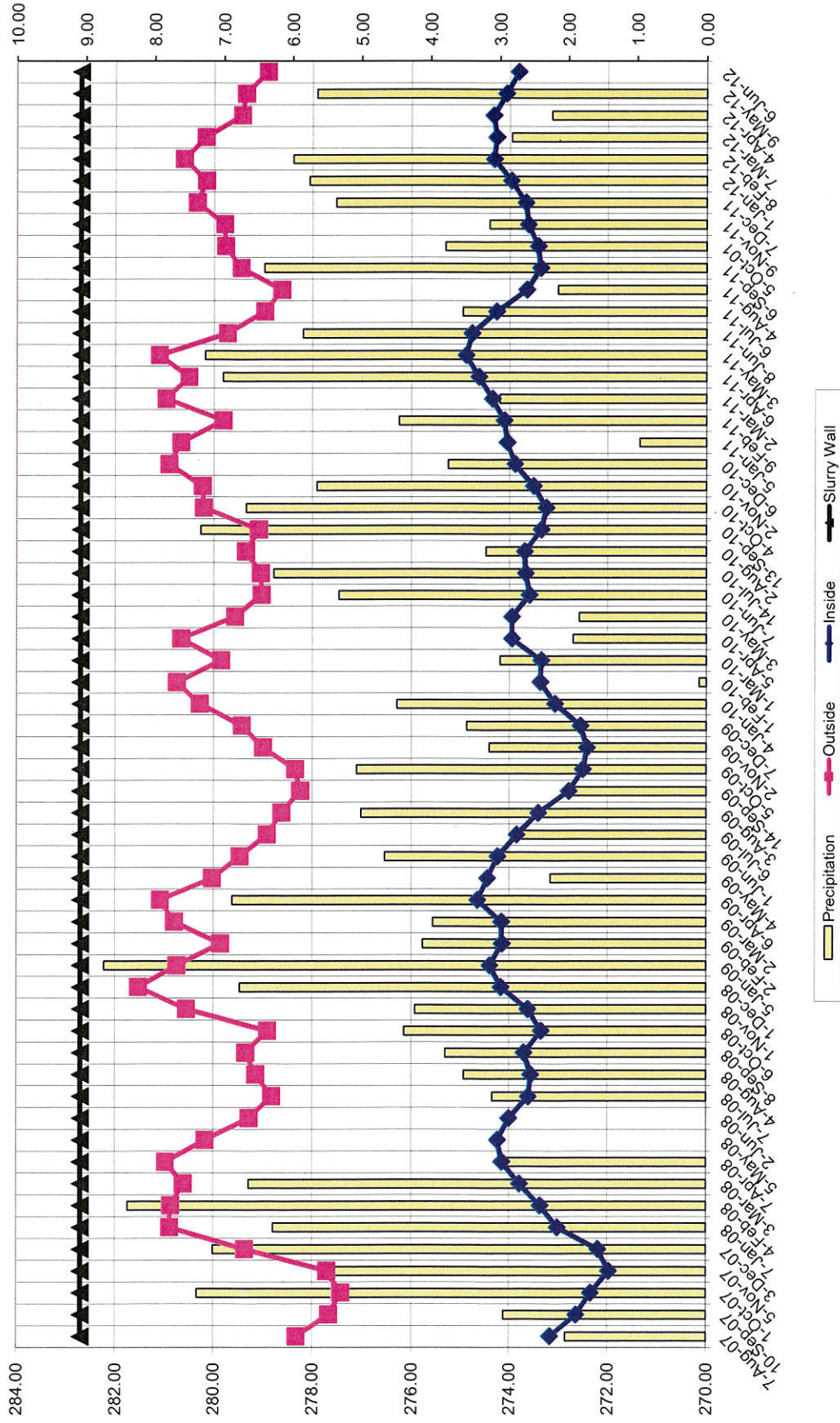
ATTACHMENT III – ACTIONS PLANNED

III – Future Report

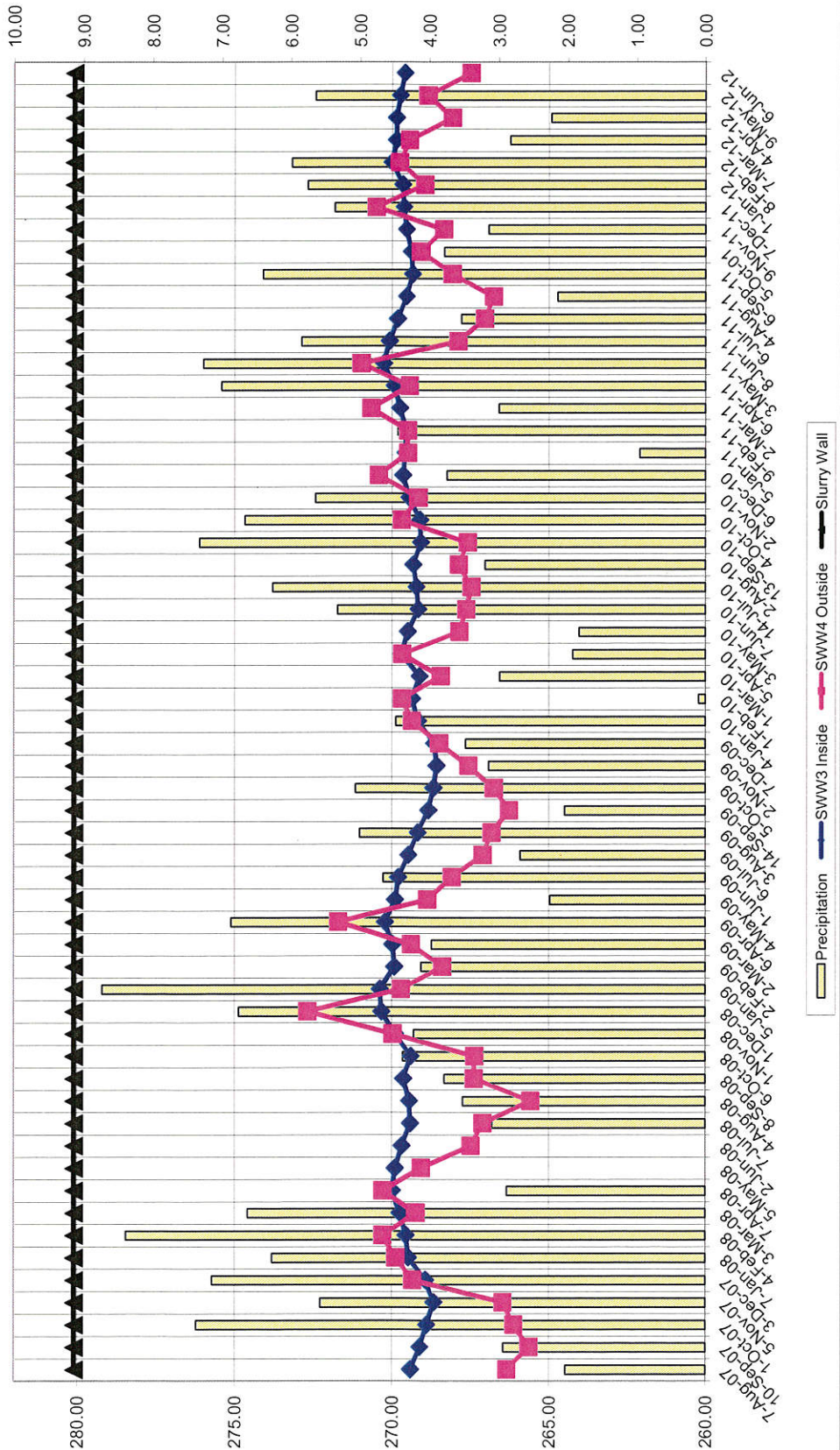
I-A

SLURRY WALL

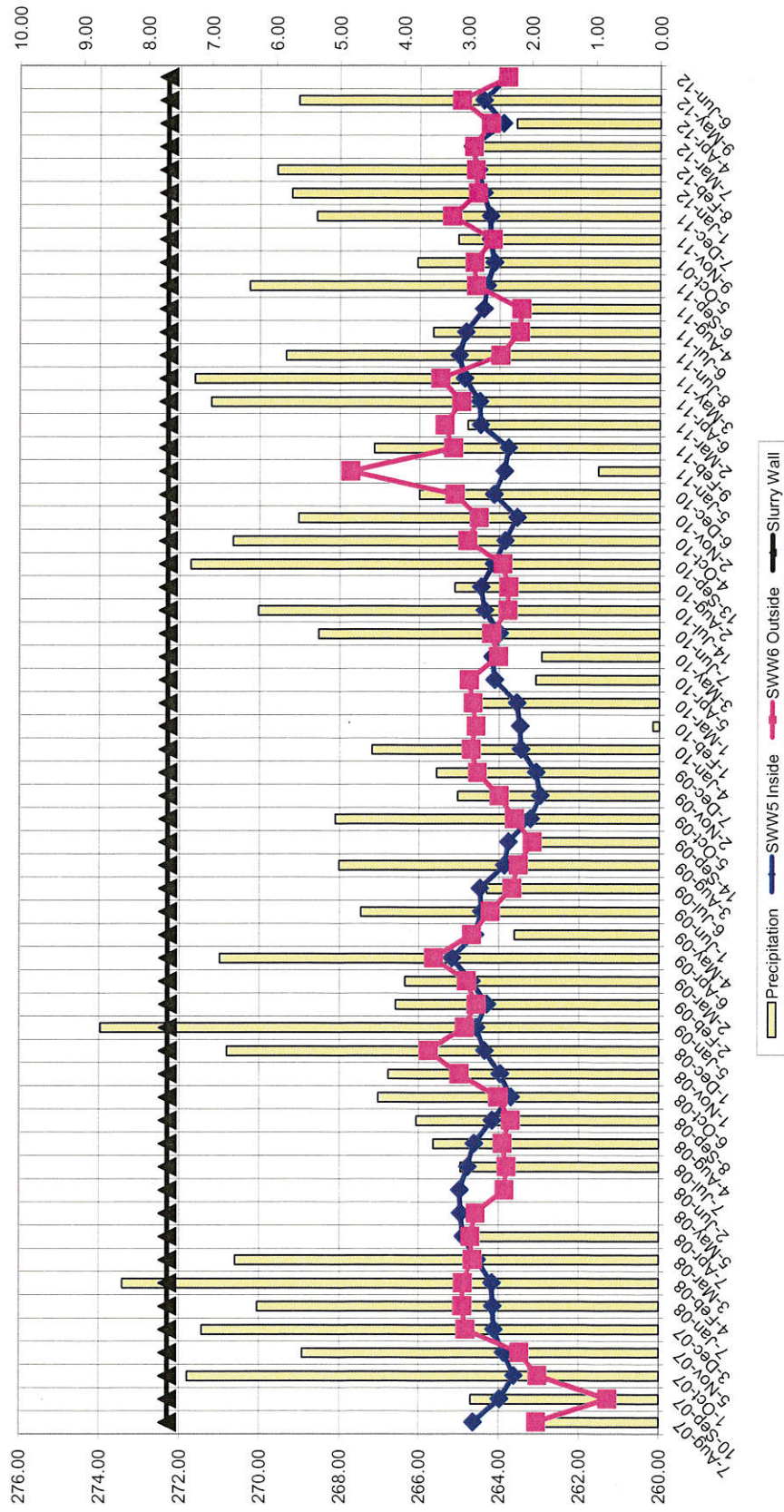
PAS - OSWEGO  
GROUNDWATER ELEVATIONS (SWW1 and SWW2)



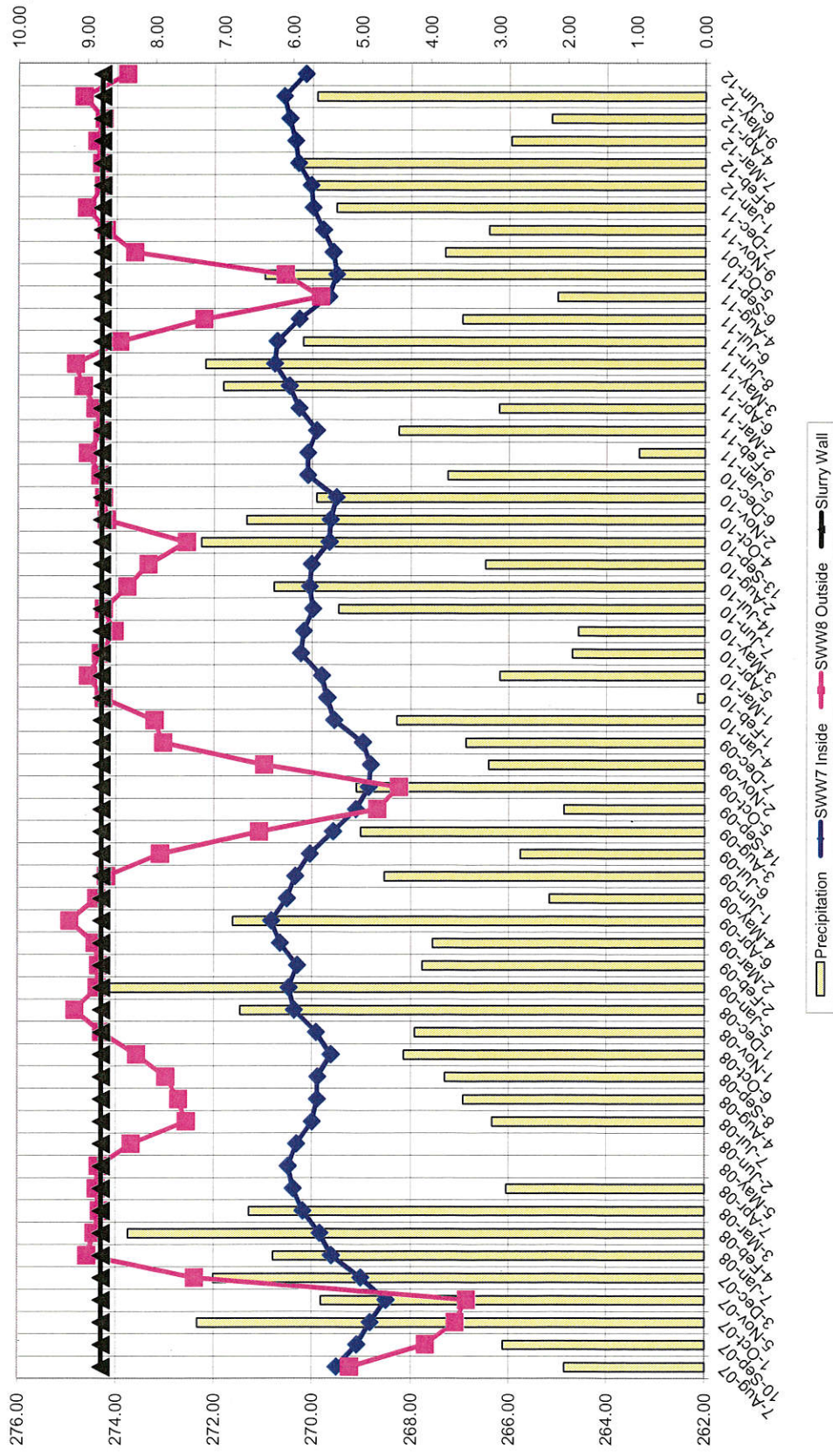
# PAS - OSWEGO GROUNDWATER ELEVATIONS (SWW3 and SWW4)



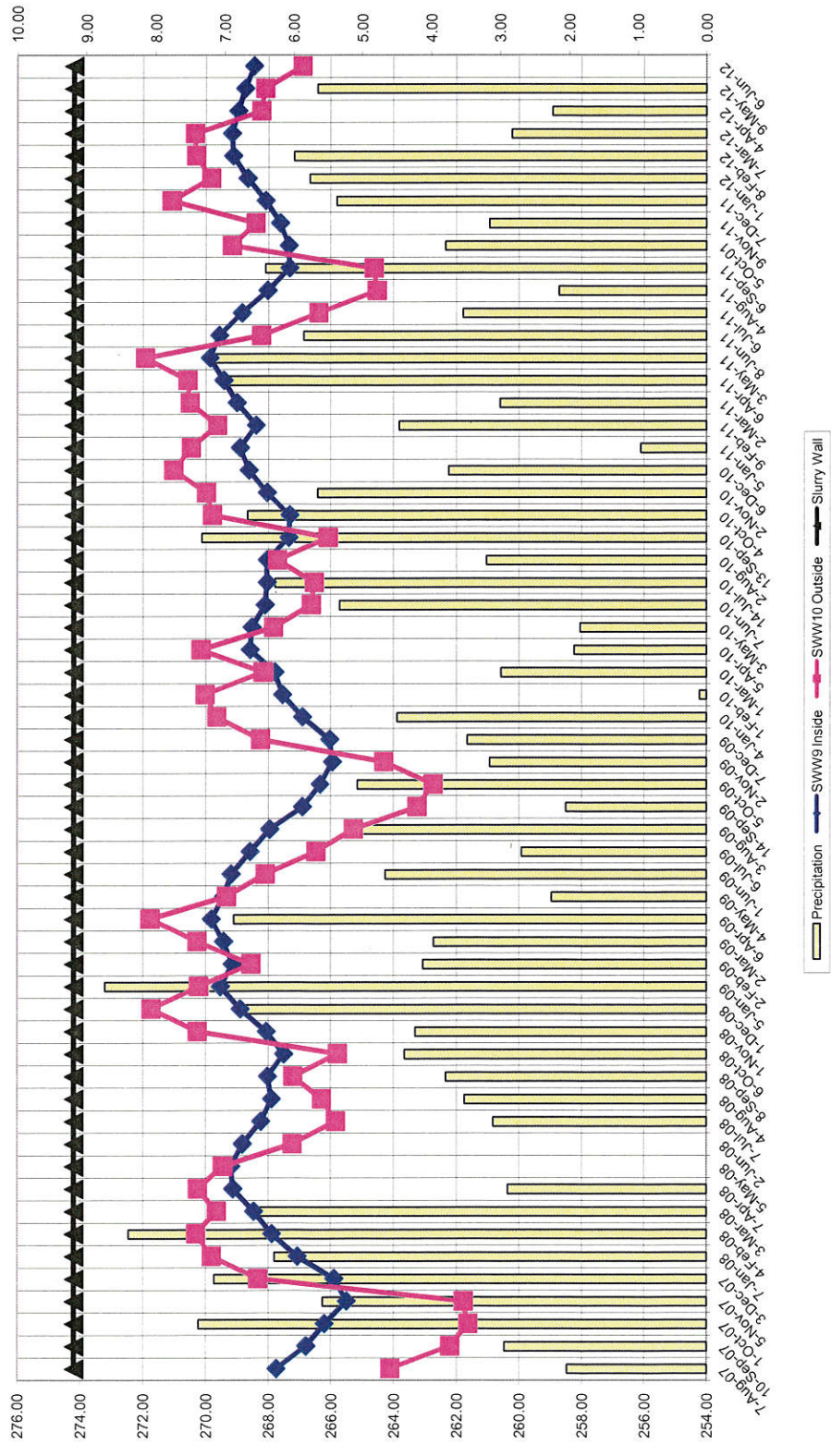
# PAS - OSWEGO GROUNDWATER ELEVATIONS (SWW5 & SWW6)



# PAS - OSWEGO GROUNDWATER ELEVATIONS (SWW7 and SWW8)

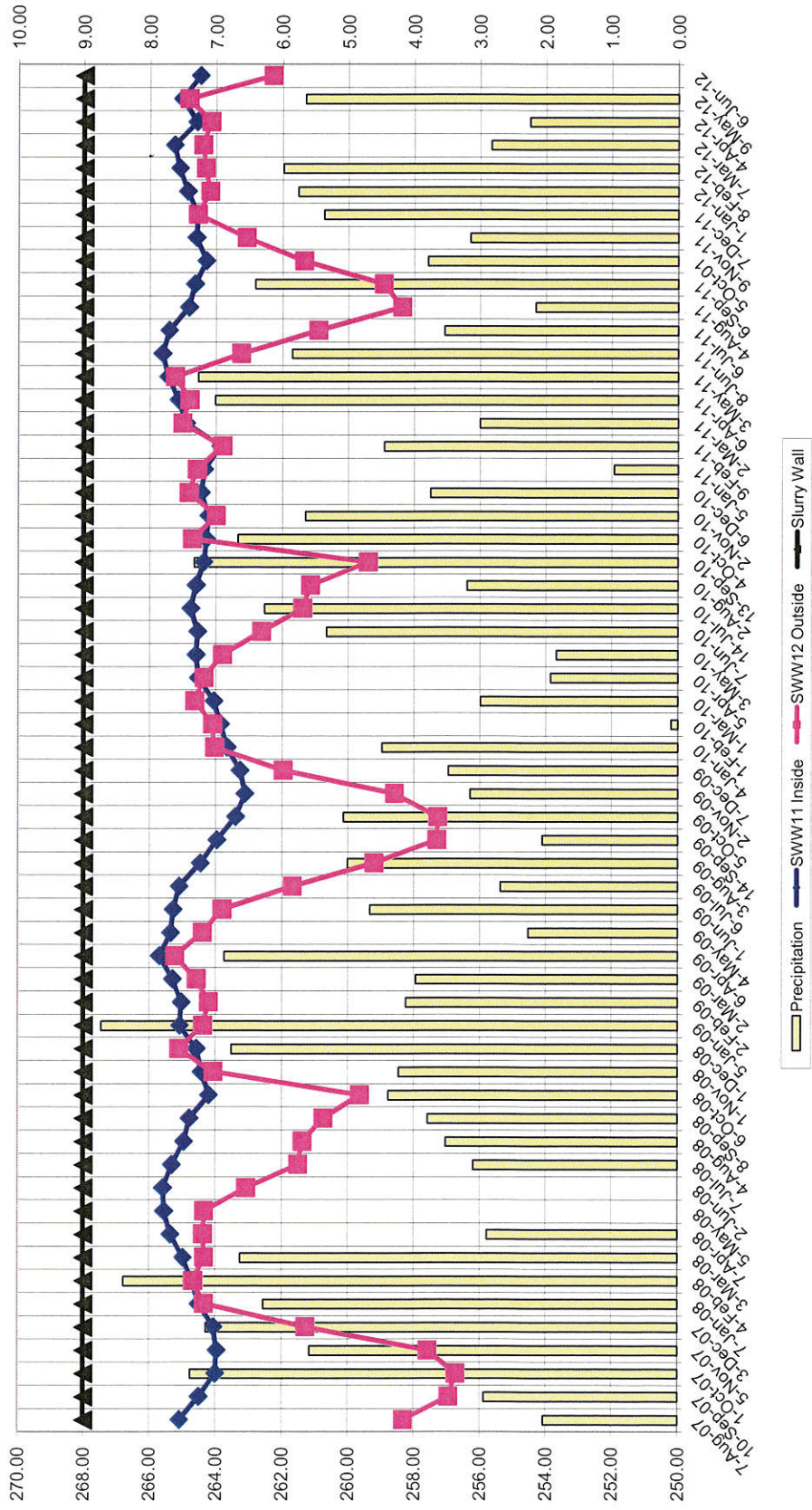


**PAS - OSWEGO  
GROUNDWATER ELEVATIONS (SWW9 and SWW10)**



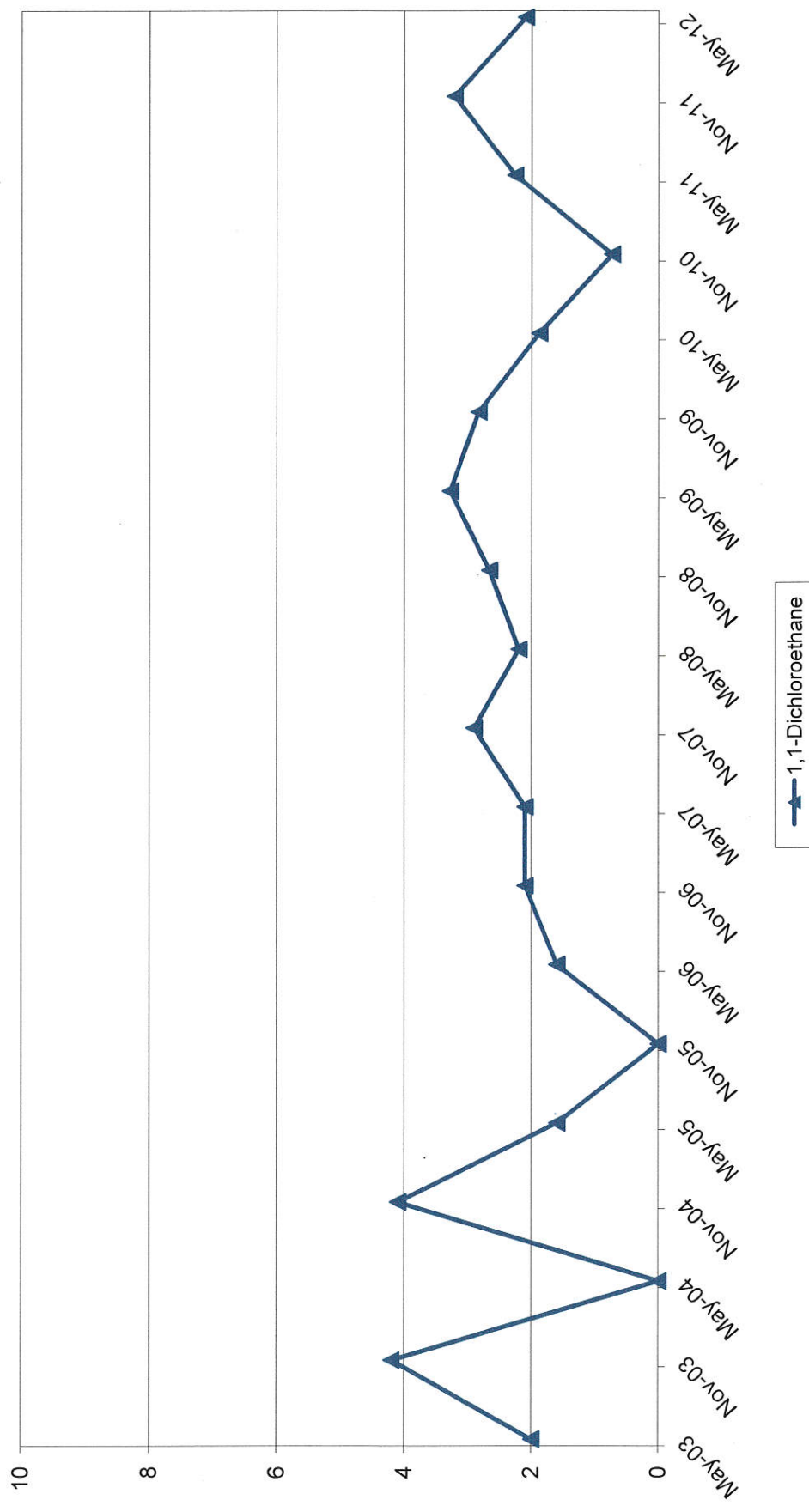


# PAS - OSWEGO GROUNDWATER ELEVATIONS (SWW11 & SWW12)

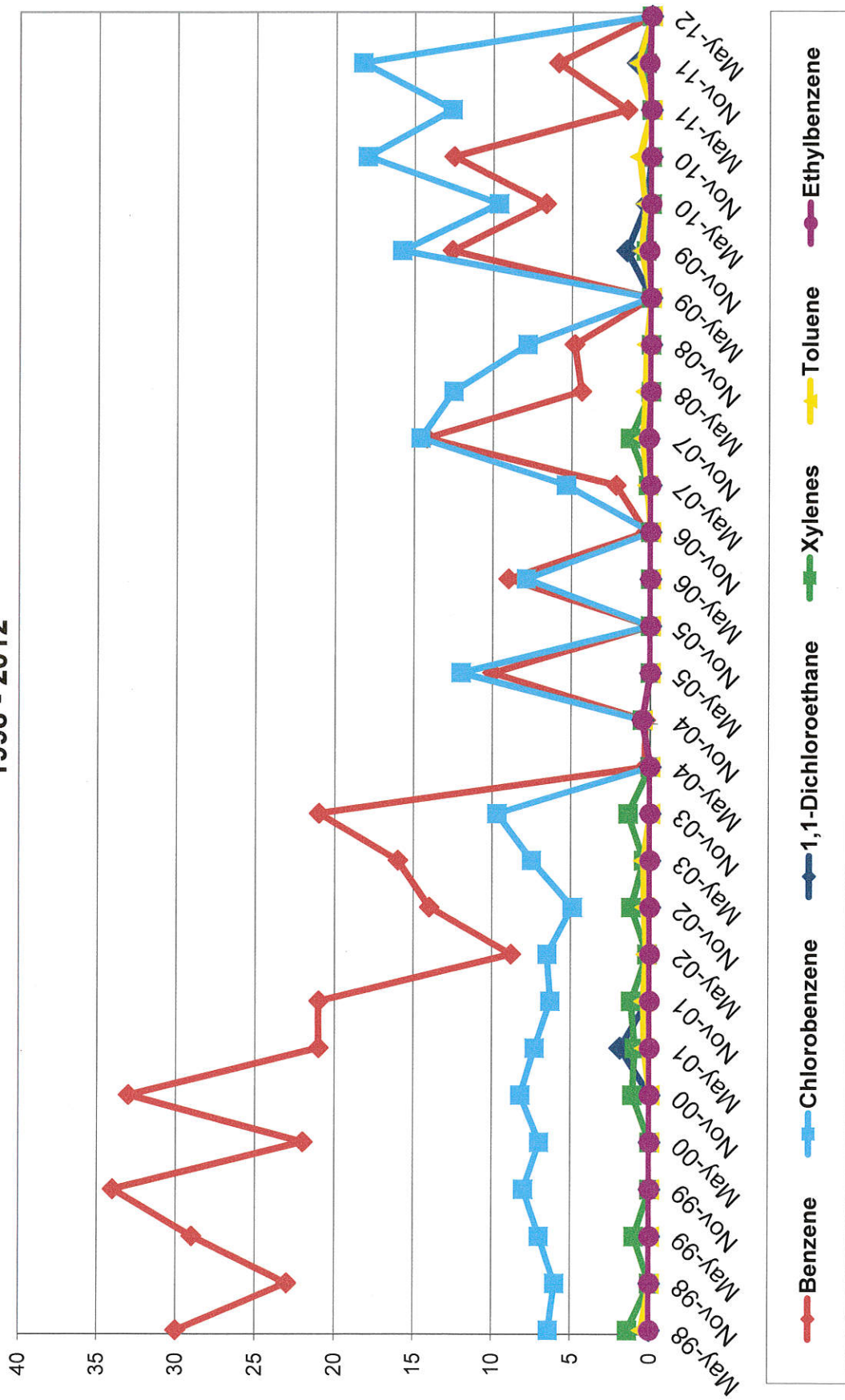


I - B  
GRAPHS

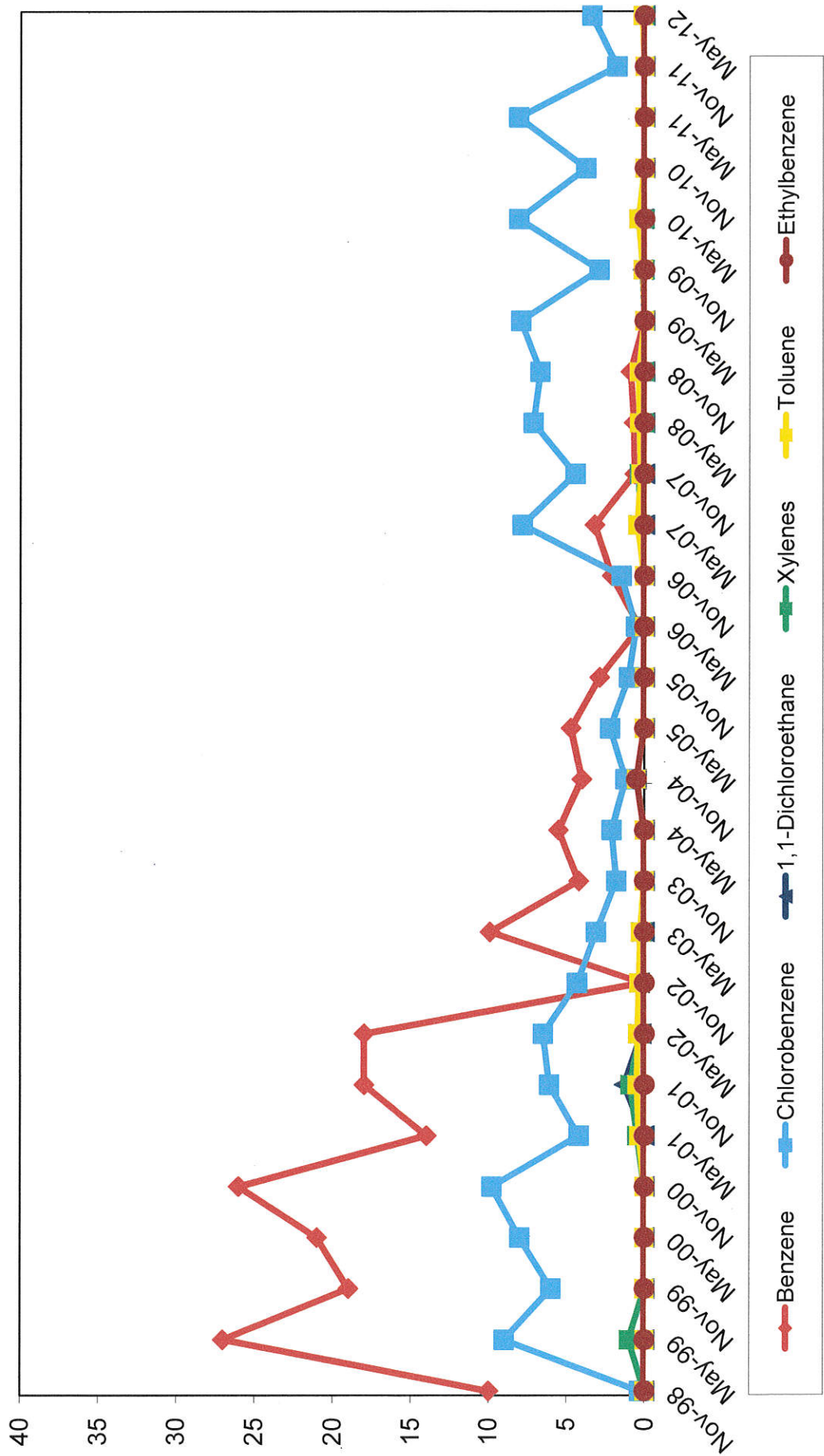
Long Term Groundwater Monitoring at LR-6  
 PAS Oswego Superfund Site Groundwater  
 2003 - 2012



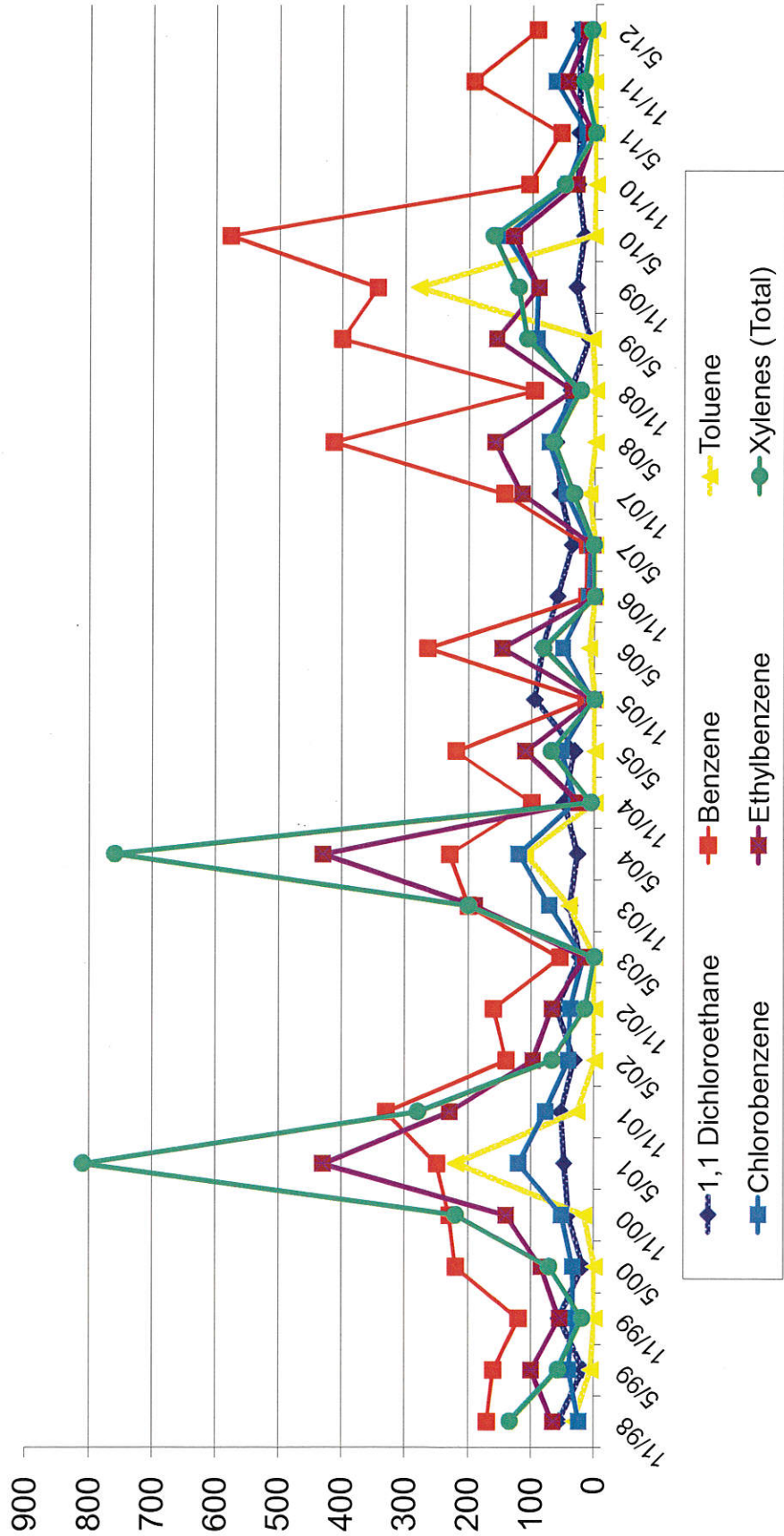
**Long Term Groundwater Monitoring at LR-8  
PAS Oswego Superfund Site Groundwater  
1998 - 2012**



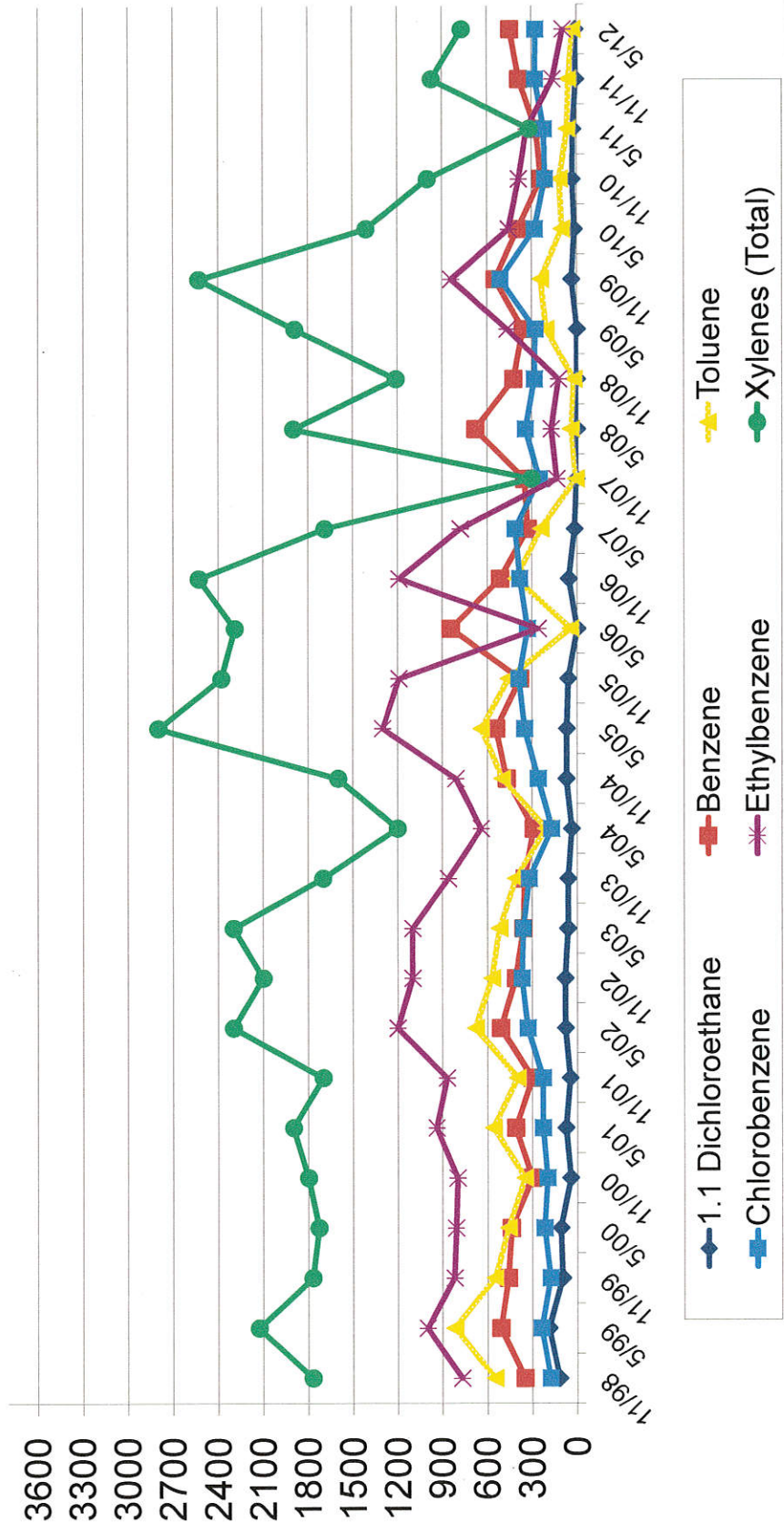
**Long Term Groundwater Monitoring at M-21  
PAS Oswego Superfund Site Groundwater  
1998 - 2012**



# LCW2 PAS Oswego Superfund Site Leachate Concentrations 1998 - 2012

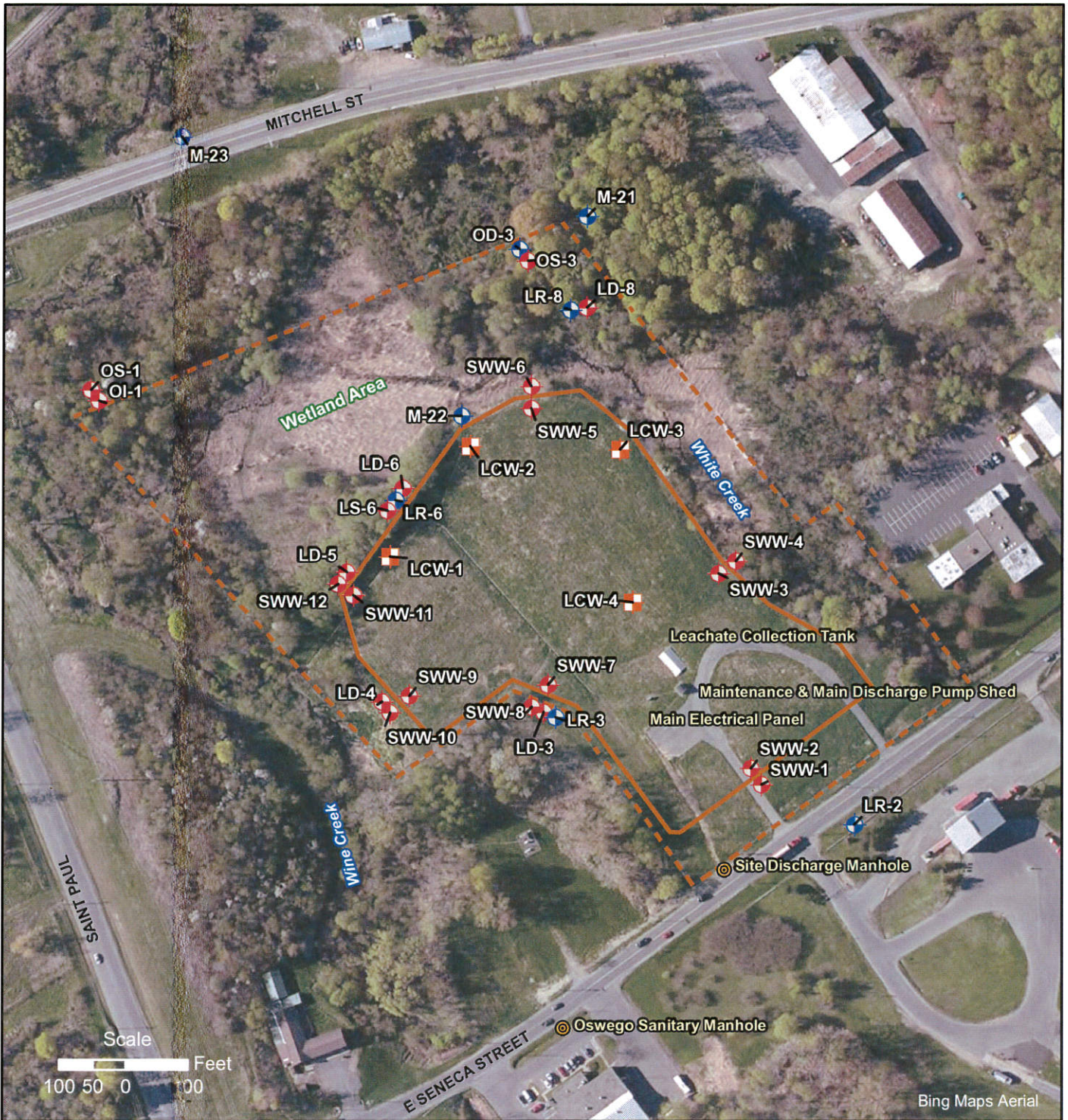


# LCW4 PAS Oswego Superfund Site Leachate Concentrations 1998 - 2012



I - C  
FIGURES





**LEGEND**

**Sample Locations**

- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Manhole
- Fence (Site Boundary)
- Slurry Wall

**EXISTING SITE WELLS**

PAS Site, Oswego, New York



Project No.: 3131  
 Plot Date: 4 May 2012  
 Arc Operator: BJAR  
 Reviewed by:

**Figure 1**

**ddms**<sup>TM</sup>  
 1217 Bandana Boulevard North  
 Saint Paul, Minnesota 55108  
 Main Phone: (651) 842-4224  
 www.ddmsinc.com

LR-6	NOV 1989	MAY 1990	NOV 1990	MAY 1991	NOV 1991	MAY 1992	NOV 1992	MAY 1993	NOV 1993	MAY 1994	NOV 1994	MAY 1995	NOV 1995	MAY 1996	NOV 1996	MAY 1997	NOV 1997	MAY 1998	NOV 1998	MAY 1999	NOV 1999	MAY 2000	NOV 2000	MAY 2001	NOV 2001	MAY 2002	NOV 2002	MAY 2003	NOV 2003	MAY 2004	NOV 2004	MAY 2005	NOV 2005	MAY 2006	NOV 2006	MAY 2007	NOV 2007	MAY 2008	NOV 2008	MAY 2009	NOV 2009	MAY 2010	NOV 2010	MAY 2011	NOV 2011	MAY 2012				
BENZENE	2J	ND	1J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
TOLUENE	2J	ND	2J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
ETHYLBENZENE	1J	ND	1J	0.3J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
XYLENES (TOTAL)	ND	ND	3J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	4B	67	49	34	33	14	12	8	10	8	7J	13	7	8	ND	8	5	4.2J	6	3	9	2	4.2	ND	4.1	1.6	16J	1.6	2.1	2.1	2.9	2.2	2.66	3.28	2.83	1.88	0.73	2.26	3.21	2.09	3.43	1.65	2.2	1.66	2.55	1.83				

EXPLANATION

- LR-6 ● LOCATION AND DESIGNATION OF EXISTING BEDROCK MONITORING WELL
- OD-1 ● LOCATION AND DESIGNATION OF ABANDONED BEDROCK MONITORING WELL
- FENCE (SITE BOUNDARY)
- SLURRY WALL
- ▲ LAND AREAS SUBJECT TO FREQUENT, SHALLOW INUNDATION

DESIGNATION OF SAMPLING LOCATION  
DATE OF SAMPLING EVENT (R=REPLICATE)

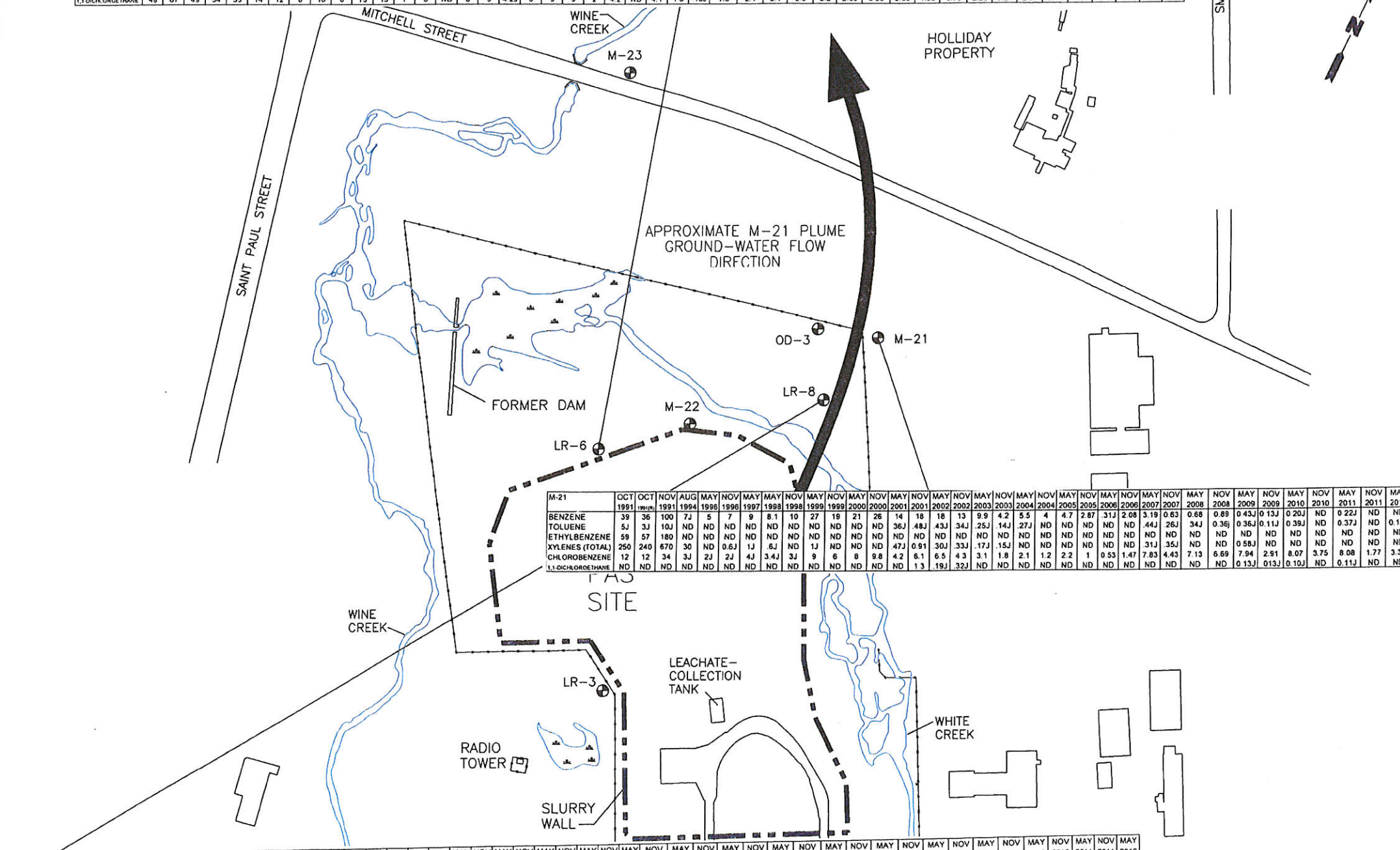
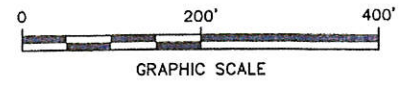
M-25	AUG 1994	MAY 1996	NOV 1996	MAY 1997
BENZENE	4J	9	ND	12
TOLUENE	ND	ND	ND	ND
ETHYLBENZENE	ND	ND	ND	ND
XYLENES (TOTAL)	ND	ND	ND	ND
CHLOROBENZENE	1J	3J	ND	6
1,1-DICHLOROETHANE	ND	2J	4J	ND

CONCENTRATION OF VOC DETECTED IN BEDROCK GROUND WATER, MEASURED IN ug/L.

- ND - NOT DETECTED
- J - ESTIMATED CONCENTRATION (LESS THAN SAMPLE QUANTITATION LIMIT)
- D - CONCENTRATION CALCULATED FROM SECONDARY DILUTION
- B - COMPOUND DETECTED IN QUALITY CONTROL BLANKS

NOTES:

1. BASE MAP ADAPTED FROM TOPOGRAPHIC MAP DEVELOPED BY LOCKWOOD MAPPING, INC. BASED ON AN APRIL 14, 1993 AERIAL PHOTOGRAPH; SOME WELL AND STREAM-GAUGE LOCATIONS ARE INFERRED; LOCATION OF SLURRY WALL BASED ON SITE PLAN DRAWN BY DUNN GEOSCIENCE CORP., INC. (DEC. 1994), TITLED "BORING, WELL & TEST PIT PLOT PLAN."
2. ANALYTICAL DATA PRIOR TO AUGUST 1994 OBTAINED FROM GOLDER ASSOCIATES, INC. (1993a) AND URS COMPANY, INC. (1994)
3. FIGURE PROVIDED BY ROUX ASSOCIATES, INC. (PROJECT No. 32702M06, FILE D0610002, DATED 3/98) AND PREVIOUSLY PRESENTED IN "REVIEW OF INTERIM GROUNDWATER REMOVAL AND LONG-TERM MONITORING PROGRAM DATA FOR PAS SITE" (MARCH 1998).



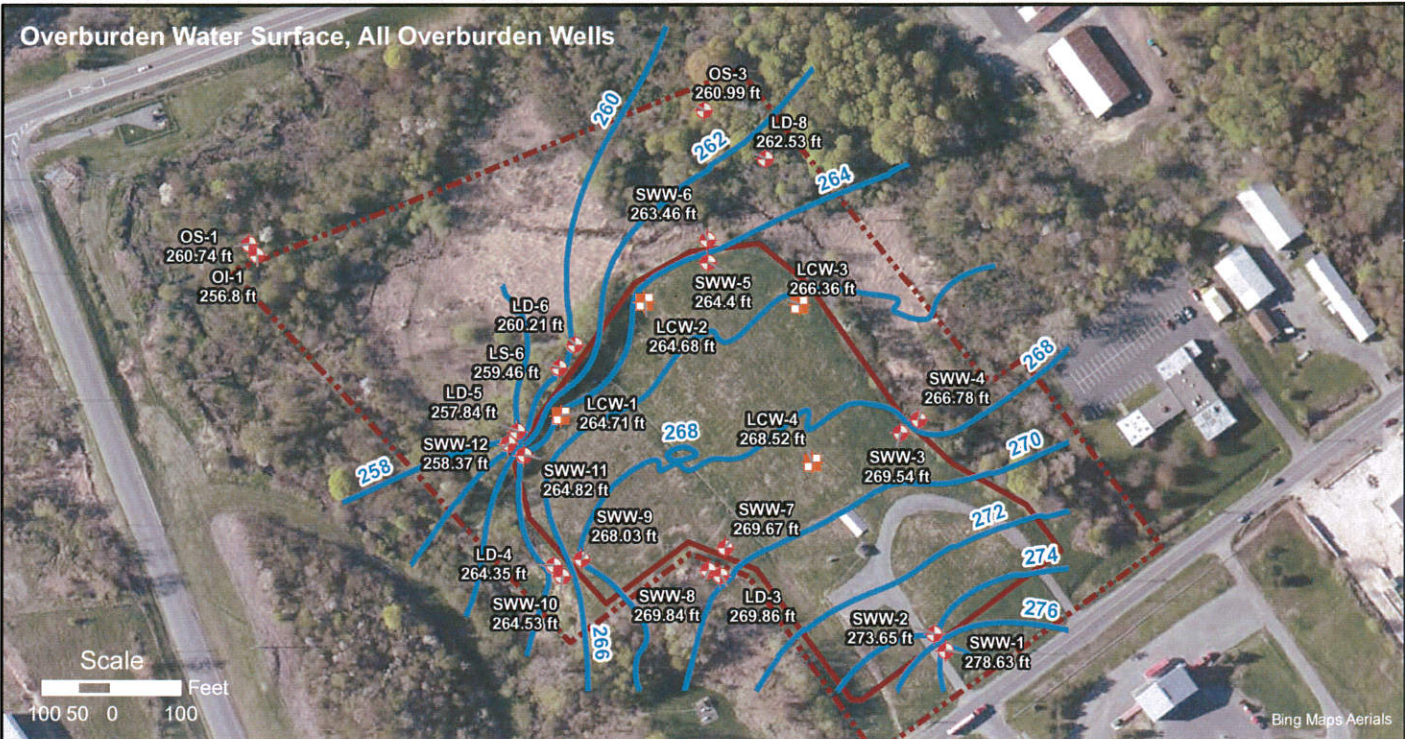
M-21	OCT 1991	OCT 1991	NOV 1991	AUG 1994	MAY 1996	NOV 1996	MAY 1997	MAY 1998	NOV 1998	MAY 1999	NOV 1999	MAY 2000	NOV 2000	MAY 2001	NOV 2001	MAY 2002	NOV 2002	MAY 2003	NOV 2003	MAY 2004	NOV 2004	MAY 2005	NOV 2005	MAY 2006	NOV 2006	MAY 2007	NOV 2007	MAY 2008	NOV 2008	MAY 2009	NOV 2009	MAY 2010	NOV 2010	MAY 2011	NOV 2011	MAY 2012							
BENZENE	39	36	100	7J	5	7	9	8.1	10	27	19	21	26	14	18	13	9.9	4.2	5.5	4	4.7	2.87	3.1J	2.08	3.19	0.63	0.68	0.89	0.43J	0.13J	0.20J	ND	0.22J	ND	ND	0.13J							
TOLUENE	5J	3J	10J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.37J	ND	0.13J					
ETHYLBENZENE	59	57	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
XYLENES (TOTAL)	250	240	670	30	ND	0.6J	1J	5J	ND	1J	ND	1J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
CHLOROBENZENE	12	12	34	3J	2J	2J	4J	3.4J	3J	9	6	8	9.8	4.2	6.1	6.5	4.3	3.1	1.8	2.1	1.2	2.2	1	0.53	1.47	7.83	4.43	7.13	6.89	7.94	2.91	8.07	3.75	8.08	1.77	3.38							
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

LR-8	NOV 1989	MAY 1990	NOV 1990	MAY 1991	NOV 1991	MAY 1992	NOV 1992	MAY 1993	NOV 1993	MAY 1994	NOV 1994	MAY 1995	NOV 1995	MAY 1996	NOV 1996	MAY 1997	NOV 1997	MAY 1998	NOV 1998	MAY 1999	NOV 1999	MAY 2000	NOV 2000	MAY 2001	NOV 2001	MAY 2002	NOV 2002	MAY 2003	NOV 2003	MAY 2004	NOV 2004	MAY 2005	NOV 2005	MAY 2006	NOV 2006	MAY 2007	NOV 2007	MAY 2008	NOV 2008	MAY 2009	NOV 2009	MAY 2010	NOV 2010	MAY 2011	NOV 2011	MAY 2012				
BENZENE	100	32	55	67	84	82	84	45	36	46	51	48	42	29	20J	22	33	30	23	29	34	22	33	21	21	8.8	14	16	21	33J	30J	10	ND	9	0.31J	2.21	14.2	4.39	4.83	0.12J	12.6	6.65	12.5	1.53	5.88	ND				
TOLUENE	12	11	138	9J	3J	18J	2J	7	8J	2J	8J	7J	0.8J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
ETHYLBENZENE	150	69	93	110	55	24	26	87	2J	54	87	98	97	29	1J	ND	2J	3J	1.4J	ND	1J	ND	1.1	0.96	1.2	1.8J	1.2	40J	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
XYLENES (TOTAL)	380	200	310	370	1900	2700	370	3900	120	54	87	98	97	29	1J	ND	2J	3J	1.4J	ND	1J	ND	1.1	0.96	1.2	1.8J	1.2	40J	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
CHLOROBENZENE	23	7	13	18	22	23	228	10	20	8J	8J	10	9	9	5	6	6.4	6	7	8	7	8	7	8.2	7.3	6.3	6.5	4.9	7.5	9.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

POLLUTION ABATEMENT SERVICES SITE  
OSWEGO, NEW YORK  
OPERATION AND MAINTENANCE AND  
LONG-TERM MONITORING PLAN  
HISTORICAL CONCENTRATIONS OF VOCs  
OF CONCERN DETECTED IN CONSENT  
DECREE WELLS (1998 - 2012)

FIGURE 2

FIGURES  
SET 4



**LEGEND**

- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Potentiometric Surface Contours (ft)
- Fence (Site Boundary)
- Slurry Wall

Notes: Universal kriging was used to determine potentiometric surface of wells within slurry wall; ordinary kriging was used to determine potentiometric surface of all overburden wells.

Some surface contours for the all overburden wells dataset were smoothed to remove jagged areas.

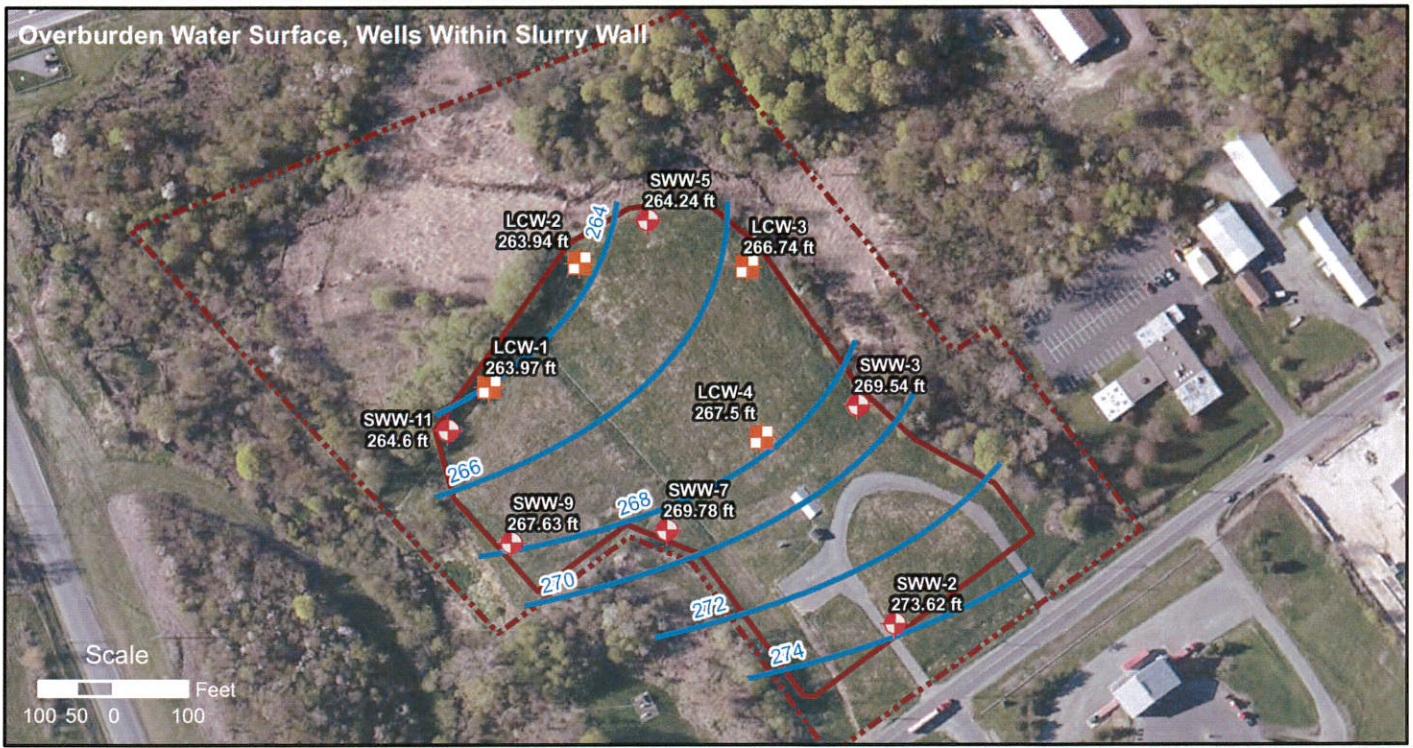
**POTENTIOMETRIC SURFACE  
COMPARISON - OVERBURDEN WELLS  
AUGUST 4, 2011  
PAS Site, Oswego, New York**



Project No.: 3131  
Plot Date: 13 June 2012  
Arc Operator: BJAR  
Reviewed by: MEP

**Figure 2011-Q3-A-ALT**

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Saint Paul, Minnesota 55108  
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**LEGEND**

- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Potentiometric Surface Contours (ft)
- Fence (Site Boundary)
- Slurry Wall

Notes: Universal kriging was used to determine potentiometric surface of wells within slurry wall; ordinary kriging was used to determine potentiometric surface of all overburden wells.

Some surface contours for the all overburden wells dataset were smoothed to remove jagged areas.

**POTENTIOMETRIC SURFACE COMPARISON - OVERBURDEN WELLS**  
**NOVEMBER 9, 2011**  
 PAS Site, Oswego, New York



Project No.: 3131  
 Plot Date: 27 June 2012  
 Arc Operator: BJAR  
 Reviewed by: MEP

**Figure 2011-Q4-A-ALT**





**LEGEND**

-  Leachate Collection Well (Overburden)
-  Overburden Monitoring Well
-  Potentiometric Surface Contours (ft)
-  Fence (Site Boundary)
-  Slurry Wall

Notes: Ordinary kriging was used to determine potentiometric surfaces of overburden wells within slurry wall and of all overburden wells.

Some surface contours for the all overburden wells dataset were smoothed to remove jagged areas.

**POTENTIOMETRIC SURFACE  
COMPARISON - OVERBURDEN WELLS  
FEBRUARY 8, 2012**  
PAS Site, Oswego, New York



Project No.: 3131  
Plot Date: 27 June 2012  
Arc Operator: BJAR  
Reviewed by: MEP

**Figure 2012-Q1-A-ALT**



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Saint Paul, Minnesota 55108  
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**LEGEND**

- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Potentiometric Surface Contours (ft)
- Fence (Site Boundary)
- Slurry Wall

Notes: Ordinary kriging was used to determine potentiometric surfaces of overburden wells within slurry wall and of all overburden wells.

Some surface contours for the all overburden wells dataset were smoothed to remove jagged areas.

**POTENTIOMETRIC SURFACE  
COMPARISON - OVERBURDEN WELLS  
MAY 9, 2012**  
PAS Site, Oswego, New York



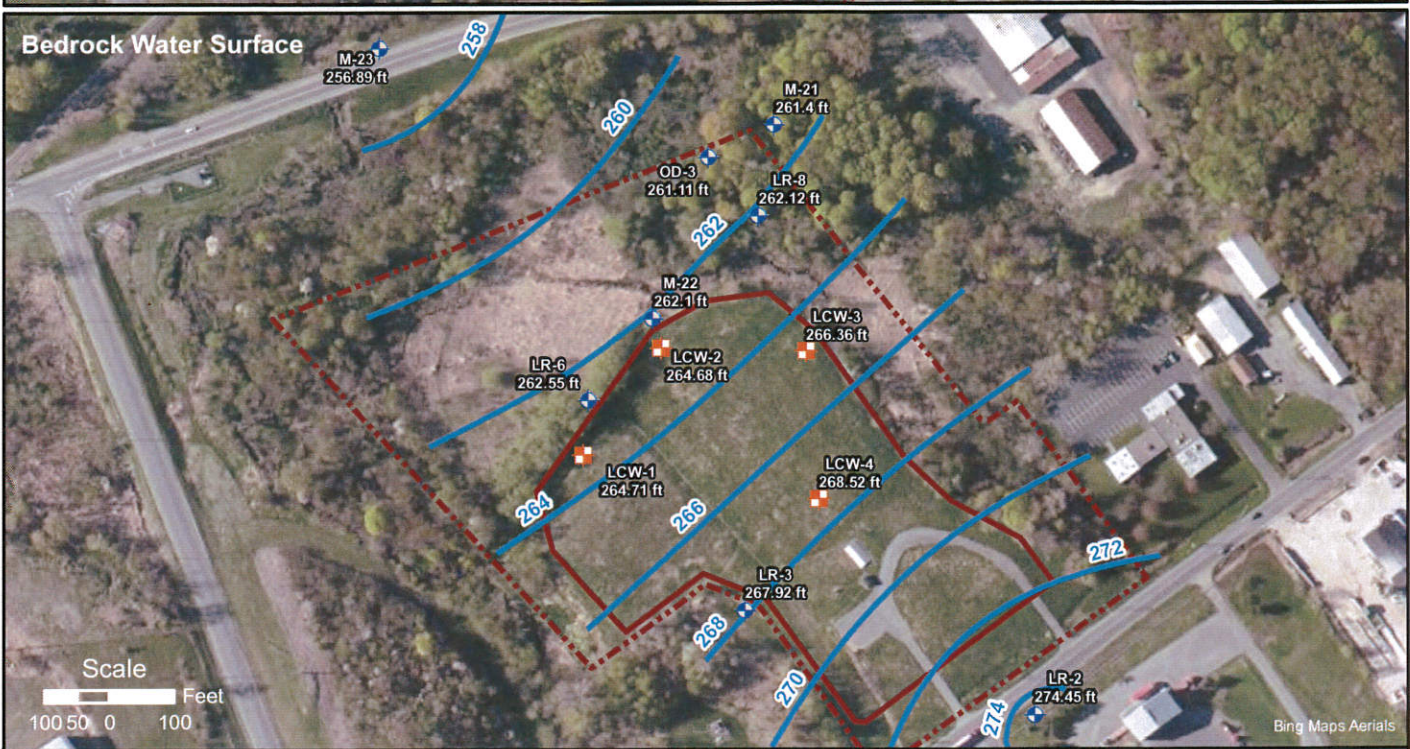
Project No.: 3131  
Plot Date: 13 June 2012  
Arc Operator: BJAR  
Reviewed by: MEP

**Figure 2012-Q2-A-ALT**



FIGURES  
SET 5





**LEGEND**

- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Potentiometric Surface Contours (ft)
- Fence (Site Boundary)
- Slurry Wall

Notes: LCW wells labeled on Bedrock Water Surface map for reference only and were not used in creation of the potentiometric surface.

Linear kriging was used to determine potentiometric surfaces. Bedrock contours within the containment system are inferred from the identified bedrock wells.

**POTENTIOMETRIC SURFACES  
AUGUST 4, 2011**

PAS Site, Oswego, New York



Project No.: 3131  
Plot Date: 16 Feb 2012  
Arc Operator: BJAR  
Reviewed by: MEP

**Figure 2011-Q3-A**

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Saint Paul, Minnesota 55108  
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**LEGEND**

- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Fence (Site Boundary)
- Line of Potentiometric Surface Difference (ft)
- Upward Vertical Hydraulic Gradient
- Downward Vertical Hydraulic Gradient
- Slurry Wall

**Notes:**  
 Overburden wells within the slurry wall were used to calculate the overburden potentiometric surface. Bedrock wells outside the slurry wall were used to calculate bedrock potentiometric surface. The bedrock potentiometric surface was subtracted from the overburden surface to produce the inferred vertical hydraulic gradient.

Negative gradient values indicate an upward hydraulic gradient.

**INFERRED VERTICAL HYDRAULIC GRADIENT - AUGUST 4, 2011**

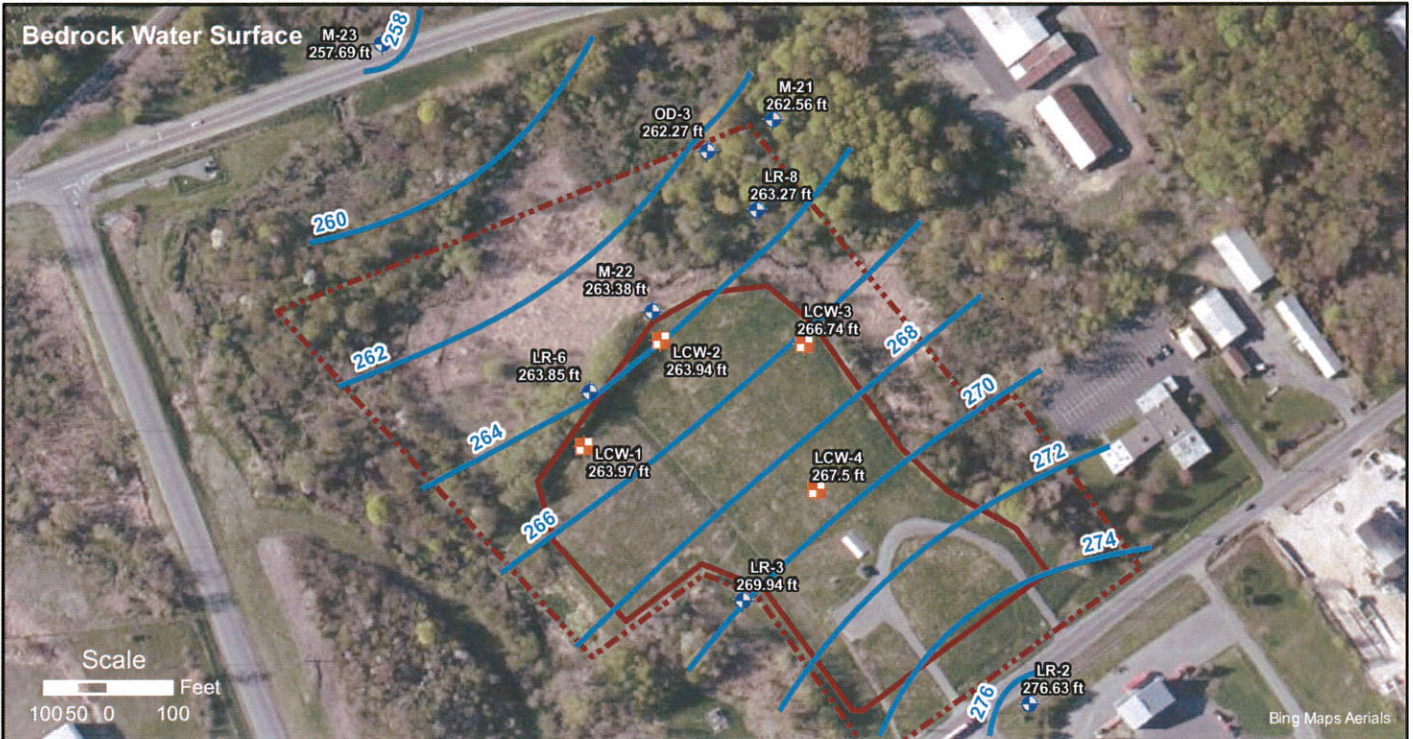
PAS Site, Oswego, New York



Project No.: 3131  
 Plot Date: 16 Feb 2012  
 Arc Operator: BJAR  
 Reviewed by: MEP

**Figure 2011-Q3-B**

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 Saint Paul, Minnesota 55108  
 Main Phone: (651) 842-4224  
 www.ddmsinc.com



**LEGEND**

- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Potentiometric Surface Contours (ft)
- Fence (Site Boundary)
- Slurry Wall

Notes: LCW wells labeled on Bedrock Water Surface map for reference only and were not used in creation of the potentiometric surface.

Linear kriging was used to determine potentiometric surfaces. Bedrock contours within the containment system are inferred from the identified bedrock wells.

**POTENTIOMETRIC SURFACES**  
**NOVEMBER 9, 2011**  
 PAS Site, Oswego, New York



Project No.: 3131  
 Plot Date: 16 Feb 2012  
 Arc Operator: BJAR  
 Reviewed by: MEP

**Figure 2011-Q4-A**

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 Saint Paul, Minnesota 55108  
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**LEGEND**

- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Fence (Site Boundary)
- Line of Potentiometric Surface Difference (ft)
- Upward Vertical Hydraulic Gradient
- Downward Vertical Hydraulic Gradient
- Slurry Wall

**Notes:**  
 Overburden wells within the slurry wall were used to calculate the overburden potentiometric surface. Bedrock wells outside the slurry wall were used to calculate bedrock potentiometric surface. The bedrock potentiometric surface was subtracted from the overburden surface to produce the inferred vertical hydraulic gradient.

Negative gradient values indicate an upward hydraulic gradient.

**INFERRED VERTICAL HYDRAULIC GRADIENT - NOVEMBER 9, 2011**

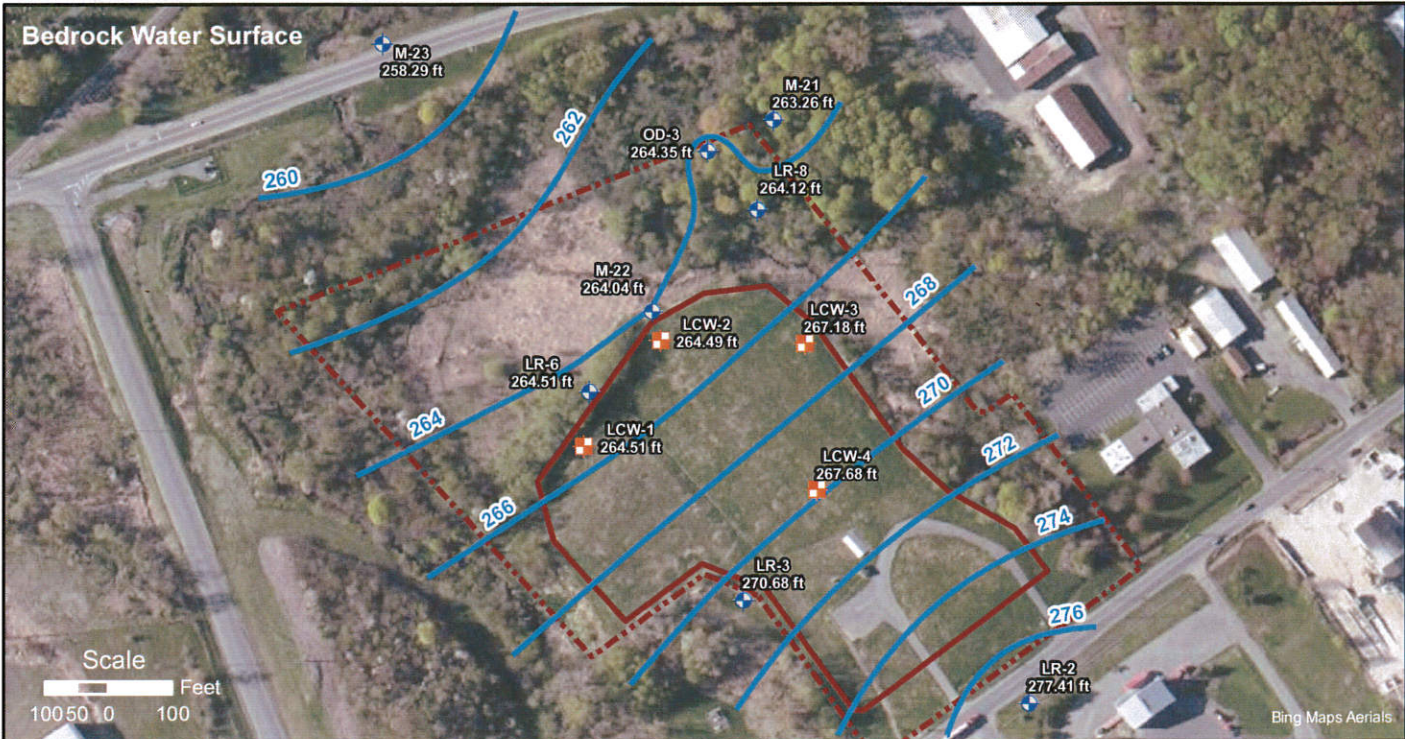
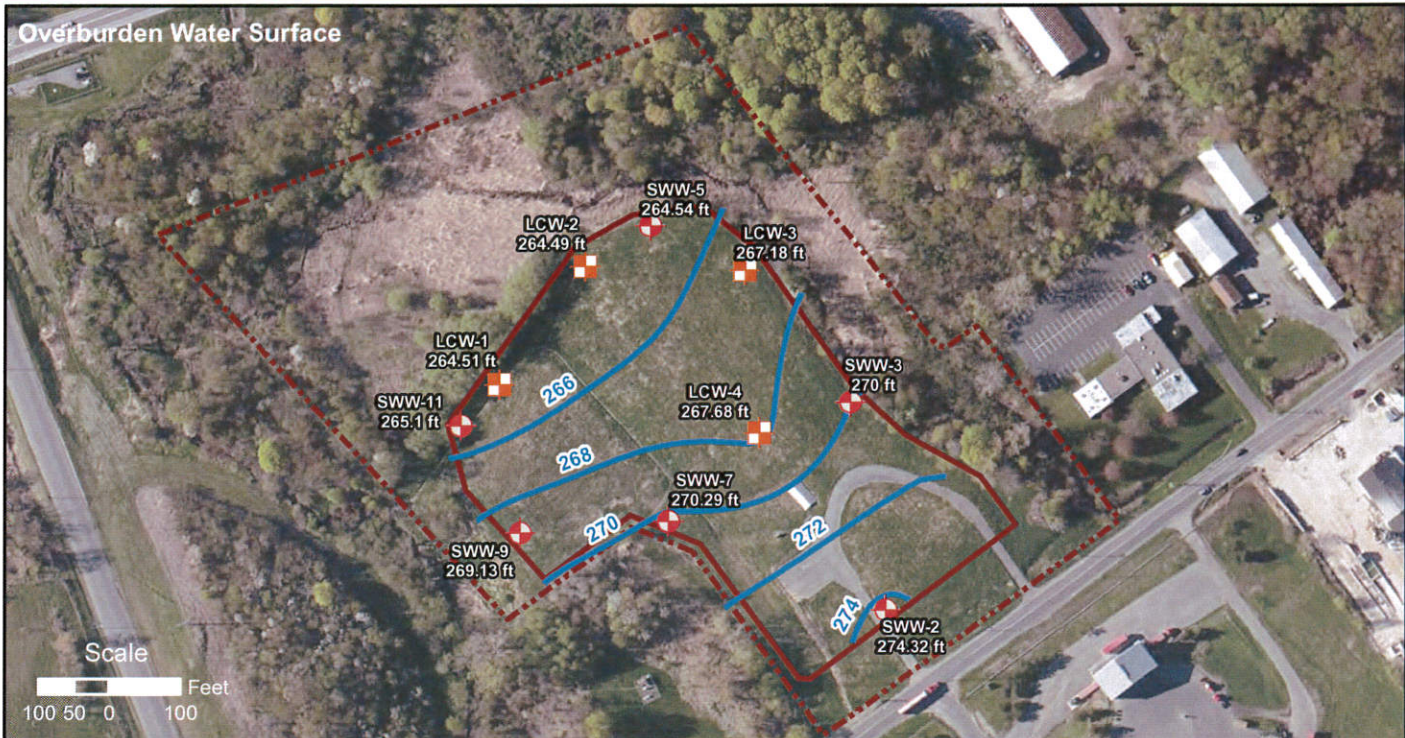
PAS Site, Oswego, New York



Project No.: 3131  
 Plot Date: 16 Feb 2012  
 Arc Operator: BJAR  
 Reviewed by: MEP

**Figure 2011-Q4-B**

**ddms**  
 1217 Bandana Boulevard North  
 Saint Paul, Minnesota 55108  
 Main Phone: (651) 842-4224  
 www.ddmsinc.com



**LEGEND**

- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Potentiometric Surface Contours (ft)
- Fence (Site Boundary)
- Slurry Wall

Notes: LCW wells labeled on Bedrock Water Surface map for reference only and were not used in creation of the potentiometric surface.

Linear kriging was used to determine both potentiometric surfaces. Bedrock contours within the containment system are inferred from the identified bedrock wells.

**POTENTIOMETRIC SURFACES  
FEBRUARY 8, 2012  
PAS Site, Oswego, New York**



Project No.: 3131  
Plot Date: 30 Apr 2012  
Arc Operator: BJAR  
Reviewed by: MEP

**Figure 2012-Q1-A**

1217 Bandana Boulevard North  
Saint Paul, Minnesota 55108  
Main Phone: (651) 842-4224  
www.ddmsinc.com



**LEGEND**

- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Fence (Site Boundary)
- Line of Potentiometric Surface Difference (ft)
- Upward Vertical Hydraulic Gradient
- Downward Vertical Hydraulic Gradient
- Slurry Wall

**Notes:**  
 Overburden wells within the slurry wall were used to calculate the overburden potentiometric surface. Bedrock wells outside the slurry wall were used to calculate bedrock potentiometric surface. The bedrock potentiometric surface was subtracted from the overburden surface to produce the inferred vertical hydraulic gradient.

Negative gradient values indicate an upward hydraulic gradient.

**INFERRED VERTICAL HYDRAULIC GRADIENT - FEBRUARY 8, 2012**

PAS Site, Oswego, New York



Project No.: 3131  
 Plot Date: 30 Apr 2012  
 Arc Operator: BJAR  
 Reviewed by: MEP

**Figure 2012-Q1-B**





**LEGEND**

- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Potentiometric Surface Contours (ft)
- Fence (Site Boundary)
- Slurry Wall

Notes: LCW wells labeled on Bedrock Water Surface map for reference only and were not used in creation of the potentiometric surface.

Linear kriging was used to determine both potentiometric surfaces. Bedrock contours within the containment system are inferred from the identified bedrock wells.

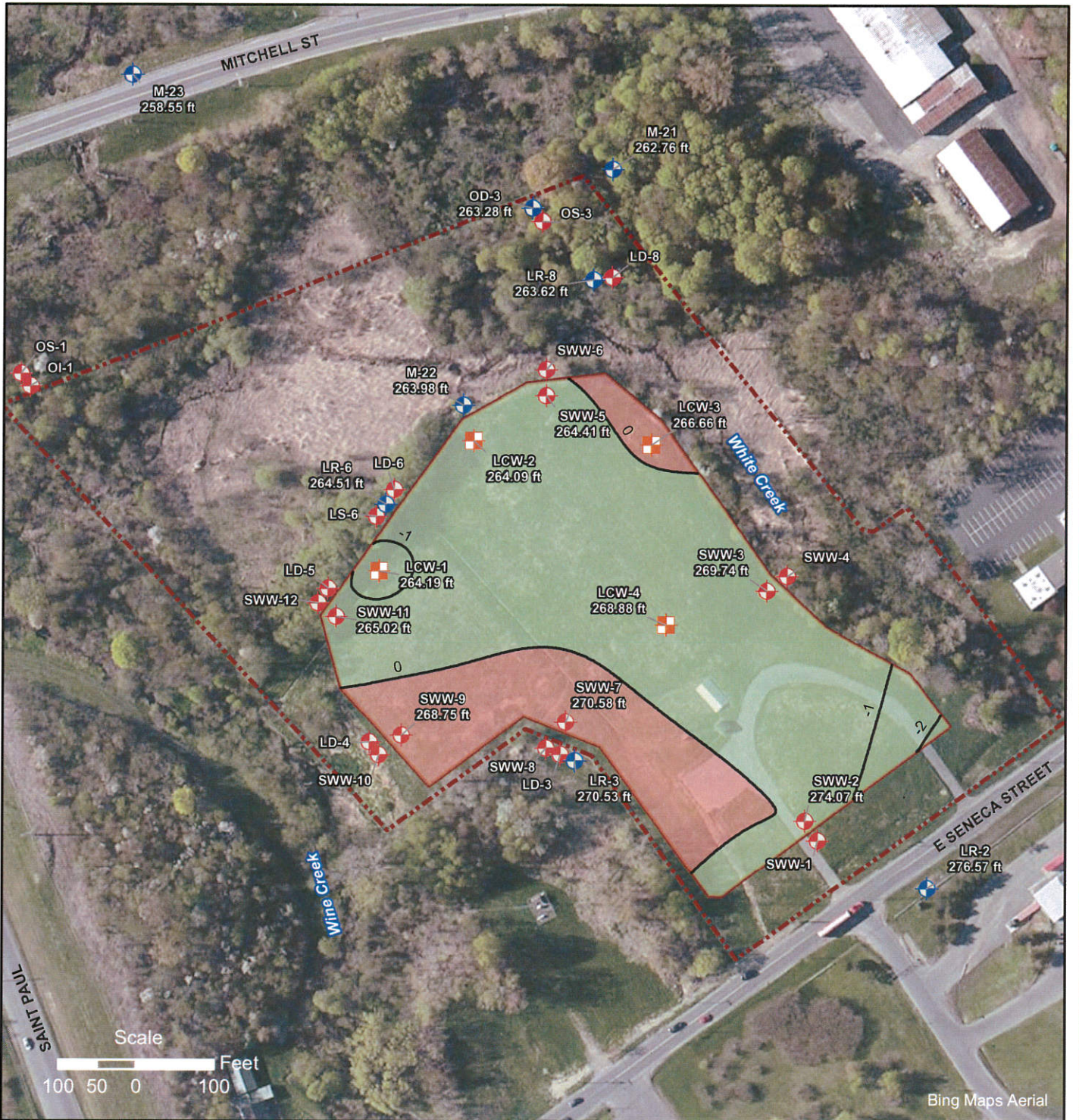
**POTENTIOMETRIC SURFACES**  
**MAY 9, 2012**  
 PAS Site, Oswego, New York



Project No.: 3131  
 Plot Date: 4 June 2012  
 Arc Operator: BJAR  
 Reviewed by: MEP

**Figure 2012-Q2-A**

1217 Bandana Boulevard North  
 Saint Paul, Minnesota 55108  
 Main Phone: (651) 842-4224  
 www.ddmsinc.com



**LEGEND**

- Bedrock Monitoring Well
- Leachate Collection Well (Overburden)
- Overburden Monitoring Well
- Fence (Site Boundary)
- Line of Potentiometric Surface Difference (ft)
- Upward Vertical Hydraulic Gradient
- Downward Vertical Hydraulic Gradient
- Slurry Wall

**Notes:**  
 Overburden wells within the slurry wall were used to calculate the overburden potentiometric surface. Bedrock wells outside the slurry wall were used to calculate bedrock potentiometric surface. The bedrock potentiometric surface was subtracted from the overburden surface to produce the inferred vertical hydraulic gradient.

Negative gradient values indicate an upward hydraulic gradient.

**INFERRED VERTICAL HYDRAULIC GRADIENT - MAY 9, 2012**

PAS Site, Oswego, New York



Project No.: 3131  
 Plot Date: 4 June 2012  
 Arc Operator: BJAR  
 Reviewed by: MEP

**Figure 2012-Q2-B**





I - D  
TABLES

Table 1

**Historical Leachate Removal Summary (Gallons)  
Pollution Abatement Service Superfund Site  
Oswego, New York**

Month	91 IGR Order			94 IGR Order				98 Consent Decree										2006	2007	2008	2009	2010	2011	2012
	1992	1993	1994	1994	1995	1996	1997	1998	1998	1999	2000	2001	2002	2003	2004	2005								
Jan		20,170	30,067		25,445	25,441	25,972	21,485		9,979	15,706	10,506	9,751	10,537	9,962	10,472	9,972	9,683	9,503	20,184	10,918	10,000	10,005	
Feb	18,937	20,283	29,661		25,830	23,457	22,316	12,924		16,056	9,687	10,294	10,444	9,904	9,899	10,300	10,030	9,620	9,656	11,200	11,293	10,010	10,000	
Mar	20,314	20,347	29,602		24,852	25,098	24,257	25,455		15,785	8,927	10,484	10,307	9,896	10,573	10,149	9,812	0	9,500	20,125	11,000	10,000	10,000	
Apr	20,140	30,403	29,051		22,815	22,187	26,793	26,009		28,110	9,352	19,609	8,463	10,211	9,765	9,947	9,795	10,058	8,575	19,600	10,995	10,010	10,000	
May	20,620	30,803	29,199		23,690	23,718	24,840	23,935		13,566	26,160	10,158	8,868	10,117	10,503	10,215	9,743	9,693	7,712	20,047	11,000	10,020	20,000	
Jun	20,030	30,244	20,481		24,586	23,924	23,830	20,052		20,685	25,292	10,055	9,822	10,518	10,105	10,193	9,885	10,110	9,474	19,000	10,950	10,005	20,000	
Jul	20,270	31,069	20,655		23,450	25,402	25,340	20,411		10,121	20,416	10,470	10,255	10,197	10,292	10,100	9,902	9,472	10,144	18,873	0	10,000		
Aug	20,363	31,404	25,690		24,188	25,129	19,677	20,292		21,832	23,597	9,368	10,254	10,403	10,306	10,025	9,839	9,781	10,200	19,600	19,000	10,020		
Sep	20,807	31,232	25,677		18,343	21,514	20,417	20,520		10,255	20,407	10,473	9,907	10,566	10,456	9,672	9,499	9,616	10,000	19,000	12,800	20,005		
Oct	19,421	31,114	14,815	0	23,288	24,541	17,867	16,458		10,255	17,563	10,226	10,400	8,196	10,717	9,773	9,802	0	10,871	18,806	20,000	20,005		
Nov	20,409	30,239		25,562	20,133	20,589	18,564		8,185	10,250	9,042	9,355	10,435	9,908	10,486	9,987	9,692	9,497	10,750	19,068	20,000	20,005		
Dec	20,497	30,311		25,121	22,544	22,347	19,498		10,238	10,816	10,463	9,214	9,686	10,130	10,359	9,833	9,779	9,603	10,900	11,009	20,000	10,010		
<b>Totals</b>	<b>221,808</b>	<b>337,619</b>	<b>254,898</b>	<b>50,683</b>	<b>279,164</b>	<b>283,347</b>	<b>269,371</b>	<b>207,541</b>	<b>18,423</b>	<b>177,710</b>	<b>196,613</b>	<b>130,212</b>	<b>118,592</b>	<b>120,583</b>	<b>123,423</b>	<b>120,666</b>	<b>117,750</b>	<b>97,133</b>	<b>117,285</b>	<b>216,512</b>	<b>157,956</b>	<b>150,090</b>	<b>80,005</b>	
<b>Average Removal Per Month</b>	<b>20,164</b>	<b>28,135</b>	<b>25,490</b>	<b>16,894</b>	<b>23,264</b>	<b>23,612</b>	<b>22,448</b>	<b>20,754</b>	<b>9,212</b>	<b>14,809</b>	<b>16,384</b>	<b>10,851</b>	<b>9,883</b>	<b>10,049</b>	<b>10,285</b>	<b>10,056</b>	<b>9,813</b>	<b>8,094</b>	<b>9,774</b>	<b>18,043</b>	<b>13,163</b>	<b>12,508</b>	<b>13,334</b>	

<u>SUMMARY:</u>	<u>TOTALS (GAL)</u>	<u>AVG RATE (GAL/MO)</u>
1991 IGR Order:	814,325	23,951
1994 IGR Order:	1,090,106	22,710
1998 C D:	<u>1,942,953</u>	11,750
		(11/98 to present)
<b>Total (To Date):</b>	<b>3,847,384</b>	

- 1) Used CECOS - Niagara Falls for leachate treatment/disposal beginning in May 1996 - DuPont Deepwater used for treatment/disposal prior to May 96.
- 2) BBLES completed removal work at the end of July 2000; OBG began in August 2000.
- 3) Leachate collection well LCW4 pumped per 11/15/99 LCW4 pumping protocol as approved by EPA.
- 4) Leachate disposed at Clean Harbors facilities at Bristol CT from Mar05 to Oct07 and Baltimore MD from Nov07 to Jun07.
- 5) Leachate disposed at the Auburn Wastewater Treatment Plant in Auburn, NY starting Jul 31 2008 to present.
- 6) Leachate disposed at the City of Oswego Wastewater Treatment Plant in Oswego, NY starting October 28, 2010 to present.

**TABLE 2**  
**Pollution Abatement Services Superfund Site**  
**Oswego, NY**  
*Monitoring Wells Proposed for Abandonment - July 2012*

Wells Proposed for Abandonment*	Date Installed	Screen Interval (ft below land surface)	Elevation of Screen Zone (ft above msl)	Total Well Depth (ft below land surface)	Ground Surface Elevation (ft above msl)	Open Borehole (ft above msl)	Elevation of Open Borehole (ft above msl)	Well Dia (in)	Measuring Pt Elev (feet above msl)
OS-1	10/18/84	6.0-15.0	264.6-254.6	15.0	269.63	-	-	3	272.10
OI-1	10/22/84	21.0-26.0	248.1-243.1	26.0	269.14	-	-	3	272.00
OS-3	10/24/84*	10.0-20.0	264.3-254.3	20.0	274.63	-	-	3	277.89
OD-3	11/01/84*	-	-	42.0	274.96	27.0-42.0	-	4	277.85
LR2	11/17/88	45.8-55.8	241.7-231.7	56.0	287.50	-	-	2	289.85
LD3	11/15/88	17.0-27.0	258.8-248.8	27.3	275.80	-	-	2	278.62
LR3	11/22/88	53.7-63.7	221.8-211.8	63.8	275.50	-	-	2	278.06
LD4	11/04/88	19.8-29.8	256.5-246.5	30.0	276.30	-	-	2	279.25
LD5	10/27/88	16.6-26.6	253.6-243.6	27.0	270.20	-	-	2	272.94
LS6	10/28/88	7.8-17.8	263.6-253.6	18.0	271.40	-	-	2	274.14
LD6	11/03/88	19.8-29.8	251.1-241.1	30.0	270.90	-	-	2	274.03
LR6	11/01/88	47.0-57.0	223.9-229.9	57.2	270.90	-	-	2	274.39
LD8	11/10/88	11.7-21.7	258.2-248.2	21.8	269.90	-	-	2	272.83
LR8	11/11/88	29.5-39.5	240.5-230.5	39.7	270.00	-	-	2	273.42
LCW1	NA	5.3-15.3	265.9-255.9	15.3	271.40	-	-	14	272.21
LCW2	NA	9.6-19.6	263.8-253.8	19.6	272.60	-	-	14	274.44
LCW3	NA	NA	NA	NA	283.30	-	-	14	284.36
LCW4	NA	NA	NA	NA	283.80	-	-	14	285.70
SWW1	06/25/86	6.0-16.0	280.2-270.2	16.5	286.20	-	-	3	289.33
SWW2	06/26/86	5.5-15.5	280.8-270.8	15.5	286.30	-	-	3	289.37
SWW3	06/27/86	7.0-17.0	279.0-269.0	17.0	286.00	-	-	3	286.50
SWW4	06/30/86	14.0-24.0	268.9-258.9	24.0	282.90	-	-	3	283.60
SWW5	06/30/86	6.5-16.5	269.4-259.4	16.5	275.90	-	-	3	277.02
SWW6	07/01/86	6.0-16.0	264.9-254.9	17.0	270.90	-	-	3	273.06
SWW7	10/26/88	9.0-19.0	266.3-253.9	19.5	275.30	-	-	2	277.93
SWW8	11/14/88	9.3-19.3	266.4-256.4	19.5	275.70	-	-	2	278.24
SWW9	10/31/88	17.0-27.0	266.3-256.0	27.5	283.30	-	-	2	285.55
SWW10	11/03/88	12.8-22.6	266.5-256.7	23.0	279.30	-	-	2	280.43
SWW11	11/01/88	9.9-20.0	261.1-251.0	20.5	271.00	-	-	2	273.50
SWW12	10/26/88	8.7-18.7	261.5-251.5	18.9	270.20	-	-	2	272.82
M-21	09/17/91	-	-	39.0	270.28	18.0-39.0	252.3-231.3	6	272.32
M-22	09/13/91	-	-	49.7	270.40	40.0-49.7	230.4-220.7	6	273.88
M-23	09/16/91	-	-	39.5	267.98	27.7-39.5	240.3-228.5	6	270.49

\* PAS wells originally proposed for abandonment in July 2006 highlighted in yellow and re-proposed for abandonment.

I - E

WELL ABANDONMENT FORMS AND HISTORICAL LOGS

**Facility Information**

Site Name: Pollution Abatement Services  
 Site Address: 701 East Seneca Street  
 Site County: Oswego  
 Site State: New York  
 EPA Site ID Number: NYD 000 511 659  
 Site Owner: NYS DEC  
 EPA Project Manager: Patrice Pierre

**Well Locational Information**

State Well ID: LD 3  
 Well Tag ID: LD 3  
 Well Installation date: 11-15-1988

	From Log	By GPS
Ground Surface Elevation	275.80	261
Latitude		
Longitude		
Northing (State Plane)		4813988
Easting (State Plane)		18380028

Cross streets (if applicable): N/A

GPS Instrument used: \_\_\_\_\_  
 Accuracy/Precision: \_\_\_\_\_

**Well Construction Details**

Type of well (Circle one)      Flush Mount       **Stick up**      Multilevel Well\*  
 Well lock/security type: \_\_\_\_\_ Pad Lock Cover \_\_\_\_\_  
 Elevation (top of inner casing): 278.62  
 Surface casing material: 304 Stainless Steel  
 Well casing material: Steel  
 Surface Casing diameter: \_\_\_\_\_ 6 inches  
 Well Diameter: \_\_\_\_\_ 2 inches  
 Well Depth (as installed): \_\_\_\_\_ 27.7 ftbgs  
 Well Depth (as measured): \_\_\_\_\_ 27.3 ftoc  
 Screened interval: \_\_\_\_\_ 10 ft  
 Open hole interval: \_\_\_\_\_ 11.6 ft  
 Depth to water: \_\_\_\_\_ 4.3 ftbtoc  
 Date: 2/8/2012 Time: NL

\* If multilevel well please see attached worksheet.

**Well Headspace Readings**

PID/FID Reading taken inside top of casing (if applicable):    N/A    ppm

Multi-gas/CGI meter Readings taken (if applicable):

LEL:                      % LEL  
 O<sub>2</sub>:                      40% Vol.  
 CO:                      ppm  
 H<sub>2</sub>S:                      ppm

Do readings indicate unsafe conditions exist?                      Yes                      No

**Well Condition**

Is the concrete pad in good condition?	(Yes)	No
Is the well surface casing in good condition?	(Yes)	No
Is the surface casing vertical?	(Yes)	No
Is there an internal well seal?	(Yes)	No
Has there been physical damage to the well?	Yes	(No)
Does sounding depth match completed depth?	Yes	(No)
Is measuring point marked?	(Yes)	No
Is the well clearly labeled?	(Yes)	No
Flush mount - Is it secure from runoff?	(Yes)	No

Other Comments \_\_\_\_\_

**Recommendations**

Well needs to be redeveloped	Yes	No
Well needs to be re-surveyed.	Yes	No
Well needs to be repaired.	Yes	No
Well needs to be replaced.	Yes	No
Well needs to be properly abandoned.	(Yes)	No
No action necessary.	Yes	No

**Comments**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Inspected by:**           K. Stone          

**Date of Inspection:**           7-10-12          

**Reviewed by:**           C. McClarnon           (Print)

          Clay McClarnon           (Sign)

**MONITOR WELL CONSTRUCTION REPORT**

Site PAS

Well No. LD-3

Total Depth 27'7" Surface Elev. 275.8'

Top Riser Elev. 278.62'

Water Levels (Depth, Date, Time) \_\_\_\_\_

Date Installed 11-15-88

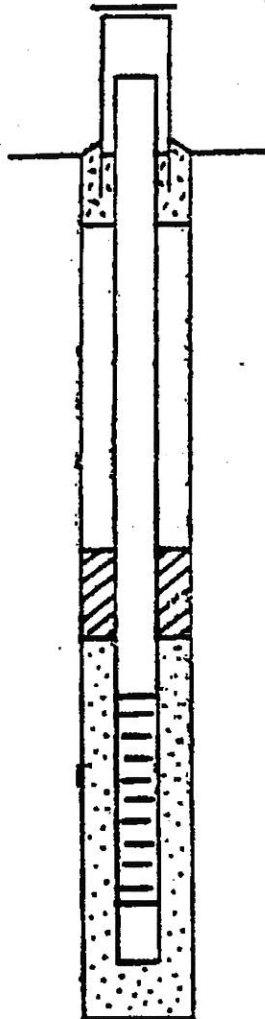
Riser:	Dia. <u>2"</u>	Material <u>304 s.s.</u>	Length <u>20'</u>	Slot Size <u>0.010"</u>
Screen:	Dia. <u>2"</u>	Material <u>304 s.s.</u>	Length <u>10'</u>	
Prot. Csg:	Dia. <u>6"</u>	Material <u>steel</u>	Length <u>7'</u>	

**SCHEMATIC**

Surface Seal Type concrete

Seal Type bentonite slurry

Sand Pack Type/Size #4 QROK



39" Prot. Csg stickup

36" Riser stickup

Ground Surface

3' Bottom Surface Seal

Grout Type cement/bentonite

14' Top Seal

16' Top Sand Pack

17'1" Top Screen

27'1" Bottom Screen

27'3" Bottom Sump/Wellpoint

27'7" Total Depth of Boring

Comments two 5' screens

Driller M. Hawkins

Geologist \_\_\_\_\_

DEC Inspector R. Edwards

**Facility Information**

Site Name: Pollution Abatement Services  
 Site Address: 701 East Seneca Street  
 Site County: Oswego  
 Site State: New York  
 EPA Site ID Number: NYD 000 511 659  
 Site Owner: NYS DEC  
 EPA Project Manager: Patrice Pierre

**Well Locational Information**

State Well ID: LD 4  
 Well Tag ID: LD 4  
 Well Installation date: 11-04-1988

	From Log	By GPS
Ground Surface Elevation	276.30	278
Latitude		
Longitude		
Northing (State Plane)		4814044
Easting (State Plane)		18379930

Cross streets (if applicable): N/A

GPS Instrument used: Magellan  
 Accuracy/Precision: +/- 6 feet

**Well Construction Details**

Type of well (Circle one)      Flush Mount       Stick up      Multilevel Well\*  
 Well lock/security type: Pad Lock Cover  
 Elevation (top of inner casing): 279.52  
 Surface casing material: Steel  
 Well casing material: 304 Stainless Steel  
 Surface Casing diameter: 6 inches  
 Well Diameter: 2 inches  
 Well Depth (as installed): 30.5 ftbgs  
 Well Depth (as measured): 30 fttoc  
 Screened interval: 10 ft  
 Open hole interval: 10.7 ft  
 Depth to water: 9.82 fttoc  
 Date: 2/8/2012      Time: NL

\* If multilevel well please see attached worksheet.



**EPA Region 2 Superfund Well Assessment (Class 1)**

**Well Headspace Readings**

PID/FID Reading taken inside top of casing (if applicable):    N/A    ppm

Multi-gas/CGI meter Readings taken (if applicable):

LEL:	_____	% LEL
O <sub>2</sub> :	_____	40% Vol.
CO:	_____	ppm
H <sub>2</sub> S:	_____	ppm

Do readings indicate unsafe conditions exist?                      Yes                      No

**Well Condition**

Is the concrete pad in good condition?	(Yes)	No
Is the well surface casing in good condition?	(Yes)	No
Is the surface casing vertical?	(Yes)	No
Is there an internal well seal?	(Yes)	No
Has there been physical damage to the well?	Yes	(No)
Does sounding depth match completed depth?	Yes	(No)
Is measuring point marked?	(Yes)	No
Is the well clearly labeled?	(Yes)	No
Flush mount - Is it secure from runoff?	(Yes)	No

Other Comments \_\_\_\_\_

**Recommendations**

Well needs to be redeveloped	Yes	No
Well needs to be re-surveyed.	Yes	No
Well needs to be repaired.	Yes	No
Well needs to be replaced.	Yes	No
Well needs to be properly abandoned.	(Yes)	No
No action necessary.	Yes	No

**Comments**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Inspected by:**    K. Stone   

**Date of Inspection:**    7-10-12   

**Reviewed by:**    Clay McClarnon    (Print)

   Clay McClarnon    (Sign)

MONITOR WELL CONSTRUCTION REPORT

Site PAS

Well No. LD-4

Total Depth 30.5' Surface Elev. 276.3'

Top Riser Elev. 279.25'

Water Levels (Depth, Date, Time) \_\_\_\_\_

Date Installed 11-4-88

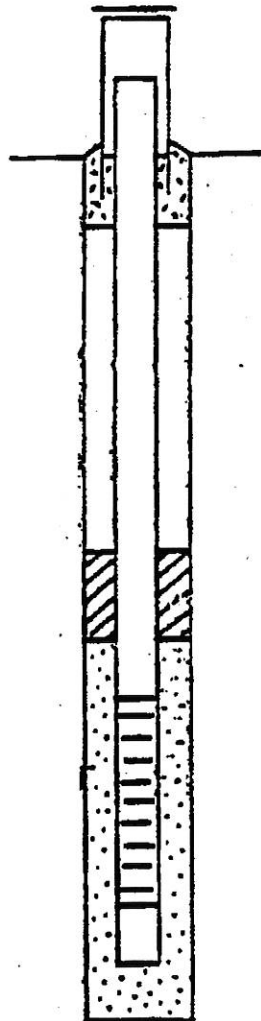
Riser:	Dia. <u>2"</u>	Material <u>304 s.s.</u>	Length <u>23'</u>	Slot Size <u>0.010"</u>
Screen:	Dia. <u>2"</u>	Material <u>304 s.s.</u>	Length <u>10'</u>	
Prot. Csg:	Dia. <u>6"</u>	Material <u>steel</u>	Length <u>7'</u>	

SCHEMATIC

Surface Seal Type concrete

Seal Type  bentonite slurry

Sand Pack Type/Size #4 QROK



38" Prot. Csg stickup

36" Riser stickup

Ground Surface

3' Bottom Surface Seal

Grout Type cement/bentonite

17' Top Seal

19' Top Sand Pack

19'10" Top Screen

29'10" Bottom Screen

30' Bottom Sump/Wellpoint

30'6" Total Depth of Boring

Comments liner not encountered

Driller T. Burnham

Geologist \_\_\_\_\_

DEC Inspector R. McNamee

EPA Region 2 Superfund Well Assessment Checklist

**Facility Information**

Site Name: Pollution Abatement Services  
 Site Address: 701 East Seneca Street  
 Site County: Oswego  
 Site State: New York  
 EPA Site ID Number: NYD 000 511 659  
 Site Owner: NYS DEC  
 EPA Project Manager: Patrice Pierre

**Well Locational Information**

State Well ID: LD 5  
 Well Tag ID: LD 5  
 Well Installation date: 10-27-1988

	From Log	By GPS
Ground Surface Elevation	270.2	279
Latitude		
Longitude		
Northing (State Plane)		4814084
Easting (State Plane)		18037991

Cross streets (if applicable): N/A

GPS Instrument used: Magellan  
 Accuracy/Precision: +/- 6 feet

**Well Construction Details**

Type of well (Circle one)      Flush Mount       Stick up      Multilevel Well\*  
 Well lock/security type: \_\_\_\_\_ Pad Lock Cover  
 Elevation (top of inner casing): \_\_\_\_\_ 272.94  
 Surface casing material: \_\_\_\_\_ Steel  
 Well casing material: \_\_\_\_\_ 304 Stainless Steel  
 Surface Casing diameter: \_\_\_\_\_ 6 inches  
 Well Diameter: \_\_\_\_\_ 2 inches  
 Well Depth (as installed): \_\_\_\_\_ 27.8 ftbgs  
 Well Depth (as measured): \_\_\_\_\_ 27 fttoc  
 Screened interval: \_\_\_\_\_ 10 ft  
 Open hole interval: \_\_\_\_\_ 12 ft  
 Depth to water: \_\_\_\_\_ 8.74 ftbtoc  
 Date: \_\_\_\_\_ 2/8/2012      Time: \_\_\_\_\_ NL

\* If multilevel well please see attached worksheet.

**Well Headspace Readings**

PID/FID Reading taken inside top of casing (if applicable):   N/A   ppm

Multi-gas/CGI meter Readings taken (if applicable):

LEL: \_\_\_\_\_ % LEL  
O<sub>2</sub>: \_\_\_\_\_ 40% Vol.  
CO: \_\_\_\_\_ ppm  
H<sub>2</sub>S: \_\_\_\_\_ ppm

Do readings indicate unsafe conditions exist?                      Yes                      No

**Well Condition**

Is the concrete pad in good condition?	(Yes)	No
Is the well surface casing in good condition?	(Yes)	No
Is the surface casing vertical?	(Yes)	No
Is there an internal well seal?	(Yes)	No
Has there been physical damage to the well?	Yes	(No)
Does sounding depth match completed depth?	Yes	(No)
Is measuring point marked?	(Yes)	No
Is the well clearly labeled?	(Yes)	No
Flush mount - Is it secure from runoff?	(Yes)	No

Other Comments \_\_\_\_\_  
\_\_\_\_\_

**Recommendations**

Well needs to be redeveloped	Yes	No
Well needs to be re-surveyed.	Yes	No
Well needs to be repaired.	Yes	No
Well needs to be replaced.	Yes	No
Well needs to be properly abandoned.	(Yes)	No
No action necessary.	Yes	No

**Comments**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Inspected by:** \_\_\_\_\_  
**Date of Inspection:** \_\_\_\_\_  
**Reviewed by:** \_\_\_\_\_ (Print)  
\_\_\_\_\_ (Sign)

MONITOR WELL CONSTRUCTION REPORT

Site PAS

Well No. LD-5

Total Depth 27' 10" Surface Elev. 270.2'

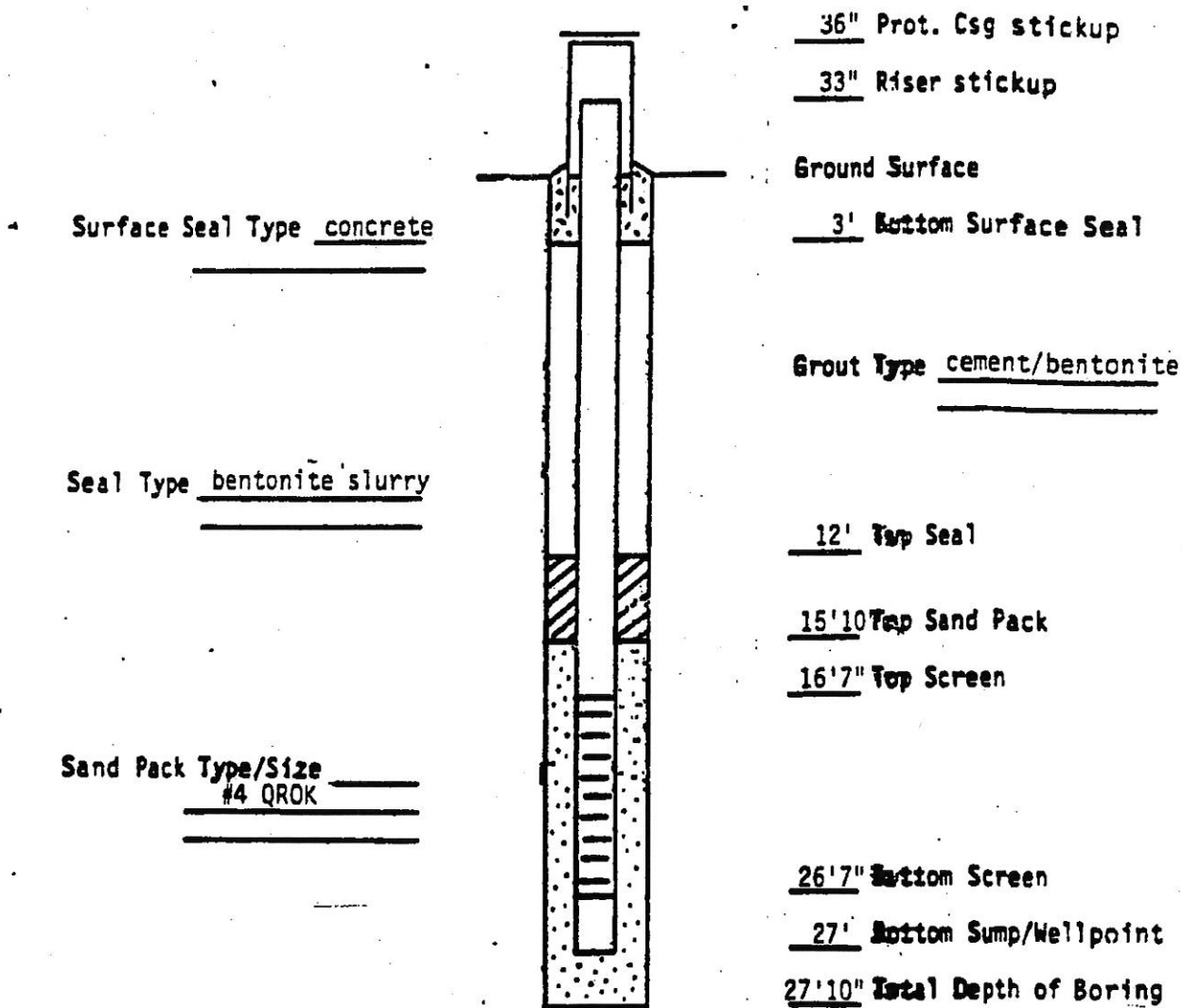
Top Riser Elev. 272.94'

Water Levels (Depth, Date, Time) \_\_\_\_\_

Date Installed 10-27-88

Riser:	Dia. <u>2"</u>	Material <u>304 s.s.</u>	Length <u>20'</u>	Slot Size <u>0.010"</u>
Screen:	Dia. <u>2"</u>	Material <u>304 s.s.</u>	Length <u>10'</u>	
Prot. Csg:	Dia. <u>6"</u>	Material <u>steel</u>	Length <u>7'</u>	

SCHEMATIC



Comments \_\_\_\_\_

Driller M. Hawkins

Geologist \_\_\_\_\_

DEC Inspector R. Edwards

**Facility Information**

Site Name: Pollution Abatement Services  
 Site Address: 701 East Seneca Street  
 Site County: Oswego  
 Site State: New York  
 EPA Site ID Number: NYD 000 511 659  
 Site Owner: NYS DEC  
 EPA Project Manager: Patrice Pierre

**Well Locational Information**

State Well ID: LD 6  
 Well Tag ID: LD 6  
 Well Installation date: \_\_\_\_\_

	From Log	By GPS
Ground Surface Elevation	270.9	279
Latitude		
Longitude		18380046
Northing (State Plane)		4814174
Easting (State Plane)		

Cross streets (if applicable): N/A

GPS Instrument used: Magellan  
 Accuracy/Precision: +/- 6 feet

**Well Construction Details**

Type of well (Circle one)      Flush Mount       Stick up      Multilevel Well\*  
 Well lock/security type: \_\_\_\_\_ Pad Lock Cover  
 Elevation (top of inner casing): 274.03  
 Surface casing material: Steel  
 Well casing material: 304 Stainless Steel  
 Surface Casing diameter: \_\_\_\_\_ 6 inches  
 Well Diameter: \_\_\_\_\_ 2 inches  
 Well Depth (as installed): \_\_\_\_\_ 31 ftbgs  
 Well Depth (as measured): \_\_\_\_\_ 30 fttoc  
 Screened interval: \_\_\_\_\_ 10 ft  
 Open hole interval: \_\_\_\_\_ 12.25 ft  
 Depth to water: \_\_\_\_\_ 9.70 fttoc  
 Date: 2/8/2012      Time: NL

\* If multilevel well please see attached worksheet.

**Well Headspace Readings**

PID/FID Reading taken inside top of casing (if applicable):   N/A   ppm

Multi-gas/CGI meter Readings taken (if applicable):

LEL: \_\_\_\_\_ % LEL  
 O<sub>2</sub>: \_\_\_\_\_ 40% Vol.  
 CO: \_\_\_\_\_ ppm  
 H<sub>2</sub>S: \_\_\_\_\_ ppm

Do readings indicate unsafe conditions exist?                    Yes                    No

**Well Condition**

Is the concrete pad in good condition?	(Yes)	No
Is the well surface casing in good condition?	(Yes)	No
Is the surface casing vertical?	(Yes)	No
Is there an internal well seal?	(Yes)	No
Has there been physical damage to the well?	Yes	(No)
Does sounding depth match completed depth?	Yes	(No)
Is measuring point marked?	(Yes)	No
Is the well clearly labeled?	(Yes)	No
Flush mount - Is it secure from runoff?	(Yes)	No

Other Comments \_\_\_\_\_  
 \_\_\_\_\_

**Recommendations**

Well needs to be redeveloped	Yes	No
Well needs to be re-surveyed.	Yes	No
Well needs to be repaired.	Yes	No
Well needs to be replaced.	Yes	No
Well needs to be properly abandoned.	(Yes)	No
No action necessary.	Yes	No

**Comments**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Inspected by:           K. Stone          

Date of Inspection:           7-10-12          

Reviewed by:           Clay McClannan          (Print)

          Clay McClannan          (Sign)

MONITOR WELL CONSTRUCTION REPORT

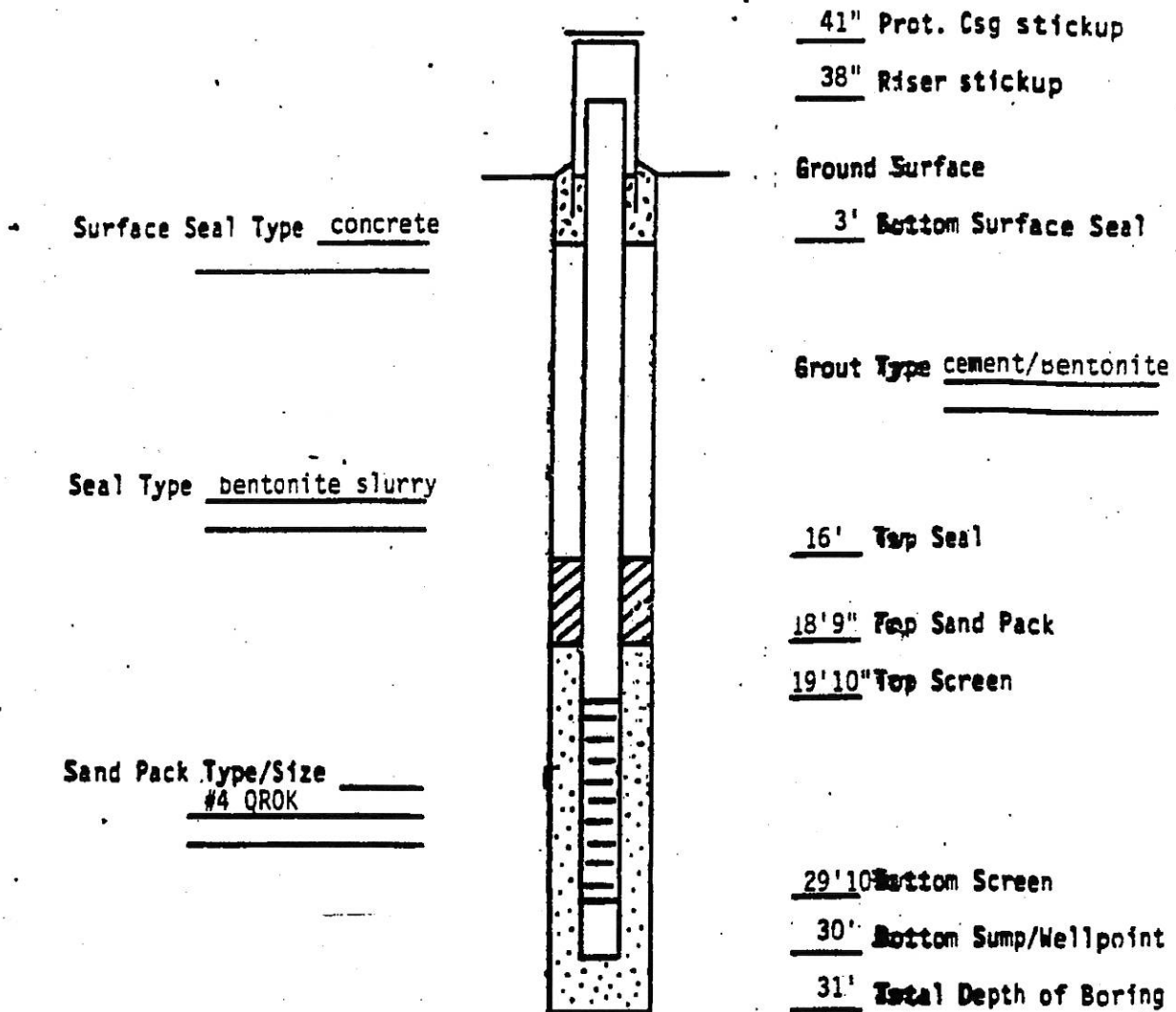
Site PAS Well No. LD-6

Total Depth 31' Surface Elev. 270.9' Top Riser Elev. 274.03'

Water Levels (Depth, Date, Time) \_\_\_\_\_ Date Installed 11-3-88

Riser:	Dia. <u>2"</u>	Material <u>304 s.s.</u>	Length <u>23'</u>	
Screen:	Dia. <u>2"</u>	Material <u>304 s.s.</u>	Length <u>10'</u>	Slot Size <u>0.010"</u>
Prot. Csg:	Dia. <u>6"</u>	Material <u>steel</u>	Length <u>7'</u>	

SCHMATIC



Comments \_\_\_\_\_

Driller M. Hawkins  
Geologist \_\_\_\_\_

DEC Inspector R. Edwards



**Facility Information**

Site Name: Pollution Abatement Services  
Site Address: 701 East Seneca Street  
Site County: Oswego  
Site State: New York  
EPA Site ID Number: NYD 000 511 659  
Site Owner: NYS DEC  
EPA Project Manager: Patrice Pierre

**Well Locational Information**

State Well ID: LD 8  
Well Tag ID: LD 8  
Well Installation date: 11-10-88

	From Log	By GPS
Ground Surface Elevation	269.9 ft	284
Latitude		
Longitude		
Northing (State Plane)		4814174
Easting (State Plane)		18380046

Cross streets (if applicable): N/A

GPS Instrument used: Magellan  
Accuracy/Precision: +/- 6 feet

**Well Construction Details**

Type of well (Circle one)      Flush Mount       **Stick up**      Multilevel Well\*  
Well lock/security type: \_\_\_\_\_ Pad Lock Cover \_\_\_\_\_  
Elevation (top of inner casing): \_\_\_\_\_ 272.83 \_\_\_\_\_  
Surface casing material: \_\_\_\_\_ Steel \_\_\_\_\_  
Well casing material: \_\_\_\_\_ 304 Stainless Steel \_\_\_\_\_  
Surface Casing diameter: \_\_\_\_\_ 6 \_\_\_\_\_ inches  
Well Diameter: \_\_\_\_\_ 2 \_\_\_\_\_ inches  
Well Depth (as installed): \_\_\_\_\_ 26.5 \_\_\_\_\_ ftbgs  
Well Depth (as measured): \_\_\_\_\_ 21.8 \_\_\_\_\_ fttoc  
Screened interval: \_\_\_\_\_ 10 \_\_\_\_\_ ft  
Open hole interval: \_\_\_\_\_ 14.8 \_\_\_\_\_ ft  
Depth to water: \_\_\_\_\_ 6.96 \_\_\_\_\_ fttoc  
Date: \_\_\_\_\_ 2/8/2012 \_\_\_\_\_ Time: \_\_\_\_\_ NL \_\_\_\_\_

\* If multilevel well please see attached worksheet.

**Well Headspace Readings**

PID/FID Reading taken inside top of casing (if applicable):   N/A   ppm

Multi-gas/CGI meter Readings taken (if applicable):

LEL: \_\_\_\_\_ % LEL  
 O<sub>2</sub>: \_\_\_\_\_ 40% Vol.  
 CO: \_\_\_\_\_ ppm  
 H<sub>2</sub>S: \_\_\_\_\_ ppm

Do readings indicate unsafe conditions exist?                      Yes                      No

**Well Condition**

Is the concrete pad in good condition?	(Yes)	No
Is the well surface casing in good condition?	(Yes)	No
Is the surface casing vertical?	(Yes)	No
Is there an internal well seal?	(Yes)	No
Has there been physical damage to the well?	Yes	(No)
Does sounding depth match completed depth?	Yes	(No)
Is measuring point marked?	(Yes)	No
Is the well clearly labeled?	(Yes)	No
Flush mount - Is it secure from runoff?	(Yes)	No

Other Comments \_\_\_\_\_  
 \_\_\_\_\_

**Recommendations**

Well needs to be redeveloped	Yes	No
Well needs to be re-surveyed.	Yes	No
Well needs to be repaired.	Yes	No
Well needs to be replaced.	Yes	No
Well needs to be properly abandoned.	(Yes)	No
No action necessary.	Yes	No

**Comments**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Inspected by:   K. Stone    
 Date of Inspection:   7-10-12    
 Reviewed by:   Clay McClarnon   (Print)  
                     Clay McClarnon   (Sign)

MONITOR WELL CONSTRUCTION REPORT

Site PAS

Well No. LD-8

Total Depth 26.5' Surface Elev. 269.9'

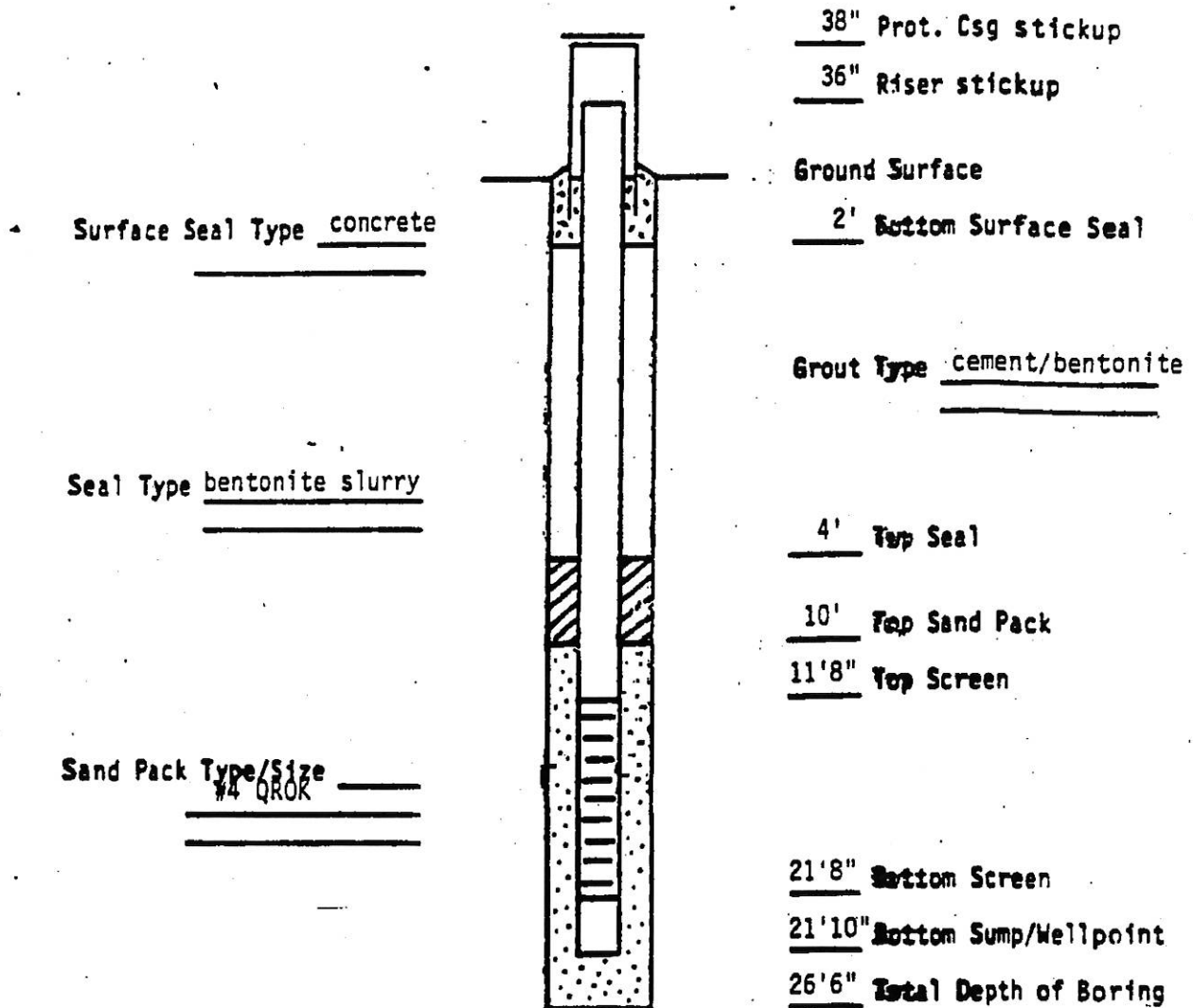
Top Riser Elev. \_\_\_\_\_

Water Levels (Depth, Date, Time) \_\_\_\_\_

Date Installed 11-10-88

Riser:	Dia. <u>2"</u>	Material <u>304 s.s.</u>	Length <u>15'</u>	Slot Size <u>0.010"</u>
Screen:	Dia. <u>2"</u>	Material <u>304 s.s.</u>	Length <u>10'</u>	
Prot. Csg:	Dia. <u>6"</u>	Material <u>steel</u>	Length <u>7'</u>	

SCHEMATIC



Comments pellets from b.o.n. to 23'

Driller I. Burnham

Geologist \_\_\_\_\_

DEC Inspector R. McNamee