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SITE #738001
POLLUTION ABATEMENT SERVICES

PAS Site O&M WA D00234-8
Fall 1996 Environmental Sampling

URS
AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

URS CONSULTANTS, INC.
282 DELAWARE AVENUE
BUFFALO, NEW YORK 14202-1805
(716) 856-5636
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ATLANTA
BOSTON
DENVER
NEW YORK
PARAMUS, NJ
NEW ORLEANS
SAN FRANCISCO
SAN MATEO
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WASHINGTON, DC

November 25, 1996

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Mr. Ronnie Lee, P. E., Project Manager
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road, Room 208
Albany, New York 12233-7010

RE: PAS SITE O&M (WA D00234-8)
FALL 1996 ENVIRONMENTAL SAMPLING

Dear Mr. Lee:

During the week of November 11, 1996, URS completed the Fall 1996 environmental sampling, in accordance with the Work Plan for the site, and revised analytical program per the Department's letter dated March 4, 1992, and the substitution of three wells (M-21, 25 and 26 for LS-2, LD-3, LR-3) per the Department's April 15, 1996 letter. Field activities and measurements are summarized in the attached O&M forms, Field Activities Summary and field notes.

All samples were sent to RECRA Environmental for analysis. Analytical results will be submitted in a report after they are reviewed and validated by URS. We understand that the Fall 1996 environmental sampling is the last scheduled event under this Work Assignment. Consequently, the Final Summary Report is to be comprehensive and include an assessment of the effectiveness of the remedy. Please provide the PRP reports if you want us to incorporate leachate collection and monthly water level data into this assessment.

If you have any questions, please do not hesitate to call me.

Very truly yours,

URS CONSULTANTS, INC.

Dharmarajan R. Iyer, Ph.D., P.E.
Project Manager

Enclosure

cc: R. Lupe - NYSDEC
J. Gorton - URS
S. Nowak - URS
C. Scher - URS
File: 05-35236.00 (1000)

J\35236\wp\Fall.96\yg
11/25/96:11:18 am

PAS SITE NO. 7-38-001
(W.A. D002340-8)

FALL 1996 ENVIRONMENTAL MONITORING
NOVEMBER 11, 1996 TO NOVEMBER 15, 1996

EVENT SUMMARY

November 11, 1996

- Rental vehicle loaded with equipment (0730)
- K. Kearney and C. Scher departed from Buffalo to Oswego (0825)
- Arrived at Airborne Express, E. Syracuse to pick up rental HNU (1120)
- Arrived at Oswego to purchase additional field sampling supplies (1200)
- Arrived on site (1230)
- Performed site inspection and water level monitoring (1230-1500)
- Check-in at office with D. Iyer (1500)
- Calibrated instruments and purged wells (LR-2, LD-2, SWW-1, LS-9)
- Secured site and depart (1730)
- Arrived at Airborne Express - return HNU to Response Rental (1830)
- Arrived at Syracuse hotel and check-in (1900)

November 12, 1996

- Departed for PAS Oswego (0630). Arrived on site (0740)
- Calibrated instruments and prepared equipment (0740-0800)
- Sampled wells (LS-9, LD-2, LR-2 SWW-1) (0800-0830)
- Purged wells SWW-10, LD-4, SWW-12, LD-5, SWW-4, SWW-6 (0900-1130)
- Offsite to check in at office with D. Iyer (1215)
- Purged wells LS-6, LD-6, LR-6 (1230-1330)
- Sampled wells SWW-10, LD-4, SWW-12, LD-5, SWW-4, SWW-6 (1350-1515)
- Packed cooler, picked up ice, iced samples (1515-1630)
- Secured site and departed (1630)
- Arrived at Airborne Express (1730)

November 13, 1996

- Departed for PAS Oswego (0630). Arrived on site at (0715)
- Calibrated instruments and prepared for sample (0720-0800)
- Sampled wells LS-6, LD-6, LR-6 (0800)
- Purged and sampled SWW8 (0850-0945)
- Check in at office with S. Nowak, D. Iyer, and fax chain-of-custodies (0945-1050)
- Purged wells LD-8 and LR-8 (1100-1140)
- Purged and sample M-21 (1200-1530)
- Sampled wells LD-8 and LR-8 (1330)
- Packed cooler, picked up ice, iced cooler and offsite (1600)
- Arrived at Airborne Express (1700)

November 14, 1996

- Departed for PAS Oswego (0700). Arrived on site (0735)
- Calibrated instruments and purged M-26 (0740-1145)
- Sampled M-26 (1200)
- K. Kearney offsite to check in with D. Iyer and S. Nowak also fax of COC's to office (1130)
- Collected surface water/sediment SS/SW3 and repurged LD-6 (1230-1330)
- Purged of M-25 and collected remaining surface water/sediment samples (1330-1640)
- Sampled M-25 (1645)
- Offsite, purchase ice, pack cooler (1715)
- Returned to hotel (1800)

November 15, 1996

- Departed for PAS Oswego (0630). Arrived onsite (0710)
- Calibrated meters and collected resample of LD-06 SVOC only. Completed final site inspection. Secure site (0715-0900)
- Checked in at office with S. Nowak and D. Iyer (0900)
- Departed for Buffalo (0930)
- Arrived RECRA drop off samples for 11/14/96 and 11/15/96 (1240)
- Returned to Buffalo office, dropped off equipment, returned rental van (1430)

SAMPLING EVENT SUMMARY

Pollution Abatement Services

URS Greiner
282 Delaware Avenue
Buffalo, New York 14202
(716) 856-5636

ARRIVAL:

DATE: 11/11/96 TIME: 1230

Personnel Onsite: Kevin Kearney
Cheryl Scher

Site Conditions on Arrival: _____

Weather: Date: 11/11/96
Date: 11/12/96
Date: 11/13/96
Date: 11/14/96
DATE: 11/15/96

DEPARTURE:

DATE: 11/15/96 TIME: 0930

POST SAMPLING CHECKLIST:

Yes Wells Locked
Yes Tank Secured
Yes Site Cleanup / Walk Through
Yes Site Secured

SURFACE WATER SAMPLES

Sample Number	Sample Date	Sample Time	Analytical Schedule
PAS-SW-1	11/14/96	1300	A
PAS-SW-2	11/14/96	1330	A
PAS-SW-3	11/14/96	1230	A
PAS-SW-4A	11/14/96	1400	A
PAS-SW-5	11/14/96	1500	A

STREAM SEDIMENT SAMPLES

Sample Number	Sample Date	Sample Time	Analytical Schedule
PAS-SS-1	11/14/96	1300	C
PAS-SS-2	11/14/96	1330	C
PAS-SS-3	11/14/96	1230	C
PAS-SS-4A	11/14/96	1400	C
PAS-SS-5	11/14/96	1500	C
MS/MSD (SS)	11/14/96	1330	C

GROUNDWATER SAMPLES

Sample Number	Sample Date	Sample Time	Analytical Schedule
PAS-LS-2	NOT SAMPLED	–	–
PAS-LR-2	11/12/96	0800	A
PAS-LD-2	11/12/96	0810	A
PAS-LR-3	NOT SAMPLED	–	–
PAS-LD-3	NOT SAMPLED	–	–
PAS-LD-4	11/12/96	1410	A
PAS-LD-5	11/12/96	1440	A
PAS-LS-6	11/13/96	0810	A
PAS-LR-6	11/13/96	0820	A
PAS-LD-6	11/13/96	0830	A
PAS-LR-8	11/13/96	1330	A
PAS-LD-8	11/13/96	1345	A
PAS-LS-9	11/12/96	0830	A
PAS-SWW-1	11/12/96	0820	A
PAS-SWW-4	11/12/96	1450	A
PAS-SWW-6	11/12/96	1500	A
PAS-SWW-8	11/13/96	0930	A
PAS-SWW-10	11/12/96	1400	A
PAS-SWW-12	11/13/96	1430	A
PAS-M-21	11/13/96	1530	A
PAS-M-25	11/14/96	1645	A
PAS-M-26	11/14/96	1200	A
Trip Blank	11/12/96	–	A VOC ONLY
MS/MSD (LR-8)	11/13/96	1330	A

TANK LEVEL MEASUREMENTS

Date	Time	Level from Bottom	Remarks
11/11/96	1405	≈.25"	Tank appears to have been pumped out
11/15/96	0800	≈.25"	Recently some sections of Tank are dry
			Some Mud ≈ .25"

NOTES: LD-06 was Resampled for SVOC on 11/15/96 to Replace Broken Bottles

By: Cheryl Scher Firm: URS Greiner, Inc. Telephone #: (716) 856-5636

SAMPLING EVENT SUMMARY

URS Greiner

Pollution Abatement Services

Month: NOVEMBER Year: 1996 **Semiannual**

Date	Time	Well Number	Well Bottom Elevation (feet)	Water Elevation (feet)	Water Height From Bottom (feet)	Volume of Casing (gal)	Volume Purged (gal)	Specific Conduct. (µmhos/cm)	pH (S.U.)	Temp. (deg. C)	Remarks
REPLACED		LS-2	269.5	—	—	—	—	—	—	—	—
11/12/96	0800	LR-2	231.5	276.07	44.57	7.58	23.0	686	9.01	9.5	
11/12/96	0810	LD-2	251.1	283.56	32.46	5.08	16.0	1786	7.71	9.7	
REPLACED		LR-3	211.7	—	—	—	—	—	—	—	—
REPLACED		LD-3	248.6	—	—	—	—	—	—	—	—
11/12/96	1410	LD-4	246.3	269.76	23.46	4.01	7.00	197	7.68	9.7	PURGED DRY
11/13/96	1440	LD-5	243.2	263.91	20.70	3.49	8.00	303	7.63	9.3	PURGED DRY
11/13/96	0810	LS-6	253.4	265.14	11.74	1.99	4.00	2020	6.85	9.4	PURGED DRY
11/13/96	0820	LR-6	213.6	263.94	50.34	8.48	26.00	3180	7.21	9.9	
11/13/96	0830	LD-6	240.9	264.06	23.16	3.94	5.00	2440	7.69	9.2	PURGED DRY
11/13/96	1330	LR-8	230.3	263.85	33.55	5.49	17.00	3400	8.52	9.5	
11/13/96	1345	LD-8	248.1	265.77	17.67	3.10	10.00	1940	7.81	9.1	
11/12/96	0830	LS-9	260.9	268.82	7.92	1.36	4.50	624	7.08	10.0	PURGED DRY
11/12/96	0820	SWW-1	267.1	280.58	13.48	2.60	7.79	268	7.38	8.9	
NOT SAMPLED		SWW-2	268.2	—	—	—	—	—	—	—	—
NOT SAMPLED		SWW-3	265.8	—	—	—	—	—	—	—	—
11/12/96	1450	SWW-4	257.5	270.80	13.30	2.27	7.00	250	6.81	9.6	
NOT SAMPLED		SWW-5	254.5	—	—	—	—	—	—	—	—
11/12/96	1500	SWW-6	254.0	265.06	11.06	1.85	6.00	348	7.16	9.5	
NOT SAMPLED		SWW-7	250.3	—	—	—	—	—	—	—	—
11/13/96	0930	SWW-8	256.2	274.91	18.71	3.14	10.00	4060	7.19	9.1	
NOT SAMPLED		SWW-9	256.1	—	—	—	—	—	—	—	—
11/12/96	1400	SWW-10	256.3	270.43	14.13	2.57	4.00	288	7.52	9.5	PURGED DRY
NOT SAMPLED		SWW-11	250.7	—	—	—	—	—	—	—	—
11/12/96	1430	SWW-12	251.5	264.03	12.53	2.15	2.00	254	7.61	9.6	PURGED DRY
11/13/96	1530	M-21	231.3	263.45	32.15	46.23	139.0	3360	8.24	9.2	
11/14/96	1645	M-25	*234.2	264.06	29.86	43.60	131.0	191	8.27	5.3	
11/17/96	1200	M-26	*228.3	266.37	38.07	55.05	166.0	51	7.74	8.3	

Casing Volume = water height from botton of well(ft.) X π r² (Insidde Radius of casing in ft.) X 7.48 gal/ft^3

NOTES: * ELEVATIONS ARE ESTIMATED - NOT SURVEYED AS SHOWN ON WELL CONSTRUCTION LOG

By: Cheryl Sebe Firm: URS Greiner, Inc. Telephone #: (716) 856-5636

URSF-106/1 OF 1/WDS/GCM

MONTHLY MONITORING WELL LEVELS

URS Greiner

282 Delaware Avenue
Buffalo, New York 14202
(716) 856-5636

Pollution Abatement Services **Date:** NOV 11 1996

Well Number	Riser Elevation (feet)	Ground Elevation (feet)	Water Depth to Level of		Water Elevation (feet)
			Top of Riser (feet)	Ground Level (feet)	
LS2	289.81	287.5	3.65	1.34	286.16
LR2	289.85	287.5	13.78	11.44	276.07
LD2	289.73	287.1	6.17	3.54	283.56
LR3	278.06	275.5	8.59	6.03	269.47
LD3	278.62	275.8	3.03	0.21	275.59
LD4	279.25	276.3	9.49	6.54	269.76
LD5	272.94	270.2	9.03	6.29	263.91
LS6	274.14	271.4	9 00	6.26	265.14
LR6	274.39	270.9	10.45	6.96	263.94
LD6	274.03	270.9	9.97	6.84	264.06
LR8	273.42	270.0	9.57	6.15	263.85
LD8	272.83	269.9	7.06	4.13	265.77
LS9	276.72	274.0	7.90	5.18	268.82
SWW1	289.33	286.2	8.75	5.62	280.58
SWW2	289.37	286.3	16.20	13.13	273.17
SWW3	286.50	286.0	17.33	16.83	269.17
SWW4	283.60	282.9	12.80	12.10	270.80
SWW5	277.02	275.9	14.83	13.71	262.19
SWW6	273.06	270.9	8.00	5.84	265.06
SWW7	277.93	273.3	7.90	3.27	270.03
SWW8	278.24	275.7	3.33	0.79	274.91
SWW9	285.55	283.3	18.18	15.93	267.37
SWW10	280.43	279.3	10.00	8.87	270.43
SWW11	273.50	271.0	10.94	8.44	262.56
SWW12	272.82	270.2	8.79	6.17	264.03
M-21	* 272.48	270.3	9.03	6.85	263.45
M-25	* 269.50	* 268.0	5.44	3.94	264.06
M-26	* 273.10	* 272.0	7.33	5.63	266.37

Remarks: * Elevations are Estimated, NOT Surveyed AS IN Well Construction Log

By: Cheryl Scher Firm: URS Greiner, Inc. Telephone #: (716) 856-5636

URSF-107/1 OF 1/MMWL/GCM

Notebook No.

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PROJECT Pas OSWEGO

11/11/96 Activities/Calibration Log

Weather: 30-35°F Snow, Cloudy
Personnel: C. Scher K. Kearney

pH # 172 7 = 7.01 4 = 4.03 10 = 9.96
Cond # 15 445 = 410 3900 = 3390
Turbidity # 147 0-10 = 5.61 10-100 = 56.1 100-1000 = 547
HNU P1101 (Response Reverse) - Calibrated w/ 100 ppm isobutylene in air Reading 57ppm 10.2ev Lamp Span 9
Solinest H_2O Level # 176

0730 Loaded vehicle for sampling - left BFLO for Syracuse 0825
1100 Arrive Syracuse, Check in Hotel
1120 Arrive Airborne pick up HNU → to site 1200 arrive Oswego Stop at Ames for Sampling Supplies - Tape, towels, twine, Baggies, markers etc.
1330 Onsite @ PAS start of Inspection/water levels complete @ 1500
1500 offsite to call progress report to D. Iyer - message left on voice mail
1515 Return site Calibrate meters start well purge - Purge LR-2, LD-2, SWW-1, LS-9
1700 Complete Purge - cleanup for day offsite 1730 - to airborne to return PID
1815 arrive airborne - Ship meter Return Hotel unload meters Complete notes
Day End 1930 - 12hr Day

No more
CS

Continued on Page

C. Scher 11/11/96

Signed Date

Read and Understood By

Signed Date

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PROJECT PAS OSWEGO 11/11/96

Notebook No. _____

Continued From Page _____

WATER Levels / Well Inspection

Well ID	TIME	PID	DTB	DTW	Comments
LS-2	1248	ND	20.15	3.65	No Riser cap } Risers painted white
LR-2	1251	ND	58.42	13.78	No Riser cap
LD-2	1253	ND	36.05	6.17	No Riser cap }
LR-3	1258	ND	66.45	8.59	No Riser cap
LD-3	1300	ND	30.30	3.03	No Riser cap
LD-4	1322	ND	33.15	9.49	No Riser cap
LD-5	1330	ND	29.70	9.03	No riser cap
LS-6	1335	ND	20.73	9.00	No riser cap
LR-6	1337	ND	60.34	10.45	No Riser cap
LD-6	1339	ND	33.15	9.97	No Riser cap
LR-8	1422	ND	43.05	9.57	No Riser cap
LD-8	1424	ND	25.28	7.06	No Riser cap
LS-9	1407	ND	15.95	7.90	No Riser cap
SWW 1	1307	ND	22.10	8.75	OK
SWW 2	1308	ND	20.90	16.20	OK
SWW 3	1359	ND	20.80	17.33	OK
SWW 4	1401	ND	26.20	12.80	OK
SWW 5	1351	ND	22.50	14.83	OK
S. W 6	1353	3.1	18.96	8.00	OK
SWW 7	1314	ND	22.00	7.90	No Riser Cap
SWW 8	1302	ND	22.20	3.33	No Riser Cap
SWW 9	1318	ND	30.26	18.18	No Riser Cap
SWW 10	1330	ND	25.28	10.00	No Riser Cap
SWW 11	1325	ND	23.15	10.94	No Riser Cap
SWW 12	1325	ND	21.50	8.79	No Riser Cap
M-21	1420	ND	39.95	9.03	OK
M-22 25	1430	ND	35.10	5.44	OK
M-26	1437	ND	44.40	7.33	OK
M-25 22	1347	ND	53.00	10.30	OK
LCW-1	1332	0.3	-	12.30	OK
LCW-2	1342	0.2	-	15.72	OK
LCW-3	1355	ND	-	19.22	OK
LCW-4	1403	ND	-	22.70	OK
TANK House	1405	ND	-	-	.25" of Bottom - Recently Emptied ?

Continued on Page

C. Snyder — Signed

11/11/96 — Date

Read and Understood By

Signed — Date

PROJECT Casa Oswego

Notebook No. _____

Continued From Page _____

11/12/96 Calibration / Acknowledge Log

Weather 35°F - 30°F Snowy Wind 10mph NNW

Personnel K. Kenney C. Sicher

pH #172 7 = 7.04 4 = 4.02 10 = 9.87

Cond #15 445 = 440 3920 = 3370

Turbidity #147 0-10 = 5.67 10-100 = 56.1 100-1000 = 564

Solvent H2O Lot #176

0630 Load van drive To Site + Heavy Snow whiteout on Highway

0740 Arrive Oswego -on-site Calibrate meters, set up for Sampling

0800 Sample LR-3, LD-2, LS-9, SWW-1

0900 Purge of SWW-10, LD-4. 0930 Complete all

0940 offsite call D IYER Leave message on voice, mail Return Site.

1000 Purge of SWW 12, LD-5, SWW-4, SWW-6. Complete @ 1130

Label / Prep Bottles for Sampling.

1315 offsite call program Report to D IYER Return Site and Continue Purge

1330 Purge of LS-6 LR-6 ; LD-6 Complete @ 1330

1350 Start Sampling of wells purged in sum - SWW10, LD-4, SWW13, LD-5

SWW-4, SWW-6

1515 Sampling for Day Complete TO Store for Ice - Inspect Coolers

Shipment, Packaged, Seal, COC.

1630 OFFSite for Day - TO Airbase

1730 Arrive AirBase - Ship Samples 11hr Day

Trip Blank TB1-11-12-96 Sent

Continued on Page

C Sicher

Signed

11/12/96

Date

Read and Understood By

Signed

Date

18 PROJECT PAS Oswego

Notebook No.

Continued From Page

11/11/96 G.W Purge

Location	LR-2	Start 1530		Location	LD-2	Start 1530
DTB	58.42	End 1630		DTB	36.05	End 1615
DTW	13.78	DIA: 2"		DTW	6.17	DIA 2"
Vol/3 Vol	7.58/22.76	Actual: 23 gal		Vol/3 Vol	5.08/15.23	Actual 16 gal
Field Parameters				Field Parameters		
pH	11.68	8.15			8.76	7.45
Ω	722	538			445	1749
°C	10.5	8.9			10.5	6.3
NTU	6.48	9.92			7.8	8.40
appear	clear	clear			clear	clear
	Initial	Final			Initial	Final

Location	LS-9	Start 1645		Location	SWW1	Start 1625
DTB	15.95	End 1655		DTB	25.98	End 1640
DTW	7.90	DIA 2"		DTW	10.00	DIA 2"
Vol/3 Vol	1.36/4.10	Actual 4.5		Vol/3 Vol	2.60/7.79	actual 8 Gallons
Field Parameters				Field Parameters		
pH	6.80	7.03	Purged to Dry 4.5 gal		7.46	7.24	w/ Red Brown Floc
Ω	384	676			721	1611
°C	12.2	11.3			7.2	8.7
NTU	18.6	>1000			29.7	164
appear	Clear	Turbid Brown			clear	sl Turbid
	Initial	Final			Initial	Final

* Wells Purged w/ Dedicated HDPE Bailer & Nylon Cord
Water Containerized and disposed of in Leachate Tank

Continued on Page

Signed: C. [signature] Date: 11/11/96

Read and Understood By

Signed Date

PROJECT PAS Oswego

Notebook No. _____

Continued From Page _____

11/11/96

Site Conditions

Containment Cell - Fully Snow covered ≈ 6 to 8" snow on Cap

Landscape - very Badly overgrown 8"-18" snow c

Roadway - Good No trash presents

Drainage Trough - Badly overgrown Has steady of water presents

French Drains - Badly overgrown

Fence - Fence appears to be generally in Good Condition

Storage Shed - Front doors - Decay of wood Structurally unsound / unsecure would recommend Locking Equip inside.

Monitoring Well - Locks/risers continue rusting - L52 L82 L12 Have been painted White - possible to blend in w/ snow may be subject for damage by snowplow - not visible

Continued on Page

Signed _____ Date 11/15/96

Read and Understood By

Signed _____ Date _____

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PROJECT Pas Oswego Sampling

Notebook No. _____

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11-12-96

All Sampled w/ Dedicated HDPE Bailers & Nylon Twine

Well ID/Sample ID PAS-LR2	pH 9.01
Sample Time 0800	Cond 686
DTW 13.65	NTU 5.19
Sample by: CS/KK	Temp 9.5
Paramaters: VOC SVOC	Appear Clear
Well ID/Sample ID PAS-LD2	pH 7.71
Sample Time 0810	Cond 1786
DTW ~~CS/KK~~ 6.15	NTU 8.75
Sample by CS/KK	Temp 9.7
Paramater: VOC SVOC	Appear Clear
Well ID/Sample ID PAS-SW01	pH 7.38
Sample Time 0820	Cond 268
DTW 8.70	NTU 32.4
Sample by CS/KK	Temp 8.9
Paramaters VOC SVOC	appear Clear
Well ID/Sample ID PAS-LS-9	pH 7.08
Sample Time 0830	Cond 634
DTW 8.00	NTU 556
Sample by CS/KK	Temp 10.0
Paramaters VOC SVOC	appear Clear LT TAN TINT

* Sampled w/ Dedicated HDPE Bailer/Nylon Cord

Continued on Page

Read and Understood By

Signed	Date	Signed	Date
C Schle	11/12/96		

Notebook No. ______
Continued From Page ______

PROJECT Pas Oswego Purge

11/12/96

All Purged w/ Dedicated HDPE Bailers & Nylon [illegible]

Location	SWW-10	Start 0900		Location	LD-4	Start [illegible]
DTB	25.38	End 0930		DTB	33.15	End [illegible]
DTW	10.17	Dia 2"		DTW	9.52	Dia 2"
Vol/3Vol	2.57/7.70	Actual 4gal-Dry		Vol/3Vol	4.01/12.05	actual 7 gal
	Field Paramater				Field Paramater	
pH	7.44	7.48			7.74	7.79
Ω	316	291			248	216
°C	9.6	9.8			9.3	9.6
NTU	4.04	935			7.95	>1000
appear	Clear	Brown			Clear	Brown
	Initial	Final			Initial	Final

Location	SWW-12	Start 1000		Location	LD-5	Start 1000
DTB	21.50	End 1030		DTB	29.70	End [illegible]
DTW	8.85	Dia 2"		DTW	9.13	Dia 2"
Vol/3Vol	2.15/6.45	actual 2gal - DRY		Vol/3Vol	3.49/10.49	actual 5 [illegible]
	Field Paramater				Field Paramater	
pH	7.64	7.56			8.03	7.74
Ω	258	256			256	260
°C	9.1	9.7			9.0	9.5
NTU	16.1	>1000			81.1	>1000
appear	Clear	Turbid Brown			Clear	Brown
	Initial	Final			Initial	Final

Location	SWW-4	Start 1100		Location	SWW-6	Start [illegible]
DTB	26.20	End 1110		DTB	13.76	End [illegible]
DTW	12.83	Dia 2"		DTW	8.07	Dia 2"
Vol/3Vol	2.27/6.82	actual 7 Gal		Vol/3Vol	1.85/5.55	actual 6 [illegible]
	Field Paramater				Field Paramater	
pH	7.12	6.96			7.04	7.07
Ω	193	202			284	304
°C	9.1	9.0			9.0	9.4
NTU	13.4	21.3			13.6	272
appear	Clear	Clear w/ Red Brk Floc			Clear Yellow Tint	Lt Tan
	Initial	Final			Initial	Final

Continued to Page

Read and Understood By

[signature] 11/12/96

Signed | Date | Signed

PROJECT Pas Oswego

Notebook No. ______
Continued From Page ______

11-12-96 Sampling - Sampled w/ Dedicated HDPE Bailers & nylon Twine

well/sample ID	PAS-SWW-10	pH	7.52
Sample time	1400	Cond	288
DTW	10.30	Temp	9.5
Sample by	KK/CS	NTU	14.1
Parameters	VOC SVOC	appear	Clear
well/sample ID	PAS-LD-4	pH	7.68
Time	1410	Cond	197
DTW	10.52	Temp	9.7
Sample by	KK/CS	NTU	7.76
Parameters	VOC SVOC	appear	Clear
well/sample ID	PAS-SWW-12	pH	7.61
Time	1430	Cond	254
DTW	9.13	Temp	9.6
Sample by	KK/CS	NTU	135
Parameter	VOC SVOC	appear	Clear
well/sample ID	PAS-LD-5	pH	7.63
Time	1440	Cond	303
DTW	9.14	Temp	9.3
Sample by	KK/CS	NTU	22.4
Parameter	VOC SVOC	appear	~~Clear~~ Tan Tint
well/sample ID	PAS-SWW-4	pH	6.51
Time	1450	Cond	250
DTW	13.03	Temp	9.6
Sample by	KK/CS	NTU	38.2
Parameter	VOC SVOC	appear	Clear
well/sample ID	PAS-SWW-6	pH	7.16
Time	1500	Cond	348
DTW	11.40	Temp	9.5
Sample by	KK/CS	NTU	670
Parameters	VOC SVOC	appear	Lt Yellow

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C Sute — 11/12/96

Signed — Date

Read and Understood By

Signed — Date

PROJECT Rua usweze

Notebook No.

Continued From Page

11-12-96 Purge

Location	LS-6	Start	1330
DTB	20.73	End	1345
DTW	9.03	Dia	2"
Vol/3vol	1.99/5.97	actual	4 gal Dry

Field Parameter

PH	7.41	7.54
Ω	340	295
°C	4.4	4.1
NTU	7.64	584
Appear	Clear	Grey tint

Location	LR-6	Start	1330
DTB	60.34	End	1320
DTW	10.45	Dia	2"
Vol/3vol	8.48/25.44	Actual	26 Gal

Field Parameters

PH	7.41	7.30 ~~Start~~
Ω	332	334 ~~End~~
°C	4.6	4.5
NTU	68.8	6.27
Appear	Clear	Clear

Location	LD-6	Start	1345
DTB	33.15	End	1300
DTW	9.99	Dia	2"
Vol/3vol	3.94/11.51	actual	5 gal - DRY

Field Parameters

PH	7.83	7.74
Ω	297	259
°C	5.5	6.7
NTU	6.57	> 1000
Appear	Clear	Turbid Brown

All wells Purged w/ Dedicated HDPE Bailers [illegible]

Continued on Page

C. [signature] Signed

11/12/96 Date

Read and Understood By

Signed

PROJECT PAS OSWEGO

Notebook No.

Continued From Page

11/13/96 Calibration/activity Log

WEather 30-35°/ Snow wind 5mph NNW
PERSONNAL C. Schen K Kenny

PH # 172 7 = 7.05 4 = 4.03 10 = 9.97
COND # 15 445 = 439 3900 = 3390
NTU # 147 0-10 = 5.27 10-100 = 53.9 100-1000 = 527
Solinest H_2O level # 176 Generator # 137 ISCO # 413

0630 - leave Syracuse for PAS - arrive 0715 onsite
0730 - Calibrate meters & Label bottles for Sampling
0800 Sample LS-6, LR-6, LD-6
0850 Purge and Sample of SWW-8
0945 OFFsite to fax COC, check In w/ S Nowak and leave message for D IYER.
1100 Purge LR-8, LD-8 Label bottle sets and Set up for M-series wells
1230 Start Purge of M-21
1330 Sample LR-8 and LD-8 cont w/ Purge M-21
Prep coolers, Start COC's
1530 Sample M-21 Clean up for Day pack coolers ~~w/ Ices~~ to Store for Ice for Sampler
1600 OFFsite to Airborne to Ship Samples.
1700 arrive Airborn - Send Samples Clean Van End day 1230 11hR Day

no more CS

Continued on Page

C. Schen 11/13/96
Signed Date

Read and Understood By

Signed Date

PROJECT PAS OSWEGO

Notebook No. _____

Continued From Page _____

11/13/96 Sampling - G.W.

Well/Sample ID	PAS-LS06	PH	6.85
Time	0810	COND	2020
DTW	9.10	ORP	95.2
Sample by	CS/KK	Temp	9.4
Parameters	VOA 500C	Appear	LT TAN TINT

well/Sample ID	PAS-LR-06	PH	7.21
Time	0830	COND	3150
DTW	10.57	ORP	3.05
Sample by	CS/KK	Temp	9.9
Parameter	500C VOC	appear	Clear

Well/Sample ID	PAS-LD-6	PH	7.69
Time	0830	COND	2440
DTW	23.37	ORP	393
Sample by	CS/KK	Temp	9.2
Parameter	500C VOC	appear	LT TAN TINT

G.W. Purge/Sample

Location	SWW-8	start	0850
DTB	22.20	End	0920
DTW	3.68	Dia	2"
IV/3V	3.14 / 9.44	actual	10 Gal

Field Parameters

PH	7.47	7.39	7.19	Sample ID PAS-S
COND	4600	5050	4060	Time 093(
ORP	16.6	79.7	36.0	DTW 4.17
Temp	9.0	9.5	9.1	BY CS/KK
appear	Clear	LT TAN TINT	Clear	Parameters 5(
	Initial	Final	Sample	

All Purging/Sampling Done w/ Dedicated HDPE Bailer & Nylon Cord

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Read and Understood By

C. Sole — Signed

11/13/96 — Date

_____ — Signed

_____ — Date

96
PROJECT PAS Oswego

Notebook No. _____

Continued From Page _____

11/13/96 G.W. Purge/Sample

Location LR-8 Start 1100
DTB 43.05 End 1140
DTW 10.70 Dia 2"
IV/3V 5.49/16.50 actual 17Gal

Field Parameters

pH	8.62	7.36	8.52	Sample Time 1330
S	3030	3550	3400	ID PAS-LR-8
°C	9.0	9.6	9.5	DTW 10.90
NTU	36.0	6.36	34.7	by CS/Tek
appear	Clear	Clear	Yellow Tint	Parameters VOC/SVOC
	Initial	Final	Sample	& MS MSD

Location LD-8 Start 1100
DTB 25.38 End 1125
DTW 7.02 DIA 2"
IV/3V 3.10/9.31 Actual 10 Gallons

Field Parameters

pH	7.88	7.74	7.81	Sample Time 1345
S	2000	1920	1940	ID PAS LD-08
°C	9.2	9.1	9.1	DTW 7.02
NTU	8.61	238	21.4	by CS/Tek
Appear	Clear	Turbid Beige	Clear	Parameters VOC/SVOC
	Initial	Final	Sample	

All purge/sampling done w/ Dedicated HDPE Bailer and Nylon Cord

Continued on Page

Read and Understood By

C. S[illegible] 11/13/96

Signed Date Signed Date

Notebook No. ______

PROJECT PAS Oswego

Continued From Page ______

11/13/96 G.W. Purge / Sample

well ID	M-21	Start	1200	Sample Time	153[illegible]
DTB	39.95	End	1520	DTW:	9.97
DTW	9.13	Actual:	139 Gallons		
1V/3V	46.33 / 138.7	DIA - 6" well (1.50)			

Field Parameters

	Initial	Final	Sample
pH	8.02	8.27	8.24
Ω	2550	3390	3360
°C	9.1	9.3	9.2
NTU	33.9	41.3	37.6
Appear	Clear w/Rust particles	Clear w/ Rust parts	Clear w/ Rust Parts

Purged w/ Dedicated 5/8 OD Tubing + ISCO pump
Sampled w/ Dedicated HDPE Bailer + Nylon Tubing

NO more

CS

Continued on Page

Signed: [signature] Date: 11/13/96

Read and Understood By

Signed ______ Date ______

28 PROJECT PAS Oswego

Notebook No.

Continued From Page

11/14/96 Calibration/Activities Log

Weather 25°/ some snow/sun

Personnel C. Scher K Kearny

pH #172 4= 4.04 7= 7.01 10= 9.94

Cond #15 445= 438 3900= 3100

Neu # 147 0-10= 4.68 10-100= 47.1 100-1000= 524

Solinest H_2O level #176 Generator #127 ISCO #43

D.O. # Orion 810 Calibration to atmosphere pressure/ambient air

0700 leave E. Syracuse for Oswego - arrive 0735 Calibrate meters
Set up for days Sampling/Purge
0800 Start Purge M-26 label Bottles for Sample
Continue w/ Inspection of Silt Fence areas.
1130 KK Call office for Check in w/ Chemist - SVOC from LD-6
Broke - Have to Repurge + Resample message left for D. Dyer.
1200 Sample of M-26 Set up for Surface water/Sediments
1230 SWSS-03 and purge of LD-6. 1300 SWSS-01
1330 Start purge of M-25 and SWSS-02 (MS/MSD)
1400 Collect SWSS-04A and 1500 SWSS-05. during
Purge of M-25
1645 Collect Sample M-25 Pack up Samples for day, Complete COC
1715 To Store for Ice - will Hand Deliver Sample tomorrow AM. Clean up
Return Hotel arrive 1800 - End day 11 HR

No more CS

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C. Scher 11/14/96

Signed Date

Read and Understood By

Signed Date

PROJECT GAS Oswego

Notebook No. _____

Continued From Page _____

11/14/96 Purge/Sample

Well ID	M-26	Start time	0800
DTB	44.40	End time	1145
DTW	7.70	actual amt	166 Gallons
Vol/3 Vol	53.05 / 165.15	Diameter	6" well

Sample Time 12
DTW 7.74
By CS/KR

Field Parameters

pH	8.30	7.70	7.74
Ω	89	51	51
°C	8.2	8.4	8.3
NTU	12.5	2.23	3.01
Appear	Clear	Clear	Clear
	Initial	Final	Sample

Well ID	M-25	Start time	1330 ~~1333~~
DTB	35.10	End time	1640
DTW	5.97	Actual purge	131 gallons
Vol/3 Vol	43.6 / 130.8	Diameter	6"

Sample Time 1645
DTW 6.01
By CS

Field Parameters

pH	8.51	8.23	8.27
Ω	111	194	191
°C	5.4	5.4	5.3
NTU	3.11	4.26	3.78
Appear	Clear	Clear	Clear
	Initial	Final	Sample

Wells Purged w/ 3/8 OD Tubing (Dedicated) and ESCO Pump
Wells Sampled w/ Dedicated HDPE Bailer + Nylon cord

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Signed

11/14/96
Date

Read and Understood By

Signed

Date

Notebook No. _____

PROJECT Pas Oswego

Continued From Page _____

11/4/96 Surface water / Sediments

Loc ID (water)	PAS-SW-01	PAS-SW-02	PAS-SW-03	PAS-SW-04A	PAS-SW-05
Time	1300	1330	1230	1410	1500
Flow/Depth	12" Fast	12" FAST	10" Deep - FAST	18" Fast	18" Fast
Parameters	A / C	A / C	A / C	A / C	A / C
pH	8.35	8.37	8.05	8.57	8.38
COND	101	137	77	140	164
°C	3.7	3.9	5.4	3.7	3.9
NTU	4.12	7.18	3.59	15.9	11.9
Appear	Clear	Clear	Clear	Clear	Clear
Comments	~~PAS/MSD~~	MS/MSD	-	-	-
D.O.	9.17	9.99	13.91	9.84	10.99
ID (SED)	PAS-SS-01	PAS-SS-02	PAS-SS-03	PAS-SS-04A	PAS SS-05
	Dk Brown Silty Sand w/ organic matter	Dk Brown Silty Sand w/ organic matter	Dk Brown Silty Sand w/ organic matter	Dk Brown Silty Sand w/ organic matter	Dk Brown Silty Sand w/ organic matter

Stream Guages

SSSW 1 Guage Gone 12" Deep Swift Flow

SSSW 2 Guage Gone Renamed w/ Branch ≠ 12" Deep

SSSW 3 9" Deep Guage in place Fast Flow (Stream - No Flow by Guage

SSSW 4A 18" Deep - Fast Flow

SSSW 5 18" water in Stream but Guage in out of water DRY

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C Signed

11/4/96 Date

Read and Understood By

Signed

Date

PROJECT PAS Oswego 11/14/96 & 11/15/96 Notebook No. _____

Continued From Page _____

11/14/96 Purge/Sample

11/15/96

Location PAS-LD-06 Start 1230 Sample Time C

DTB 33.15 End 1240 BY CS/KK

DTW 19.78 Dive 2" Parameter + SVOC

IVOC/SVOC 2.35/7.07 Actual 2Gal-D127 DTW 23.98

Resample for Lab/Airborn Breakage - SVOC only

pH	7.92	7.79	7.81
Ω	301	270	290
°C	8.1	8.3	7.7
NTU	12.6	>1000	14.9
appear	Clear	Turbid Brown	Clear
	Initial	Final	Sample

Day End - 111496

Activity Log / Calibration

Weather 35°

Personal C. Schen K. Keary

pH# 172 7= 7.02 4= 4.03 10= 9.86

Cond# 15 445= 437 3900= 3310

ORP# 147 0-10= 4.79 10-100= 49.1 100-1000= 52

~~DTW~~ Water level# 176

0800 Final Tank level between ORP + .25" - same as 11-11

0630- leave Syracuse for PAS- arrive 0710 Calibrate meters

0715 Collects Resample of LD-06 SVOC only -

Final Site walk/Inspection Clean up Site/Secure -

0900 Off Site Final check in @ office - message left for D. Iyer/check in

Project Complete

0930 Leave Oswego for BFLO arrive ≈ 1000 - Ship Equip @ Airborn 122

1240 Arrive Barre Sign off Samples. 1300 Pick up C.S. Car → to BFLO

Demob, Clean out Van Return vehicle to Mark and Drive H.

Home Day End 1430 8 Hr day

Continued on Page

Read and Understood By

C S 11/15/96

Signed Date Signed Date

URS

URS CONSULTANTS, INC.
252 DELAWARE AVENUE
BUFFALO NEW YORK 14202 1495
716) 856 5636
FAX (716) 856-2545

August 16, 1996

Mr. Ronnie Lee Gupta, P.E., Project Manager
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

AUG 2 6 1996

RE: NYSDEC STANDBY CONTRACT
WORK ASSIGNMENT D002340-8 MONTHLY REPORT
POLLUTION ABATEMENT SERVICES - O & M

Dear Mr. Gupta:

Enclosed is a copy of the Progress Report for the months of June and July, 1996 for Work Assignment D002340-8, Pollution Abatement Services - O&M. At the Department's direction, Progress Reports and Payment Requests are submitted only when the cumulative work effort and associated costs exceed the minimum level.

Very truly yours,

URS CONSULTANTS, INC.

Dharmarajan R. Iyer, Ph.D., P.E.
Task Manager

Enclosure

cc: Mr. John Gorton - URS
File: 35236.00 (1005)

J\35236\WP\COR\PROGRESS.#41 na

MONTHLY REPORT NO. 41
POLLUTION ABATEMENT SERVICES - O & M
JUNE AND JULY 1996

CONTRACT NO.	D002340
W.A. NO.:	D002340-8
DEC SITE NO.:	7-38-001
DEC PROJECT MANAGER:	Ronnie Lee, P.E.
TELEPHONE NO.:	(518) 457-4254
URS TASK MANAGER:	Dharmarajan R. Iyer, Ph.D., P.E.
TELEPHONE NO.:	(716) 856-5636

PROGRESS FOR PERIOD

- Compiled and validated analytical data for the Spring 1996 sampling event.
- Developed and submitted the Spring 1996 Monitoring Report.

OUTSTANDING ISSUES AND POTENTIAL PROBLEM AREAS

- None.

ANTICIPATED ACTIVITIES DURING THE FOLLOWING MONTHS

- Perform the Fall 1996 site monitoring.
- Prepare and submit a Comprehensive Site Monitoring Report at the end of this work Assignment.
- Provide overlap training for continuation of site monitoring, if necessary.
- Closeout the payment issues with Environmental Products & Services for leachate disposal.

LABORATORY SUMMARY

- None

DELIVERABLE SCHEDULE

	ACTIVITY	SCHEDULED DATE	ACTUAL DATE
1.	Submission of Draft Work Plan (Task 1)	06/25/90	08/01/90[1]
	Submission of Final Work Plan	07/17/90	09/28/90[1]
	Work Plan Approval/Notice to Proceed	07/24/90	10/10/90[1]
2.	a. Evaluation Report of Leachate System (Task 2)	11/30/90	11/30/90
	b. Evaluation Report of Containment Cell (Task 3)	11/30/90	11/30/90
3.	Task 4 - Monitoring of Site		
	a) Laboratory Subcontract Quotes	07/23/90	09/30/90[2]
	b) Revised Monitoring Plan	09/17/92	03/04/92[5]
	c) Letter Report	2/96[6]	
4.	Task 5 - Construction Plans and Specifications		
	a) Submit Draft Plans/Specs.	Within 60 days of direction to prepare plans and specs.	
	b) Submit Final Plans/Specs.	Within 30 days of Department comments on draft plans and specs.	
5.	Task 6 - Operation and maintenance (O&M) Plan		
	a) Submit Draft O&M Plan and O&M Manual	02/01/91	02/01/91
	Comments on Draft O&M Plan and O&M Manual	02/15/91	03/20/91[4]
	b) Submit Final O&M Plan and O&M Manual	03/01/91	04/05/91[4]
	c) Submit Subcontract/Subcontractors Available		
	Leachate Collection/Disposal	11/10/90	12/20/90[3]
	All Other Subcontracts	02/10/91	12/20/90
	d) Review and Modify O&M Plan and O&M Manual	09/17/92	03/04/92[4]
	e) Provide Overlap Training	2/97[6]	

NOTES:

1, 2 and 3) See Monthly Progress Report No. 6.

4) See Monthly Progress Report No. 11.

5) Monitoring program was revised effective Spring 1992. The O&M for this site will be further reviewed near the end of this Work Assignment.

6) Schedule revised to include third extension of environmental monitoring.

FINANCIAL STATUS REPORT

o For task details, see Cost Control Report for this reporting period.

URS
AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

URS CONSULTANTS, INC.
282 DELAWARE AVENUE
BUFFALO, NEW YORK 14202-1805
(716) 856-5636
FAX: (716) 856-2545

July 14, 1996

Mr. Ronnie Lee Gupta, P.E., Project Manager
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

RE: NYSDEC STANDBY CONTRACT
WORK ASSIGNMENT D002340-8 MONTHLY REPORT
POLLUTION ABATEMENT SERVICES - O & M

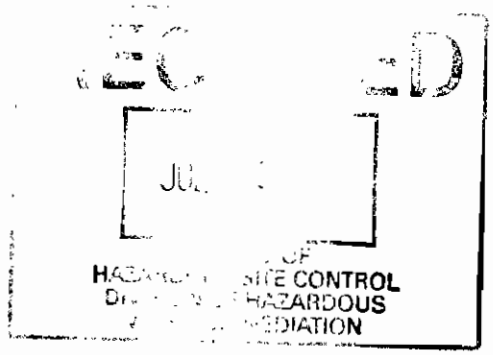
Dear Mr. Gupta:

Enclosed is a copy of the Progress Report for the month of June 1996 for Work Assignment D002340-8, Pollution Abatement Services - O&M. At the Department's direction, Progress Reports and Payment Requests are submitted only when the cumulative work effort and associated costs exceed the minimum level.

Very truly yours,

URS CONSULTANTS, INC.

Dharmarajan R. Iyer, Ph.D., P.E.
Task Manager



Enclosure

cc: Mr. John Gorton - URS
File: 35236.00 (1005)

MONTHLY REPORT NO. 41
POLLUTION ABATEMENT SERVICES - O & M
JUNE 1996

CONTRACT NO.	D002340
W.A. NO.:	D002340-8
DEC SITE NO.:	7-38-001
DEC PROJECT MANAGER:	Ronnie Lee, P.E.
TELEPHONE NO.:	(518) 457-4254
URS TASK MANAGER:	Dharmarajan R. Iyer, Ph.D., P.E.
TELEPHONE NO.:	(716) 856-5636

PROGRESS FOR PERIOD

- Validated data from the Spring 1996 Sampling and Analysis.
- Developing Summary Report for the Spring 1996 Sampling.

OUTSTANDING ISSUES AND POTENTIAL PROBLEM AREAS

- None.

ANTICIPATED ACTIVITIES DURING THE FOLLOWING MONTHS

- Complete and submit Spring 1996 Monitoring Report.
- Perform the Fall 1996 site monitoring.
- Prepare and submit a Comprehensive Site Monitoring Report at the end of this work Assignment.
- Provide overlap training for continuation of site monitoring, if necessary.
- Closeout the payment issues with Environmental Products & Services for leachate disposal.

LABORATORY SUMMARY

- None

DELIVERABLE SCHEDULE

	ACTIVITY	SCHEDULED DATE	ACTUAL DATE
1.	Submission of Draft Work Plan (Task 1)	06/25/90	08/01/90[1]
	Submission of Final Work Plan	07/17/90	09/28/90[1]
	Work Plan Approval/Notice to Proceed	07/24/90	10/10/90[1]
2.	a. Evaluation Report of Leachate System (Task 2)	11/30/90	11/30/90
	b. Evaluation Report of Containment Cell (Task 3)	11/30/90	11/30/90
3.	Task 4 - Monitoring of Site		
	a) Laboratory Subcontract Quotes	07/23/90	09/30/90[2]
	b) Revised Monitoring Plan	09/17/92	03/04/92[5]
	c) Letter Report	2/96[6]	To Be Rescheduled
4.	Task 5 - Construction Plans and Specifications		
	a) Submit Draft Plans/Specs.	Within 60 days of direction to prepare plans and specs.	
	b) Submit Final Plans/Specs.	Within 30 days of Department comments on draft plans and specs.	
5.	Task 6 - Operation and maintenance (O&M) Plan		
	a) Submit Draft O&M Plan and O&M Manual	02/01/91	02/01/91
	Comments on Draft O&M Plan and O&M Manual	02/15/91	03/20/91[4]
	b) Submit Final O&M Plan and O&M Manual	03/01/91	04/05/91[4]
	c) Submit Subcontract/Subcontractors Available		
	Leachate Collection/Disposal	11/10/90	12/20/90[3]
	All Other Subcontracts	02/10/91	12/20/90
	d) Review and Modify O&M Plan and O&M Manual	09/17/92	03/04/92[4]
	e) Provide Overlap Training	2/97[6]	To Be Rescheduled

NOTES:

1, 2 and 3) See Monthly Progress Report No. 6.

4) See Monthly Progress Report No. 11.

5) Monitoring program was revised effective Spring 1992. The O&M for this site will be further reviewed near the end of this Work Assignment.

6) Schedule to be revised due to third extension of environmental monitoring..

FINANCIAL STATUS REPORT

o For task details, see Cost Control Report for this reporting period.

URS
AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

URS CONSULTANTS, INC.
282 DELAWARE AVENUE
BUFFALO, NEW YORK 14202-1805
(716) 856-5636
FAX: (716) 856-2545

July 10, 1996

Mr. Ronnie Lee, P.E., Project Manager
Bureau of Construction Services
Division of Hazardous Waste Remediation
NYS Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

JUL 15

RE: PAS SITE O&M SITE NO. 7-38-001 (W.A. D002340-8)
SPRING 1996 ENVIRONMENTAL MONITORING REPORT

Dear Mr. Lee:

We are pleased to submit five (5) copies of this Report for the Spring (May 1996) Environmental Monitoring in accordance with the Work Plan, the revised Analytical Program, and modifications by the Department (letter dated January 29, 1993).

The next environmental sampling (Fall 1996) at the site is tentatively scheduled for the week of November 11, 1996.

If you have any questions, please do not hesitate to call us.

Very truly yours,

URS CONSULTANTS, INC.

Dharmarajan R. Iyer, Ph.D., P.E.
Task Manager

Enc.

cc: R. Lupe - NYSDEC
J. Gorton - URS
G. Kisluk - URS
File 35236.00 (1000)

J\35236\wp\cor\7-9-96.L.akg:mm
July 10, 1996 (11:53am)

SUMMARY REPORT

SPRING 1996 ENVIRONMENTAL MONITORING

PAS SITE O&M (W.A. D002340-8)

SITE ID # 7-38-001

JULY 1996

Prepared by:

URS CONSULTANTS, INC.

for:

NEW YORK STATE DEC
ALBANY, NY

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PAS SITE O&M (W.A. D002340-8)
SITE #7-38-001
SPRING 1996 ENVIRONMENTAL MONITORING
SUMMARY REPORT

1. INTRODUCTION

During the week of May 13, 1996, URS completed the Spring 1996 Environmental Monitoring in accordance with the Work Plan (inclusive of addenda) for the Operations and Maintenance (O&M) at the Pollution Abatement Services (PAS) site. This is the twelfth of thirteen (13) sampling events scheduled to be performed by URS as part of the O & M work assignment, which was extended the third time for one year to a total of six years. As summarized in Table 1, thirteen previous rounds of sampling conducted at the site include two by NYSDEC (11/89 and 5/90), and eleven by URS (11/95, 5/95, 11/94, 5/94, 11/93, 5/93, 11/92, 5/92, 11/91, 5/91 and 11/90). Field activities and measurements, and analytical results are summarized in this report.

As of February 1992, the NYSDEC turned over the monthly leachate removal to the Responsible Parties; also the NYSDEC is performing the groundwater level measurements. Since spring 1992, the environmental monitoring by URS has consisted of only groundwater, surface water and sediment sampling and analysis at the NYSDEC's direction. Beginning in spring 1996 and per the NYSDEC's request, URS also began sampling M-Series wells installed by the responsible parties. Wells LS-2, LD-3 and LR-3 were substituted by wells M-21, M-25 and M-26.

2. ONSITE ACTIVITIES

Field activities began on May 13, 1996 and ended on May 16, 1996. A chronological summary of the field activities is included in Attachment A, along with the field activities log and sample chain-of-custody records. During the spring of 1996, the L-series and M-series groundwater monitoring wells locations were sampled in accordance with the revised analytical program included in the O & M Manual for this site. Consistent with the NYSDEC practice at other sites, disposable bailers were used to purge

TABLE 1
PAS SITE O&M
SUMMARY OF SAMPLING AND ANALYSIS

Matrix	Sampling Schedule	Sample ID	Analytical Schedule				
			VOA	BNA	PEST/PCB	Metals	Wet Chemistr
Groundwater - L-series wells (S - Shallow, D - Deep, R - Bedroc	Fall & Spring	LS-2, LD-2, LR-2 LD-3, LR-3, LD-4, LD-5, LS-6, LD-6, LR-6, LR-8 (MS/MSD), LD-8 AND LS-9	X	X	--	X (only 11/89)	--
Groundwater - M-Series wells	Spring 1996	M-21, M-25, M-26	X	X	--	-	--
Groundwater - Slurry Wall Wells	Fall	SWW-1,SWW-4, SWW-6, SWW-8, SWW-10, SWW-12	X	X	--	X (only 11/89)	--
Surface Water	Fall	SW-1, SW-2, SW-3, SW-4 (11/92 only), SW-4A (11/90,11/91 and11/93 SW-4B (11/90 only), SW-5 (11/92 and 11/93 only)	X	X	--	--	--
Stream Sediment	Fall [aa] [excl. Fall 1995] [aaa]	SS-1[a], SS-2[a], SS-3[a], SS-4[a] (replaced with SS-4A,11/9 SS-4B (11/90 only), SS-5 (started 11/91)	X	X	X	X	X
Leachate (Not sampled by URS since 11/91)	Fall - 1990 and 19 Spring 1991	LCW-1 (11/90)					X
		LCW-2 (11/89, 5/91 and 11/91)	X	X	X	X	X
		LCW-4 (11/90, 5/91 and 11/91)					X

(1) [a] SS-1,SS-2,SS-3, and SS-4 were re-analyzed (5/91) for Pest/PCB and hexavalent chromium.
(2) [aa] Fall 1993 sediment samples were resampled in Spring 1994.
(3) [aaa] Fall 1995 sediments were not sampled due to high water levels.
(4) Monitoring wells LS-2, LD-3 and LR-3 were subsituted by M-21, M-25 and M-26 for the Spring 1996 sampling event

Note: The bi-annual monitoring program was initiated by the NYSDEC in November 1989;
URS has been performing the monitoring program since November 1990.
Leachate sampling was turned over to the responsible parties in November 1991.
Three M-Series wells installed by the PRPs were added to this program beginning Spring 1996.

and sample the L-Series and M-Series wells. Groundwater level measurements were taken in all wells.

3. FIELD SAMPLING AND MEASUREMENTS

Groundwater from ten (10) L-Series and three (3) M-Series wells were sampled for Schedule A parameters (volatile and semivolatile organic compounds). The locations of the L-Series and M-Series groundwater monitoring wells are shown on Figure 1. The M-series wells are shown in a figure from the PRPs included in Attachment C. Boring logs provided by the NYSDEC for the M-Series wells are also included in Attaehment C. Form PAS-1, Sampling Event Summary, (Attachment B), presents a summary of all field samples collected during this sampling event.

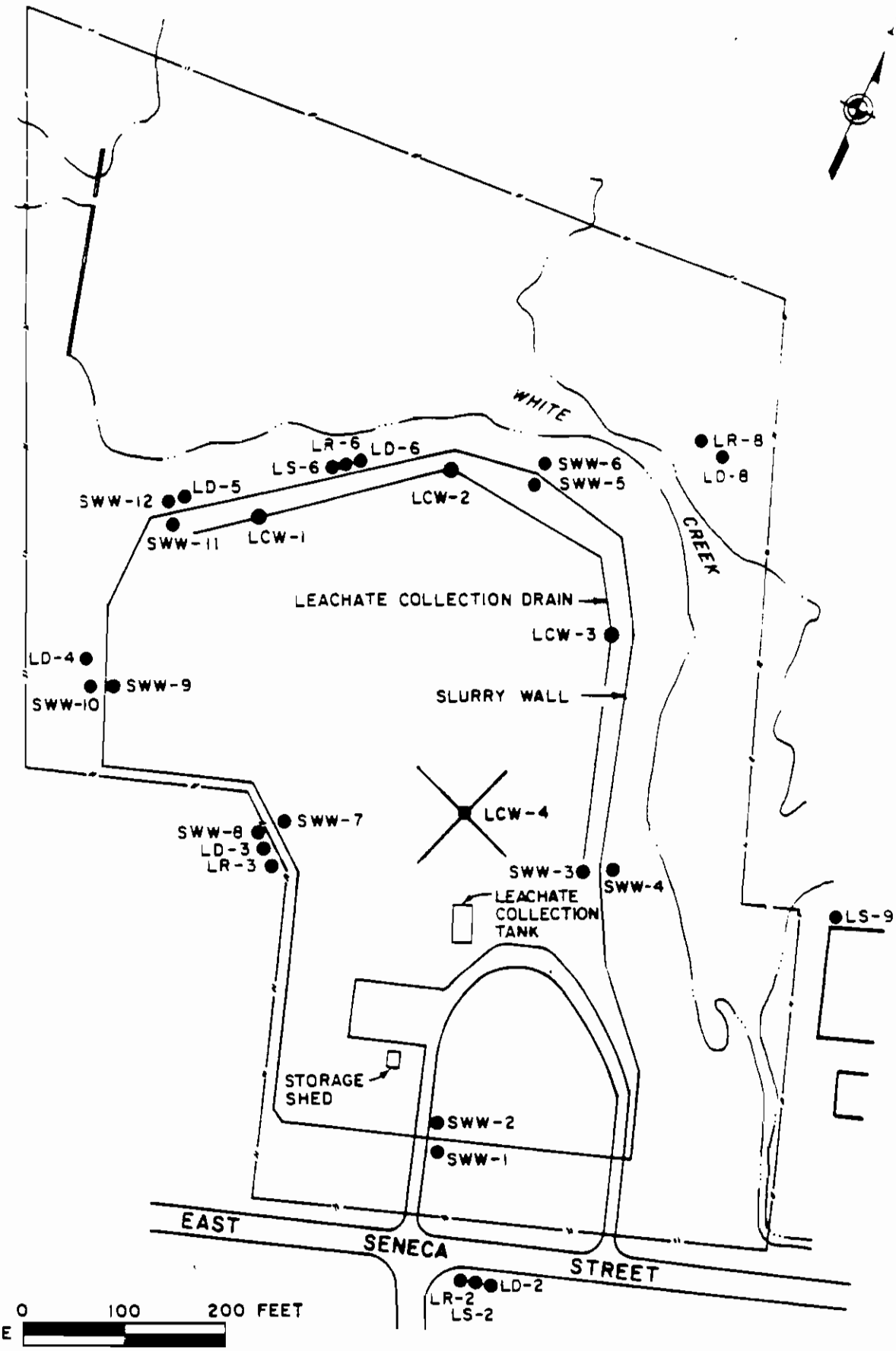
Field measurements taken in the L-Series wells included water level, specific conductivity, pH, and temperature. These field measurements are summarized on Form PAS-2, Well Data Summary (Attachment B). Water level measurements taken in the monitoring wells are tabulated on Form PAS-3, Monthly Monitoring Well Levels (Attachment B). Form PAS-5, Routine Inspection Checklist, also is included (Attachment B).

4. ANALYTICAL DATA AND RESULTS

A. Data Validation

Thirteen (13) groundwater samples, plus a volatile trip blank, were analyzed by Recra Environmental, Inc. of Amherst, New York, as part of this monitoring event. The groundwater samples were analyzed for Schedule A parameters following the methods in the revised analytical program. The deliverable data package consisted of analytical results and quality control data.

For the volatile analysis, sample LS-6 had high recovery for one of the three surrogates. Re-analysis resulted in similar high recovery suggesting possible matrix interference. No qualifiers were required. Samples LD-6, LD-8, LR-8, M-21, M-25 and M-26 were qualified as estimated for acetone only due to a percent difference outlier in the daily calibration check standard.



URS CONSULTANTS, INC.	MONITORING WELL LOCATIONS	FIGURE 1

A-3619/B

For semivolatile analysis, samples LD-2, LD-4, LD-5, LR-2, LR-6, LS-6 and LS-9 were extracted one day beyond the holding time due to laboratory oversight. Re-extractions on samples LD-4, LD-5, LD-6, LD-8, LR-2, LR-6, LR-8, LS-6, M-21, M-25 and M-26 were required due to low surrogate recoveries in the initial extractions. All reextractions were 7 to 10 days past the holding time. The re-analysis resulted in similar low recoveries suggesting matrix interference. The initial data is reported, since the results were similar in both analysis. Note that semivolatile compounds were detected. Sample M-25 and M-26 were qualified as estimated for 4-nitrophenol due to a percent difference outlier in the daily calibration check standard.

The data was validated against the appropriate methods and the deliverables were reviewed for completeness. As a result of the data audit, the laboratory was requested to provide additional information to make the data packages complete. All issues have been resolved and the data is usable as reported with some qualifications due to the holding time exceedances and continuing calibration outlier for the volatiles and semivolatiles.

B. Analytical Results

The analytical data received from Recra Environmental, Inc. are summarized in Attachment D and briefly discussed below.

VOLATILE ORGANICS: Volatile organic analytes (VOAs) were detected in only three (3) of the ten (10) L-Series wells (LD-5, LD-6 and LR-8). With the exception of LD-8, VOAs were present at relatively low parts per billion (ppb) levels (less than 20 ppb) in two (2) wells. Volatile organic analytes were detected in two (2) of the three (3) M-Scries wells, M-21and M-25.

TABLE 2

PAS SITE O&M

VOCs DETECTED IN MONITORING WELLS

	LD-5	LD-6	LR-8	M-21	M-25
Acetone	ND	7	9	5	9
Benzene	2	ND	20	2	ND
Bromodichloromethane	ND	ND	ND	ND	2
Chlorobenzene	ND	ND	5	2	3
Chloroethane	ND	ND	8	ND	ND
Chloroform	ND	ND	ND	ND	3
Dibromochloromethane	ND	ND	ND	ND	0.95
1,1-Dichloroethane	18	ND	ND	ND	3

SEMIVOLATILE ORGANICS: No semivolatile compounds detected in any of the groundwater samples.

C. Comparative Data

The data received from this sampling event (May 1996) were compared to previous data from sampling conducted by URS (May and November 1995, May and November 1994, May and November 1993, May and November 1992, May and November 1991, and November 1990), and NYSDEC (May 1990 and November 1989). Analytical data from previous sampling are included for reference as Attachment D. Results from this comparison are summarized below. It should be noted that samples from the NYSDEC monitoring events were analyzed by a different laboratory than those from the URS sampling events. Also, for the May 1996 sampling event, another laboratory (IEA, Inc.) was used by URS because the previous laboratory is no longer in business.

VOLATILE ORGANICS: Volatile organics continue to be absent in the L-series wells at locations up- and side-gradient to the predominant groundwater flow, which is north-northwest towards White Creek (see Figure 1).

L - Series Wells - The number of L-series wells with detectable VOC concentrations decreased from seven in the last round to three. Groundwater at LD-5, located across the downgradient slurry wall from leachate collection well LCW-1, had the same relatively low level of 1,1-dichloroethane as the last three sampling events. Benzene, reappeared at levels similar to sampling events prior to 5/95, and still below the CRQL. Volatile organics which were in the double-digit ppb range in well LS-6 through the fall of 1994, and below CRQL in 1995, were not detected this time. Well LR-6 had no compounds detected as compared to concentrations that were one to high during the first half of this O&M (i.e., 1990 through 1993) and at trace levels in the last few rounds. Acetone reappeared in LD-6, the first time since 5/91, no other compounds were detected at this well. It should be noted that this is a common laboratory contaminant even though none of the QC blanks exhibited acetone contamination.

The most significant concentrations of volatile organics occurred at LR-8 across White Creek, north of the slurry wall.

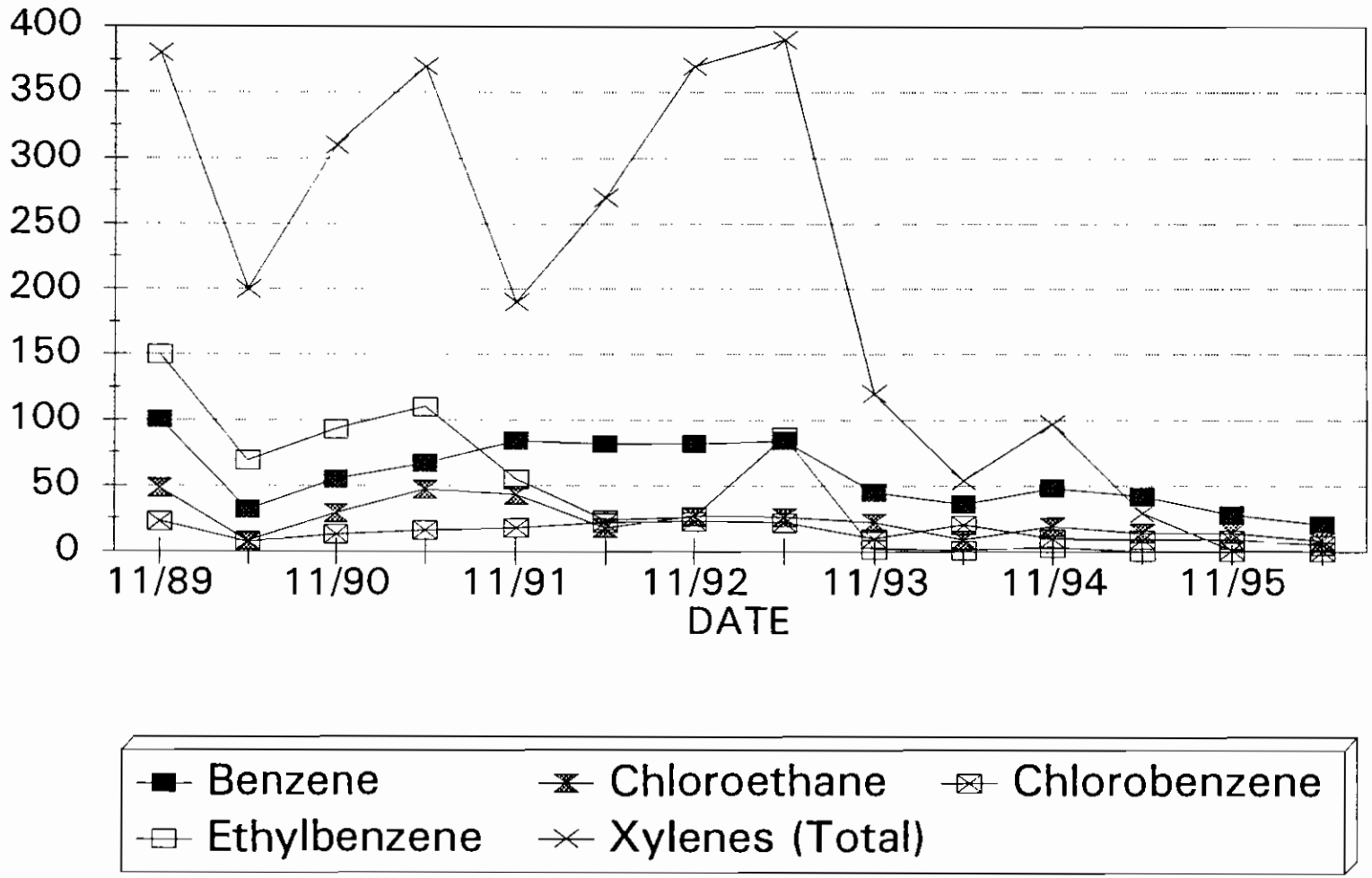
- Xylene, which was previously detected at higher concentrations than any of the other compounds, was not detected for the first time since monitoring began. As illustrated by Figure 2, xylene dropped significantly in 1993, and has continually decreased over the last six monitoring events.

- Benzene has averaged 37 ppb with minor fluctuations over the last six events. For four events (11/91 to 5/93) prior to that, benzene remained steady at about 83 ppb. The current level represents over a 70% drop from the benzene level (100 ppb) at the beginning (11/89) of this program, and more than a 50% decrease from 1994/1995.

- Ethylbenzene follows a pattern similar to benzene, but with one difference. It initially was detected at concentrations higher (69 to 150 ppb) than benzene during the first four (11/89-5/91) events and dropped to trace levels (i.e., less than the CRQL of 5 ppb) during the last five events. It was not detected during the last two events.

FIGURE 2

VOC CONCENTRATIONS IN WELL LR-8



- Chloroethane and Chlorobenzene, the other two compounds of significance in LR-8, were both below 20 ppb with no obvious trend since 1992.

M-Series Wells - Previous analytical data for the M-series wells is not available for comparison. VOAs were present in M-21 and M-25, the most significant ones being benzene at 5 ppb and 9 ppb respectively. Trace levels of chlorobenzene (3 ppb), chloroform (3 ppb), bromodichloromethane (2 ppb) and dibromochloromethane (0.9 ppb) were found in M-25. Trace levels of chloroethane (2 ppb) and chlorobenzene (2 ppb) were found in M-21.

SEMIVOLATILE ORGANICS: No semivolatile compounds were detected in wells for the Spring 1996 sampling event

ATTACHMENT A

DAILY EVENTS SUMMARY
FIELD ACTIVITIES LOG
AND
SAMPLE CHAIN-OF-CUSTODY RECORDS

PAS SITE NO. 7-38-001
(W.A. D002340-8)

SPRING 1996 ENVIRONMENTAL MONITORING
MAY 13, 1996 TO MAY 16, 1996

EVENT SUMMARY

May 13, 1996

- C. Scher pickup rental vehicle and load equipment (0730)
- K. Kearney and C. Scher departed from Buffalo to Oswego (0845)
- Arrived Oswego (1215)
- Lunch (1215-1245)
- Arrive on site (1300)
- Calibrate instruments, perform site inspection and water level monitoring (1300-1525)
- Check-in at office with D. Iyer (1530)
- Purchase field sampling supplies (1530-1600)
- Locate M-series that are substituted for three L-series wells (1600-1800) (Location map and boring logs attached)
- Secure site and depart (1800)
- Arrive Syracuse hotel and check-in (1900)

May 14, 1996

- Departed for PAS Oswego (0630). Arrived on site (0700)
- Calibrated instruments and prepared equipment (0700-0800)
- Purged wells LS-6, LD-6, LR-6 (0815-0925)
- Check in at office with D. Iyer (0930)
- Purge wells LD-5, LD-4, LD-2, LR-2, LS-9 (1000-1240)
- Lunch (1300-1330)

- Pick up additional equipment at lumber store (1330-1350)
- Sample wells LS-6, LR-6, LR-2, LD-2, LS-9 and LD-5 (1350-1540)
- Secured site and depart (1600)
- Called office, check in with D. Iyer (1615)
- Pack cooler, pick up ice, ice samples (1615-1645)
- Arrived at Airborne Express (1730)

May 15, 1996

- Departed for PAS Oswego (0630). Arrived on site at (0715)
- Calibrated instruments and prepared for sample (0720-0800)
- Sampled LD-6 (0800)
- Purged LD-8 and LR-8 (0830-0925)
- Check in at office with S. Nowak and fax chain-of-custodies. Pick up ISCO pump at Oswego County Transfer Station (0930-1020)
- Sample LD-8 and LR-8 (1030)
- Purge and sample M-21 (1100-1500)
- C. Scher offsite to check in at office with D. Iyer (1130)
- Purge and sample M-26 (1430-1800)
- Pack cooler, pick up ice, ice cooler and offsite (1815)
- Arrive at Airborne Express (1900)

May 16, 1996

- Departed for PAS Oswego (0730). Arrived on site (0815)
- Calibrated instruments and purged M-25 (0825-1100)
- Sample M-25, purchase ice and check in at office with D. Iyer and S. Nowak (1130)
- Secure site, pack cooler and leave for Buffalo (1230)
- Arrive Recra drop off final sample (1700)

ATTACHMENT B

FIELD/ANALYTICAL DATA FORMS

FORMS:

PAS-1, Sampling Event Summary

PAS-2, Well Data Summary

PAS-3, Monthly Monitoring Well Levels

PAS-5, Routine Inspection Checklist

SAMPLING EVENT SUMMARY

Pollution Abatement Services

URS
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ARRIVAL:
DATE: 5-13-96 TIME: 1300

DEPARTURE:
DATE: 5-16-96 TIME: 1230

Personnel Onsite: Cheryl Scher Kevin Kearney

Site Conditions on Arrival: Good - See pg PAS-5

Weather:
Date: 5-13-96
Date: 5-14-96
Date: 5-15-96
Date: 5-16-96

POST SAMPLING CHECKLIST:

Yes Wells Locked
Yes Tank Secured
Yes Site Cleanup / Walk Through
Yes Site Secured

SURFACE WATER SAMPLES

Sample Number	Sample Date	Sample Time	Analytical Schedule
PAS-SW-1			
PAS-SW-2		ONLY IN FALL	
PAS-SW-3			
PAS-SW-4A			
PAS-SW-5			

STREAM SEDIMENT SAMPLES

Sample Number	Sample Date	Sample Time	Analytical Schedule
PAS-SS-1			
PAS-SS-2		ONLY IN FALL	
PAS-SS-3			
PAS-SS-4A			
PAS-SS-5			

GROUNDWATER SAMPLES

Sample Number	Sample Date	Sample Time	Analytical Schedule
PAS-LS-2	NOT SAMPLED		
PAS-LR-2	5-14-96	1400	A
PAS-LD-2	5-14-96	1410	A
PAS-LR-3	NOT SAMPLED		
PAS-LD-3	NOT SAMPLED		
PAS-LD-4	5-14-96	1445	A
PAS-LD-5	5-14-96	1455	A
PAS-LS-6	5-14-96	1530	A
PAS-LR-6	5-14-96	1530	A
PAS-LD-6	5-15-96	0800	A
PAS-LR-8	5-15-96	1045	A
PAS-LD-8	5-15-96	1030	A
PAS-LS-9	5-14-96	1430	A
PAS-SWW-1			
PAS-SWW-4		ONLY IN FALL	
PAS-SWW-6			
PAS-SWW-8			
PAS-SWW-10			
PAS-SWW-12			
PAS-M-21 *	5-15-96	1500	A
PAS-M-25 *	5-16-96	1100	A
PAS-M-26 *	5-15-96	1800	A
Trip Blank	5-14-96	—	8240 ONLY
MS/MSD (LR-8)	5-15-96	1045	A

TANK LEVEL MEASUREMENTS

Date	Time	Level from Bottom	Remarks
5-13-96	1505	1 1/2"	TANK appears to Have Been Pumped
5-16-96	1200	1 3/4"	out Recently.

NOTES: * WELL CONSTRUCTION LOGS FOR PAS-M-21 25 and 26 ARE INCLUDED IN PAGES AFTER FIGURE 3. These wells were substituted for LS-2, LR-3 and LD-3 for this sampling event.

By: Cheryl Scher Firm: URS Consultants, Inc. Telephone #: (716) 856-5636

SAMPLING EVENT SUMMARY

URS
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Pollution Abatement Services
Semiannual

Month: May Year: 1996

Date	Time	Well Number	Well Bottom Elevation (feet)	Water Elevation (feet)	Water Height From Bottom (feet)	Volume of Casing (gal)	Volume Purged (gal)	Specific Conduct. (µmhos/cm)	pH (S.U.)	Temp. (deg. C)	Remarks
FALL	ONLY	LS-2	269.5	–	–	–	–	–	–	–	
5-14-96	1530	LR-2	231.5	276.90	45.40	7.70	24.0	630	7.88	11.6	
5-14-96	1540	LD-2	251.1	283.65	32.55	5.05	16.0	1790	7.50	10.7	
FALL	ONLY	LR-3	211.7	–	–	–	–	–	–	–	
FALL	ONLY	LD-3	248.6	–	–	–	–	–	–	–	
5-14-96	1445	LD-4	246.3	270.43	24.13	4.13	7.0	740	7.60	11.0	PURGED DRY
5-14-96	1455	LD-5	243.2	264.34	21.14	3.55	11.0	920	7.59	12.5	PURGED DRY
5-14-96	1530	LS-6	253.4	265.51	12.11	1.99	3.0	860	7.42	10.8	PURGED DRY
5-14-96	1540	LR-6	213.6	264.23	50.63	8.50	26.0	1010	7.48	11.4	
5-15-96	0800	LD-6	240.9	264.35	23.45	3.97	6.0	1010	7.76	9.9	PURGED DRY
5-15-96	1045	LR-8	230.3	264.91	34.61	5.77	18.0	1490	7.00	10.3	
5-15-96	1030	LD-8	248.1	264.79	16.69	2.97	11.0	730	7.61	10.4	
5-14-96	1430	LS-9	260.9	268.66	7.76	1.32	5.0	740	7.15	9.6	PURGED DRY
FALL	ONLY	SWW-1	267.1								
		SWW-2	268.2								
		SWW-3	265.8								
		SWW-4	257.5								
		SWW-5	254.5								
		SWW-6	254.0								
		SWW-7	250.3								
		SWW-8	256.2								
		SWW-9	256.1								
		SWW-10	256.3								
		SWW-11	250.7								
		SWW-12	251.5								
5-15-96	1500	M-21	231.3	264.55	33.25	47.1	142.0	880	7.54	11.3	
5-16-96	1100	M-25	* 234.2	264.77	30.57	44.3	134.0	790	7.20	8.8	
5-15-96	1800	M-26	* 228.3	267.43	39.13	56.08	169.0	60	7.80	15.1	

Casing Volume = water height from botton of well(ft.) X π r² (Insidde Radius of casing in ft.) X 7.48 gal/ft^3

NOTES: * Elevations are estimated not surveyed as shown on well construction log

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MONTHLY MONITORING WELL LEVELS

URS
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Pollution Abatement Services
Date: MAY 13 1996

Well Number	Riser Elevation (feet)	Ground Elevation (feet)	Water Depth to Level of		Water Elevation (feet)
			Top of Riser (feet)	Ground Level (feet)	
LS2	289.81	287.5	3.86	1.55	285.95
LR2	289.85	287.5	12.95	10.60	276.90
LD2	289.73	287.1	6.08	3.45	283.65
LR3	278.06	275.5	8.26	5.70	269.80
LD3	278.62	275.8	3.88	1.06	274.74
LD4	279.25	276.3	8.82	5.87	270.43
LD5	272.94	270.2	8.60	5.86	264.34
LS6	274.14	271.4	8.63	5.89	265.51
LR6	274.39	270.9	10.16	6.67	264.23
LD6	274.03	270.9	9.68	6.55	264.35
LR8	273.42	270.0	8.51	5.09	264.91
LD8	272.83	269.9	8.04	5.11	264.79
LS9	276.72	274.0	8.06	5.34	268.66
SWW1	289.33	286.2	8.21	5.08	281.12
SWW2	289.37	286.3	15.29	12.22	274.08
SWW3	286.50	286.0	16.80	16.30	269.70
SWW4	283.60	282.9	12.15	11.45	271.45
SWW5	277.02	275.9	14.65	13.53	262.37
SWW6	273.06	270.9	8.02	5.86	265.04
SWW7	277.93	273.3	7.22	2.59	270.71
SWW8	278.24	275.7	3.53	0.99	274.71
SWW9	285.55	283.3	16.53	14.28	269.02
SWW10	280.43	279.3	9.30	8.17	271.13
SWW11	273.50	271.0	10.25	7.75	263.25
SWW12	272.82	270.2	8.32	5.70	264.50
M-21	* 272.48	270.3	7.93	5.75	264.55
M-25	* 269.50	* 268.0	4.73	3.23	264.77
M-26	* 273.7	* 272.0	6.27	4.57	267.43

Remarks: * ELEVATIONS ARE ESTIMATED, NOT SURVEYED AS IN WELL CONSTRUCTION LOG.

By: Cheryl Scher

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ROUTINE INSPECTION CHECKLIST

Pollution Abatement Services

URS CONSULTANTS, INC

Item	Date Inspection Performed	Remarks
CONTAINMENT CELL CAP	5-13-96	MULTIPLE TIRE RUTS ON CAP. HAS RECENTLY BEEN DRIVEN ON. ALSO WHAT APPEAR TO BE GOPHER HOLES NEAR TANK COLLECTION HOUSE
Landscaping	5-13-96	VERY OVERGROWN. GRASS APPROX 8-12" NEEDS CUTTING
Roadways	5-13-96	CLEAN - FREE OF DEBRIS
- General Condition	5-13-96	GOOD
- Snow Removal	5-13-96	NON APPLICAPLE
Concrete Drainage Trough	5-13-96	SLIGHTLY OVERGROWN. BACK SECTION OF TROUGH NEAR WELLS LR, LD, LS 6 HAD STEADY STREAM WEST TO EAST OF WATER
Debris	5-13-96	NO GROSS DEBRIS. APPROX 9.50 GALLON DRUMS (SECURE) LOCATED OUTSIDE STORAGE SHED
French Drains	5-13-96	GOOD CONDITION - OVERGROWN W/ GRASS
FENCE	5-13-96	EAST FENCE LINE BY LD/LRB HAS TREES DOWN ON IT NEAR STREAM. GAP UNDER FENCE 1½. FRONT FENCE NEEDS REPAIR (HIT BY SOME VEHICLE) - OTHERWISE SECURE. BACK FENCE - CUT + RECHAINED W/ LOCK (MECHAL SE SECTION)
MONITORING WELLS	5-13-96	OVERALL - GOOD CONDITION
Risers	5-13-96	CONTINUAL RUSTING OTHERWISE GOOD CONDITION
Locks	5-13-96	GOOD CONDITION

Remarks: STORAGE SHED FOUND TO HAVE BEEN LEFT MESSY INSIDE SINCE LAST INSPECTION IN NOVEMBER 1995 - OLD BAILERS LEFT HANGING ON ROOF BEAMS PACKING MATERIAL SPILLED ON GROUND - NEEDS TO BE CLEARED OUT

By: Cheryl Ecker Firm: URS Consultants, Inc. Telephone #: (716) 856-5636

PROJECT PAS OSWEGO - 5/13/96

Continued From Page

ACTIVITYS & Calibration Log

DATE 5-13-96 WEATHER: 45° Clear partly Sunny very WINDY 5-10mph

PERSONNEL C. SCHER
K. KEARNEY

ONSITE 1300
OFFSITE 1800

HNU #11 Calibrated to 57 PPM w/ ISOBUTYLENE in air @ Span of 9.8 w/ 10.2 eV lamp 99PPM Gas/air mix

activity / Phone Log

0730 PICK UP RENTAL vehicle @ muck motors Load Equipment
Calibrate HNU Prior to leave BFLO
0845 Leave BUFFALO → PAS OSWEGO ARRIVE ≈ 1215
1215 - 1245 Lunch
1300 onsite Start Inspection / well H_2O level → Complete 1525
1530 offsite Call D. IYER Check IN & unable to locate M-21, 25 & 26
we are to call back @ 1600 He will chk w/ Ronnie Lee to Tops
for Sampling / Preserv / Shipping Supplies
1600 Recall D. IYER → M-21 @ NE CORNER of SITE outSIDE fence
These are all offsite
M-25 50' NE of M-21 60' NE along Mitchel St
M-26 450' NE of M-25
Actual Location of M-25 ≈ 400' NW of M-21 and M-26 60' DOWN Smith Rd
wells are 6" WILL advise D IYER TOMORROW about options ~~otto~~ more Effective for Purging on these
1800 OFFSITE drive to E. Syracuse to Hotel arrive @ 1900
Checkin & Bring return in Complete Notes End Day 11 hour Day

Continued on Page

[signature] Signed 5/13/96 Date

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PROJECT Pas Oswego 5/13/96

Notebook No.

Continued From Page

Water level / Well Inspect / Site Inspect

WELL ID	TIME	DTB	DTW	HNU	COMMENTS
LS-2	1316	20.12	3.86	ND	NO RISER CAPS CONTINUAL RUST BUILDUP
LR-2	1314	58.41	12.95	ND	
LD-2	1318	36.03	6.08	ND	
LR-3	1330	66.41	8.26	ND	
LD-3	1331	30.28	3.88	ND	
LD-4	1352	33.14	8.82	ND	
LD-5	1402	29.65	8.60	ND	
LS-6	1405	20.72	8.63	ND	
LR-6	1410	60.31	10.16	ND	
LD-6	1413	33.14	9.68	ND	
LR-8	1437	43.05	8.51	ND	
LD-8	1440	25.28	8.04	ND	
LS-9	1511	15.94	8.06	ND	
SWW 1	1335	22.10	8.21	ND	ok
SWW 2	1337	20.91	15.29	ND	ok
SWW 3	1454	20.80	16.80	ND	ok SILTY
SWW 4	1452	26.20	12.15	ND	ok
SWW 5	1425	22.46	14.65	ND	ok
SWW 6	1427	18.95	8.02	ND	ok
SWW 7	1344	22.00	7.22	ND	NO RISER CAP
SWW 8	1333	22.21	3.53	ND	
SWW 9	1348	30.25	16.53	ND	
SWW 10	1350	25.27	9.30	ND	
SWW 11	1358	23.14	10.25	ND	
SWW 12	1400	21.49	8.32	ND	
M-21	1622	40.00	7.93	ND	6" well
M-22	~~10.03~~ 1419	52.86	10.03	ND	6" well
M-25	1650	35.20	4.73	ND	6" well
M-26	1715	44.40	6.27	ND	6" well
LCW-1	1405	N/A	12.17	ND	
LCW-2	1415	N/A	15.75	ND	
LCW-3	1446	N/A	18.99	ND	
LCW-4	1500	N/A	22.72	ND	
TANK HOUSE	1510	N/A	1½" off Bottom	-	

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PROJECT Pas oswego 5/13/96 — Notebook No. ______ Continued From Page ______

Site Conditions

Containment cell

Sandscape - overgrown grass needs cutting ≈
multiple Ruts - Cap Driven on. appears to ha
Some gopher Holes around tank House.

Roadway - Good

Drainage Trough - Slightly overgrown - Back of Si
trough Had Steady Flow of wa

French Drains Slightly over grown

Fence East fence line near Stream (by 20/ER8 well custer) Trees
Fence gap under fence 1½' where stream passes under
Front Fence Secure Gates Not Repaired from 6 mo ago (Hit by S
Back fence (mitchel st) back of fence opened (cut) & Rechained c
Same key as well keys
west fence line secure

Storage Shed - approx 9 drums outside of it inside very mess
with sampling/development Equip from other firm.

monitoring well Risers/Locks Continual Rusting - Locks
Lubrication otherwise Good

STREAM Guages

SS SW 1 Fast Flow 8½" measure w/ Branch Guage Gone
SS SW 2 16" measure Branch Fast Flow ≈ 30' S of Sanitary Sewer Guage
SS SW 3 8½" Deep Guage in Place Steady Flow
SS SW 4A Steel Guage ~~[illegible]~~ Water 2½" measure by branch
SS SW 5 Guage out of water measure w/ branch 18" Deep

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4 PROJECT PAS Oswego

Notebook No. _____

Continued From Page _____

5/14/95 Instrument Calibration / activity Log

weather clear Sunny 45-57°F

Personnell C. Scher
K. Kearney

pH #146 7.00 = 7.02 4.01 = 4.00 10.00 = 10.18

COND #16 445 umho = 460 3900 umho = 3460

Turbid # 0-10 = 4.47 10-100 = 49.2 100-1000 = 523

HNU #11 Calibrated w/ 99 ppm Isobutylene air Read 5 ppm @ 9.8 w/ 10.2 eV lamp

activity Log / bore Log

0630 Leave Hotel for Site

0700 Arrive on Site Calibrate Meters set up & Start well purge
LS-6 LR-6 LD-6

0930 offSite call office Request ISCO to pump 6" M-Series wells
D Sheppard to Ship Equip to weigh Station across Street
okayed by D. Dyer - asked why we don't have ISCO w/ us →
only well we Ever used it on was LR-3 and we are not Sampling
that well. all other wells are Hand Bailed - all Else ok No Problems

1000 Return to Site Purge LD-5 LD-4 LD-2 LR-2 and LS-9
Complete Purge activities @ 1240. Clean up offSite for Lunch

1300 - 1330 Lunch

1330 to Lumber Store for wood (access pad) for LR-8 LD-8

1350 Return Site Begin Sampling. Sample all above purged wells
Except LD-6 (very slow Recharge will sample 5/15) Complete Sampling
at 1540 Prep coolers for Shipment, Prepare COC. Clean up

1600 offSite to Tops for Ice Pack coolers and to Airborne

1730 Arrive Airborn Ship Samples - End day 10½ hr day.

615 Called D. Dyer w/ Progress Report - No Problems. Concern w/ Time (Dharma expressed)
for M-Series & Purge. We are Having 2 ISCO's Sent To arrive
≈ 10am 5/15 to work on 2 wells Simultaneously

Continued on Page

C. Scher 5/14/96

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Notebook No. _____

Continued From Page _____

5/14/96 G.W. Purge

Location LD-6 Start 0811

DTB 33.14 End 0830

DTW 9.82

Vol/3 Vol 3.97/11.89

actual 6 gallons (Purged dry) Method Dedicated HDPE Bailer w/ NYLON Cord

Field Parameters	Initial	Final
pH	6.56	6.68
COND	910	890
Temp	11.5°C	13.5
NTU	2.01	>1000
appear	Clear	Turbid Brgt

Location LR-6 Start 0835

DTB 60.31 End 0925

DTW 10.29

Vol/3 Vol 8.50/25.51

actual 26 gallons method Dedicated HDPE Bailer w/ NYLON Cor

Field Parameter	Initial	Final
pH	6.96	6.28
COND	1180	1030
Temp	15.8°C	12.5
NTU	15.4	4.96
appear	Clear	Clear

Location LS-6 Start 0815

DTB = 20.72 DTW = 8.98 End 0825

Vol/3 Vol = 1.99/5.99 Actual 3 gallons (Purged dry)

Field Parameters	Initial	Final
pH	6.48	6.72
COND	840	890
Temp	12.6	12.9
NTU	1.42	47.6
appear	Clear	Clear

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PROJECT PAS Oswego

Notebook No. _____

Continued From Page _____

5/14/96 G.W. Purge

Location LD-2 Start 1021

TB 36.03' End 1050

TW 6.30

OL/3VOL 5.05/15.16

ctual 16 Gallons Method: Dedicated HDPE Bailer w/ NYLON CORD

Field Paramaters	Initial	Final
H	7.78	7.44
OND	1360	1800
emp	14.5	14.3
urbID	4.41	62.5
ppear	Clear	Clear/slight brown tint

Location LR-2 Start 1128

TB 58.41' End 1240

TW 13.07'

OL/3VOL 7.79/23.12

ctual 24 Gallons Method: Dedicated HDPE Bailer w/ NYLON CORD

Field Paramaters	Initial	Final
DH	9.62	8.29
OND	580	~~12.2~~ 610
emp	12.9	12.2
urbID	3.26	6.08
ppear	Clear	Clear

Location LD-4 Start 1050

TB 33.14 End 1106

TW 8.82

OL/3VOL 4.13/12.40

ctual 7 Gallons Purge Dry Method: Dedicated HDPE Bailer w/ NYLON CORD

FIELD Paramaters	Initial	Final
H	7.32	7.35
OND	710	660
Temp	15.3	14.7
Turbid	19.8	>1000
ppear	Clear	turbid Lt Beige

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Notebook No.

Continued From Page

1/4/96 G.W. Purge

Location LD-5

DTB 29.65

DTW 8.77

VOL/3VOL 3.55/10.64

Start 1014

End 1046

actual 11 Gallons - Purged dry Method Dedicated HDPE Bailer w/Nylon co-

field Parameter	Initial	Final
PH	7.44	7.40
Cond	960	910
Temp	16.3	17.1
Turbid	17.4	678
appear	Clear	turbid gray

Location LS-9

DTB 15.94

DTW 8.15

VOL/3VOL 1.32/3.97

Start 1141

End 1202

actual 5 gallons - Purged almost dry method: Dedicated HDPE Bailer w/Nylon c

field Parameter	Initial	Final
PH	6.95	6.87
COND	600	750
Temp	10.5°C	9.2
Turbid	68.2	>1000
appear	Clear w/Red Bact floc yellow tint	turbid gray (SANDY)

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PROJECT PAS Oswego

Notebook No. _____

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5/14/96 G.W. Sampling

Sample ID	PAS-LR-2	PAS-LD-2	PAS-LS-9	PAS-LD-4	PAS-LD-5
Sample Time	1400	1410	1430	~~1430~~ 1445	1455
DTW	16.55	6.61	8.24	10.90	8.85
Sample By	CS/KK	CS/KK	CS/KK		
Parameters	8240/8270	→	→	→	→
Method	Dedicated	Hope Bailer	→	→	→
pH	7.88	7.50	7.15	7.60	7.59
Conductivity	630	1790	740	740	920
Temp °C	11.6	10.7	9.6	11.0	12.5
Turbidity	4.16	20.9	214	44.5	28.4
Appear	Clear	Clear	Hazy	SL Hazy	Clear

Sample ID	PAS-LS-6	PAS-LR-6
Sample Time	1530	1540
DTW	9.21	10.43
Sample by	CS/KK	CS/KK
Parameters	8240/8270	→
Method	Peristaltic	Hope Bailer
pH	7.42	7.48
Conductivity	860	1010
Temp °C	10.8	11.4
Turbidity	2.74	2.44
Appear	SL Hazy	Clear

Trip Blank – TB1-051496 Sent

No additional QC for 5-14-96

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C. Seder

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5/14/96

Date

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PROJECT PAS Oswego
Continued From Page

5/15/96 Instrument Calibration / activity Log

weather – WINDY 45° / Sunny
Personnel C. Scher / K. Kearney

pH meter # 7.00 = 7.21 4.01 = 3.95 10.00 = 10.24
Conductivity meter # 445 umho = 460 3980 uho = 3490
Turbidity meter # 0-10 = 4.76 10-100 = 49.6 100-1000 = 523
HNU # 11 Calibrated to 99 ppm Isobutylene in air Reading 57 ppm Span 9.8 w/ 10.2 ...

activity Log / phone Log

0630 Leave Hotel for site – arrive 0715 Calibrate meters, label Bottle and Sample LD-6. Purge off LD + LR-8. Purge DONE 0925
0930 offsite to fax COC to S. Nowak & call Steve at office
1000 Stop @ weigh station to pick up SSCO – (ONLY 1 was sent w/o tubing ???)
1030 Sample LD & LR8 K. Kearney to agway for tubing
1100 Set up for purge of M-21 – Start Purge @ 1120 w/ SSCO
1130 C. Scher offsite for Ice & Check in w/ D. IYER (Progress update) No problems we will complete (2) m series today + (1) m series tomorrow all other wells DONE & will ship today Samples airborne tonight.
1300 K. Kearney to Store for Electric co-d to run pump off car battery
* all water is being contained & DISPOSED of in Leachate collection ...
1500 Sample of M-21 Continue of Purge M-26. Purchase Ice
1800 Sample of M-26. Package Samples Prep COC
1815 Ice Coolers and → air borne – offsite @ 1815
1900 Arrive Airborne Sign over Samples End day 12 hrs – Zurich

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PROJECT PAS Oswego

Notebook No. _____
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5/15/96 G.W. Purge / Sampling

Location LR-8 Start 0840
DTB 43.05 End 0920
DTW 9.08
VOL/3VOL 5.77/17.3 gallons
actual 18. gallons method - Dedicated HDPE Bailer w/NYLON CORD

Field Paramater	Initial	Final
PH	7.89	7.38
COND	920	1500
Temp	15.4	14.3
Turbid	7.44	6.07
appear	Clear	Clear

Location LD-8 Start 0840
DTB 25.28 End 0905
DTW 7.80
VOL/3VOL 2.97/8.91 gallons
actual 11 Gallons method Dedicated HDPE Bailer w/NYLON CORD

Field Paramater	Initial	Final
PH	7.63	7.32
COND	240	750
Temp	16.2	14.1
Turbid	9.38	58.1
appear	Clear	Clear

Sampling

Sample ID - PAS-LD-6 PH 7.76
Sample Time 0800 COND 1010
DTW 20.51 Temp 9.9
Sample BY CS/KK Turbid 36.3
Paramaters 8240/8270 appear Clear
method Dedicated HDPE Bailer

This well was Purged 5/14/96 and allowed to Recover overnight
Extreamly Slow Recharge @ 1600 well was @ 20.10'

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Continued From Page ______

PROJECT PAS Oswego

5/15/96 G.W. Purge / Sampling

Sampling

Sample ID	PAS-LD-8	PAS-LR-8
Sample Time	1030	1045
DTW	5.87	8.21
Sample BY	CS/KK	CS/KK
Paramater	8240/8270	8240/8270
method	Dedicated	HDPE Bailer
pH	7.61	7.00
COND	730	1490
Temp °C	10.4	10.3
Turbidity	8.6	5.04
appear	Clear	Clear
QC	NONE	MS/MSD

Purging

Location M-21 Start 1120

DTB 40.00 END 1420

DTW 8.60 Dia 6" well (1.50 factor

Voc/3Voc 47.1 gal / 141.3 gal

actual 142 Gallons

method: Isco Pump w/ 1/2" HDPE (Dedicated) Tubing

Field Paramaters	Initial	Final
pH	7.45	6.78
COND	880	1280
Temp	10.9	10.6
Turbid	49.6	6.61
appear	Clear	Clear

Sample

ID PAS-M-21

DTW 8.72

Time 1500

Paramaters 8240/8270

method Dedicated HDPE Bailer w/ NYLON cord

Field Paramaters

pH	7.54
COND	880
Temp	11.3
Turbid	14.5
appear	Clear

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PROJECT Pas Oswego

Notebook No. ______

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5/15/96 G.W. Purge; Sample

Purge

Location PAS-M-26 Start 1430

DTB 44.40 End 1750

DTW 7.01 Diameter 6" (1.5 factor)

Vol/3Vol 56.08/168.25

actual 169 gallons

method: ISCO pump w/ ½" Dedicated Tubing

Field Parameters	Initial	Final
pH	8.03	7.73
Cond	60 umho	80 umho
Temp	13.8	9.34
Turbid	34.1	9.4
appear	Clear	Clear

Sampling

Sample ID: Pas-M-26

Sample Time: 1800

Samplers: CS/[illegible]

Parameters 8240/8270

method: Dedicated HDPE Bailer w/ NYLON CORD

DTW: 7.11

Field Parameters

pH: ~~7.80~~ 7.80

Cond: 60

Temp: 15.1

Turbid: 3.24

appear: Clear

~~Restock of Leachate Tank 1¾" CS~~

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PROJECT GAS Oswego

Continued From Page

5/16/96 Activity Log / Calibration Page

Weather overcast 50°F Rain
Perowell & C. Scher K. Kearney

PH Meter: 7.00 = 7.02 4.00 = 4.07 10.00 = 10.19
Conductivity Meter: 445 umhc = 460 3900 umho = 3490
Turbidity: 0-10 = 4.74 10-100 = 49.6 100-1000 = 537
HNU: Calibrated w/ 99 ppm Isobutylene Reading 57 ppm @ Span 9.8 10.2 eV lamp

Activity / Phone Log

0730 Leave Syracuse Check out Hotel → Site. Arrive site 0815
Calibrate meters & Setup for purge of M-25.
Start Purge of M-25 & Sample @1100
1115 To TOPS Pick up Ice for Sampler Rack cooler write up COC
1130 Final Call to D. IYER. Progress update all work complete
* we will be securing Sight > clean up & Return to Buffalo
1230 Offsite Return to Buffalo
1600 Arrive Recra Sign over Lists Sample Cooler & Return unused bottles. Drive K. Kearney Home
1700 End Day End Sampling 8 HR

* 1140 Called S. Nowak Checked on 5/15/96 Bottles - No Breakage

Remeasure of Leachate Tanks 1 3/4" @ 1200

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PROJECT PAS Oswego

Notebook No. _____

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5/16/96 G.W. Purge/Sample

Purge

Location M-25 Start 0825

DTB 35.20 End 1050

DTW 5.64 Diameter - 6" (factor 1.5)

Vol/3Vol 44.3/133.02

Actual 134

Method: ISCO Pump w/ dedicated 1/2" HDPE Tubing

Field Parameters	Initial	Final
pH	7.26	7.02
COND	500	790
Temp	8.1	8.5
Turbid	21.2	@8 5.13
appear	clear	clear

Sampling

Sample ID: PAS-M-25

Sample Time: 1100

Samplers: BJH

Parameters: 8240/8270

Method: Dedicated HDPE Bailer w/ Nylon cord

Field Parameter	
pH	7.20
Conductivity	790
Temp	8.8 °C
Turbidity	6.01
Appear	Clear

Continued on Page

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ATTACHMENT C

LOCATION MAP AND
BORING LOGS FOR M-SERIES WELLS

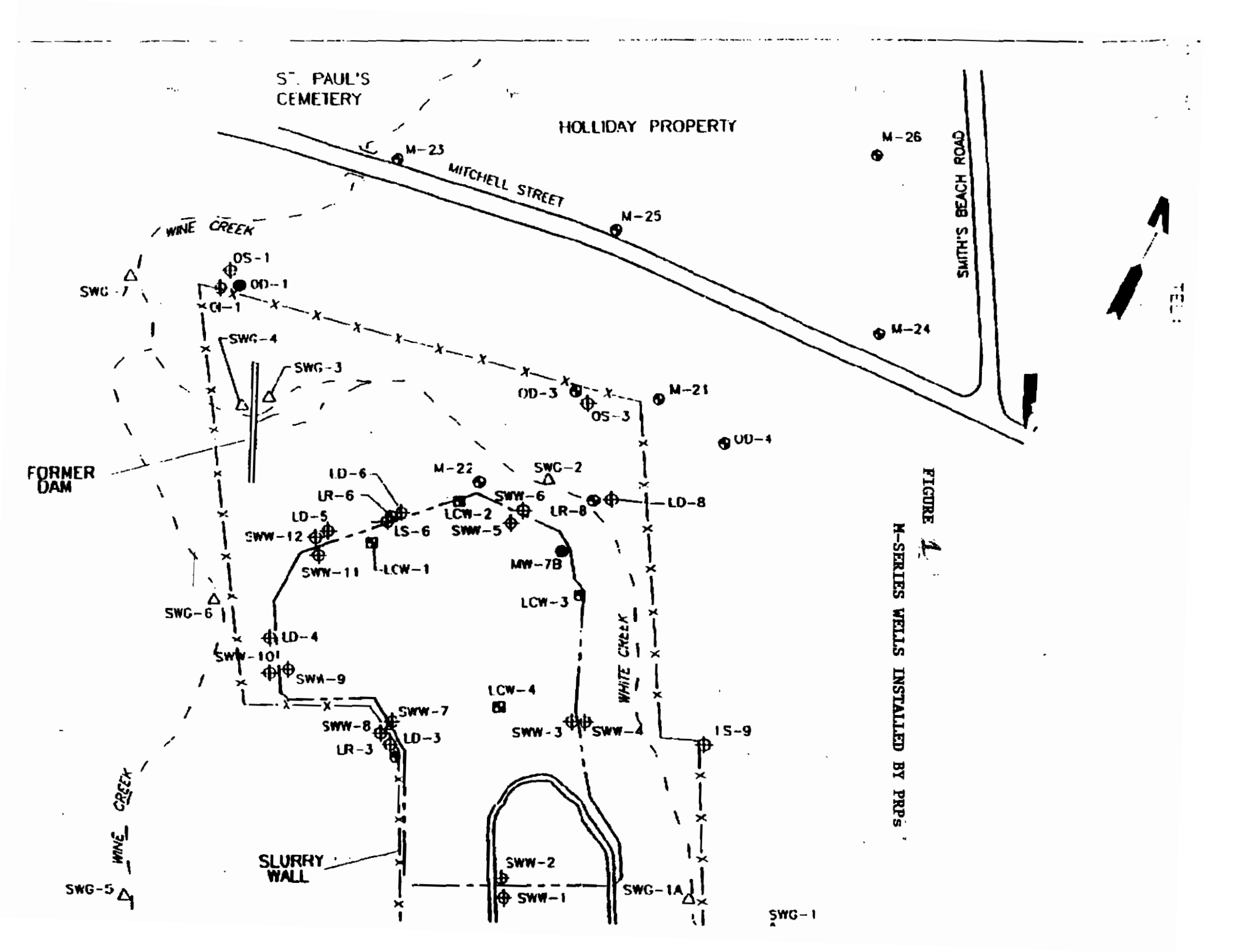
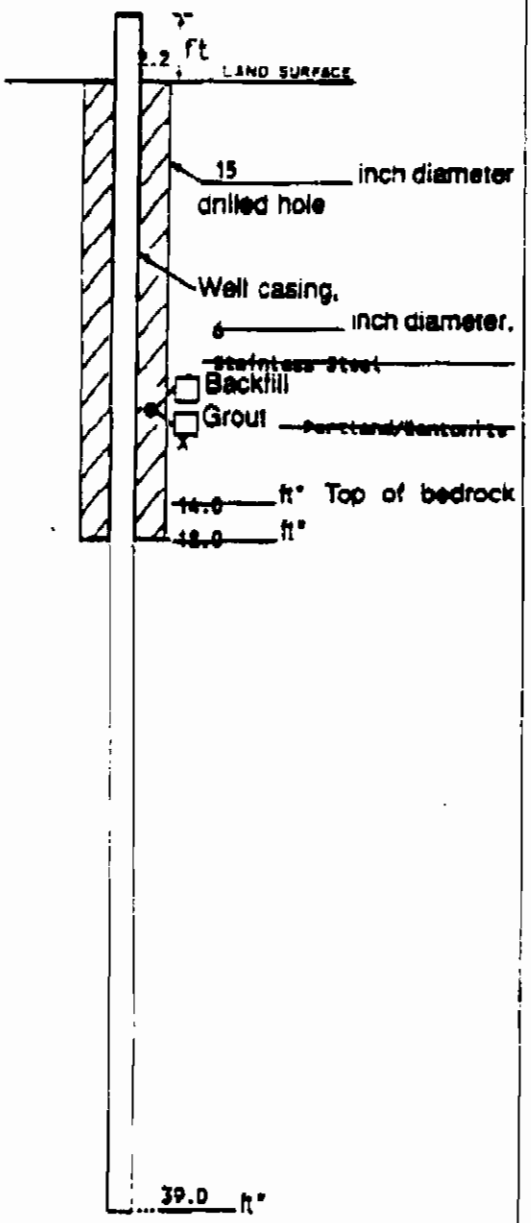


FIGURE 1

M-SERIES WELLS INSTALLED BY PRPs

GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION LOG
(BEDROCK)



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project PAS - NY30402 Well N-21

Town/City Oswego

County Oswego State New York

Permit No.

Land-Surface Elevation and Datum 270.28 feet mean sea-level ☒ Surveyed ☐ Estimated

Installation Date(s) 9/9/91 - 9/17/91

Drilling Method 4 1/4", 8 1/4", NX, R

Drilling Contractor Bennett Weldg, Inc.

Drilling Fluid Water

Development Technique(s) and Date(s)

Submersible Pump for 2.0 hours on 9/17/91

Centrifugal Pump (Rig) for 1.0 hours on 9/18/91

Fluid Loss During Drilling 30 - 40 gallons

Water Removed During Development Approximately 1,400 gallons

Static Depth to Water 11.21 feet below M.P.

Pumping Depth to Water 36 feet below M.P.

Pumping Duration 3.0 hours

Yield 10.0 - 11.5 gpm Date 9/17, 9/18/91

Specific Capacity gpm/ft

Well Purpose Bedrock Ground Water Monitoring

Fracture Zones Horizontal/Angular 18.6, 19.8, 20.0-22.0, 22.3, 24.6, 25.8, 33.0-34.0, 34.8, 38.1

Remarks

Vertical fracture zones: 15.2-16.8, 22.3-24.3, 38.1-38.6

Strong odor to water

Prepared by S. Bowers

GERAGHTY & MILLER, INC.
Environmental Services

SAMPLE/CORE LOG

Boring/Well M-21 Project/No. PAS - NY50402 Page 1 of 2

Site Location Oswego, New York Drilling Started 9/9/91 Drilling Completed 9/17/91

Total Depth Drilled 39.0 feet Hole Diameter 15 inches Type of Sample/ Coring Device Split Spoon

Length and Diameter of Coring Device 2' x 2" Sampling Interval 2 feet

Land-Surface Elev. _____ feet ☐ Surveyed ☐ Estimated Datum _____

Drilling Fluid Used None 0 - 14.0'; Water 14.0 - 39.0' Drilling Method 4 1/4", 8 1/4", NX, P

Drilling Contractor Parratt Wolff, Inc. Driller Rice Helper Lansing/Eaves

Prepared By S. Beames Hammer Weight 140# Hammer Drop 30 inches

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	SAMPLE ID	Sample/Core Description
0	2	1.5	3-4-6-8	No lab	SAND (80%) brown, coarse to medium, trace fine; Top Soil (10%)
				samples	organics, silt; Silt (5%) brown; Gravel (5%) fine, subround,
				taken	trace medium to coarse; poorly sorted, damp.
2	4	1.5	8-7-7-10		SAND (70%) brown, medium to fine, trace coarse; Silt (30%)
					brown; trace fine gravel, trace organics, moist.
4	6	0.0	50/0.1		Cobbles/Boulders 4.1 - 6.0'
6	8	1.4	17-27-		SAND (60%) brown, coarse to medium, trace fine; Gravel (40%)
			50/0.4		coarse to fine, subangular (fragmented) to subround; poorly
					sorted, cobbles present, moderately compacted, moist.
7.5	9.1				Boulder/Cobbles
10	12	0.8	32-50/0.3		Same as above (moist - wet).
12	14	1.0	49-61		Same as above (wet).
14		0.0	50/0.0		Rock.
14.3	19.3	5.08	(100%)		Bedrock - SANDSTONE, green, fine, medium hard to hard,
NX-1	RQD	4.8/5	(96%)		competent, trace green siltstone gravel/fragments throughout
					(dropstones?), very little weathering, horizontal bedding, trace
					crossbedding (18.0'), trace fine gravel (18.4'), wet.
					Horizontal fractures: well developed, 18.6';
					Vertical: 15.2 - 16.8', healed 18.6 - 19.3'.

GERAGHTY & MILLER, INC.
Environmental Services

SAMPLE/CORE LOG (Cont.d)

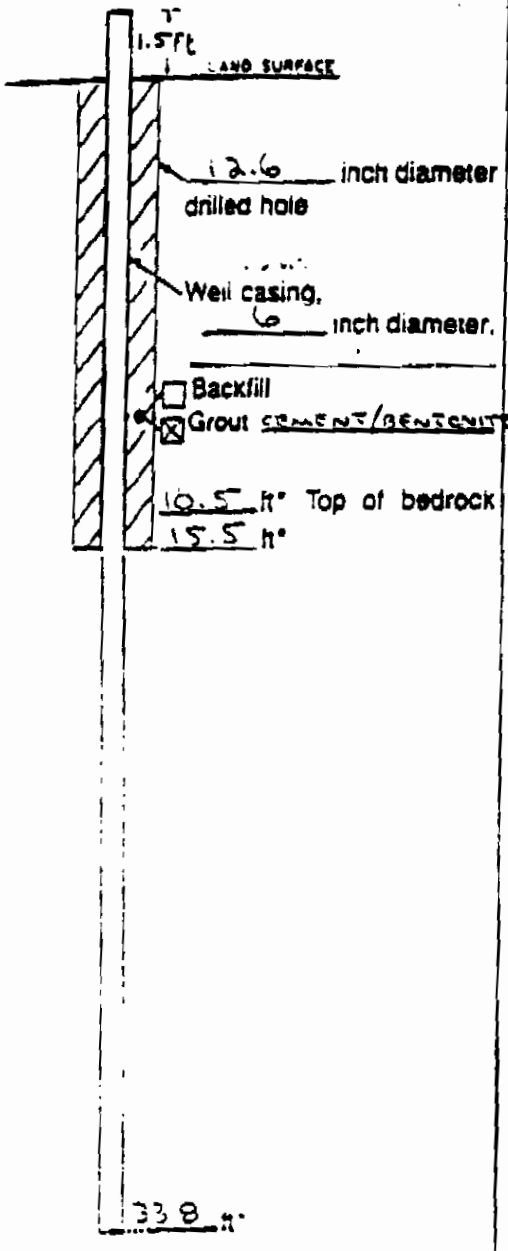
Boring/Well M-21 Page 2 of 2

Prepared By: S. Beamer

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	SAMPLE ID	Sample/Core Description
19.3	24.3	4.9/5	(98%)		SANDSTONE - same as above. Varying amounts of silt
NX-2	RQD	4.0/4.9	(81%)		(ie silty fine sandstone at 21.3', 22.3 - 22.6'). Horizontal
					fractures: 19.8', 22.3'. Fractured at angle: 20.1', 20.6',
					20.7', 20.8', 20.9', 21.9'. Vertical fractures: 22.3 - 24.3'
24.0	29.0	4.5	(89%)		SANDSTONE - same as above.
P-1	RQD	2.92/4.5	(65%)		Well developed horizontal fractures 24.25', 24.6', 25.8'.
29.0	34.0	4.7	(94%)		SANDSTONE - same as above.
P-2	RQD	3.0/4.7	(64%)		Trace coarse sand, siltstones 29.0 - 29.2', black
					staining 30.25'.
34.0	39.0	4.8	(96%)		SANDSTONE - same as above.
P-3	RQD	3.94/4.8	(82%)		Upper 3" fractured. At 34.8' fracture and gravel zone
					approximately 0.04' thick. Healed vertical fracture/crack
					38.1 - 38.8'. Horizontal fracture 38.1'.
39.0					End of coring.
					Water at 11.21'

DRAFT

WELL CONSTRUCTION LOG
(BEDROCK)



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project SPRDS / DAS SITE Well M-25

Town/City OSWEGO

County _____ State NEW YORK

Permit No. _____

Land-Surface Elevation and Datum 268 feet ☐ Surveyed ☒ Estimated

Installation Date(s) 7/13/94 - 7/21/94

Drilling Method _____

Drilling Contractor _____

Drilling Fluid _____

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water _____ feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose _____

Fracture Zones _____

Remarks _____

Prepared by _____

ROUX

DRAFT

Project: SPRDS PAS Site, Oswego, New York	Log of Well No. M-25
Date Started: 7/13/94 Completed: 7/21/94	Measuring Point Elevation: Total Depth: 33.8 ft
Logged By: J. Makowski Checked By: L. McTiern	Water Level During Drilling: 8.5 ft Post-Development: 8.6 ft
Drilling Co: Parratt-Wolff Driller: Mark Eaves	Casing: 6-Inch Stainless Steel Drill Bit Diameter: 5.4 in.
Drilling Method: Water Rotary	Perforation: from to
Drilling Equipment: Mobile Drill B-57 DRAFT	Pack: from to
Sampler: 2-Inch Split Spoon	Seal: from to
	Cement/Bentonite Grout from 0.0 to 15.5

Depth (feet)	LITHOLOGIC DESCRIPTION	Lithology	Monitoring Well Construction	Sampler Blows per 6"	PID (ppm)	REMARKS
	Light and dark brown SILT, little fine Gravel, trace fine Sand, roots throughout; angular gravel; slight plasticity; dry.	SILT		4 5 5 11	0.0	Casing stick-up is 1.5' above land surface. Split-spoon sample contained 1.2' of recovery.
		SAND				Hard drilling from 4'-5' bls.
5	Light brown fine SAND, little fine Gravel, trace Silt; angular gravel; slight plasticity; moist.			8 26 50/4"	0.0	Split-spoon sample contained 0.5' of recovery.
		SILT				Hard drilling from 7'-8' bls.
						Soil cuttings appear wet at 8.5' bls.
10	Light gray SILT, little fine Gravel; angular gravel; wet.			12 50/3"	0.0 0.0	Split-spoon sample contained 0.3' of recovery. Hard drilling at 10' bls.
	Gray SANDSTONE.	SANDSTON				Core from 10.5'-15.5' bls: Recovery 4.8', RQD 69%. Vertical fracturing from 10.83'-11.65' bls.
15	Gray SANDSTONE.				0.0	Bottom of steel casing 15.5' bls.
						Core from 15.5'-18.0' bls: Recovery 2.1', RQD 30%.
	Gray SANDSTONE, trace green Shale fragments.				0.0	Core from 18.0'-21.0' bls: Recovery 2.76', RQD 29%.
20						
	Gray SANDSTONE, trace green Shale fragments.				0.0	Core from 21.0'-21.8' bls: Recovery 1.6' (broken rock), RQD 47%.
	Gray SANDSTONE.				0.0	Core from 21.8'-23.0' bls: Recovery 1.95', RQD 86%. Iron staining noted approximately 22.6' bls.
	Gray SANDSTONE.				0.0	Core from 23.0'-28.0' bls: Recovery 5.16', RQD 98%.
25						

Continued Next Page

ROUX

Project: SPRDS
PAS Site, Oswego, New York

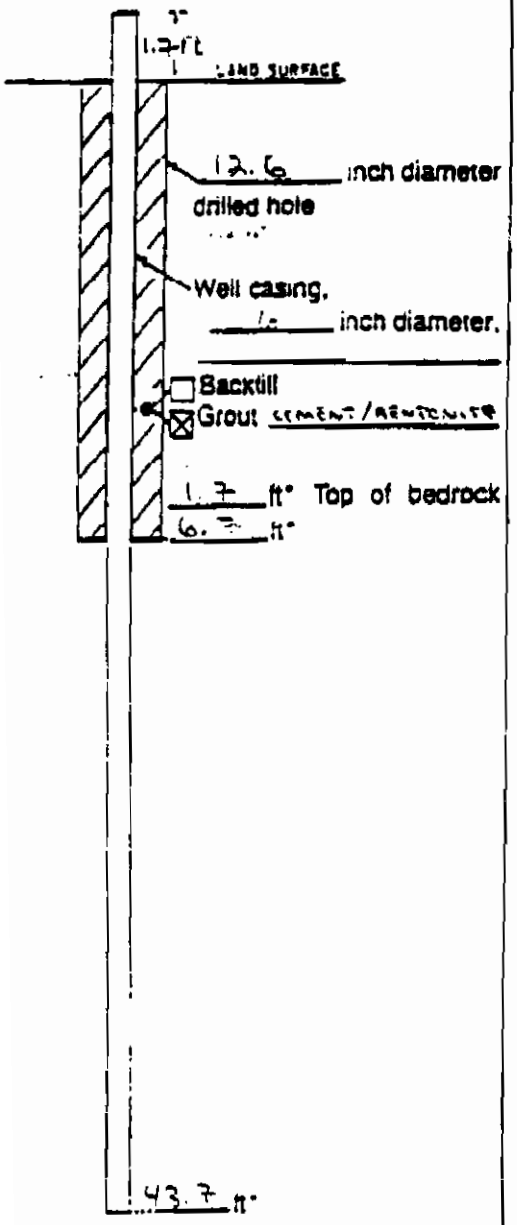
Log of Well No. M-25

DRAFT

Depth (feet)	LITHOLOGIC DESCRIPTION	Lithology	Monitoring Well Construction	Sampler Blows per 6"	PID (ppm)	REMARKS
30	Gray SANDSTONE.				0.0	Core from 28.0'-33.0' bls: Recovery 5.03', RQD 82%. Vertical fracturing from 28.4'-30.05' bls.
35						Bottom of measured borehole at 33.79' bls.
40	DRAFT					
45						
50						

DRAFT

WELL CONSTRUCTION LOG
(BEDROCK)



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project SPRDS / PAS SITE Well M-26

Town/City OSWEGO

County _____ State NEW YORK

Permit No. _____

Land-Surface Elevation and Datum 272 feet ☐ Surveyed ☒ Estimated

Installation Date(s) 7/14/94 - 7/26/94

Drilling Method _____

Drilling Contractor _____

Drilling Fluid _____

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water _____ feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose _____

Fracture Zones _____

Remarks _____

Prepared by _____

ROUX

Project: SPRDS PAS Site, Oswego, New York	Log of Well No. M-26 DRAFT
Date Started: 7/14/94 Completed: 7/26/94	Measuring Point Elevation: Total Depth: 43.7 ft
Logged By: J. Makowski Checked By: L. McTiern	Water Level During Drilling: 12.2 ft Post-Development: 13.0 ft
Drilling Co: Parratt-Wolff Driller: Mark Eaves	Casing: 6-Inch Stainless Steel Drill Bit Diameter: 5.4 in.
Drilling Method: Water Rotary	Perforation: from to
Drilling Equipment: Mobile Drill B-57	Pack: from to
Sampler: 2-Inch Split Spoon	Seal: from to
	Cement/Bentonite Grout from 0.0 to 6.5

Depth (feet)	LITHOLOGIC DESCRIPTION	Lithology	Monitoring Well Construction	Sampler Blows per 6"	PID (ppm)	REMARKS
	Light brown SILT, little fine Gravel, trace fine Sand, roots throughout; slight plasticity; dry.	SILT		4 9 25/3"	0.0	Casing stick-up is 1.7' above land surface. Split-spoon sample contained 1.0' of recovery.
		SANDSTON			0.0	Hard drilling at 1.5' bls.
	Gray SANDSTONE (weathered).					Core from 1.7'-6.7' bls: Recovery 5.0', RQD 35%.
5	DRAFT					
						Bottom of steel casing 6.5' bls.
	Gray SANDSTONE (weathered).				0.0	Core from 6.7'-8.7' bls: Recovery 2.2', RQD 34%.
	Gray SANDSTONE.				0.0	Core from 8.7'-13.7' bls: Recovery 5.1', RQD 75%. Iron staining noted approximately 13.25' bls.
10						
	Gray SANDSTONE, trace gray Shale fragments.				0.0	Core from 13.7'-18.7' bls: Recovery 4.8', RQD 69%.
15						
	Gray SANDSTONE, trace gray Shale fragments.				0.0	Core from 18.7'-23.7' bls: Recovery 4.9', RQD 72%.
20						
	Gray SANDSTONE.				0.0	Core from 23.7'-28.7' bls: Recovery 4.85', RQD 68%. Vertical fracture noted approximately 24.9' bls.
25						

Continued Next Page

ROUX

Project: SPRDS
PAS Site, Oswego, New York

Log of Well No. M-26 DRAFT

Depth (feet)	LITHOLOGIC DESCRIPTION	Lithology	Monitoring Well Construction	Sampler	Blows per 6"	PID (ppm)	REMARKS
30	Gray SANDSTONE.					0.0	Core from 28.7'-33.7' bls: Recovery 4.78', RQD 94%.
	DRAFT						
35	Gray SANDSTONE, trace blue-green Shale fragments.					0.0	Core from 33.7'-38.7' bls: Recovery 5.0', RQD 87%.
40	Gray SANDSTONE, trace blue-green Shale fragments.					0.0	Core from 38.7'-43.7' bls: Recovery 5.15', RQD 85%.
45							Bottom of measured borehole at 43.7' bls.
50							

ATTACHMENT D

ANALYTICAL DATA FROM

ALL SAMPLING EVENTS (11/89 - 11/95)

- **MONITORING WELLS (L-series and SWW-series)**
- **SURFACE WATER (SW-series)**
- **SEDIMENTS (SS-series)**
- **LEACHATE (LCW-series)**

Note: See Table 1 of Report for a summary of sampling and analysis preformed to date.

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LS-2

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95
Compound													
VOLATILE (ppb)													
Acetone													
Benzene													
2-Butanone													
Chloroethane													
Chlorobenzene													
Carbon disulfide													
Chloroform													
1,1-Dichloroethane													
1,2-Dichloroethane													
1,1-Dichloroethylene													
1,2-Dichloroethene (Total													
Ethylbenzene													
4-Methyl-2-pentanone													
Methylene chloride		2 BJ											
Toluene													
1,1,1-Trichloroethane													
Trichloroethylene											2 BJ		
Vinyl acetate													
Vinyl chloride													
Xylenes (Total)													
SEMIVOLATILE (ppb)													
Phenol													
1,2-Dichlorobenzene													
2-Methylphenol													
4-Methylphenol													
2,4-Dimethylphenol													
Benzoic acid													
Naphthalene													
Isophorene													
4-Chloroaniline													
2-Methylnaphthalene													
N-Nitrosodiphenylamine													
Di-n-butylphthalate													
Butylbenzyl phthalate									2 J				
bis (2-Ethylhexyl) phthala					3 BJ								
Di-n-octyl phthalate													
METALS (ppb)													
Aluminum	986												
Antimony													
Arsenic													
Barium	105 B												
Beryllium													
Calcium	175000												
Chromium	475												
Cobalt	9.2 B												
Copper													
Iron	3060												
Lead	2.6 B												
Magnesium	51220												
Manganese	121												
Nickel	92.2												
Potassium	2560 B												
Sodium	68400												
Vanadium													
Zinc	49.1												

Only detected results reported.

B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).

J - Concentration < sample quantitation limit (SQL) but > zero.

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LR-2

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95	05/96
Compound														
VOLATILE (ppb)														
Acetone														
Benzene											2 J			
2-Butanone														
Chloroethane														
Chlorobenzene														
Carbon disulfide	1 J											12		
Chloroform														
1,1-Dichloroethane														
1,2-Dichloroethane														
1,1-Dichloroethylene														
1,2-Dichloroethene (Total)														
Ethylbenzene														
4-Methyl-2-pentanone														
Methylene chloride														
Toluene														
1,1,1-Trichloroethane														
Trichloroethylene											3 BJ			
Vinyl acetate														
Vinyl chloride														
Xylenes (Total)														
SEMIVOLATILE (ppb)														
Phenol														
1,2-Dichlorobenzene														
2-Methylphenol														
4-Methylphenol														
2,4-Dimethylphenol														
Benzoic acid														
Naphthalene														
Isophorene														
4-Chloroaniline														
2-Methylnaphthalene														
N-Nitrosodiphenylamine														
Di-n-butylphthalate														
Butylbenzyl phthalate														
bis (2-Ethylhexyl) phthalate					0.5 BJ	0.6 J					22 J		2 J	
Di-n-octyl phthalate														
METALS (ppb)														
Aluminum	605													
Antimony														
Arsenic														
Barium	432													
Beryllium														
Calcium	42500													
Chromium														
Cobalt														
Copper														
Iron	977													
Lead	3													
Magnesium	22300													
Manganese	45.5													
Nickel														
Potassium	3190													
Sodium	21900													
Vanadium														
Zinc	56													

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LD-2

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95	05/96
Compound														
VOLATILE (ppb)														
Acetone		15 B												
Benzene														
2-Butanone														
Chloroethane														
Chlorobenzene														
Carbon disulfide	7	9												
Chloroform														
1,1-Dichloroethane														
1,2-Dichloroethane														
1,1-Dichloroethylene														
1,2-Dichloroethene (Total)														
Ethylbenzene														
4-Methyl-2-pentanone														
Methylene chloride		2 BJ												
Toluene														
1,1,1-Trichloroethane														
Trichloroethylene											2 BJ			
Vinyl acetate														
Vinyl chloride														
Xylenes (Total)														
SEMIVOLATILE (ppb)														
Phenol														
1,2-Dichlorobenzene														
2-Methylphenol														
4-Methylphenol														
2,4-Dimethylphenol														
Benzoic acid														
Naphthalene														
Isophorene														
4-Chloroaniline														
2-Methylnaphthalene														
N-Nitrosodiphenylamine														
Di-n-butylphthalate			51											
Butylbenzyl phthalate			46											
bis (2-Ethylhexyl) phthalate			3 J								4 J			
Di-n-octyl phthalate														
METALS (ppb)														
Aluminum	268													
Antimony														
Arsenic	2 B													
Barium	225													
Beryllium														
Calcium	118000													
Chromium														
Cobalt														
Copper														
Iron	1210													
Lead														
Magnesium	55300													
Manganese	258													
Nickel														
Potassium	1360 B													
Sodium	4700													
Vanadium														
Zinc	17 B													

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LR-3

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95
Compound													
VOLATILE (ppb)													
Acetone		13 B											
Benzene					43								
2-Butanone													
Chloroethane													
Chlorobenzene													
Carbon disulfide													
Chloroform													
1,1-Dichloroethane													
1,2-Dichloroethane													
1,1-Dichloroethylene													
1,2-Dichloroethene (Total)													
Ethylbenzene													
4-Methyl-2-pentanone													
Methylene chloride													
Toluene													
1,1,1-Trichloroethane													
Trichloroethylene											1 BJ		
Vinyl acetate													
Vinyl chloride													
Xylenes (Total)													
SEMIVOLATILE (ppb)													
Phenol													
1,2-Dichlorobenzene													
2-Methylphenol													
4-Methylphenol													
2,4-Dimethylphenol													
Benzoic acid													
Naphthalene													
Isophorene													
4-Chloroaniline													
2-Methylnaphthalene													
N-Nitrosodiphenylamine													
Di-n-butylphthalate			76		1 J								
Butylbenzyl phthalate			16		2 J								
bis (2-Ethylhexyl) phthalate					11 B								
Di-n-octyl phthalate					3 J								
METALS (ppb)													
Aluminum	3240												
Antimony													
Arsenic													
Barium	527												
Beryllium													
Calcium	191000												
Chromium	15.1												
Cobalt	13 B												
Copper	24 B												
Iron	5080												
Lead	2.3 B												
Magnesium	67500												
Manganese	872												
Nickel													
Potassium	4700 B												
Sodium	12100												
Vanadium													
Zinc	29.7												

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LD-3

Date / Compound	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95
VOLATILE (ppb)													
Acetone	280 E	17	22	13 B	9 J								
Benzene	9	45	5	3 J	3 J	2 J	3 J		2 J		2 J		1 J
2-Butanone	40												
Chloroethane					2 J								
Chlorobenzene													
Carbon disulfide		9											
Chloroform													
1,1-Dichloroethane	8		4 J	2 J	2 J	2 J							1 J
1,2-Dichloroethane	3 J												
1,1-Dichloroethylene													
1,2-Dichloroethene (Total)	10		2 J	0.7 J									
Ethylbenzene													
4-Methyl-2-pentanone	49	3 J	2 J										
Methylene chloride	430 E	23 B	4 J				4 J		1 J				
Toluene	6		0.5 BJ										
1,1,1-Trichloroethane													
Trichloroethylene	30	3 J	2 J	0.2 J			0.7 J				2 BJ		
Vinyl acetate													
Vinyl chloride					1 J								
Xylenes (Total)	1 J												
SEMIVOLATILE (ppb)													
Phenol	120												
1,2-Dichlorobenzene													
2-Methylphenol	13												
4-Methylphenol	53												
2,4-Dimethylphenol	4 J												
Benzoic acid	960 E												
Naphthalene													
Isophorone	3 J												
4-Chloroaniline													
2-Methylnaphthalene													
N-Nitrosodiphenylamine													
Di-n-butylphthalate													
Butylbenzyl phthalate													
bis (2-Ethylhexyl) phthalate		1 J			2 BJ								
Di-n-octyl phthalate													
METALS (ppb)													
Aluminum	2210												
Antimony													
Arsenic	41.2												
Barium	1030												
Beryllium													
Calcium	414000												
Chromium													
Cobalt	21 B												
Copper													
Iron	24400												
Lead	24 B												
Magnesium	159000												
Manganese	2930												
Nickel	1220												
Potassium	4400 B												
Sodium	12600 B												
Vanadium													
Zinc	126												

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LD-4

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95	05/96
Compound														
VOLATILE (ppb)														
Acetone		18 B	3 J	4 BJ				24						
Benzene				0.6 J										
2-Butanone														
Chloroethane														
Chlorobenzene					0.8 J									
Carbon disulfide														
Chloroform														
1,1-Dichloroethane													1 J	
1,2-Dichloroethane														
1,1-Dichloroethylene														
1,2-Dichloroethene (Total)														
Ethylbenzene					1 J									
4-Methyl-2-pentanone														
Methylene chloride														
Toluene														
1,1,1-Trichloroethane														
Trichloroethylene														
Vinyl acetate														
Vinyl chloride														
Xylenes (Total)											2 J			
SEMIVOLATILE (ppb)														
Phenol	2 J													
1,2-Dichlorobenzene														
2-Methylphenol														
4-Methylphenol														
2,4-Dimethylphenol														
Benzoic acid														
Naphthalene														
Isophorene														
4-Chloroaniline														
2-Methylnaphthalene														
N-Nitrosodiphenylamine														
Di-n-butylphthalate														
Butylbenzyl phthalate					0.9 J									
bis (2-Ethylhexyl) phthalate			0.8 J		2 BJ						1 J			
Di-n-octyl phthalate														
METALS (ppb)														
Aluminum	5770													
Antimony														
Arsenic														
Barium	95 B													
Beryllium														
Calcium	59100													
Chromium	17.7													
Cobalt	10 B													
Copper	28.4													
Iron	9740													
Lead	3.6													
Magnesium	18700													
Manganese	678													
Nickel	60.4													
Potassium	3060													
Sodium	11200													
Vanadium	12 B													
Zinc	59.5													

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LD-5

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95	05/96
Compound														
VOLATILE (ppb)														
Acetone			4 J	4 BJ										
Benzene	12	19	21	21	20	8	18	5	7	4 J	5		3 J	2 J
2-Butanone														
Chloroethane		3 J	10	12	8 J	3 J	8 J		2 J				2 J	
Chlorobenzene		5	6	5	5	3 J	5	2 J	2 J	1 J	1 J			
Carbon disulfide		3 J												
Chloroform														
1,1-Dichloroethane	42	50	52	44	38	32	47	24	26	20	22	17	20	18
1,2-Dichloroethane	6	6		4 J	5				2 J				2 J	
1,1-Dichloroethylene														
1,2-Dichloroethene (Total)			2 J	15	1 J	0.8 J	0.8 J							
Ethylbenzene	8	8	13	8	4 J	1 J	2 J							
4-Methyl-2-pentanone														
Methylene chloride		48 J	0.5 J											
Toluene														
1,1,1-Trichloroethane	1 J													
Trichloroethylene														
Vinyl acetate														
Vinyl chloride			1 J			0.7 J				1 J			1 J	
Xylenes (Total)														
SEMIVOLATILE (ppb)														
Phenol														
1,2-Dichlorobenzene														
2-Methylphenol														
4-Methylphenol														
2,4-Dimethylphenol														
Benzoic acid				1 J										
Naphthalene														
Isophorone														
4-Chloroaniline														
2-Methylnaphthalene														
N-Nitrosodiphenylamine														
Di-n-butylphthalate														
Butylbenzyl phthalate									5 J					
bis (2-Ethylhexyl) phthalate			4 J		0.7 BJ									
Di-n-octyl phthalate			2 J											
METALS (ppb)														
Aluminum	2080													
Antimony														
Arsenic	8.7 B													
Barium	276													
Beryllium														
Calcium	128000													
Chromium														
Cobalt	13 B													
Copper	30.8													
Iron	4310													
Lead	1.5 B													
Magnesium	62700													
Manganese	636													
Nickel	73.7													
Potassium	7430													
Sodium	31300													
Vanadium	2.2 B													
Zinc	41.5													

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LS-6

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95	05/96
Compound														
VOLATILE (ppb)														
Acetone	2 J		4 J	7 BJ										
Benzene	1 J		2 J	2 J	4 J	2 J	2 J		2 J	1 J				
2-Butanone														
Chloroethane	9 J	7 J	22	31	14	6 J	9 J	3 J	5 J					
Chlorobenzene														
Carbon disulfide														
Chloroform								4 J						
1,1-Dichloroethane	5		10	11	17	11	21	7	26	4 J	11		3 J	
1,2-Dichloroethane	2 J		4 J	3 J	8				8	1 J	3 J			
1,1-Dichloroethylene		4 J												
1,2-Dichloroethene (Total)	4 J		14	14	28	7	10		35	3 J	14	3 J	3 J	
Ethylbenzene														
4-Methyl-2-pentanone														
Methylene chloride	1 BJ	3 BJ	1 J	0.1 J		0.6 J								
Toluene														
1,1,1-Trichloroethane														
Trichloroethylene			0.9 J	0.6 J					0.8 J					
Vinyl acetate														
Vinyl chloride	55	9 J	25	33	20	5 J	9 J	2 J	15	1 J	3 J			
Xylenes (Total)														
SEMIVOLATILE (ppb)														
Phenol														
1,2-Dichlorobenzene														
2-Methylphenol														
4-Methylphenol														
2,4-Dimethylphenol														
Benzoic acid		2 J												
Naphthalene														
Isophorene														
4-Chloroaniline														
2-Methylnaphthalene														
N-Nitrosodiphenylamine		2 J												
Di-n-butylphthalate			0.8 J	1 J										
Butylbenzyl phthalate														
bis (2-Ethylhexyl) phthalate					0.7 BJ									
Di-n-octyl phthalate														
METALS (ppb)														
Aluminum	24600													
Antimony	31 B													
Arsenic	13.4													
Barium	268													
Beryllium	3.2 B													
Calcium	262000													
Chromium	74.9													
Cobalt	51.4													
Copper	117													
Iron	39900													
Lead	17													
Magnesium	81900													
Manganese	4850													
Nickel	371													
Potassium	10100													
Sodium	65400													
Vanadium	57.1													
Zinc	165													

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LR-6

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95	05/9
Compound														
VOLATILE (ppb)														
Acetone			2 J	4 BJ										
Benzene	2 J		1 J											
2-Butanone														
Chloroethane			2 J											
Chlorobenzene														
Carbon disulfide		14												
Chloroform														
1,1-Dichloroethane	48	67	49	34	33	14	12	8	10	8	13	7	8	
1,2-Dichloroethane	4 J		4 J											
1,1-Dichloroethylene	2 J	25	0.8 J											
1,2-Dichloroethene (Total)	9	10	8	0.9 J	2 J									
Ethylbenzene	1 J		1 J	0.3 J										
4-Methyl-2-pentanone														
Methylene chloride		3 BJ												
Toluene	2 J	2 J	2 J											
1,1,1-Trichloroethane	160	200	130	81	98	17	11	6	11	3 J	8		2 J	
Trichloroethylene	2 J	2 J	2 J											
Vinyl acetate														
Vinyl chloride	36	3 B	32	30	23	3 J	3 J		2 J	1 J	2 J		2 J	
Xylenes (Total)	1 J		3 J											
SEMIVOLATILE (ppb)														
Phenol														
1,2-Dichlorobenzene														
2-Methylphenol														
4-Methylphenol														
2,4-Dimethylphenol														
Benzoic acid	4 J													
Naphthalene	6 J	9 J	3 J	5 J	5 J									
Isophorene														
4-Chloroaniline														
2-Methylnaphthalene														
N-Nitrosodiphenylamine														
Di-n-butylphthalate														
Butylbenzyl phthalate														
bis (2-Ethylhexyl) phthalate		2 J				6 J					3 J			
Di-n-octyl phthalate														
METALS (ppb)														
Aluminum	3440													
Antimony														
Arsenic	62 B													
Barium	504													
Beryllium														
Calcium	159000													
Chromium	9.8 B													
Cobalt	142 B													
Copper	213 B													
Iron	6060													
Lead	2 B													
Magnesium	47800													
Manganese	2930													
Nickel														
Potassium	2700 B													
Sodium	68700													
Vanadium	4.9 B													
Zinc	27.6													

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LD-6

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95	05/96
Compound														
VOLATILE (ppb)														
Acetone			9 J	18										7
Benzene														
2-Butanone														
Chloroethane														
Chlorobenzene														
Carbon disulfide														
Chloroform														
1,1-Dichloroethane														
1,2-Dichloroethane														
1,1-Dichloroethylene														
1,2-Dichloroethene (Total)														
Ethylbenzene														
4-Methyl-2-pentanone														
Methylene chloride		2 BJ												
Toluene														
1,1,1-Trichloroethane														
Trichloroethylene														
Vinyl acetate														
Vinyl chloride														
Xylenes (Total)														
SEMIVOLATILE (ppb)														
Phenol														
1,2-Dichlorobenzene														
2-Methylphenol														
4-Methylphenol														
2,4-Dimethylphenol	4 J													
Benzoic acid		3 J												
Naphthalene														
Isophorene														
4-Chloroaniline														
2-Methylnaphthalene														
N-Nitrosodiphenylamine														
Di-n-butylphthalate														
Butylbenzyl phthalate														
bis (2-Ethylhexyl) phthalate														
Di-n-octyl phthalate														
METALS (ppb)														
Aluminum	152 B													
Antimony														
Arsenic														
Barium	75 B													
Beryllium														
Calcium	48300													
Chromium														
Cobalt	6.9 B													
Copper														
Iron	43 B													
Lead	1.1 B													
Magnesium	15700													
Manganese	202													
Nickel	80.9													
Potassium	12500													
Sodium	49000													
Vanadium														
Zinc	30.1													

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LR-8

Date / Compound	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95	05/
VOLATILE (ppb)														
Acetone			15 BJ											9 J
Benzene	100	32	55	67	84	82	82	84	45	36	48	42	29	20 J
2-Butanone														
Chloroethane	48	8 J	29	47	43	18	27	26	22	9	19	14	14	8 J
Chlorobenzene	23	7	13	16	18	22	23	22 B	10	20	10	9	9	5
Carbon disulfide	17													
Chloroform														
1,1-Dichloroethane														
1,2-Dichloroethane														
1,1-Dichloroethylene														
1,2-Dichloroethene (Total)														
Ethylbenzene	150	69	93	110	55	24	26	87	2 J	1 J	3 J			
4-Methyl-2-pentanone														
Methylene chloride	3 J	8 BJ	1 J		0.7 J	0.6 J								
Toluene	12	11	13 B	9 J	3 J	1 BJ	2 J	7	0.6 J	1 J				
1,1,1-Trichloroethane														
Trichloroethylene														
Vinyl acetate		8 J												
Vinyl chloride														
Xylenes (Total)	380	200	310	370	190 D	270 D	370	390 D	120	54	97	29	1 J	
SEMIVOLATILE (ppb)														
Phenol	130													
1,2-Dichlorobenzene		4 J	0.8 J		1 J	1 J								
2-Methylphenol		7 J												
4-Methylphenol														
2,4-Dimethylphenol	6 J	11		23	18	29	82	15	12	8 J	9 J	6 J		
Benzoic acid														
Naphthalene	3 J	16	3 J	4 J	2 J	2 J	6 J				1 J			
Isophorene														
4-Chloroaniline		4 J	1 J	2 J	3 J	3 J	11							
2-Methylnaphthalene		2 J		0.8 J										
N-Nitrosodiphenylamine														
Di-n-butylphthalate												0.5 J		
Butylbenzyl phthalate														
bis (2-Ethylhexyl) phthalate											3 J		6 J	
Di-n-octyl phthalate														
METALS (ppb)														
Aluminum														
Antimony														
Arsenic	11.4													
Barium	1330													
Beryllium														
Calcium	260000													
Chromium														
Cobalt	58 B													
Copper														
Iron	13000													
Lead														
Magnesium	78100													
Manganese	3720													
Nickel	193													
Potassium	5540													
Sodium	20300													
Vanadium														
Zinc	8.6 B													

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LD-8

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95	06/96
Compound														
VOLATILE (ppb)														
Acetone													7 J	
Benzene														
2-Butanone														
Chloroethane														
Chlorobenzene														
Carbon disulfide														
Chloroform														
1,1-Dichloroethane														
1,2-Dichloroethane														
1,1-Dichloroethylene														
1,2-Dichloroethene (Total)														
Ethylbenzene														
4-Methyl-2-pentanone														
Methylene chloride		8 BJ												
Toluene			0.7 BJ											
1,1,1-Trichloroethane														
Trichloroethylene														
Vinyl acetate														
Vinyl chloride														
Xylenes (Total)										0.4 J				
SEMIVOLATILE (ppb)														
Phenol														
1,2-Dichlorobenzene														
2-Methylphenol														
4-Methylphenol														
2,4-Dimethylphenol														
Benzoic acid														
Naphthalene														
Isophorene														
4-Chloroaniline														
2-Methylnaphthalene														
N-Nitrosodiphenylamine														
Di-n-butylphthalate														
Butylbenzyl phthalate														
bis (2-Ethylhexyl) phthalate											1 J			
Di-n-octyl phthalate														
METALS (ppb)														
Aluminum	14300													
Antimony														
Arsenic														
Barium	136 B													
Beryllium														
Calcium	102000													
Chromium	37.1													
Cobalt	25 B													
Copper	91.1													
Iron	29300													
Lead	6.5													
Magnesium	36000													
Manganese	4230													
Nickel	43.2													
Potassium	4410													
Sodium	66200													
Vanadium	27 B													
Zinc	100													

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: LS-9

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	5/94	11/94	5/95	11/95	05/96
Compound														
VOLATILE (ppb)														
Acetone														
Benzene														
2-Butanone														
Chloroethane														
Chlorobenzene														
Carbon disulfide														
Chloroform														
1,1-Dichloroethane														
1,2-Dichloroethane														
1,1-Dichloroethylene														
1,2-Dichloroethene (Total)														
Ethylbenzene														
4-Methyl-2-pentanone														
Methylene chloride		3 BJ												
Toluene														
1,1,1-Trichloroethane														
Trichloroethylene														
Vinyl acetate														
Vinyl chloride														
Xylenes (Total)														
SEMIVOLATILE (ppb)														
Phenol														
1,2-Dichlorobenzene														
2-Methylphenol														
4-Methylphenol														
2,4-Dimethylphenol														
Benzoic acid														
Naphthalene														
Isophorene														
4-Chloroaniline														
2-Methylnaphthalene														
N-Nitrosodiphenylamine														
Di-n-butylphthalate														
Butylbenzyl phthalate														
bis (2-Ethylhexyl) phthalate														
Di-n-octyl phthalate														
METALS (ppb)														
Aluminum	2700													
Antimony														
Arsenic	7 B													
Barium	281													
Beryllium														
Calcium	99800													
Chromium														
Cobalt	104 B													
Copper	12 B													
Iron	6460													
Lead	4.1													
Magnesium	29200													
Manganese	8300													
Nickel														
Potassium	5270													
Sodium	31800													
Vanadium	8.3 B													
Zinc	74.4													

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: M-21

Date	05/96
Compound	
VOLATILE (ppb)	
Acetone	
Benzene	5
2-Butanone	
Chloroethane	2 J
Chlorobenzene	2 J
Carbon disulfide	
Chloroform	
1,1-Dichloroethane	
1,2-Dichloroethane	
1,1-Dichloroethylene	
1,2-Dichloroethene (Total)	
Ethylbenzene	
4-Methyl-2-pentanone	
Methylene chloride	
Toluene	
1,1,1-Trichloroethane	
Trichloroethylene	
Vinyl acetate	
Vinyl chloride	
Xylenes (Total)	
SEMIVOLATILE (ppb)	
Phenol	
1,2-Dichlorobenzene	
2-Methylphenol	
4-Methylphenol	
2,4-Dimethylphenol	
Benzoic acid	
Naphthalene	
Isophorene	
4-Chloroaniline	
2-Methylnaphthalene	
N-Nitrosodiphenylamine	
Di-n-butylphthalate	
Butylbenzyl phthalate	
bis (2-Ethylhexyl) phthalate	
Di-n-octyl phthalate	
METALS (ppb)	
Aluminum	
Antimony	
Arsenic	
Barium	
Beryllium	
Calcium	
Chromium	
Cobalt	
Copper	
Iron	
Lead	
Magnesium	
Manganese	
Nickel	
Potassium	
Sodium	
Vanadium	
Zinc	

Only detected results reported.
B - Compound detected in associated blank (organic); compound < contract required detection limits (CR
J - - Not Analyzed

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: M-25

Date	05/96
Compound	
VOLATILE (ppb)	
Acetone	
Benzene	9
2-Butanone	
Chloroethane	
Chlorobenzene	3 J
Carbon disulfide	
Chloroform	3 J
Bromodichloromethane	2 J
Dibromochloromethane	0.9 J
1,1-Dichloroethylene	
1,2-Dichloroethene (Total)	
Ethylbenzene	
4-Methyl-2-pentanone	
Methylene chloride	
Toluene	
1,1,1-Trichloroethane	
Trichloroethylene	
Vinyl acetate	
Vinyl chloride	
Xylenes (Total)	
SEMIVOLATILE (ppb)	
Phenol	
1,2-Dichlorobenzene	
2-Methylphenol	
4-Methylphenol	
2,4-Dimethylphenol	
Benzoic acid	
Naphthalene	
Isophorene	
4-Chloroaniline	
2-Methylnaphthalene	
N-Nitrosodiphenylamine	
Di-n-butylphthalate	
Butylbenzyl phthalate	
bis (2-Ethylhexyl) phthalate	
Di-n-octyl phthalate	
METALS (ppb)	
Aluminum	
Antimony	
Arsenic	
Barium	
Beryllium	
Calcium	
Chromium	
Cobalt	
Copper	
Iron	
Lead	
Magnesium	
Manganese	
Nickel	
Potassium	
Sodium	
Vanadium	
Zinc	

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: M-26

Date	05/96
Compound	
VOLATILE (ppb)	
Acetone	
Benzene	
2-Butanone	
Chloroethane	
Chlorobenzene	
Carbon disulfide	
Chloroform	
1,1-Dichloroethane	
1,2-Dichloroethane	
1,1-Dichloroethylene	
1,2-Dichloroethene (Total)	
Ethylbenzene	
4-Methyl-2-pentanone	
Methylene chloride	
Toluene	
1,1,1-Trichloroethane	
Trichloroethylene	
Vinyl acetate	
Vinyl chloride	
Xylenes (Total)	
SEMIVOLATILE (ppb)	
Phenol	
1,2-Dichlorobenzene	
2-Methylphenol	
4-Methylphenol	
2,4-Dimethylphenol	
Benzoic acid	
Naphthalene	
Isophorene	
4-Chloroaniline	
2-Methylnaphthalene	
N-Nitrosodiphenylamine	
Di-n-butylphthalate	
Butylbenzyl phthalate	
bis (2-Ethylhexyl) phthalate	
Di-n-octyl phthalate	
METALS (ppb)	
Aluminum	
Antimony	
Arsenic	
Barium	
Beryllium	
Calcium	
Chromium	
Cobalt	
Copper	
Iron	
Lead	
Magnesium	
Manganese	
Nickel	
Potassium	
Sodium	
Vanadium	
Zinc	

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: SWW-1

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/95
Acetone							
Benzene							
Chloroethane							
Chlorobenzene							
Carbon disulfide	3 J						
1,1-Dichloroethane							
1,2-Dichloroethane							
1,1-Dichloroethylene							
1,2-Dichloroethene (Total)							
Ethylbenzene							
Methylene chloride	4 J						
Toluene							
1,1,1-Trichloroethane							
Trichloroethylene						1 BJ	
Vinyl chloride							
Xylenes (Total)							
SEMIVOLATILE (ppb)							
1,2-Dichlorobenzene							
2-Methylphenol							
4-Methylphenol							
2,4-Dimethylphenol							
Benzoic acid							
Naphthalene							
2-Methylnaphthalene							
Di-n-butylphthalate		89					
Butylbenzyl phthalate		39					
bis (2-Ethylhexyl) phthalate		1 J	1 BJ			1 J	
4-Chloroaniline							
METALS (ppb)							
Aluminum	422						
Antimony	27 B						
Arsenic	6.1 B						
Barium	141 B						
Beryllium	3.2 B						
Calcium	99800						
Chromium							
Cobalt	12 B						
Copper	8.1 B						
Iron	681						
Lead	2.5 B						
Magnesium	29300						
Manganese	230						
Nickel							
Potassium	8330						
Sodium	43100						
Vanadium	8.4 B						
Zinc	18 B						

Notes:
Only detected results reported from annual monitoring, performed in November of each year since 1989.
B - Compound detected in associated blank (organic);
compound < contract required detection limits (CRDL) (metals).
J - Concentration < sample quantitation limit (SQL) but > zero.
Not Analyzed =

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: SWW-4

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/95
Acetone		6 J					
Benzene		8	64	1 J	63	2 J	
Chloroethane		16	16	5 J	7 J		
Chlorobenzene		4 J	16	0.9 J	17		
Carbon disulfide							
1,1-Dichloroethane		8	6	4 J		3 J	
1,2-Dichloroethane							
1,1-Dichloroethylene							
1,2-Dichloroethene (Total)			0.6 J		1 J		
Ethylbenzene		32	100	2 J	52	1 J	
Methylene chloride		0.5 J	0.6 J				
Toluene			0.9 J		1 J		
1,1,1-Trichloroethane							
Trichloroethylene							
Vinyl chloride							
Xylenes (Total)		5	41		17	2 J	
SEMIVOLATILE (ppb)							
1,2-Dichlorobenzene							
2-Methylphenol							
4-Methylphenol					3 J		
2,4-Dimethylphenol			3 J				
Benzoic acid							
Naphthalene							
2-Methylnaphthalene							
Di-n-butylphthalate							
Butylbenzyl phthalate							
bis (2-Ethylhexyl) phthalate						2 J	
4-Chloroaniline							
METALS (ppb)							
Aluminum	141 B						
Antimony							
Arsenic	2.8 B						
Barium	108 B						
Beryllium							
Calcium	70300						
Chromium							
Cobalt	9.9 B						
Copper							
Iron	896						
Lead	1.7 B						
Magnesium	16200						
Manganese	442						
Nickel							
Potassium	11000						
Sodium	65300						
Vanadium	3.03						
Zinc	1.53						

Notes:

Only detected results reported from annual monitoring, performed in November of eech year since 1989.

B - Compound detected in essociated blank (organic); compound < contract required detection limits (CRDL) (metals).

J - Concentration < sample quantitetion limit (SQL) but > zero.

Not Analyzed =

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: SWW-6

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/95
Acetone		92 BJ					
Benzene	10	680	430	660	570	550	570
Chloroethane	95	180	85 J	85	73	49 J	58 J
Chlorobenzene		9 J	10 J	69	78	140	190
Carbon disulfide							
1,1-Dichloroethane							
1,2-Dichloroethane							
1,1-Dichloroethylene							
1,2-Dichloroethene (Total)							
Ethylbenzene	250	640	340	580	490	550	690
Methylene chloride	7 BJ	17 BJ	8 J	10 J	7 J	6 J	
Toluene	550	910 B	160	390	50	25 J	18 J
1,1,1-Trichloroethane							
Trichloroethylene							
Vinyl chloride							
Xylenes (Total)	620	1900	860	2200	1400	2000	2600
SEMIVOLATILE (ppb)							
1,2-Dichlorobenzene	17 J				31 J		
2-Methylphenol	130						
4-Methylphenol	600	33		14	48 J		3 J
2,4-Dimethylphenol	1200		69 J	1800 D	640 D	610 D	4 J
Benzoic acid							
Naphthalene				23			10
2-Methylnaphthalene		2 J			2 J		
Di-n-butylphthalate							
Butylbenzyl phthalate							
bis (2-Ethylhexyl) phthalate							2 J
4-Chloroaniline						13	49
METALS (ppb)							
Aluminum	1000						
Antimony							
Arsenic	34						
Barium	102						
Beryllium							
Calcium	232000						
Chromium	8.3 B						
Cobalt	54						
Copper	16 B						
Iron	8010						
Lead	3						
Magnesium	58400						
Manganese	2170						
Nickel	507						
Potassium	20000						
Sodium	152000						
Vanadium	4.8 B						
Zinc	22.6						

Notes:
Only detected results reported from annual monitoring, performed in November of each year since 1989.
B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).
J - Concentration < aampla quantitation limit (SQL) but > zero.
Not Analyzed =

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: SWW-8

Date	11/89	11/90	11/91	11/92	11/93	11/93	11/95
Acetone							
Benzene	7	5	2 J	2 J	1 J	1 J	
Chloroethane							
Chlorobenzene	2 J						
Carbon disulfide							
1,1-Dichloroethane		3 J	2 J				
1,2-Dichloroethane	3 J						
1,1-Dichloroethylene							
1,2-Dichloroethene (Total)		0.9 J					
Ethylbenzene							
Methylene chloride							
Toluene							
1,1,1-Trichloroethane							
Trichloroethylene		0.6 J				2 BJ	
Vinyl chloride							
Xylenes (Total)							
SEMIVOLATILE (ppb)							
1,2-Dichlorobenzene							
2-Methylphenol							
4-Methylphenol							
2,4-Dimethylphenol							
Benzoic acid							
Naphthalene							
2-Methylnaphthalene							
Di-n-butylphthalate							
Butylbenzyl phthalate					4 J		
bis (2-Ethylhexyl) phthalate			3 BJ				
4-Chloroaniline							
METALS (ppb)							
Aluminum	2600						
Antimony	32 B						
Arsenic	21.1						
Barium	826						
Beryllium							
Calcium	335000						
Chromium	8.5 B						
Cobalt	27 B						
Copper	10 B						
Iron	25500						
Lead	3.8						
Magnesium	116000						
Manganese	12600						
Nickel	546						
Potassium	3070 B						
Sodium	110000						
Vanadium							
Zinc	60.4						

Notes:

Only detected results reported from annual monitoring, performed in November of each year since 1989.

B - Compound detected in associated blank (orgenic); compound < contract required detection limits (CRDL) (metals).

J - Concentration < sample quentitation limit (SQL) but > zero.

Not Analyzed =

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: SWW-10

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/95
Acetone		8 BJ					
Benzene							
Chloroethane							
Chlorobenzene							
Carbon disulfide							
1,1-Dichloroethane	1 J	2 J		3 J		4 J	2 J
1,2-Dichloroethane							
1,1-Dichloroethylene					3 J		
1,2-Dichloroethene (Total)							
Ethylbenzene							
Methylene chloride	2 BJ						
Toluene		0.1 BJ					
1,1,1-Trichloroethane		2 J		1 J			1 J
Trichloroethylene	3 J	9		4 J	5	5	3 J
Vinyl chloride							
Xylenes (Total)							
SEMIVOLATILE (ppb)							
1,2-Dichlorobenzene							
2-Methylphenol							
4-Methylphenol							
2,4-Dimethylphenol							
Benzoic acid							
Naphthalene							
2-Methylnaphthalene							
Di-n-butylphthalate							
Butylbenzyl phthalate					4 J		
bis (2-Ethylhexyl) phthalate						2 J	
4-Chloroaniline							
METALS (ppb)							
Aluminum	979						
Antimony							
Arsenic	2.8 B						
Barium	67 B						
Beryllium							
Calcium	117000						
Chromium	12.1						
Cobalt	16 B						
Copper	142 B						
Iron	3600						
Lead							
Magnesium	26300						
Manganese	2170						
Nickel							
Potassium	990 B						
Sodium	11700						
Vanadium							
Zinc	23.4						

Notes:

Only detected results reported from annual monitoring, performed in November of eech year since 1989.

B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).

J - Concentration < sample quantitation limit (SQL) but > zero.

Not Analyzed =

PAS SITE O&M - ANALYTICAL RESULTS
MONITORING WELL: SWW-12

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/95
Acetone		2 J					
Benzene	2 J	2 J	1 J	0.9 J	1 J		
Chloroethane		4 J	3 J	1 J			
Chlorobenzene							
Carbon disulfide							
1,1-Dichloroethane	32	56	48	42	31	25	20
1,2-Dichloroethane	3 J				3 J		2 J
1,1-Dichloroethylene							
1,2-Dichloroethene (Total)	3 J	1 J	0.8 J				
Ethylbenzene							
Methylene chloride							
Toluene							
1,1,1-Trichloroethane	5	1 J					
Trichloroethylene							
Vinyl chloride		0.8 J					
Xylenes (Total)							
SEMIVOLATILE (ppb)							
1,2-Dichlorobenzene							
2-Methylphenol							
4-Methylphenol							
2,4-Dimethylphenol							
Benzoic acid	18 J						
Naphthalene							
2-Methylnaphthalene							
Di-n-butylphthalate							
Butylbenzyl phthalate							
bis (2-Ethylhexyl) phthalate						1 J	
4-Chloroaniline							
METALS (ppb)							
Aluminum	2910						
Antimony							
Arsenic	4 B						
Barium	162 B						
Beryllium							
Calcium	101000						
Chromium	8.9 B						
Cobalt	13 B						
Copper	33.2						
Iron	5390						
Lead	3.2						
Magnesium	37500						
Manganese	3300						
Nickel							
Potassium	4500 B						
Sodium	19500						
Vanadium	6.1 B						
Zinc	29.4						

Notes:

Only detected results reported from annual monitoring, performed in November of each yaar since 1989.

B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).

J - Concentration < sampla quantitation limit (SQL) but > zero.

Not Analyzed =

PAS SITE O&M - ANALYTICAL RESULTS
SURFACE WATER: SW-1

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/95
Compound							
VOLATILE (ppb)							
Acetone		7 BJ					
Toluene		0.6 BJ					

SURFACE WATER: SW-2

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/85
Compound							
VOLATILE (ppb)							
Acetone							
Toluene							
SEMIVOLATILE (ppb)							
Bis(2-ethylhexyl) phthalate							5 J

SURFACE WATER: SW-3

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/95
Compound							
VOLATILE (ppb)							
Acetone		3 BJ					
Toluene		0.6 BJ					
SEMIVOLATILE (ppb)							
Acenaphthene							0.6 J

SURFACE WATER: SW-4

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/95
Compound							
VOLATILE (ppb)							
Acetone							
Toluene							

SURFACE WATER: SW-4A

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/95
Compound							
VOLATILE (ppb)							
Acetone							
Toluene		0.6 BJ					
SEMIVOLATILE (ppb)							
Acenaphthene							0.4 J

SURFACE WATER: SW-4B

Date	11/89	11/90	11/91	11/92	11/93	11/94	11/95
Compound							
VOLATILE (ppb)							
Acetone		6 BJ					
Toluene		0.7 BJ					

SURFACE WATER: SW-5

Date	11/99	11/90	11/91	11/92	11/93	11/94	11/95
Compound							
VOLATILE (ppb)							
Acetone							
Toluene							
SEMIVOLATILE (ppb)							
Bis(2-ethylhexyl) phthalate							6 J

Only detected results reported.
B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).
J - Concentration < sample quantitation limit (SQL) but > zero.
- Not Analyzed

PAS SITE O&M - ANALYTICAL RESULTS
SEDIMENT: SS-1

Date	11/89	11/90	5/91	11/91	11/92	11/93	05/94	11/94	11/95
Compound									
VOLATILE (ppb)									
Acetone	20 B	22 B				15			
Benzene									
2-Butanone									
Chloroform	8 J								
Methylene chloride	24 B								
Tetrachloroethene								6 BJ	
Toluene									
SEMIVOLATILE (ppb)									
Phenol									
Benzyl Alcohol									
4-Methylphenol	69 J						160 J		
2,4-Dimethylphenol									
Benzoic acid					67 J		27 J		
Acenaphthylene									
Acenaphthene									
Diethylphthalate		240 J							
Fluorene					160 J				
Phenanthrene	120 J			400 J	1400	230 J		190 J	
Anthracene					360 J				
Fluoranthene	240 J			730	1900	340 J		360 J	
Pyrene	220 J			650	8000 E	280 J		320 J	
Butylbenzyl phthalate									
Benzo (a) anthracene	120 J			360 J	970	180 J		170 J	
Chrysene	130 J			350 J	3600	170 J		160 J	
bis (2-Ethylhexyl) phthalate	460 J	85 J		120 BJ	670	91 J	390 J		
Di-n-octyl phthalate									
Benzo (b) fluoranthene	200 J			360 J	1700	230 J		230 J	
Benzo (k) fluoranthene	200 J			180 J	1900	140 J		130 J	
Benzo (a) pyrene	110 J			250 J	820				
Indeno (1,2,3-cd) pyrene	59 J			110 J		100 J			
Dibenzo (a,h) anthracene									
Benzo (g,h,i) perylene	575			85 J		87 J			
PEST/PCB (ppb)									
beta-BHC									
gamma-BHC					1.4 J				
Aldrin		10 R			11			4.4 J	
Heptachlor epoxide					1.8 J				
Endosulfan I					3.2 J				
Endosulfan II					2.6 J				
Endosulfan sulfate							10 J		
Dieldrin					7.6 J				
4,4'-DDE			8.3 J *		1.1 J				
Endrin									
4,4'-DDD					2 J		11 J		
4,4'-DDT			8.8 J *	2.6 J	4.4 J				
Methoxychlor			6.3 J *						
Endrin Ketone			6.3 J *						
Aroclor - 1248									
Aroclor - 1254									
METALS (ppm)									
Aluminum	5730	9630		6330	4610		7750	5960	
Antimony					3.1 B				
Arsenic	5.9	1.3		2.0	2.1		2.9 N	3.5	
Barium	85	65		71.7	62.5		79.4	124	
Cadmium		<0.71							
Calcium	4710	1770		4850 B	3400		1970	7750	
Chromium	6.2	10		12.3	6.1		12.1	7.5	
Cobalt	6.4 B	5.7		3.2	3.9 B		6.4	2.7 B	
Copper	30.9	14		10.7	15.7		6.1	4.3 B	
Iron	10200	10500		15200	16400		14500	38400	
Lead	25.6	88		18.7	10.3		8.1	48.4	
Magnesium	2570	2050		1370	1580		2960	2640	
Manganese	674	386		222	426 N		313	1650	
Mercury		0.15							
Nickel		11		10.4	7.8		12.8	14.2	
Potassium	1370 B	622		697	505 B		1050	493 B	
Selenium								4.0	
Silver					10.6 BN				
Sodium	602 B	304		463 B	297 B		302 B	580 B	
Vanadium	17.7	18		11.1	10.1		17.2	19.1	
Zinc	73.8	46		37.6	53.1		32.3	106	
Total Phenol							0.9		
Hexavalent Chromium		0.18 R	0.26	0.31	0.16 N		0.46 N*		

Only detected results reported.

B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).

E - Response of the analyte is greater then the upper level of the calibration range.

J - Concentration < sample quantitation limit (SQL) but > zero.

N - Spike sample recovery not within control limits.

R - Data rejected due to holding time violation.

* - Concentration detected from sample reanalysis.

▒▒▒ - Not Analyzed

PAS SITE O&M - ANALYTICAL RESULTS
SEDIMENT: SS-2

Date	11/89	11/90	5/91	11/91	11/92	11/93	05/94	11/94	11/95
Compound									
VOLATILE (ppb)									
Acetone	11 J					9 J			
Benzene									
2-Butanone									
Chloroform									
Methylene chloride	41 B								
Tetrachloroethene								4 BJ	
Toluene									
SEMIVOLATILE (ppb)									
Phenol									
Benzyl Alcohol									
4-Methylphenol									
2,4-Dimethylphenol									
Benzoic acid									
Acenaphthylene						47 J	19 J		
Acenaphthene							29 J		
Diethylphthalate									
Fluorene							61 J		
Phenanthrene	360 J				71 J	550	84 J	120 J	
Anthracene									
Fluoranthene	690 J				94 J	920	840 J	200 J	
Pyrene	540 J				110 J	660	1000 J	150 J	
Butylbenzyl phthalate									
Benzo (a) anthracene	270 J					390 J	480 J	70 J	
Chrysene	330 J					340 J	360 J	84 J	
bis (2-Ethylhexyl) phthalate	1000			75 BJ	130 J	180 J	170 J		
Dibenzofuran							21 J		
Di-n-octyl phthalate									
Benzo (b) fluoranthene	470 J				62 J	400	320 J	120 J	
Benzo (k) fluoranthene	470 J				23 J	180 J	320 J	52 J	
Benzo (a) pyrene	260 J						140 J		
Indeno (1,2,3-cd) pyrene	150 J						120 J		
Dibenzo (a,h) anthracene							59 J		
Benzo (g,h,i) perylene							29 J		
PEST/PCB (ppb)									
beta-BHC					1.4 J				
gamma-BHC					1.3 J				
Aldrin									
Heptachlor epoxide									
Endosulfan I									
Endosulfan II									
Dieldrin				8.7 J	16 J				
4,4'-DDE					3.2 J				
Endrin					2.5 J				
4,4'-DDD					3.2 J				
4,4'-DDT					4.1 J				
Methoxychlor									
Endrin Ketone									
Aroclor - 1248									
Aroclor - 1254			570						
METALS (ppm)									
Aluminum	6790			4750	4920		5310	4740	
Antimony					0.96 B				
Arsenic	2.2 B			5.3	3.2		2.5 N	3.5	
Barium	204			51.7	78.3		70.6	49.9	
Cadmium					0.82				
Calcium	6340			6580 B	13400		4430	47800	
Chromium	4.2			6	8.9		7.1	5.2	
Cobalt	4.7 B			3.9 B	4.7 B		3.6 B	3.4 B	
Copper	27.2			12.1	25.6		3.3 B	6.1	
Iron	47200			6260	17700		16400	7550	
Lead	18.6			11	96		20.2	13.4	
Magnesium	2580			1760	3830		2960	2550	
Manganese	2080			262	978 N		501	533	
Mercury									
Nickel				11.2	14.9		9.9	7.9	
Potassium	1610 B			686 B	746 B		561 B	448 B	
Selenium								1.1	
Silver					0.06 BN				
Sodium	1260 B				322 B		257 B	294 B	
Vanadium	45.7			7.4 B	10.3		10.7	9.2	
Zinc	112			36.9	70.8		67.1	48.9	
Total Phenol							2.8		
Hexavalent Chromium			0.33	0.42	0.1 N			1.5 N*	

Only detected results reported.

B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).

J - Concentration < sample quantitation limit but > zero.

N - Spike sample recovery not within control limits.

* - Concentration detected from sample reanalysis.

▒▒▒ - Not Analyzed

PAS SITE O&M - ANALYTICAL RESULTS
SEDIMENT: SS-3

Date	11/89	11/90	5/91	11/91	11/92	11/93	05/94	11/94	11/95
Compound									
VOLATILE (ppb)									
Acetone	27 B				110	170		94	
Benzene									
2-Butanone						27			
Chloroform	3 J					21			
Methylene chloride	69 B								
Tetrachloroethene								10 BJ	
Toluene		0.9 BJ							
SEMIVOLATILE (ppb)									
Phenol	270 J								
Benzyl Alcohol		32 J							
4-Methylphenol	86 J	35 J					760 J		
2,4-Dimethylphenol	97 J								
Benzoic acid	67 J	120 J				38 J	17 J		
Acenaphthylene						76 J			
Acenaphthene									
Diethylphthalate		49 J							
Fluorene									
Phenanthrene					160 J	270 J	190 J	190 J	
Anthracene								37 J	
Fluoranthene	65 J						440 J	320 J	
Pyrene	69 J					890 J		350 J	
Butylbenzyl phthalate							190 J		
Benzo (a) anthracene							170 J		
Chrysene						270 J			
bis (2-Ethylhexyl) phthalate	1200	96 J		200 BJ	690 J	230 J	1600		
Di-n-octyl phthalate									
Benzo (b) fluoranthene						500 J	270 J	270 J	
Benzo (k) fluoranthene								140 J	
Benzo (a) pyrene									
Indeno (1,2,3-cd) pyrene									
Dibenzo (a,h) anthracene									
Benzo (g,h,i) perylene									
PEST/PCB (ppb)									
beta-BHC							42 J		
gamma-BHC									
Aldrin		32 R	730 *						
Heptachlor epoxide	26								
Endosulfan I									
Endosulfan II									
Dieldrin									
4,4'-DDE									
Endrin									
4,4'-DDD					14 J				
4,4'-DDT									
Methoxychlor					4.6 J				
Endrin Ketone									
Aroclor - 1248				1900 D	720		1400 J	500	
Aroclor - 1254		450 R	3700 *					240	
METALS (ppm)									
Aluminum	7520	6430		6110	12100		10400	5240	
Antimony					5.3 B				
Arsenic	2.8 B	1.6		2.5	7.8		5.8 N	2.0 B	
Barium	82.9	48		60	345		199	105	
Cadmium		0.61							
Calcium	3430	5450		7110	14800		7360	5230	
Chromium	0.7	6.7		10.7	18.1		14.3	7.7	
Cobalt	6 B	4.9		4.9 B	9.0 B		7.5 B		
Copper	54.3	24		33.9	52.7		14.1	6.4	
Iron	13500	9890		10100	61200		41400	25200	
Lead	13.2	66		16.3	66.9		78	38.5	
Magnesium	2170	2900		2580	4200		3220	2000	
Manganese	402	445		392	3290 N		2380	978	
Mercury		0.21							
Nickel		12		16	22.9		21.4	10.8	
Potassium	259 B	724		733	1170 B		1061	506 B	
Selenium								2.6	
Silver					0.25 BN				
Sodium		144		298 B	938 B		804 B	785 B	
Vanadium	22.6	12		13.6	38.5		29.4	13.6	
Zinc	57.6	35		13.9	205		154	69.5	
Total Phenol				0.61					
Hexavalent Chromium		0.13 R	1.10	0.27			1.2 N*	4.3 N*	

Only detected results reported.

B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).

D - Concentration determined from secondary dilution.

J - Concentration < sample quantitation limit but > zero.

N - Spike sample recovery not within control limits.

R - Data rejected due to holding time violation.

* - Concentration detected from sample reanalysis.

- Not Analyzed

PAS SITE O&M - ANALYTICAL RESULTS
SEDIMENT: SS-4

Date	11/89	11/90	5/91	11/91	11/92	11/93	05/94	11/94	11/95
Compound									
VOLATILE (ppb)									
Acetone	47 B								
Benzene									
2-Butanone									
Chloroform	3 J								
Methylene chloride	69 B								
Tetrachloroethene									
Toluene									
SEMIVOLATILE (ppb)									
Phenol									
Benzyl Alcohol									
4-Methylphenol									
2,4-Dimethylphenol									
Benzoic acid									
Acenaphthylene									
Acenaphthene									
Diethylphthalate									
Fluorene									
Phenanthrene	86 J								
Anthracene									
Fluoranthene	170 J								
Pyrene	130 J								
Butylbenzyl phthalate									
Benzo (a) anthracene	78 J								
Chrysene	100 J								
bis (2-Ethylhexyl) phthalate	130 J								
Di-n-octyl phthalate									
Benzo (b) fluoranthene	96 J								
Benzo (k) fluoranthene									
Benzo (a) pyrene	87 J								
Indeno (1,2,3-cd) pyrene	55 J								
Dibenzo (a,h) anthracene									
Benzo (g,h,i) perylene									
PEST/PCB (ppb)									
beta-BHC									
gamma-BHC									
Aldrin									
Heptachlor epoxide			35						
Endosulfan I									
Endosulfan II									
Dieldrin									
4,4'-DDE			19						
Endrin									
4,4'-DDD									
4,4'-DDT									
Methoxychlor									
Endrin Ketone									
Aroclor - 1248									
Aroclor - 1254	410								
METALS (ppm)									
Aluminum	4990	10200							
Antimony									
Arsenic	4.3	2.6							
Barium	160	82							
Cadmium									
Calcium	3620	6900							
Chromium	6.8	12							
Cobalt	6.3 B	6.1							
Copper	25.7	24							
Iron	12900	16500							
Lead	22	88							
Magnesium	1980	2520							
Manganese	712	240							
Mercury									
Nickel		12							
Potassium	1140 B	1300							
Selenium									
Silver									
Sodium	634 B	511							
Vanadium	22.3	19							
Zinc	97	41							
Total Phenol									
Hexavalent Chromium		0.13 R	0.9						

Only detected results reported.
B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).
J - Concentration < sample quantitation limit but > zero.
R - Data rejected due to holding time violation.
- Not Analyzed

PAS SITE O&M - ANALYTICAL RESULTS
SEDIMENT: SS-4A

Date / Compound	11/89	11/90	11/91	11/92	11/93	05/94	11/94	11/95
VOLATILE (ppb)								
Acetone		11 BJ		41		11 J	28	
Benzene								
2-Butanone								
Chloroform				1 J				
Methylene chloride								
Tetrachloroethene							4 BJ	
Toluene		1 BJ						
SEMIVOLATILE (ppb)								
Phenol								
Benzyl Alcohol								
4-Methylphenol								
2,4-Dimethylphenol								
Benzoic acid		49 J						
Acenaphthylene								
Acenaphthene		58 J						
Diethylphthalate								
Fluorene								
Phenanthrene		510 J			70 J	89 J		
Anthracene		110 J						
Di-n-butylphthalate			1300 B	460 BJ				
Fluoranthene		2000				220 J	120 J	
Pyrene		2500			120 J	200 J	110 J	
Butylbenzyl phthalate		40 J						
Benzo (a) anthracene		1400			84 J	110 J		
Chrysene		1100			80 J	120 J		
bis (2-Ethylhexyl) phthalate		100 J	260 BJ	510 J	210 J	460 J		
Di-n-octyl phthalate								
Benzo (b) fluoranthene		1900	47 J		100 J	160 J	120 J	
Benzo (k) fluoranthene		730					47 J	
Benzo (a) pyrene		1200			63 J		290 J	
Indeno (1,2,3-cd) pyrene		290 J			29 J			
Dibenzo (a,h) anthracene		73 J						
Benzo (g,h,i) perylene		220 J			23 J			
PEST/PCB (ppb)								
beta-BHC								
gamma-BHC								
Aldrin								
Heptachlor epoxide								
Endosulfan I								
Endosulfan II								
Dieldrin								
4,4'-DDE								
Endrin								
4,4'-DDD				7 J				
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
Aroclor - 1248			1400 D	140 J			39 J	
Aroclor - 1254								
METALS (ppm)								
Aluminum		10200	9440	7110		13800	4120	
Antimony				1.3 B				
Arsenic		2.6	6.4	6.4		10.5 N	2.4	
Barium		82	172	165		196	68.9	
Cadmium		<0.67						
Calcium		6900	14700	5100		5500	2880	
Chromium		12	15.1	11.3		15.9	5.3	
Cobalt		6.1	7.7 B	5.2 B		8.4 B	2.9 B	
Copper		24	41.6	35		18.7	2.9 B	
Iron		16500	18700	14600		18900	8550	
Lead		88	53.5	32.1		54.2	18.7	
Magnesium		2520	3960	2860		3720	1690	
Manganese		240	837	907 N		394	448	
Mercury							1.4	
Nickel		12	28.8	16.1		17.4	6.6	
Potassium		1300	1180 B	755 B		1080 B	302 B	
Selenium							1.4	
Silver				0.11 BN		1.3		
Sodium		511		413 B		450 B	270 B	
Thallium						0.77 BN		
Vanadium		19	21.7	18.8		26.7	8.5	
Zinc		41	185	108		180	45.5	
Total Phenol				4.7				
Hexavalent Chromium		0.13 R	0.59	0.29 N		1.4 N*	0.46 N*	

Only detected results reported; * - Concentration detected from sample reanalysis

B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).

D - Concentration determined from secondary dilution.

J - Concentration < sample quantitation limit but > zero.

N - Spike sample recovery not within control limits.

R - Data rejected due to holding time violation.

- Not Analyzed

PAS SITE O&M - ANALYTICAL RESULTS
SEDIMENT: SS-4B

Date	11/89	11/90	11/91	11/92	11/93	05/94	11/94	11/95
Compound								
VOLATILE (ppb)								
Acetone		16 B						
Benzene		0.09 J						
2-Butanone								
Chloroform								
Methylene chloride								
Tetrachloroethene								
Toluene		1 BJ						
SEMIVOLATILE (ppb)								
Phenol		51 J						
Benzyl Alcohol								
4-Methylphenol		110 J						
2,4-Dimethylphenol								
Benzoic acid		88 J						
Acenaphthylene								
Acenaphthene								
Diethylphthalate								
Fluorene								
Phenanthrene		59 J						
Anthracene								
Fluoranthene		110 BJ						
Pyrene		110 J						
Butylbenzyl phthalate								
Benzo (a) anthracene		69 J						
Chrysene		57 J						
bis (2-Ethylhexyl) phthalate		100 BJ						
Di-n-octyl phthalate								
Benzo (b) fluoranthene		56 J						
Benzo (k) fluoranthene		39 J						
Benzo (a) pyrene		45 J						
Indeno (1,2,3-cd) pyrene								
Dibenzo (a,h) anthracene								
Benzo (g,h,i) perylene								
PEST/PCB (ppb)								
beta-BHC								
gamma-BHC								
Aldrin								
Heptachlor epoxide								
Endosulfan I								
Endosulfan II								
Dieldrin								
4,4'-DDE		41 R						
Endrin								
4,4'-DDD								
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
Aroclor - 1248								
Aroclor - 1254								
METALS (ppm)								
Aluminum		5000						
Antimony								
Arsenic		5.6						
Barium		94						
Cadmium		0.62						
Calcium		5220						
Chromium		4.7						
Cobalt		3.9						
Copper		15						
Iron		89						
Lead		74						
Magnesium		2010						
Manganese		733						
Mercury		0.27						
Nickel		11						
Potassium		666						
Selenium								
Silver								
Sodium		301						
Vanadium		13						
Zinc		51						
Total Phenol								
Hexavalent Chromium		0.2 R						

Only detected results reported.
B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).
J - Concentration < sample quantitation limit (SQL) but > zero.
R - Date rejected due to holding time violation.
..... - Not Analyzed

PAS SITE O&M - ANALYTICAL RESULTS
SEDIMENT: SS-5

Date / Compound	11/89	11/90	11/91	11/92	11/93	05/94	11/94	11/95
VOLATILE (ppb)								
Acetone					110			
Benzene								
2-Butanone					0.8 J			
Chloroform					9			
Methylene chloride								
Tetrachloroethene							5 BJ	
Toluene								
SEMIVOLATILE (ppb)								
Phenol								
Benzyl Alcohol								
4-Methylphenol						190 J		
2,4-Dimethylphenol								
Benzoic acid						30 J		
Acenaphthylene					90 J			
Acenaphthene								
Diethylphthalate								
Fluorene								
Phenanthrene			130 J	97 J	320 J	240 J		
Anthracene								
Fluoranthene			260 J		720	660 J	80 J	
Pyrene			250 J		390 J	670 J	75 J	
Butylbenzyl phthalate								
Benzo (a) anthracene			150 J		350 J	330 J		
Chrysene			130 J		390 J	390 J		
bis (2-Ethylhexyl) phthalate			790 B		330 J	370 J		
Di-n-octyl phthalate								
Benzo (b) fluoranthene					430 J	690 J		
Benzo (k) fluoranthene					180 J			
Benzo (a) pyrene			110 J		310 J		380 J	
Indeno (1,2,3-cd) pyrene					140 J			
Dibenzo (a,h) anthracene					32 J			
Benzo (g,h,i) perylene					99 J			
PEST/PCB (ppb)								
beta-BHC								
gamma-BHC								
Aldrin								
Heptachlor epoxide								
Endosulfan I			15 J					
Endosulfan II						95 J		
Dieldrin			40				3.3 J	
4,4'-DDE			9.5 J					
Endrin						23 J		
4,4'-DDD						31 J		
4,4'-DDT								
Methoxychlor								
Endrin Ketone								
Aroclor - 1248				360				
Aroclor - 1254				280				
METALS (ppm)								
Aluminum			11000	6370		6230	6820	
Antimony				1.8 B				
Arsenic			6.8	2.8		4.2 N	5.2	
Barium			2470	95.8		138	83.8	
Cadmium								
Calcium			18300 B	7240		9430	3520	
Chromium			17.8	8.8		11	8.3	
Cobalt			7.3 B	6.7 B		4.7 B	4.5 B	
Copper			54.2	28		28.6	9.1	
Iron			17200	14600		12400	10800	
Lead			74.1	20.7		39.4	24.6	
Magnesium			4410	3330		3740	2430	
Manganese			947	975 N		1440	332	
Mercury								
Nickel			28.3	11.7		18.2	8.0	
Potassium			1030	782 B		867 B	544 B	
Selenium							2.1	
Silver				0.11 BN				
Sodium			564 B	255 B		398 B	288 B	
Vanadium			24.4	14.6		15.2	12.9	
Zinc			207	92		139	66.5	
Total Phenol								
Hexavalent Chromium			0.74	0.31 N		1.7 N*		

Only detected results reported.

B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).

J - Concentration < sample quantitation limit (SQL) but > zero.

N - Spike sample recovery not within control limits.

* - Concentration detected from sample reanalysis.

- Not Analyzed

PAS SITE O&M - ANALYTICAL RESULTS
LEACHATE: LCW-2

Date	11/89	5/90	11/90	5/91	11/91	5/92	11/92	5/93	11/93	05/94	11/94	05/95	11/95
Compound													
VOLATILE (ppb)													
Acetone	5000			5100 BD	5800								
Benzene	1400			700 D	470 J								
2-Butanone	810			370 DJ									
Chlorobenzene	2900			1200 D	1000								
Chloroform	87 J			30 DJ	3900								
1,2-Dichloroethane	470			210 DJ									
1,1-Dichloroethylene					7500								
1,2-Dichloroethene (Total)	**** E			12000 D									
Ethylbenzene	**** E			8300 D									
Methylene chloride	1200 B												
Toluene	**** E			8400 D									
Vinyl chloride	4000			980 DJ	500 J								
Xylenes (Total)	**** E			17000 D	****								
SEMIVOLATILE (ppb)													
Phenol	650				290								
1,2-Dichlorobenzene	120			110	69 J								
2-Methylphenol	60												
4-Methylphenol					1600								
2,4-Dimethylphenol	50			100									
Naphthalene	71			110	58 J								
N-Nitrosodiphenylamine				23									
Di-n-butylphthalate				0.65									
METALS (ppm)													
Aluminum	6812												
Arsenic	0.047												
Barium	0.849												
Calcium	259												
Iron	328												
Lead	0.035												
Magnesium	49.5												
Manganese	23.3												
Nickel	0.57												
Potassium	60.9												
Sodium	121												
Vanadium	0.019 B												
Zinc	0.033												

Only detected results reported.
B - Compound detected in associated blank (organic); compound < contract required detection limits (CRDL) (metals).
D - Concentration determined from secondary dilution.
E - The value exceeds the linear range of calibration.
J - Concentration < sample quantitation limit (SQL) but > zero.
- Not Analyzed

URS
AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

URS CONSULTANTS, INC.
282 DELAWARE AVENUE
BUFFALO, NEW YORK 14202-1805
(716) 856-5636
FAX: (716) 856-2545

May 22, 1996

Mr. Ronnie Lee, P.E., Project Manager
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road, Room 208
Albany, New York 12233-7010

RE: PAS SITE O&M (WA D00234-8)
SPRING 1996 ENVIRONMENTAL SAMPLING

Dear Mr. Lee:

During the week of May 13, 1996, URS completed the Spring 1996 environmental sampling, in accordance with the Work Plan for the site, and revised analytical program per the Department's letter dated March 4, 1992, and the substitution of three wells (M-21, 25 and 26 for LS-2, LD-3, LR-3) per the Department's April 15, 1996 letter. Field activities and measurements are summarized in the attached O&M forms, Field Activities Summary and field notes.

All samples were sent to Recra Environmental for analysis. Analytical results will be submitted in a letter report after they are reviewed and validated by URS.

The next environmental sampling (Fall 1996) at the site is tentatively scheduled for the week of November 11, 1996.

If you have any questions, please do not hesitate to call me.

Very truly yours,

URS CONSULTANTS, INC.

Dharmarajan R. Iyer, Ph.D., P.E.
Task Manager

Enclosure

cc: R. Lupe - NYSDEC
J. Gorton - URS
S. Nowak - URS
C. Scher - URS
File: 05-35236.00 (1000)

PAS SITE NO. 7-38-001
(W.A. D002340-8)

SPRING 1996 ENVIRONMENTAL MONITORING
MAY 13, 1996 TO MAY 16, 1996

EVENT SUMMARY

May 13, 1996

- C. Scher pickup rental vehicle and load equipment (0730)
- K. Kearney and C. Scher departed from Buffalo to Oswego (0845)
- Arrived Oswego (1215)
- Lunch (1215-1245)
- Arrive on site (1300)
- Calibrate instruments, perform site inspection and water level monitoring (1300-1525)
- Check-in at office with D. Iyer (1530)
- Purchase field sampling supplies (1530-1600)
- Locate M-series that are substituted for three L-series wells (1600-1800) (Location map and boring logs attached)
- Secure site and depart (1800)
- Arrive Syracuse hotel and check-in (1900)

May 14, 1996

- Departed for PAS Oswego (0630). Arrived on site (0700)
- Calibrated instruments and prepared equipment (0700-0800)
- Purged wells LS-6, LD-6, LR-6 (0815-0925)
- Check in at office with D. Iyer (0930)
- Purge wells LD-5, LD-4, LD-2, LR-2, LS-9 (1000-1240)
- Lunch (1300-1330)

- Pick up additional equipment at lumber store (1330-1350)
- Sample wells LS-6, LR-6, LR-2, LD-2, LS-9 and LD-5 (1350-1540)
- Secured site and depart (1600)
- Called office, check in with D. Iyer (1615)
- Pack cooler, pick up ice, ice samples (1615-1645)
- Arrived at Airborne Express (1730)

May 15, 1996

- Departed for PAS Oswego (0630). Arrived on site at (0715)
- Calibrated instruments and prepared for sample (0720-0800)
- Sampled LD-6 (0800)
- Purged LD-8 and LR-8 (0830-0925)
- Check in at office with S. Nowak and fax chain-of-custodies. Pick up ISCO pump at Oswego County Transfer Station (0930-1020)
- Sample LD-8 and LR-8 (1030)
- Purge and sample M-21 (1100-1500)
- C. Scher offsite to check in at office with D. Iyer (1130)
- Purge and sample M-26 (I430-1800)
- Pack cooler, pick up ice, ice cooler and offsite (1815)
- Arrive at Airborne Express (1900)

May 16, 1996

- Departed for PAS Oswego (0730). Arrived on site (0815)
- Calibrated instruments and begin purge of M-25 (0825-1100)
- Sample M-25, purchase ice and check in at office with D. Iyer and S. Nowak (1130)
- Secure site, pack cooler and leave for Buffalo (1230)
- Arrive Recra drop off final sample (1700)

SAMPLING EVENT SUMMARY

Pollution Abatement Services

URS CONSULTANTS, INC.

ARRIVAL:
DATE: 5-13-96 TIME: 1300

DEPARTURE:
DATE: 5-16-96 TIME: 1230

Personnel Onsite: Cheryl Scher Kevin Kearney

Site Conditions on Arrival: GOOD - See pg PAS-5

Weather:
Date: 5-13-96
Date: 5-14-96
Date: 5-15-96
Date: 5-16-96

POST SAMPLING CHECKLIST:

Yes Wells Locked
Yes Tank Secured
Yes Site Cleanup / Walk Through
Yes Site Secured

SURFACE WATER SAMPLES

Sample Number	Sample Date	Sample Time	Analytical Schedule
PAS-SW-1			
PAS-SW-2		ONLY IN FALL	
PAS-SW-3			
PAS-SW-4A			
PAS-SW-5			

STREAM SEDIMENT SAMPLES

Sample Number	Sample Date	Sample Time	Analytical Schedule
PAS-SS-1			
PAS-SS-2		ONLY IN FALL	
PAS-SS-3			
PAS-SS-4A			
PAS-SS-5			

GROUNDWATER SAMPLES

Sample Number	Sample Date	Sample Time	Analytical Schedule
PAS-LS-2	NOT SAMPLED		
PAS-LR-2	5-14-96	1400	A
PAS-LD-2	5-14-96	1410	A
PAS-LR-3	NOT SAMPLED		
PAS-LD-3	NOT SAMPLED		
PAS-LD-4	5-14-96	1445	A
PAS-LD-5	5-14-96	1455	A
PAS-LS-6	5-14-96	1530	A
PAS-LR-6	5-14-96	1530	A
PAS-LD-6	5-15-96	0800	A
PAS-LR-8	5-15-96	1045	A
PAS-LD-8	5-15-96	1030	A
PAS-LS-9	5-14-96	1430	A
PAS-SWW-1			
PAS-SWW-4		ONLY IN FALL	
PAS-SWW-6			
PAS-SWW-8			
PAS-SWW-10			
PAS-SWW-12			
PAS-M-21 *	5-15-96	1500	A
PAS-M-25 *	5-16-96	1100	A
PAS-M-26 *	5-15-96	1800	A
Trip Blank	5-14-96	—	8240 ONLY
MS/MSD (LR-8)	5-15-96	1045	A

TANK LEVEL MEASUREMENTS

Date	Time	Level from Bottom	Remarks
5-13-96	1505	1 1/2"	TANK appears to Have Been Pumped
5-16-96	1200	1 3/4"	out Recently.

NOTES: * WELL CONSTRUCTION LOGS FOR PAS-M-21, 25 and 26 ARE INCLUDED IN PAGES AFTER FIGURE 3. These wells were substituted for LS-2, LR-3 and LD-3 for this sampling event.

By: Cheryl Scher Firm: URS Consultants, Inc. Telephone #: (716) 856-5636

SAMPLING EVENT SUMMARY

URS
CONSULTANTS, INC.

Pollution Abatement Services
Semiannual

Month: May Year: 1996

Date	Time	Well Number	Well Bottom Elevation (feet)	Water Elevation (feet)	Water Height From Bottom (feet)	Volume of Casing (gal)	Volume Purged (gal)	Specific Conduct. (µmhos/cm)	pH (S.U.)	Temp. (deg. C)	Remarks
FALL	ONLY	LS-2	269.5	–	–	–	–	–	–	–	
5-14-96	1530	LR-2	231.5	276.90	45.40	7.70	24.0	630	7.88	11.6	
5-14-96	1540	LD-2	251.1	283.65	32.55	5.05	16.0	1790	7.50	10.7	
FALL	ONLY	LR-3	211.7	–	–	–	–	–	–	–	
FALL	ONLY	LD-3	248.6	–	–	–	–	–	–	–	
5-14-96	1445	LD-4	246.3	270.43	24.13	4.13	7.0	740	7.60	11.0	PURGED DRY
5-14-96	1455	LD-5	243.2	264.34	21.14	3.55	11.0	920	7.59	12.5	PURGED DRY
5-14-96	1530	LS-6	253.4	265.51	12.11	1.99	3.0	860	7.42	10.8	PURGED DRY
5-14-96	1540	LR-6	213.6	264.23	50.63	8.50	26.0	1010	7.48	11.4	
5-15-96	0800	LD-6	240.9	264.35	23.45	3.97	6.0	1010	7.76	9.9	PURGED DRY
5-15-96	1045	LR-8	230.3	264.91	34.61	5.77	18.0	1490	7.00	10.3	
5-15-96	1030	LD-8	248.1	264.79	16.69	2.97	11.0	730	7.61	10.4	
5-14-96	1430	LS-9	260.9	268.66	7.76	1.32	5.0	740	7.15	9.6	PURGED DRY
FALL	ONLY	SWW-1	267.1								
		SWW-2	268.2								
		SWW-3	265.8								
		SWW-4	257.5								
		SWW-5	254.5								
		SWW-6	254.0								
		SWW-7	250.3								
		SWW-8	256.2								
		SWW-9	258.1								
		SWW-10	256.3								
		SWW-11	250.7								
		SWW-12	251.5								
5-15-96	1500	M-21	231.3	264.55	33.25	47.1	142.0	880	7.54	11.3	
5-16-96	1100	M-25	* 234.2	264.77	30.57	44.3	134.0	790	7.20	8.8	
5-15-96	1800	M-26	* 228.3	267.43	39.13	56.08	169.0	60	7.80	15.1	

Casing Volume = water height from botton of well(ft.) X π r² (Insidde Radius of casing in ft.) X 7.48 gal/ft^3

NOTES: * ELEVATIONS ARE ESTIMATED NOT SURVEYED AS SHOWN ON WELL CONSTRUCTION LOG

By: Cheryl Scher

Firm: URS Consultants, Inc. Telephone #: (716) 856-5636

URSF-106/1 OF 1/WDS/GCM

MONTHLY MONITORING WELL LEVELS

URS CONSULTANTS, INC.

Pollution Abatement Services

Date: MAY 13 1996

Well Number	Riser Elevation (feet)	Ground Elevation (feet)	Water Depth to Level of		Water Elevation (feet)
			Top of Riser (feet)	Ground Level (feet)	
LS2	289.81	287.5	3.86	1.55	285.95
LR2	289.85	287.5	12.95	10.60	276.90
LD2	289.73	287.1	6.08	3.45	283.65
LR3	278.06	275.5	8.26	5.70	269.80
LD3	278.62	275.8	3.88	1.06	274.74
LD4	279.25	276.3	8.82	5.87	270.43
LD5	272.94	270.2	8.60	5.86	264.34
LS6	274.14	271.4	8.63	5.89	265.51
LR6	274.39	270.9	10.16	6.67	264.23
LD6	274.03	270.9	9.68	6.55	264.35
LR8	273.42	270.0	8.51	5.09	264.91
LD8	272.83	269.9	8.04	5.11	264.79
LS9	276.72	274.0	8.06	5.34	268.66
SWW1	289.33	286.2	8.21	5.08	281.12
SWW2	289.37	286.3	15.29	12.22	274.08
SWW3	286.50	286.0	16.80	16.30	269.70
SWW4	283.60	282.9	12.15	11.45	271.45
SWW5	277.02	275.9	14.65	13.53	262.37
SWW6	273.06	270.9	8.02	5.86	265.04
SWW7	277.93	273.3	7.22	2.59	270.71
SWW8	278.24	275.7	3.53	0.99	274.71
SWW9	285.55	283.3	16.53	14.28	269.02
SWW10	280.43	279.3	9.30	8.17	271.13
SWW11	273.50	271.0	10.25	7.75	263.25
SWW12	272.82	270.2	8.32	5.70	264.50
M-21	* 272.48	270.3	7.93	5.75	264.55
M-25	* 269.50	* 268.0	4.73	3.23	264.77
M-26	* 273.7	* 272.0	6.27	4.57	267.43

Remarks: * ELEVATIONS ARE ESTIMATED, NOT SURVEYED AS IN WELL CONSTRUCTION LOG.

By: Cheryl Scher

Firm: URS Consultants, Inc. Telephone #: (716) 856-5636

ROUTINE INSPECTION CHECKLIST

Pollution Abatement Services

URS
CONSULTANTS, INC.

Item	Date Inspection Performed	Remarks
CONTAINMENT CELL CAP	5-13-96	MULTIPLE TIRE RUTS ON CAP. HAS RECENTLY BEEN DRIVEN ON. ALSO WHAT APPEAR TO BE GOPHER HOLES NEAR TANK COLLECTION HOUSE
Landscaping	5-13-96	VERY OVERGROWN. GRASS APPROX 8-12" NEEDS CUTTING
Roadways	5-13-96	CLEAN - FREE OF DEBRIS
- General Condition	5-13-96	GOOD
- Snow Removal	5-13-96	NON APPLICAPLE
Concrete Drainage Trough	5-13-96	SLIGHTLY OVERGROWN. BACK SECTION OF TROUGH NEAR WELLS LP, LD, LS 6 HAD STEADY STREAM WEST TO EAST OF WATER
Debris	5-13-96	NO GROSS DEBRIS. APPROX 9-50 GALLON DRUMS (SECURE) LOCATED OUTSIDE STORAGE SHED
French Drains	5-13-96	GOOD CONDITION - OVERGROWN W/ GRASS

FENCE	5-13-96	EAST FENCELINE BY LD/LRB HAS TREES DOWN ON IT NEAR STREAM. GAP UNDER FENCE 1½. FRONT FENCE NEEDS REPAIR (HIT BY SOME VEHICLE) - OTHERWISE SECURE. BACK FENCE - CUT + RECHAINED W/ LOCK (MECHAL SE SECTION)

MONITORING WELLS	5-13-96	OVERALL - GOOD CONDITION
Risers	5-13-96	CONTINUAL RUSTING OTHERWISE GOOD CONDITION
Locks	5-13-96	GOOD CONDITION

Remarks: STORAGE SHED FOUND TO HAVE BEEN LEFT MESSY INSIDE SINCE LAST INSPECTION IN NOVEMBER 1995 - OLD BAILERS LEFT HANGING ON ROOF BEAMS PACKING MATERIAL SPILLED ON GROUND - NEEDS TO BE CLEANED OUT

By: Cheryl Scher Firm: URS Consultants, Inc. Telephone #: (716) 856-5636

PROJECT PAS OSWEGO - 5/13/96

Notebook No.
Continued From Page

ACTIVITYS & Calibration Log

DATE 5-13-96 WEATHER: 45° Clear partly Sunny very WINDY 5-10mph

PERSONNEL C. SCHER
K. KEARNEY

ONSITE 1300
OFFSITE 1800

HNU #11 Calibrated to 57 PPM w/ ISObutylene in air @ Span of 9.8 w/ 10.2 eV lamp 99PPM Gas/air mix

activity / Phone Log

0730 Pick up Rental vehicle @ muck motors Load Equipment
Calibrate HNU Prior to leave BFLO
0845 Leave BUFFALO → PAS OSWEGO arrive ≈ 1215
1215 - 1245 Lunch
1300 onsite Start Inspection / well H_2O level → Complete 1525
1530 off site Call D. IYER Check IN & unable to Locate M-21, 25 & 26
We are to call back @ 1600 He will chk w/ Ronnie Lee & To Tops for Sampling / Preserv / Shipping Supplies
1600 Recall D. IYER → M-21 @ NE CORNER of Site outside fence
These are all off site
M-25 50' NE of M-21 60' NE along mitchel St
M-26 450' NE of M-25
Actual Location of M-25 ≈ 400' NW of M-21 and M-26 60' Down Smith Ra
wells are 6" will advise D IYER Tomorrow about options ~~other~~ more Effective for purging on these
1800 OFFSite drive to E. Syracuse to Hotel arrive @ 1900
Checks & Bring return in Complete Notes End Day 11 hour Day

Continued on Page

Read and Understood By

[signature] Signed 5/13/96 Date

Signed Date

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PROJECT Pas Oswego - 5/13/96

Notebook No. ___ ____

Continued From Page ____

Water Level / Well Inspect / Site Inspect

Well ID	Time	DTB	DTW	HNU	Comments
LS-2	1316	20.12	3.86	ND	No Riser caps — Continued Rust Build up
LR-2	1314	58.41	12.95	ND	
LD-2	1318	36.03	6.08	ND	
LR-3	1330	66.41	8.26	ND	
LD-3	1331	30.28	3.88	ND	
LD-4	1352	33.14	8.80	ND	
LD-5	1402	29.65	8.60	ND	
LS-6	1405	20.72	8.63	ND	
LR-6	1410	60.31	10.16	ND	
LD-6	1413	33.14	9.68	ND	
LR-8	1437	43.05	8.51	ND	
LD-8	1440	25.28	8.04	ND	
LS-9	1511	15.94	8.06	ND	
SWW 1	1335	22.10	8.21	ND	Ok
SWW 2	1337	20.91	15.29	ND	Ok
SWW 3	1454	20.80	16.80	ND	Ok Silty
SWW 4	1452	26.20	12.15	ND	Ok
SWW 5	1425	22.46	14.65	ND	Ok
SWW 6	1427	18.95	8.02	ND	Ok
SWW 7	1344	22.00	7.22	ND	No Riser cap
SWW 8	1333	22.21	3.53	ND	
SWW 9	1348	30.25	16.53	ND	
SWW 10	1350	25.27	9.30	ND	
SWW 11	1358	23.14	10.25	ND	
SWW 12	1400	21.49	8.32	ND	
M-31	1622	40.00	7.93	ND	6" well
M-33	~~1618~~ 1419	52.56	10.03	ND	6" well
M-35	1650	35.20	4.73	ND	6" well
M-36	1715	44.40	6.27	ND	6" well
LCW-1	1405	N/A	12.17	ND	
LCW-2	1415	N/A	15.75	ND	
LCW-3	1446	N/A	18.99	ND	
LCW-4	1500	N/A	22.72	ND	
Tank House	1510	N/A	1½" oil Bottom	-	

Continued on Page

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PROJECT Paz Osineyo 5/13/96

Notebook No. ______
Continued From Page ______

Site Conditions

CONTAINMENT cell

Sandscape - OVERGROWN grass needs cutting ≈
multiple Ruts - Cap Driven on. appears to ha
Some gopher Holes around tank House.

Roadway - Good

Drainage Trough - Slightly overgrown - Back of Si
trough Had Steady Flow of Wa

French Drains Slightly over grown

FENCE East fence line near Stream (by 20/28 well cluster) Trees
FENCE Dug under fence 1½' where Stream passes under
Front Fence Secure Gates Not Repaired From 6 mo ago (Hit by S
Back fence (mitchel St) back of fence opened (cut) + Rechained
Same key as well keys
West fence line secure

Storage Shed - approx 9 drums outside dirt inside very mess
WITH Sampling / development Equip from other firm.

MONITORING Well RISERS/LOCKS CONTINUAL RUSTING - Locks
Lubrication Otherwise Good

STREAM Guages

SS SW 1	FAST FLOW 8½" measure w/ Branch Guage Gone
SS SW 2	16" measure Branch FastFLOW ≈ 30' S of Sanitary Sewer Guage
SS SW 3	8½" Deep Guage in Place Steady Flow
SS SW 4A	Steel Guage ~~[illegible]~~ Water ~~2~~ 4½" measure by branch
SS SW 5	Guage out of water measure w/ branch 18" Deep

Continued on Pa

C Suter (Signed) 5/13/96 (Date) Read and Understood By ______ Signed ______

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PROJECT PAS Oswego — Notebook No. ______ Continued From Page ______

5/14/95 Instrument Calibration / activity Log

weather clear Sunny 45-57°F
Personell C. Scher
K. Kearney

pH#146 7.00 = 7.02 4.01 = 4.00 10.00 = 10.18
COND#16 445 umho = 460 3900 umho = 3460
Turbid# 0-10 = 4.47 10-100 = 49.2 100-1000 = 523
HNU#11 Calibrated w/ 99ppm Isobutylene in air Read 57ppm @ 9.8 span w/ 10.2 eV lamp

activity Log / phone Log

0630 Leave Hotel for Site
0700 Arrive on Site Calibrate meters set up & Start well purge LS-6 LR-6 LD-6
0930 offsite call office Request ISCO to Pump 6" M-Series wells D Sheppard to Ship equip to weigh Station across Street okayed by D. IYER - asked why we don't have ISCO w/ us → only well we ever used it on was LR-3 and we are not Sampling that well. all other wells are Hand Bailed - all Else ok No Problems
1000 Return to Site Purge LD-5 LD-4, LD-2 LR-2 and LS-9 Complete Purge activities @ 1240. clean up offsite for Lunch
1300 - 1330 Lunch
1330 To Lumber Store for wood (access path) for LR-8 LD-8
1350 Return Site Begin Sampling. Sample all above purged wells Except LD-6 (very slow Recharge will sample 5/15) Complete Sampling at 1540 Prep coolers for Shipment, Prepare COC. Clean up
1600 OFFSite to Tops for Ice pack coolers and to Airborne
1730 Arrive Airborne Ship Samples - End day 10½ hr day

1615 Called D. IYER w/ Progress Report - No problems. Dharma expressed Concern w/ Time for M-Series ~~time~~ & purge. we are Having 2 ISCO's Sent To arrive ≈ 10am 5/15 to work on 2 wells Simultaneously

Continued on Page

C. Scher 5/14/96

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PROJECT Pad Oswego

Notebook No. ____

Continued From Page ____

5/1-1/96 G. W. Purge

Socation LD-6 start 0811

DTB 33.14 END 0830

DTW 9.82

vol/3vol 3.97/11.89

actual 6 gallons (Purge dry) method Dedicated HDPE Bailer w/ NYLON cord

Field Parameters	Initial	Final
PH	6.56	6.68
COND	910	890
Temp	11.5°C	13.5
NTU	2.01	>1000
appear	Clear	Turbid Beige

Socation LR-6 start 0835

DTB 60.31 End 0925

DTW 10.29

vol/3vol 8.50/25.51

actual 2 gallons method Dedicated HDPE Bailer w/ NYLON cor

Field Parameter	Initial	Final
PH	6.96	6.78
COND	1180	1030
Temp	15.8°C	12.5
NTU	15.4	4.96
appear	Clear	Clear

Socation LS-6 Start 0815

DTB = 20.72 DTW = 8.98 End 0825

vol/3vol = 1.99/5.99 Actual 3 gallons (Purge dry)

Field Parameters	Initial	Final
PH	6.48	6.72
COND	840	890
Temp	12.6	12.9
NTU	1.42	47.6
appear	Clear	Clear

Continued on Page

C. Sul 5/1-1/96

Read and Understood By

PROJECT PAS Oswego Notebook No. ____
Continued From Page ____

5/1/96 G.W. Purge

Location LD-2 Start 1021
DTB 36.03' End 1050
DTW 6.30
VOL/3VOL 5.05/15.16
Actual 16 gallons method: Dedicated HDPE Bailer w/ NYLON CORD

Field Paramaters	Initial	Final
PH	7.78	7.44
COND	1360	1800
Temp	14.5	14.3
Turbid	4.41	62.5
Appear	Clear	Clear/slight brown tint

Location LR-2 Start 1128
DTB 58.41' End 1240
DTW 13.07'
VOL/3VOL 7.70/23.12
Actual 24 Gallons method: Dedicated HDPE Bailer w/ NYLON CORD

Field Paramaters	Initial	Final
PH	9.62	8.29
COND	580	~~12.2~~ 610
Temp	12.9	12.2
Turbid	3.26	6.08
Appear	Clear	Clear

Location LD-4 Start 1050
DTB 33.14 End 1106
DTW 8.82
VOL/3VOL 4.13/12.40
Actual 7 gallons Purge dry method: Dedicated HDPE Bailer w/ NYLON CORD

Field Paramaters	Initial	Final
PH	7.32	7.35
COND	710	660
Temp	15.3	14.7
Turbid	19.8	>1000
Appear	Clear	turbid to Beige

Continued on Page

C. [signature] 5/14/96
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PROJECT Lake Oswego

Notebook No.

Continued From Page

1/14/96 G.W. Purge

Location LD-5 Start 1014

DTB 29.65 End 1046

DTW 8.77

VOL/3VOL 3.55/10.64

actual 11 Gallons - Purged by Method Dedicated HDPE Bailer w/ Nylon co-

field Parameters	Initial	Final
pH	7.44	7.40
Cond	960	910
Temp	16.3	17.1
Turbid	17.4	678
appear	Clear	Turbid gray

Location LS-9 Start 1141

DTB 15.94 End 1202

DTW 8.15

VOL/3VOL 1.32/3.97

actual 5 gallons - Purged until dry method: Dedicated HDPE Bailer w/ Nylon c

field Parameters	Initial	Final
pH	6.95	6.87
COND	600	750
Temp	10.5	9.2
Turbid	68.2	>1000
appear	Clear w/ Red Brown floc yellow tint	Turbid gray (SANDY)

Continued on Page

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C. Sulen

Signed Date Signed Date

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PROJECT PAS Oswego

Notebook No. _____

Continued From Page _____

5/14/96 G.W. Sampling

Sample ID	PAS-LR-2	PAS-LD-2	PAS-LS-9	PAS-LD-4	PAS-LD-5
Sample Time	1400	1410	1430	~~10~~ 1445	1455
DTW	16.55	6.61	8.24	10.90	8.85
Sample BY	CS/KK	CS/KK	CS/KK		
Parameters	8240/8270	→	→	→	→
Method	DEDICATED	HDPE BAILER	→	→	→
PH	7.88	7.50	7.15	7.60	7.59
CONDUCTIVITY	630	1790	740	740	920
Temp °C	11.6	10.7	9.6	11.0	12.5
Turbidity	4.16	20.9	214	44.5	28.4
Appear	Clear	Clear	Hazy	SL Hazy	Clear

Sample ID	PAS-LS-6	PAS-LR-6
Sample Time	1530	1540
DTW	9.21	10.43
Sample by	CS/KK	CS/KK
Parameters	8240/8270	→
Method	reducted HDPE Bailer	
PH	7.42	7.48
CONDUCTIVITY	860	1010
Temp °C	10.8	11.4
Turbidity	274	2.44
Appear	SL Hazy	Clear

Trip Blank – TB1-051496 Sent

NO ADDITIONAL QC FOR 5-14-96

Continued on Page

C. Secor 5/14/96

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5/15/96 Instrument Calibration / Activity Log

Weather – WINDY 45° / Sunny
Personnel C. Scher / K. Kearney

PH Meter # 7.00 = 7.21 4.01 = 3.95 10.00 = 10.24
Conductivity meter # 445 umho = 460 3990 umho = 3490
Turbidity meter # 0-10 = 4.76 10-100 = 49.6 100-1000 = 523
HNU # N Calibrated to 99 ppm Isobutylene in air reading 57 ppm Span 9.8 w/ 10.2 eV lamp

Activity Log / Phone Log

0630 Secure Hotel for site – arrive 0715 Calibrate meters, Label Bottles and Sample LD-6. Purge off LD-LR-8. Purge DONE 0925
0930 off site to fax COC to S. Nowak & call Steve at office
1000 Stop @ weigh station to pick up ISCO – (ONLY 1 was sent w/o TUBING ???)
1030 Sample LD & LR8 K. Kearney to agency for tubing
1100 Set up for purge of M-21 – Start Purge @ 1120 w/ ISCO
1130 Called office for Ice & Check in w/ D. IYER (Progress update) No problems we will complete (6) m series today & (1) m series tomorrow all other wells done & will ship Coolers Samples airborne tonight.
1:00 K Kearney to Store for Electric Cord to run Pump off Car Battery
* all water is being Contained & DISPOSED of in Leachate Collection Ht
1500 Sample of M-21 Continue of Purge M-26. Purchase Ice
1800 Sample of M-26. Recharge Samples Prep COC
1815 Ice Coolers and → Airborne – off site @ 1815
1900 Arrive Airborne Sign over Samples End day 12 hrs – 72 Inch

Continued on Page

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Signed Date Signed Date

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PROJECT PAS Oswego

Notebook No. _____

Continued From Page _____

5/15/96 G.W. Purge / Sampling

Location LR-8 Start 0840

DTB 43.05 END 0920

DTW 9.08

VOL/3VOL 5.77/17.3 gallons

actual 18. Gallons method - Dedicated HDPE Bailer w/NYLON CORD

Field Paramater	Initial	Final
PH	7.89	7.38
COND	930	1500
Temp	15.4	14.3
Turbid	7.44	6.07
appear	Clear	Clear

Location LD-8 Start 0840

DTB 25.28 END 0905

DTW 7.80

VOL/3VOL 2.97/8.91 gallons

actual 11 Gallons method Dedicated HDPE Bailer w/NYLON CORD

Field Paramater	Initial	Final
PH	7.63	7.32
COND	240	750
Temp	16.2	14.1
Turbid	9.38	58.1
appear	Clear	Clear

Sampling

Sample ID - PAS-LD-6 PH 7.76

Sample Time 0800 COND 1010

DTW 20.51 Temp 9.9

Sample BY CS/KR Turbid 26.3

Paramaters 8240/8270 appear Clear

method Dedicated HDPE Bailer

this well was Purged 5/14/96 and allowed to Recover overnight

Extreamly Slow Recharge @ 1600 well was @ 27.10'

Continued on Page

C Sel 5/15/96

Signed Date

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PROJECT PAS Oswego

Notebook No. ____

Continued From Page ____

5/15/96 G.W. Purge / Sampling

Sampling

Sample ID	PAS-LD-8	PAS-LR-8
Sample Time	1030	1045
DTW	5.87	8.21
Sample By	CS/KK	CS/KK
Parameter	8240/8270	8240/8270
Method	Dedicated	HDPE Bailer
PH	7.61	7.00
COND	730	1490
Temp °C	10.4	10.3
Turbidity	8.6	5.04
appear	Clear	Clear
QC	None	MS/MSD

Purging

Location M-21 Start 1120

DTB 40.00 END 1420

DTW 8.60 Dia 6" well (1.50 factor

VOC/3304 47.1 gal / 141.3 gal

actual 142 Gallons

method Isco Pump w/ 1/2" HDPE (Dedicated) Tubing

Field Parameters	Initial	Final
PH	7.45	6.78
COND	880	1280
Temp	10.9	10.6
Turbid	49.6	6.61
appear	Clear	Clear

Sample

ID PAS-M-21

DTW 8.72

Time 1500

Parameters 8240/8270

method Dedicated HDPE Bailer w/ NYLON CORD

Field Parameters	
PH	7.54
COND	880
Temp	11.3
Turbid	14.5
appear	Clear

Continued on Page

Signed — Date — Read and Understood By — Signed — Date

5/15/96

PROJECT Pas Oswego

Notebook No.

Continued From Page

-/15/96 G.W. Purge; Sample

Location PAS-M-26 (Purge)

DTB 44.40

DTW 7.01

Vol/3 Vol 56.08/168.25

actual 169 gallons

Method: ISCO Pump w/ 1/2" Dedicated Tubing

Start 1430

End 1750

Diameter 6" (1.5/actor)

Field Parameters	Initial	Final
pH	8.03	7.73
Cond	60 umho	80 umho
Temp	13.8	9.34
Turbid	34.1	9.4
appear	Clear	Clear

Sampling

Sample ID: Pas-M-26

Sample Time: 1800

Samplers: CS/[illegible]

Parameters 8240/8270

Method: Dedicated HDPE Bailer w/ Nylon Cord

DTW: 7.11

Field Parameters

pH: ~~7.30~~ 7.80

Cond: 60

Temp: 15.1

Turbid: 3.24

appear: Clear

~~Restick of Leachate Tank 1 1/4" CS~~

Continued on Page

Signed: C. S[illegible] Date: 5/15/96

Read and Understood By

Signed Date

5/16/96 Activity Log / Calibration Purge

Weather overcast 50°F Rain
Personell: C. Scher K. Kearney

PH meter: 7.00 = 7.02 4.00 = 4.07 10.00 = 10.19
Conductivity Meter: 4145 umhs = 4160 3900 umhs = 3990
Turbidity: 0-10 = 4.74 10-100 = 49.6 100-1000 = 537
HNU: Calibrated w/99 ppm Isobutylene Reading 57 ppm Span 9.8 10.2 eV lamp

Activity / Phone Log

0730 Leave Syracuse Check out Hotel → Site. Arrive Site 0815
Calibrate meters & Setup for purge of M-25.
Start Purge of M-25 & Sample @1100
1115 TO TOPS Pick up ice for Sampler Rack cooler write up Coc
1130 Final Call to D. Iyer. Progress update all work complete
we will be securing Sight > clean up & Return to Buffalo
1230 Offsite Return to Buffalo
1600 Arrive Recra Sign over Last Sample Cooler & Return unused bottles. Drive K. Kearney Home
1700 End Day End Sampling 8 HR

1140
Called J. Novak Check on 5/15/96 bottles - No Breakage

Remeasure of Leachate Tank 1 3/4" @ 1200

Continued on Page

C. Scher 5/16/96
Signed Date

Read and Understood By
Signed Date

PROJECT PAS Oswego

Notebook No. _____

Continued From Page _____

5/16/96 G.W. Purge/Sample

Purge

Location M-25

Start 0825

DTB 35.20

End 1050

DTW 5.64

Diameter - 6" (factor 1.5)

Vol/3Vol 44.3/133.02

Actual 134

Method: ISCO Pump w/ dedicated 1/2" HDPE TUBING

Field Parameters	Initial	Final
pH	7.26	7.02
COND	500	790
Temp	8.1	8.5
Turbid	21.2	5.13
appear	clear	clear

Sampling

Sample ID: PAS-M-25

Sample Time: 1100

Samplers: CS/KH

Parameters: 8240/8270

Method: DEDICATED HDPE Bailer w/ NYLON CORD

Field Parameter	
pH	7.20
Conductivity	790
Temp	8.8 °C
Turbidity	6.01
appear	clear

Continued on Page

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5/16/96 — Date

Read and Understood By

Signed

Date

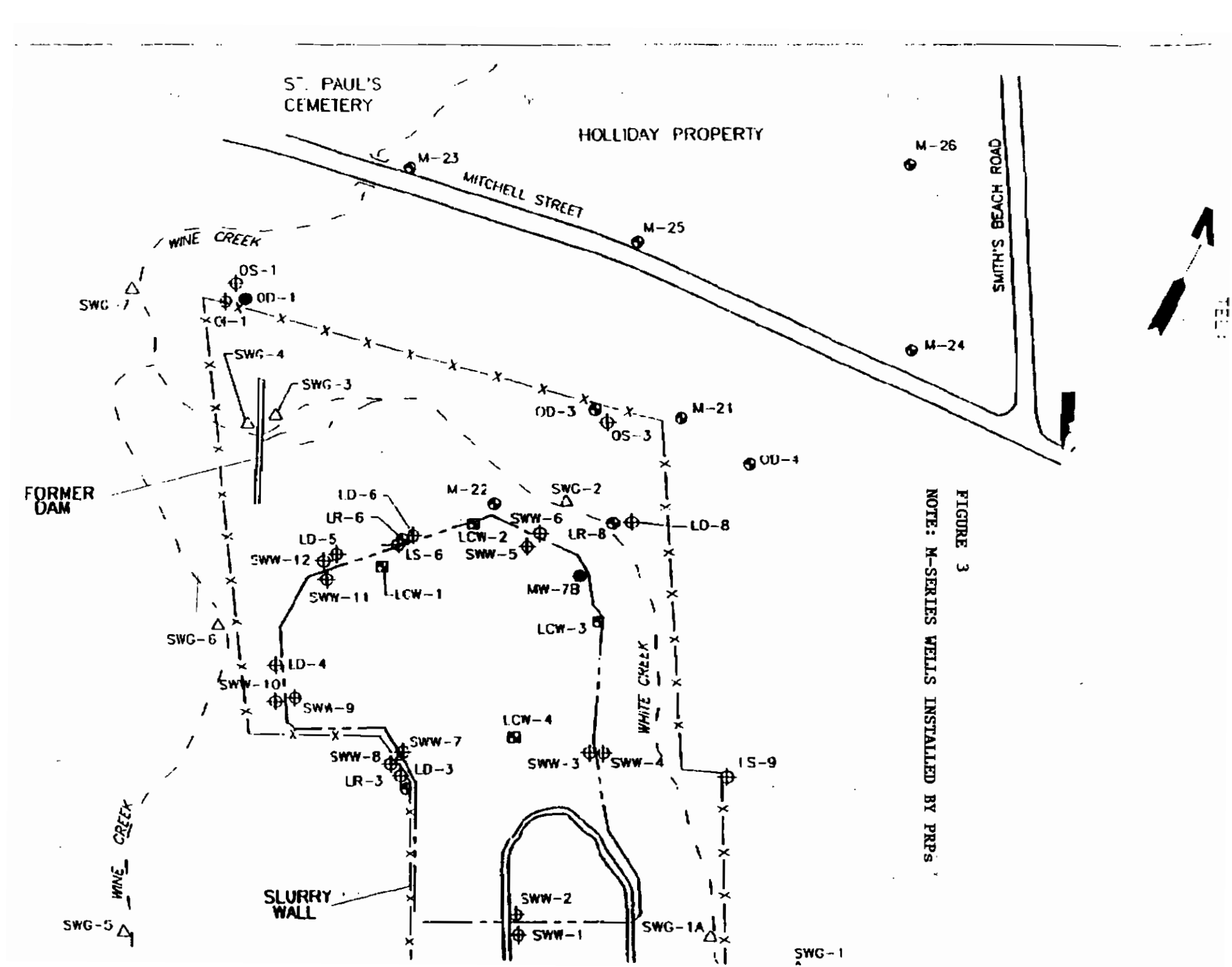
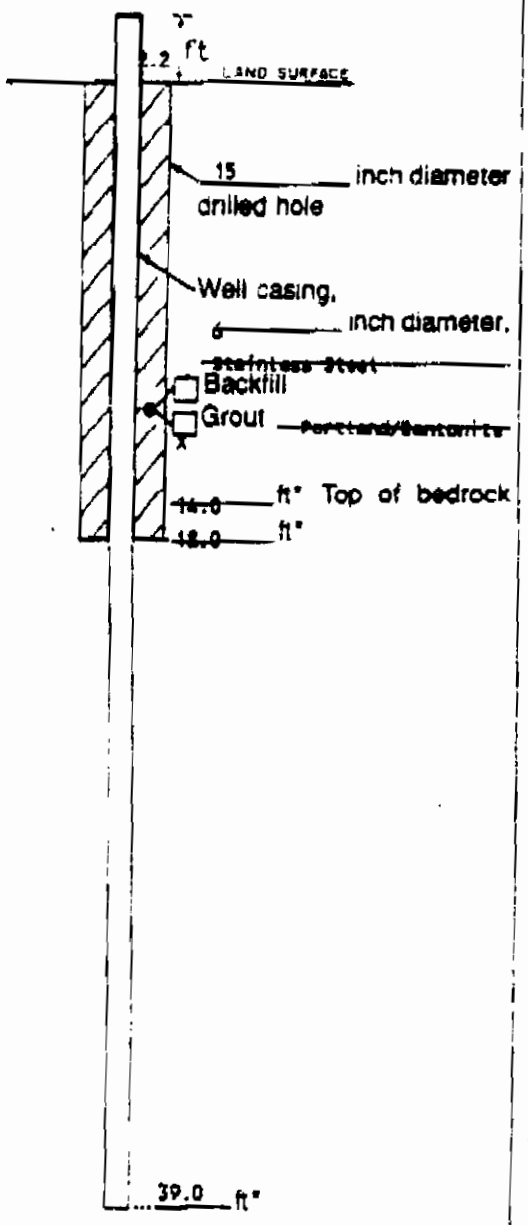


FIGURE 3

NOTE: M-SERIES WELLS INSTALLED BY PRPs

GERAGHTY & MILLER, INC.
Environmental Services

WELL CONSTRUCTION LOG
(BEDROCK)



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project PAS - NY50402 Well M-21
Town/City Oswego
County Oswego State New York
Permit No.
Land-Surface Elevation
and Datum 270.28 feet ☒ Surveyed
mean sea-level ☐ Estimated
Installation Date(s) 9/9/91 - 9/17/91
Drilling Method 6 1/4", 8 1/4", NX, P
Drilling Contractor Barcott Wolff, Inc.
Drilling Fluid Water

Development Technique(s) and Date(s)
Submersible Pump for 2.0 hours on 9/17/91
Centrifugal Pump (Rig) for 1.0 hours on 9/18/91

Fluid Loss During Drilling 30 - 40 gallons
Water Removed During Development Approximately 1,400 gallons
Static Depth to Water 11.21 feet below M.P
Pumping Depth to Water 34 feet below M.P.
Pumping Duration 1.0 hours
Yield 10.0 - 11.5 gpm Date 9/17, 9/18/91
Specific Capacity gpm/ft
Well Purpose Bedrock Ground Water Monitoring
Fracture Zones Horizontal/Angular: 18.6, 19.8, 20.0-22.0, 22.3, 24.6, 25.8, 33.0-34.0, 34.8, 38.1

Remarks
Vertical fracture zones: 15.7-16.8, 22.3-24.8, 38.1-38.8
Strong odor to water

Prepared by S. Beamer

GERAGHTY & MILLER, INC.
Environmental Services

SAMPLE/CORE LOG

Boring/Well M-21 Project/No. PAS - NY50402 Page 1 of 2

Site Location Oswego, New York Drilling Started 9/9/91 Drilling Completed 9/17/91

Total Depth Drilled 39.0 feet Hole Diameter 15 inches Type of Sample/ Coring Device Split Spoon

Length and Diameter of Coring Device 2' x 2" Sampling Interval 2 feet

Land-Surface Elev. ____ feet ☐ Surveyed ☐ Estimated Datum ____

Drilling Fluid Used None 0 - 14.0'; Water 14.0 - 39.0' Drilling Method 4 1/4", 8 1/4", NX, P

Drilling Contractor Perratt Wolff, Inc. Driller Rice Helper Lensing/Eaves

Prepared By S. Beames Hammer Weight 140# Hammer Drop 30 inches

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	SAMPLE ID	Sample/Core Description
0	2	1.5	3-4-6-8	No lab	SAND (80%) brown, coarse to medium, trace fine; Top Soil (10%)
				samples	organics, silt; Silt (5%) brown; Gravel (5%) fine, subround,
				taken	trace medium to coarse; poorly sorted, damp.
2	4	1.5	8-7-7-10		SAND (70%) brown, medium to fine, trace coarse; Silt (30%)
					brown; trace fine gravel, trace organics, moist.
4	6	0.0	50/0.1		Cobbles/Boulders 4.1 - 6.0'
6	8	1.4	17-27-		SAND (60%) brown, coarse to medium, trace fine; Gravel (40%)
			50/0.4		coarse to fine, subangular (fragmented) to subround; poorly
					sorted, cobbles present, moderately compacted, moist.
7.5	9.1				Boulder/Cobbles
10	12	0.8	32-50/0.3		Same as above (moist - wet).
12	14	1.0	49-61		Same as above (wet).
14		0.0	50/0.0		Rock.
14.3	19.3	5.08	(100%)		Bedrock - SANDSTONE, green, fine, medium hard to hard,
NX-1	RQD	4.8/5	(96%)		competent, trace green siltstone gravel/fragments throughout
					(dropstones?), very little weathering, horizontal bedding, trace
					crossbedding (18.0'), trace fine gravel (18.4'), wet.
					Horizontal fractures: well developed, 18.6';
					Vertical: 15.2 - 16.8', healed 18.6 - 19.3'.

GERAGHTY & MILLER, INC.
Environmental Services

SAMPLE/CORE LOG (Cont.d)

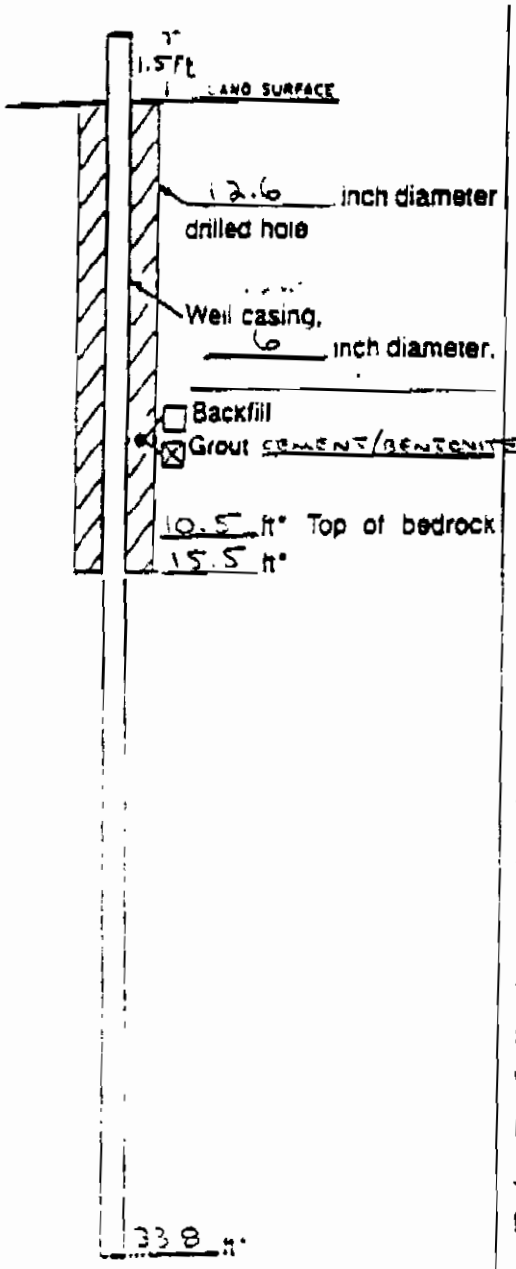
Boring/Well M-21 Page 2 of 2

Prepared By B. Beamer

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 inches	SAMPLE ID	Sample/Core Description
19.3	24.3	4.9/5	(98%)		SANDSTONE - same as above. Varying amounts of silt
NX-2	RQD	4.0/4.9	(81%)		(ie silty fine sandstone at 21.3', 22.3 - 22.6'). Horizontal
					fractures: 19.8', 22.3'. Fractured at angle: 20.1', 20.6',
					20.7', 20.8', 20.9', 21.9'. Vertical fractures: 22.3 - 24.3'
24.0	29.0	4.5	(89%)		SANDSTONE - same as above.
P-1	RQD	2.92/4.5	(65%)		Well developed horizontal fractures 24.25', 24.6', 25.8'.
29.0	34.0	4.7	(94%)		SANDSTONE - same as above.
P-2	RQD	3.0/4.7	(64%)		Trace coarse sand, siltstones 29.0 - 29.2', black
					staining 30.25'.
34.0	39.0	4.8	(96%)		SANDSTONE - same as above.
P-3	RQD	3.94/4.8	(82%)		Upper 3" fractured. At 34.8' fracture and gravel zone
					approximately 0.04' thick. Healed vertical fracture/crack
					38.1 - 38.8'. Horizontal fracture 38.1'.
39.0					End of coring.
					Water at 11.21'

DRAFT

WELL CONSTRUCTION LOG
(BEDROCK)



Measuring Point is Top of Well Casing Unless Otherwise Noted.

*Depth Below Land Surface

Project SPDES / DAS SITE Well M-25

Town/City OSWEGO

County _____ State NEW YORK

Permit No. _____

Land-Surface Elevation

and Datum 268 feet ☐ Surveyed ☒ Estimated

Installation Date(s) 7/13/94 - 7/21/94

Drilling Method _____

Drilling Contractor _____

Drilling Fluid _____

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water _____ feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose _____

Fracture Zones _____

Remarks _____

Prepared by _____

ROUX

DRAFT

Project: SPRDS PAS Site, Oswego, New York	Log of Well No. M-25
Date Started: 7/13/94 Completed: 7/21/94	Measuring Point Elevation: Total Depth: 33.8 ft
Logged By: J. Makowski Checked By: L. McTiern	Water Level During Drilling: 8.5 ft Post-Development: 8.6 ft
Drilling Co: Parratt-Wolff Driller: Mark Eaves	Casing: 6-Inch Stainless Steel Drill Bit Diameter: 5.4 in.
Drilling Method: Water Rotary	Perforation: from to
Drilling Equipment: Mobile Drill B-57 DRAFT	Pack: from to
Sampler: 2-Inch Split Spoon	Seal: from to
	Cement/Bentonite Grout from 0.0 to 15.5

Depth (feet)	LITHOLOGIC DESCRIPTION	Lithology	Monitoring Well Construction	Sampler	Blows per 6"	PID (ppm)	REMARKS
	Light and dark brown SILT, little fine Gravel, trace fine Sand, roots throughout; angular gravel; slight plasticity; dry.	SILT			4 5 5 11	0.0	Casing stick-up is 1.5' above land surface. Split-spoon sample contained 1.2' of recovery.
		SAND					Hard drilling from 4'-5' bls.
5	Light brown fine SAND, little fine Gravel, trace Silt; angular gravel; slight plasticity; moist.				8 26 50/4"	0.0	Split-spoon sample contained 0.5' of recovery.
		SILT					Hard drilling from 7'-8' bls.
							Soil cuttings appear wet at 8.5' bls.
10	Light gray SILT, little fine Gravel; angular gravel; wet.				12 50/3"	0.0 0.0	Split-spoon sample contained 0.3' of recovery. Hard drilling at 10' bls.
		SANDSTON					
	Gray SANDSTONE.						Core from 10.5'-15.5' bls: Recovery 4.8', RQD 69%. Vertical fracturing from 10.83'-11.65' bls.
15	Gray SANDSTONE.					0.0	Bottom of steel casing 15.5' bls.
							Core from 15.5'-18.0' bls: Recovery 2.1', RQD 30%.
	Gray SANDSTONE, trace green Shale fragments.					0.0	Core from 18.0'-21.0' bls: Recovery 2.76', RQD 29%.
20	Gray SANDSTONE, trace green Shale fragments.					0.0	Core from 21.0'-21.8' bls: Recovery 1.6' (broken rock), RQD 47%.
	Gray SANDSTONE.					0.0	Core from 21.8'-23.0' bls: Recovery 1.95', RQD 86%. Iron staining noted approximately 22.6' bls.
	Gray SANDSTONE.						Core from 23.0'-28.0' bls: Recovery 5.16', RQD 98%.
25							

Continued Next Page

ROUX

Project: SPRDS
PAS Site, Oswego, New York

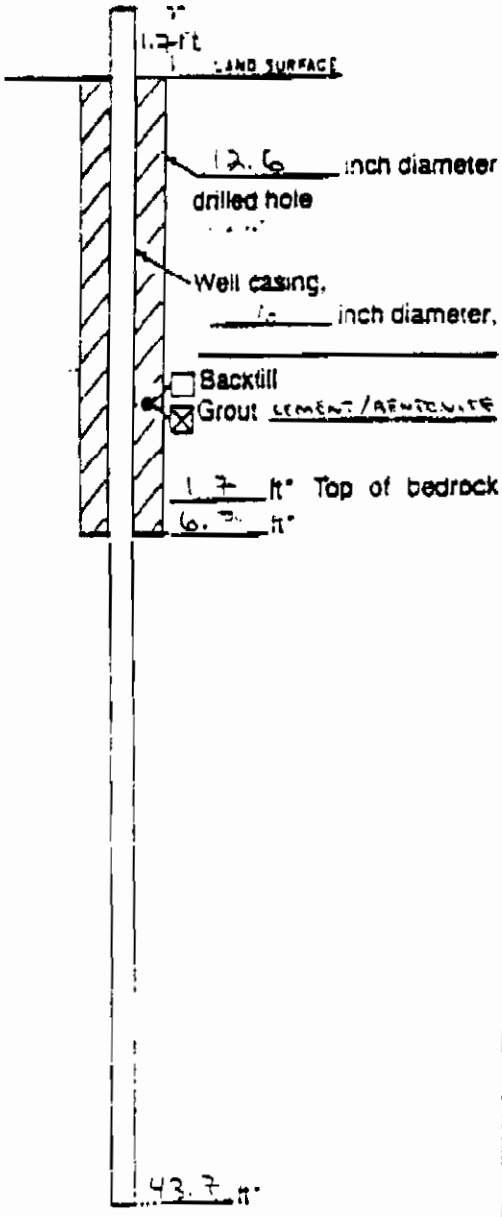
Log of Well No. M-25

DRAFT

Depth (feet)	LITHOLOGIC DESCRIPTION	Lithology	Monitoring Well Construction	Sampler Blows per 6"	PID (ppm)	REMARKS
30	Gray SANDSTONE.				0.0	Core from 28.0'-33.0' bls: Recovery 5.03', RQD 82%. Vertical fracturing from 28.4'-30.05' bls.
35						Bottom of measured borehole at 33.79' bls.
40	DRAFT					
45						
50						

DRAFT

WELL CONSTRUCTION LOG
(BEDROCK)



Measuring Point is Top of Well Casing Unless Otherwise Noted.

°Depth Below Land Surface

Project SPDES / PRB SITE Well M-26

Town/City OSWEGO

County _____ State NEW YORK

Permit No. _____

Land-Surface Elevation and Datum 272 feet ☐ Surveyed ☒ Estimated

Installation Date(s) 7/14/94 - 7/26/94

Drilling Method _____

Drilling Contractor _____

Drilling Fluid _____

Development Technique(s) and Date(s)

Fluid Loss During Drilling _____ gallons

Water Removed During Development _____ gallons

Static Depth to Water _____ feet below M.P.

Pumping Depth to Water _____ feet below M.P.

Pumping Duration _____ hours

Yield _____ gpm Date _____

Specific Capacity _____ gpm/ft

Well Purpose _____

Fracture Zones _____

Remarks _____

Prepared by _____

ROUX

Project: SPRDS PAS Site, Oswego, New York	Log of Well No. M-26 DRAFT
Date Started: 7/14/94 Completed: 7/26/94	Measuring Point Elevation: Total Depth: 43.7 ft
Logged By: J. Makowski Checked By: L. McTiern	Water Level During Drilling: 12.2 ft Post-Development: 13.0 ft
Drilling Co: Parratt-Wolff Driller: Mark Eaves	Casing: 6-Inch Stainless Steel Drill Bit Diameter: 5.4 in.
Drilling Method: Water Rotary	Perforation: from to
Drilling Equipment: Mobile Drill B-57	Pack: from to
Sampler: 2-Inch Split Spoon	Seal: from to
	Cement/Bentonite Grout from 0.0 to 6.5

Depth (feet)	LITHOLOGIC DESCRIPTION	Lithology	Monitoring Well Construction	Sampler	Blows per 6"	PID (ppm)	REMARKS
	Light brown SILT, little fine Gravel, trace fine Sand, roots throughout; slight plasticity; dry.	SILT			4 9 25/3"	0.0	Casing stick-up is 1.7' above land surface. Split-spoon sample contained 1.0' of recovery.
		SANDSTON				0.0	Hard drilling at 1.5' bls.
	Gray SANDSTONE (weathered).						Core from 1.7'-6.7' bls: Recovery 5.0', RQD 35%.
5	DRAFT						
							Bottom of steel casing 6.5' bls.
	Gray SANDSTONE (weathered).					0.0	Core from 6.7'-8.7' bls: Recovery 2.2', RQD 34%.
	Gray SANDSTONE.					0.0	Core from 8.7'-13.7' bls: Recovery 5.1', RQD 75%. Iron staining noted approximately 13.25' bls.
10							
	Gray SANDSTONE, trace gray Shale fragments.					0.0	Core from 13.7'-18.7' bls: Recovery 4.8', RQD 69%.
15							
	Gray SANDSTONE, trace gray Shale fragments.					0.0	Core from 18.7'-23.7' bls: Recovery 4.9', RQD 72%.
20							
	Gray SANDSTONE.					0.0	Core from 23.7'-28.7' bls: Recovery 4.85', RQD 68%. Vertical fracture noted approximately 24.9' bls.
25							

Continued Next Page

ROUX

Project: SPRDS
PAS Site, Oswego, New York

Log of Well No. M-26 DRAFT

Depth (feet)	LITHOLOGIC DESCRIPTION	Lithology	Monitoring Well Construction	Sampler	Blows per 6"	PID (ppm)	REMARKS
30	Gray SANDSTONE.					0.0	Core from 28.7'-33.7' bls: Recovery 4.78', RQD 94%.
	DRAFT						
35	Gray SANDSTONE, trace blue-green Shale fragments.					0.0	Core from 33.7'-38.7' bls: Recovery 5.0', RQD 87%.
40	Gray SANDSTONE, trace blue-green Shale fragments.					0.0	Core from 38.7'-43.7' bls: Recovery 5.15', RQD 85%.
							Bottom of measured borehole at 43.7' bls.
45							
50							

URS
AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

URS CONSULTANTS, INC.
282 DELAWARE AVENUE
BUFFALO, NEW YORK 14202-1805
(716) 856-5636
FAX: (716) 856-2545

March 15, 1996

Mr. Ronnie Lee, P.E., Project Manager
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

RE: NYSDEC STANDBY CONTRACT
WORK ASSIGNMENT D002340-8 MONTHLY REPORT
POLLUTION ABATEMENT SERVICES - O & M

Dear Mr. Gupta:

Enclosed is a copy of the Progress Report for the month of February 1996 for Work Assignment D002340-8, Pollution Abatement Services - O&M. At the Department's direction, Progress Reports and Payment Requests are submitted only when the cumulative work effort and associated costs exceed the minimum level.

Per our discussion, we are discontinuing the preparation of Monthly Time Reports (MTRs) since we anticipate the remainder of this Work Assignment to be similar to the last five years. Separate explanations of labor charges will be included in the progress reports as and when out-of-scope work is performed.

The next progress report will be submitted with the laboratory invoice.

Very truly yours,

URS CONSULTANTS, INC.

Dharmarajan R. Iyer, Ph.D., P.E.
Task Manager

Enclosure

cc: Mr. John Gorton - URS
File: 35236.00 (1005)

J\35236\WP\COR\PROGRESS.#39 ba

MONTHLY REPORT NO. 39
POLLUTION ABATEMENT SERVICES - O & M
FEBRUARY 1996

CONTRACT NO.	D002340
W.A. NO.:	D002340-8
DEC SITE NO.:	7-38-001
DEC PROJECT MANAGER:	Ronnie Lee, P.E.
TELEPHONE NO.:	(518) 457-4254
URS TASK MANAGER:	Dharmarajan R. Iyer, Ph.D., P.E.
TELEPHONE NO.:	(716) 856-5636

PROGRESS FOR PERIOD

- Reviewed RCRA invoice for analysis.

OUTSTANDING ISSUES AND POTENTIAL PROBLEM AREAS

- None.

ANTICIPATED ACTIVITIES DURING THE FOLLOWING MONTHS

- Perform the Spring 1996 and Fall 1996 site monitoring.
- Prepare and submit a Comprehensive Site Monitoring Report at the end of this work Assignment.
- Provide overlap training for continuation of site monitoring, if necessary.
- Closeout the payment issues with Environmental Products & Services for leachate disposal.

LABORATORY SUMMARY

- None

DELIVERABLE SC_ :DULE

	ACTIVITY	SCHEDULED DATE	ACTUAL DATE
1.	Submission of Draft Work Plan (Task 1)	06/25/90	08/01/90[1]
	Submission of Final Work Plan	07/17/90	09/28/90[1]
	Work Plan Approval/Notice to Proceed	07/24/90	10/10/90[1]
2.	a. Evaluation Report of Leachate System (Task 2)	11/30/90	11/30/90
	b. Evaluation Report of Containment Cell (Task 3)	11/30/90	11/30/90
3.	Task 4 - Monitoring of Site		
	a) Laboratory Subcontract Quotes	07/23/90	09/30/90[2]
	b) Revised Monitoring Plan	09/17/92	03/04/92[5]
	c) Letter Report	2/96[6]	
4.	Task 5 - Construction Plans and Specifications		
	a) Submit Draft Plans/Specs.	Within 60 days of direction to prepare plans and specs.	
	b) Submit Final Plans/Specs.	Within 30 days of Department comments on draft plans and specs.	
5.	Task 6 - Operation and maintenance (O&M) Plan		
	a) Submit Draft O&M Plan and O&M Manual	02/01/91	02/01/91
	Comments on Draft O&M Plan and O&M Manual	02/15/91	03/20/91[4]
	b) Submit Final O&M Plan and O&M Manual	03/01/91	04/05/91[4]
	c) Submit Subcontract/Subcontractors Available		
	Leachate Collection/Disposal	11/10/90	12/20/90[3]
	All Other Subcontracts	02/10/91	12/20/90
	d) Review and Modify O&M Plan and O&M Manual	09/17/92	03/04/92[4]
	e) Provide Overlap Training	2/97[6]	

NOTES:

1, 2 and 3) See Monthly Progress Report No. 6.

4) See Monthly Progress Report No. 11.

5) Monitoring program was revised effective Spring 1992. The O&M for this site will be further reviewed near the end of this Work Assignment.

6) Schedule revised due to third extension of environmental monitoring.

FINANCIAL STATUS REPORT

- For task details, see Cost Control Report for this reporting period.

- Per our discussion, we are discontinuing the preparation of Monthly Time Reports (MTRs) since we anticipate the remainder of this Work Assignment to be similar to the last five years. Separate explanations of labor charges will be included in the progress reports as and when out-of-scope work is performed.

URS
AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

URS CONSULTANTS, INC.
282 DELAWARE AVENUE
BUFFALO, NEW YORK 14202-1805
(716) 856-5636
FAX: (716) 856-2545

February 16, 1996

Mr. Ronnie Lee, P.E., Project Manager
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

RE: NYSDEC STANDBY CONTRACT
WORK ASSIGNMENT D002340-8 MONTHLY REPORT
POLLUTION ABATEMENT SERVICES - O & M

Dear Mr. Gupta:

Enclosed is a copy of the Progress Report for the months of December 1995 through January 1996 for Work Assignment D002340-8, Pollution Abatement Services - O&M. At the Department's direction, Progress Reports and Payment Requests are submitted only when the cumulative work effort and associated costs exceed the minimum level.

Monthly Time Reports (MTRs) filled by personnel who worked on this project during this billing period are also included as per your request.

The next progress report will be submitted with the laboratory invoice.

Very truly yours,

URS CONSULTANTS, INC.

Dharmarajan R. Iyer, Ph.D.
Task Manager

Enclosure

cc: Mr. John Gorton - URS
File: 35236.00 (1005)

J\35236\WP\COR\PROGRESS.#36 na

MONTHLY REPORT NO. 37
POLLUTION ABATEMENT SERVICES - O & M
DECEMBER 1995 THROUGH JANUARY 1996

CONTRACT NO.	D002340
W.A. NO.:	D002340-8
DEC SITE NO.:	7-38-001
DEC PROJECT MANAGER:	Ronnie Lee, P.E.
TELEPHONE NO.:	(518) 457-4254
URS TASK MANAGER:	Dharmarajan R. Iyer, Ph.D., P.E.
TELEPHONE NO.:	(716) 856-5636

PROGRESS FOR PERIOD

- Validated data
- Prepared and submitted Summary Report for the Fall 1995 site monitoring.
- At the Department's request, developed and submitted Re-Budget No.3 for Department approval. This re-budget provides for one more year of monitoring at the site, and extends the Work Assignment to December 1996.

OUTSTANDING ISSUES AND POTENTIAL PROBLEM AREAS

- None.

ANTICIPATED ACTIVITIES DURING THE FOLLOWING MONTHS

- Perform the Spring 1996 and Fall 1996 site monitoring.
- Prepare and submit a Comprehensive Site Monitoring Report at the end of this work Assignment.
- Provide overlap training for continuation of site monitoring, if necessary.
- Closeout the payment issues with Environmental Products & Services for leachate disposal.

LABORATORY SUMMARY

- None

DELIVERABLE SCHEDULE

	ACTIVITY	SCHEDULED DATE	ACTUAL DATE
1.	Submission of Draft Work Plan (Task 1)	06/25/90	08/01/90[1]
	Submission of Final Work Plan	07/17/90	09/28/90[1]
	Work Plan Approval/Notice to Proceed	07/24/90	10/10/90[1]
2.	a. Evaluation Report of Leachate System (Task 2)	11/30/90	11/30/90
	b. Evaluation Report of Containment Cell (Task 3)	11/30/90	11/30/90
3.	Task 4 - Monitoring of Site		
	a) Laboratory Subcontract Quotes	07/23/90	09/30/90[2]
	b) Revised Monitoring Plan	09/17/92	03/04/92[5]
	c) Letter Report	2/96[6]	
4.	Task 5 - Construction Plans and Specifications		
	a) Submit Draft Plans/Specs.	Within 60 days of direction to prepare plans and specs.	
	b) Submit Final Plans/Specs.	Within 30 days of Department comments on draft plans and specs.	
5.	Task 6 - Operation and maintenance (O&M) Plan		
	a) Submit Draft O&M Plan and O&M Manual	02/01/91	02/01/91
	Comments on Draft O&M Plan and O&M Manual	02/15/91	03/20/91[4]
	b) Submit Final O&M Plan and O&M Manual	03/01/91	04/05/91[4]
	c) Submit Subcontract/Subcontractors Available		
	Leachate Collection/Disposal	11/10/90	12/20/90[3]
	All Other Subcontracts	02/10/91	12/20/90
	d) Review and Modify O&M Plan and O&M Manual	09/17/92	03/04/92[4]
	e) Provide Overlap Training	2/97[6]	

NOTES:

1, 2 and 3) See Monthly Progress Report No. 6.

4) See Monthly Progress Report No. 11.

5) Monitoring program was revised effective Spring 1992. The O&M for this site will be further reviewed near the end of this Work Assignment.

6) Schedule revised due to extension of environmental monitoring by three years.

FINANCIAL STATUS REPORT

- See January 1996 billing summary.

- Monthly Time Reports (MTRs) by personnel who worked on this assignment during this reporting period are attached as requested by the Department.

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE Nancy Alessi Nancy Alessi 1/26/96

CONSULTANT URS Consultants

TASK NO. & DESCRIPTION

WORK ASSIGNMENT NUMBER DO02340 - 8

MONTH ENDING 11/27/95 - 1/26/96

HOURS (REGULAR & OVERTIME)

DATE			11/27		11/28																12/15				1/8			1/10																										TOTAL	
DAY	S	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		R	OT
	OT	R		R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT		
Progress Reports/ Wp Reports			2		.5																1				1			1																														5.5	
TOTALS			2		.5																1				1			1																														5.5	

NO.	TASK NAME & DETAILED TASK DESCRIPTION	DATE	TIME REG	UI
	Progress Reports/WP Reports	11/27/95 to 1/26/96	5.5	
	TOTALS		5.5	

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE: *Teresa Alessi* TERESA ALESSI 1/26/96

WORK ASSIGNMENT NUMBER 000 2340-8

CONSULTANT: URS

MONTH ENDING: 11/27/95 – 1/26/96

TASK NO. & DESCRIPTION

HOURS (REGULAR & OVERTIME)

DATE / DAY	S	MON	TUE	WED	THU 1/25	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	TOTAL
	OT	R / OT	R / OT	R / OT	R / OT	R / OT	OT	OT	R / OT	R / OT	R / OT	R / OT	R / OT	OT	OT	R / OT	R / OT	R / OT	R / OT	R / OT	OT	OT	R / OT	R / OT	R / OT	R / OT	R / OT	OT	OT	R / OT	R / OT	R / OT
Task 4					R 2.0																											R 2.0
TOTALS					R 2.0																											R 2.0

NO.	TASK NAME & DETAILED TASK DESCRIPTION	DATE	TIME REG	U
4	Report / Monitoring	1/25	2.0	—
	TOTALS		2.0	—

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE: DHARMARAJAN R. IYER 1/26/96

CONSULTANT: URS CONSULTANTS

TASK NO. & DESCRIPTION:

WORK ASSIGNMENT NUMBER: DO02340-8

MONTH ENDING: 12/27/95 – 1/26/96

HOURS (REGULAR & OVERTIME)

TASK NO. & DESCRIPTION	DATE						12/27		12/28								1/2				1/4	1/5			1/8	1/9	1/10	1/11					1/22					1/26							TOTAL	
	DAY	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		WED		THU	FRI			MON	TUE	WED	THU					MON	TUE	WED	THU		FRI							R	OT
		OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT	R	R	OT	OT	R	OT	R	OT	R	OT	R	OT	R	OT	R	OT	R	OT	R	OT	R	OT	R	OT		
Site Monitoring							1		2								1				1	2			1	1	1	1					1					4							16	
TOTALS							1		2								1				1	2			1	1	1	1					1					4							16	

TASK NAME & DETAILED TASK DESCRIPTION	DATE	REG	OT
4: Re-budgeting for one more year of monitoring	12/19/95 – 1/11/96	12	
5. Review/revise Fall 1995 Monitoring Report	1/22–1/26	4	
TOTALS		16	

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE Svetlana Khiteix [signature] 02/20/96

CONSULTANT URS Consultants

WORK ASSIGNMENT NUMBER D00 2340-8

MONTH ENDING 01/31/96

TASK NO. & DESCRIPTION

HOURS (REGULAR & OVERTIME)

DATE / DAY	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		WED		THU 01/18/96		FRI		S	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		TOTAL	
	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT
Task-4 monitoring of site																																2																						2	—
TOTALS																																2																						2	—

O.	TASK NAME & DETAILED TASK DESCRIPTION	DATE	REG	OT
	Task-4 Monitoring of site PAS Oswego - Data Validation and Validation report	01/18/96	2	—
	TOTALS		2	—

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE George E. Kisluk [signature] 1/16/96

CONSULTANT URS Consultants

WORK ASSIGNMENT NUMBER DOO 2340-8

MONTH ENDING 12-31-95

TASK NO. & DESCRIPTION

HOURS (REGULAR & OVERTIME)

TASK NO. & DESCRIPTION	S	MON	TUE	WED	THU	FRI 12/1	S	S	MON 12/4	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	TOTAL R	TOTAL OT
Task-4 Monitoring of Site						1.5			.5																							2	—
TOTALS						1.5			.5																							2	—

...	TASK NAME & DETAILED TASK DESCRIPTION	DATE	TIME REG	TIME OT
4	Task-4 Monitoring of site Daily Status of analytical work by Recra Environmental	12/1, 12/4	2	
	TOTALS			

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE George E. Kisluk [signature] 2/1/96

CONSULTANT URS Consultants

TASK NO. & DESCRIPTION

WORK ASSIGNMENT NUMBER 000 2340-8

MONTH ENDING 1-31-96

HOURS (REGULAR & OVERTIME)

TASK NO. & DESCRIPTION	S	MON 1/1/96	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE 1/16	WED 1/17	THU 1/18	FRI 1/19	S	S	MON 1/22	TUE 1/23	WED 1/24	THU 1/25	FRI	S	S	MON 1/29	TUE	TOTAL
Task 4 - Monitoring of Site																	.5	.5	5.5	4			4	.5	.5	.5				1.5		17.5
TOTALS																	.5	.5	5.5	4			4	.5	.5	.5				1.5		17.5

	TASK NAME & DETAILED TASK DESCRIPTION	DATE	TIME REG	TIME OT
4	TASK-4 Monitoring of Site PAS Oswego - Data Validation and Validation report	1/16/96-1/[illegible]/96	17.5	—
	TOTALS		17.5	—

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE Stephen J. Nowak [signature]

CONSULTANT URS CONSULTANTS

TASK NO. & DESCRIPTION

WORK ASSIGNMENT NUMBER D00 2340-8

MONTH ENDING 12-31-95

HOURS (REGULAR & OVERTIME)

DATE																									12/27	12/28						
DAY	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	TOTAL
Task-4 Monitoring of Site																									R 4	R 2						R 6
TOTALS																									4	2						6

TASK NAME & DETAILED TASK DESCRIPTION	DATE	TIME REG	OT
Task 4 – MONITORING OF SITE PAS OSWEGO – DATA VALIDATION	12/27/95	4	–
Task 4 – MONITORING OF SITE PAS OSWEGO – DATA VALIDATION	12/28/95	2	–
TOTALS		6	–

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE STEPHEN J. NOWAK [signature] 2/20/96

CONSULTANT URS CONSULTANTS

WORK ASSIGNMENT NUMBER DOO 2340-8

MONTH ENDING 1-31-96

HOURS (REGULAR & OVERTIME)

TASK NO. & DESCRIPTION	S OT	MON R	MON OT	TUE 1/2 R	TUE 1/2 OT	WED 1/3 R	WED 1/3 OT	THU R	THU OT	FRI R	FRI OT	S OT	S OT	MON R	MON OT	TUE R	TUE OT	WED R	WED OT	THU R	THU OT	FRI R	FRI OT	S OT	S OT	MON R	MON OT	TUE R	TUE OT	WED R	WED OT	THU R	THU OT	FRI R	FRI OT	S OT	S OT	MON R	MON OT	TUE R	TUE OT	WED R	WED OT	THU R	THU OT	FRI R	FRI OT	S OT	S OT	MON R	MON OT	TUE R	TUE OT	TOTAL R	TOTAL OT
Task 4 - Monitoring of Site				2.5		3																																																5.5	-
TOTALS				2.5		3																																																5.5	-

TASK NAME & DETAILED TASK DESCRIPTION	DATE	TIME REG	OT
Task 4 – MONITORING OF SITE PAS Oswego – Data Validation	1/2/96	2.5	
Task 4 – MONITORING OF SITE PAS OSWEGO – Data Validation	1/3/96	3.0	
TOTALS		5.5	–

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE *Connie Paata* *Connie Paata* *2/20/96*

CONSULTANT *URS Consultants, Inc.*

WORK ASSIGNMENT NUMBER D00 *2340-8*

MONTH ENDING *12/27/95 - 1/26/96*

HOURS (REGULAR & OVERTIME)

TASK NO. & DESCRIPTION	S OT	MON R	MON OT	TUE R	TUE OT	WED R	WED OT	THU R	THU OT	FRI R	FRI OT	S OT	S OT	MON R	MON OT	TUE R	TUE OT	WED R	WED OT	THU R	THU OT	FRI R	FRI OT	S OT	S OT
Task 4- Monitoring of Site																									
TOTALS																									

TASK NO. & DESCRIPTION	MON R	MON OT	TUE R	TUE OT	WED R	WED OT	THU R	THU OT	FRI R	FRI OT	S OT	S OT	MON R	MON OT	TUE R	TUE OT	WED R	WED OT	THU (1/25) R	THU OT	FRI R	FRI OT	S OT	S OT	MON R	MON OT	TUE R	TUE OT	TOTAL R	TOTAL OT
Task 4- Monitoring of Site																			.5										.5	
TOTALS																			.5										.5	

NO.	TASK NAME & DETAILED TASK DESCRIPTION	DATE	TIME REG	TIME OT
	DEC - Task 4 - Monitoring/Data Validation Report	12/27/95 1/25/96	.5	—
	TOTALS		.5	✓

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE: Phyllis Rettke — Phyllis J Rettke

CONSULTANT

TASK NO. & DESCRIPTION

WORK ASSIGNMENT NUMBER DOO 2340-8

MONTH ENDING 1-31-96

HOURS (REGULAR & OVERTIME)

DATE				12/27	12/28					1/2	1/3	1/4	1/5			1/8	1/9															
DAY	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	WED	THU	FRI	S	S	MON	TUE	TOTAL R / OT
Budget Revisions, Task 4 - Site Monitoring				6	6					1.5	5	6	2			3.5	2															32 / –
TOTALS				6	6					1.5	5	6	2			3.5	2															32 / –

NO.	TASK NAME & DETAILED TASK DESCRIPTION	DATE	REG	OT
	Task 4 - Site monitoring PAS Oswego - Budget Revisions	12/22	6	-
	" "	12/28	6	-
	" "	1/2	1.5	—
	" "	1/3	5	—
	" "	1/4	6	—
	" "	1/5	2	—
	" "	1/8	3.5	—
	" "	1/9	2	—
	TOTALS		32	—

MONTHLY TIME REPORT

EMPLOYEE NAME, SIGNATURE, DATE CHERYL SCHER, C. Scher (Ren) 2/20/96

CONSULTANT URS

TASK NO. & DESCRIPTION

WORK ASSIGNMENT NUMBER D00 2340-8

MONTH ENDING 1/26/96

HOURS (REGULAR & OVERTIME)

DATE / DAY	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		WED		THU		FRI		S	S	MON		TUE		TOTAL	
										1/19																																													
	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT	R	OT	R	OT	OT	OT	R	OT	R	OT	R	OT
TASK 4: SITE MONITORING										2																																												2	-
TOTALS										2																																												2	-

TASK NAME & DETAILED TASK DESCRIPTION	DATE	TIME REG	TIME OT
TASK 4 – DATA COMPILATION	1/19/96	2	—
TOTALS		2	—