Semi-Annual Report

Maxey Flats Disposal Site

Reporting Period: **January 2004 – June 2004**

Monitoring Results

This section covers tasks performed during this reporting period to comply with the Interim Maintenance Period Work Plan (IMP) that includes the Performance Standard Verification Plan (PSVP) and the Operation and Maintenance Summary Requirements (O&M).

Surface Water (PSVP 3.1.2)

Surface water sampling for locations 102D, 103E, 106, 107C, 122A, 122C, 143, and 144 is performed using an automatic sequential sampler that collects and composites a daily sample. The East Detention Basin (EDB) collects a sample based on a storm event of 2.8-inches during a twenty-four hour period.

A total of 1,513 surface water samples have been collected and analyzed for tritium during this period with no anomalous data reported. Table 1 contains a summary of the data obtained during this reporting period.

The flow meter/rain gauge at the East Detention Basin installed during the Initial Remedial Phase malfunctioned due to loss of power. A different type of backup power source is being obtained to prevent this type of malfunction from recurring. All other samplers operated without interruptions during the reporting period

Alluvial Wells (PSVP 3.1.2.2)

During this reporting period, a total of 20 samples from the alluvial wells were collected and analyzed for tritium. The tritium levels detected in the alluvial wells varied from 0.00 to 17.12 pCi/ml. Table 2 is a summary of the data obtained during this reporting period.

An increase in tritium activity for alluvial well AW-1 was observed during the annual sampling event in April 2004. The tritium activity increased from 13.4 pCi/ml in April 2003 to 17.12 pCi/ml in April 2004. Due to the increase tritium activity detected, additional samples were collected during May and June 2004. Results of the additional sampling were 15.34 pCi/ml (May) and 15.05 pCi/ml (June).

In accordance with the Performance Standard Verification Plan (PSVP), Section 3.1.2.2, Alluvial Monitoring Well Sampling, four wells (AW-6, AW-7, AW-10, & AW-12) are sampled quarterly while the remaining ten wells are sampled annually. All wells have been sampled for a total of nine quarters. Beginning in July 2004, the alluvial wells will be put on a rotation to be sampled annually with the exception of AW-1 and AW-7. These two wells will be sampled quarterly for one year. At that time, a decision will be made as to whether or not these wells required additional sampling.

USGS Monitoring Wells

Sixteen monitoring wells are monitored quarterly with selected wells sampled on a semi-annual basis. Table 3 contains a brief summary of the data obtained during this reporting period.

Trench Leachate Management (PSVP 2.3)

Trench sump liquid levels are obtained in accordance with the Performance Standard Verification Plan (PSVP), Section 2.3 Sump Measurement. Data loggers were downloaded quarterly and have been operating without any major problems. Table 4 contains the leachate level measurements obtained from January through June 2004.

Subsidence Monitoring (PSVP 2.2)

There has been no noticeable subsidence of the trench area during this period. Inspections are performed monthly in accordance with the O&M plan.

Erosion Monitoring (PSVP 2.1)

Erosion monitoring of the East Drainage Channel was performed in accordance with the PSVP Section 2.1.1. Table 5 contains data obtained from surveys performed by the United States Geological Survey, Kentucky District (USGS).

Inspections, Maintenance and Repair Activities Relative to the IRP

Inspections

Inspections were conducted in accordance with the Operation and Maintenance Requirements Summary (O&M), Appendix B. This includes: (26) Weekly/Daily Inspections, (12) Twice-a-Month Inspections, (6) Monthly Inspections, (2) Quarterly Inspections, (1) Semi-Annual Inspection, and (1) Annual Inspection.

Maintenance

This section covers the maintenance of the geo-membrane liner, headwalls, drainage channels, diversion berms, interior anchor trenches, perimeter, and anchor trench, articulating block system, emergency spillway at the northeast corner, east detention basin, southeast cap and general site components.

A visual inspection of the factory seams and air lancing of the field seams was completed during this period. A total of eighteen defects were detected, sixteen were defective areas in the field seams and two were defective areas found in the geo-membrane liner while visually inspecting the factory seams.

Liquid was found trapped under the liner in four locations. A sample was obtained and analyzed for tritium. All analyses indicated the tritium activity to be less than 20 pCi/ml for all samples; liquid was free released.

All other items viewed during the inspections were in satisfactory condition and performing as expected.

Repairs

Shifting of the AB Mats was noticed during the Weekly/Daily inspection (beginning of each workday) on June 14, 2004. The AB Mats had moved from the side toward the center of the channel causing blocks to ride upon one another in the center of the channel. Seven sections of AB Mats required straightening.

A total of 24 repairs were made to the geo-membrane liner during this reporting period. Sixteen repairs of the field seams, two repairs were holes/tears, and six repairs for sampling/releasing liquid under liner. A quality control check was performed on each of the repaired section.

Reporting

All validated sampling data acquired on site has been forwarded to United States Environmental Protection Agency (USEPA), Project Coordinator for the Steering Committee, and the Commonwealth. Louis McGee, United States Department of Energy (DOE), was added to the list of individuals receiving the sampling data commencing in July 2004.

Conclusion

There was no anomalous data reported during this period from 1,513 analyzed samples. The data indicates the remedy is performing as expected and is protective of human health and the environment.

Table 1
Surface Water
2004

Location	Minimum Activity (pCi/ml)	Date	Maximum Activity (pCi/ml)	Date	Average (pCi/ml)	Sampling Period
122A	0.00	01/01/04	0.40	01/18/04	0.07	1/1/04 – 06/30/04
106B	0.18	04/01/04	20.65	03/24/04	5.76	1/1/04 – 06/30/04
122C	0.43	03/06/04	3.72	03/28/04	1.43	1/1/04 – 06/30/04
102D	0.27	03/06/04	2.49	03/28/04	1.01	1/1/04 – 06/30/04
103E	0.00	02/22/04	9.90	04/10/04	1.29	1/1/04 – 06/30/04
EDB	0.00	05/26/04	0.29	01/02/04	0.09	1/1/04 – 06/30/04
143	0.00	01/08/04	1.73	04/12/04	0.27	1/1/04 – 06/30/04
144	5.85	03/06/04	217.82	04/09/04	86.13	1/1/04 – 06/30/04
C107	3.91	01/02/04	31.55	03/21/04	18.07	1/1/04 – 06/30/04

Table 2
Alluvial Wells
2004

Well ID	Date	Activity (pCi/ml)	Specific Conductivity (μ mho)	pH	Temperature (C)	Dissolved Oxygen (mg/L)	Turbidity (NTU Units)
AW-1	04/14/04	17.12 +/- 0.29	248	6.57	11.7	0.44	0.0
*AW-1	05/17/04	15.34 +/- 0.28	n/a	n/a	n/a	n/a	n/a
*AW-1	06/24/04	15.05 +/- 0.28	n/a	n/a	n/a	n/a	n/a
AW-3	04/14/04	0.65 +/- 0.14	189	5.66	9.3	2.66	3.1
AW-4	04/14/04	0.13 +/- 0.14	209	4.51	10.4	3.39	164
AW-5	04/14/04	0.34 +/- 0.14	658	6.86	8.85	0.54	11.4
AW-6	01/21/04	0.32+/- 0.14	349	6.05	12.2	0.42	0.0
AW-6	04/14/04	0.00 +/- 0.14	349	6.00	10.5	0.54	0.0
AW-7	01/21/04	8.36 +/- 0.29	176	6.02	12.9	0.34	0.0
AW-7	04/14/04	10.28 +/- 0.28	159	5.89	12.2	0.54	0.0
AW-8	04/14/04	0.18 +/- 0.14	334	4.13	11.1	1.39	0.0
AW-9	04/14/04	1.12 +/- 0.15	492	6.55	10.5	0.45	22.7
AW-10	01/21/04	0.31 +/- 0.14	116	5.75	12.5	0.40	0.0
AW-10	04/14/04	0.03 +/- 0.14	112	5.66	11.4	0.57	7.9
AW-12	01/21/04	0.00 +/- 0.14	429	6.27	11.8	0.56	0.0
AW-12	04/14/04	0.27 +/- 0.14	431	6.25	10.0	0.33	0.0
AW-13	04/14/04	0.78 +/- 0.14	252	5.03	11.9	0.90	0.0
AW-14	04/15/04	0.20 +/- 0.13	586	7.01	10.8	0.20	0.0
AW-15	04/15/04	0.55 +/- 0.14	999	6.77	10.3	0.29	0.0
ALT-1	04/14/04	0.37 +/- 0.14	110	5.75	11.0	1.15	0.0

Note: Measurements (specific conductivity, pH, temperature, dissolved oxygen, and turbidity) taken at time sample was collected.

* Sample collected by site personnel, no measurements made.

Table 3
USGS Monitoring Wells
2004

Well ID	Date	Top of Casing to bottom (ft)	Top of Casing to liquid (ft)	Activity (pCi/ml)
ESI-1	04/22/04	24.10	9.45	
ESI-2	04/22/04	17.50	14.61	
ESI-4	04/22/04	26.30	14.18	
ESI-5	04/22/04	24.50	15.18	
ESI-12	04/22/04	41.30	21.97	
ESI-19	04/22/04	21.65	16.30	
*N2B	04/22/03	12.40	11.81	6,663 +/- 5
*UE-2	04/22/04	18.50	16.89	638,029 +/- 50.13
UE-11	04/22/04	20.15	17.47	
UF-1	04/22/04	21.50	17.43	
*UF-2	04/22/04	17.30	13.08	213,624 +/- 29
UF-5	04/22/04	21.30	8.35	
UF-37	04/22/04	22.80	15.79	
*UK-1	04/22/04	15.70	13.33	313,902 +/- 35

Note: Top of Casing to Bottom measurements taken from O&M Plan, Table 7-1.
* Denotes wells that are sampled semi-annually

Table 4
Trench Sump Leachate Measurements
2004

SUMP ID #	Top of Casing to Bottom	Elevation top of casing	Elevation at bottom	MONTH					
				Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04
1-2	21.70	1056.17	1034.47	19.25	19.25	19.30	19.38	19.32	19.35
			Elevation to Liquid	1036.92	1036.92	1036.87	1036.79	1036.85	1036.82
			Feet of liquid in sump	2.45	2.45	2.40	2.32	2.38	2.35
2-6	26.30	1057.55	1031.24	20.93	20.91	20.94	20.95	20.89	20.91
			Elevation to Liquid	1036.61	1036.63	1036.60	1036.59	1036.65	1036.63
			Feet of liquid in sump	5.37	5.39	5.36	5.35	5.41	5.39
3-2	24.30	1059.5	1035.18	22.94	22.94	22.96	23.02	22.99	22.99
			Elevation to Liquid	1036.54	1036.54	1036.52	1036.46	1036.49	1036.49
			Feet of liquid in sump	1.36	1.36	1.34	1.28	1.31	1.31
3-4	18.00	1054.41	1036.96	16.00	16.00	16.00	16.00	16.00	16.00
			Elevation to Liquid	1038.96	1038.96	1038.96	1038.96	1038.96	1038.96
			Feet of liquid in sump	2.00	2.00	2.00	2.00	2.00	2.00
7-4	15.80	1052.41	1036.7	14.39	14.26	14.29	13.91	13.83	13.78
			Elevation to Liquid	1038.11	1038.24	1038.21	1038.59	1038.67	1038.72
			Feet of liquid in sump	1.41	1.54	1.51	1.89	1.97	2.02
7-5	22.40	1057.98	1035.4	18.54	18.57	18.59	18.66	18.66	18.67
			Elevation to Liquid	1039.26	1039.23	1039.21	1039.14	1039.14	1039.13
			Feet of liquid in sump	3.86	3.83	3.81	3.74	3.74	3.73
7-7	23.20	1059.12	1036.22	19.62	19.58	19.60	19.76	19.76	19.77
			Elevation to Liquid	1039.80	1039.84	1039.82	1039.66	1039.66	1039.65
			Feet of liquid in sump	3.58	3.62	3.60	3.44	3.44	3.43
10-7	29.20	1060.3	1028.82	27.92	27.93	27.71	27.24	27.19	27.23
			Elevation to Liquid	1030.10	1030.09	1030.31	1030.78	1030.83	1030.79
			Feet of liquid in sump	1.28	1.27	1.49	1.96	2.01	1.97
10-8	29.20	1058.7	1030.48	27.66	27.61	27.68	27.71	27.66	27.71
			Elevation to Liquid	1032.02	1032.07	1032.00	1031.97	1032.02	1031.97
			Feet of liquid in sump	1.54	1.59	1.52	1.49	1.54	1.49

Table 4
Trench Sump Leachate Measurements
2004

SUMP ID #	Top of Casing to Bottom	Elevation top of casing	Elevation at bottom	MONTH					
				Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04
10-9	27.70	1054.9	1027.2	25.71	25.65	25.69	25.68	25.65	25.66
			Elevation to Liquid	1029.19	1029.25	1029.21	1029.22	1029.25	1029.24
			Feet of liquid in sump	1.99	2.05	2.01	2.02	2.05	2.04
11S-5	23.10	1057.1	1033.93	20.96	20.98	20.97	21.02	21.00	21.04
			Elevation to Liquid	1036.07	1036.05	1036.06	1036.01	1036.03	1035.99
			Feet of liquid in sump	2.14	2.12	2.13	2.08	2.10	2.06
11S-6	27.10	1063.2	1036.5	24.16	24.10	24.18	24.23	24.22	24.25
			Elevation to Liquid	1039.44	1039.50	1039.42	1039.37	1039.38	1039.35
			Feet of liquid in sump	2.94	3.00	2.92	2.87	2.88	2.85
15-4	27.60	1062	1034.42	26.67	26.62	26.63	26.69	26.65	26.67
			Elevation to Liquid	1035.35	1035.40	1035.39	1035.33	1035.37	1035.35
			Feet of liquid in sump	0.93	0.98	0.97	0.91	0.95	0.93
15-5	26.50	1061.2	1034.7	25.15	25.14	25.15	25.11	25.12	25.10
			Elevation to Liquid	1036.05	1036.06	1036.05	1036.09	1036.08	1036.10
			Feet of liquid in sump	1.35	1.36	1.35	1.39	1.38	1.40
15-6	32.50	1059.5	1027.1	28.65	28.62	28.60	28.63	28.64	28.63
			Elevation to Liquid	1030.95	1030.98	1031.00	1030.97	1030.96	1030.97
			Feet of liquid in sump	3.85	3.88	3.90	3.87	3.86	3.87
15-8	23.80	1055.8	1032.25	22.52	22.48	22.58	22.78	22.82	22.84
			Elevation to Liquid	1033.53	1033.57	1033.47	1033.27	1033.23	1033.21
			Feet of liquid in sump	1.28	1.32	1.22	1.02	0.98	0.96
18-6	31.20	1065.5	1034.08	30.57	30.54	30.56	30.56	30.55	30.56
			Elevation to Liquid	1034.71	1034.74	1034.72	1034.72	1034.73	1034.72
			Feet of liquid in sump	0.63	0.66	0.64	0.64	0.65	0.64
18-9	22.40	1059.6	1037.5	22.03	22.03	22.03	22.02	22.00	22.02
			Elevation to Liquid	1037.87	1037.87	1037.87	1037.88	1037.90	1037.88
			Feet of liquid in sump	0.37	0.37	0.37	0.38	0.40	0.38

Table 4
Trench Sump Leachate Measurements
2004

SUMP ID #	Top of Casing to Bottom	Elevation top of casing	Elevation at bottom	MONTH					
				Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04
19-5	30.50	1063.3	1032.81	28.97	28.96	29.01	29.02	28.95	28.99
			Elevation to Liquid	1034.34	1034.35	1034.30	1034.29	1034.36	1034.32
			Feet of liquid in sump	1.53	1.54	1.49	1.48	1.55	1.51
19-6	25.90	1058.74	1033.3	23.50	23.49	23.50	23.49	23.47	23.47
			Elevation to Liquid	1035.70	1035.71	1035.70	1035.71	1035.73	1035.73
			Feet of liquid in sump	2.40	2.41	2.40	2.41	2.43	2.43
19-7	32.10	1064.3	1032	30.21	30.19	30.19	30.17	30.14	30.15
			Elevation to Liquid	1033.89	1033.91	1033.91	1033.93	1033.96	1033.95
			Feet of liquid in sump	1.89	1.91	1.91	1.93	1.96	1.95
20W	29.30	1065.6	1036.17	28.10	28.07	28.10	28.12	28.04	28.07
			Elevation to Liquid	1037.37	1037.40	1037.37	1037.35	1037.43	1037.40
			Feet of liquid in sump	1.20	1.23	1.20	1.18	1.26	1.23
20-7	33.00	1063.3	1030.4	29.95	29.97	29.98	29.99	29.99	29.97
			Elevation to Liquid	1033.45	1033.43	1033.42	1033.41	1033.41	1033.43
			Feet of liquid in sump	3.05	3.03	3.02	3.01	3.01	3.03
20-9	30.80	1065.4	1034.37	30.36	30.34	30.36	30.36	30.32	30.36
			Elevation to Liquid	1034.81	1034.83	1034.81	1034.81	1034.85	1034.81
			Feet of liquid in sump	0.44	0.46	0.44	0.44	0.48	0.44
20-11	24.70	1059.08	1034.42	24.14	24.14	24.18	24.22	24.16	24.17
			Elevation to Liquid	1034.98	1034.98	1034.94	1034.90	1034.96	1034.95
			Feet of liquid in sump	0.56	0.56	0.52	0.48	0.54	0.53
23-5	32.50	1063.7	1030.83	31.18	31.00	31.18	31.18	31.20	31.18
			Elevation to Liquid	1032.15	1032.33	1032.15	1032.15	1032.13	1032.15
			Feet of liquid in sump	1.32	1.50	1.32	1.32	1.30	1.32
23-6	32.10	1064.3	1032.25	30.93	30.68	30.77	30.96	30.94	30.94
			Elevation to Liquid	1033.42	1033.67	1033.58	1033.39	1033.41	1033.41
			Feet of liquid in sump	0.27	0.52	0.43	0.24	0.26	0.26

Table 4
Trench Sump Leachate Measurements
2004

SUMP ID #	Top of Casing to Bottom	Elevation top of casing	Elevation at bottom	MONTH					
				Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04
23-9	24.40	1059.1	1034.72	24.30	24.39	24.39	24.39	24.39	24.38
			Elevation to Liquid	1034.82	1034.73	1034.73	1034.73	1034.73	1034.74
			Feet of liquid in sump	0.10	0.01	0.01	0.01	0.01	0.02
24-5	24.80	1058.9	1034.04	23.38	23.38	23.39	23.41	23.38	23.40
			Elevation to Liquid	1035.46	1035.46	1035.45	1035.43	1035.46	1035.44
			Feet of liquid in sump	1.42	1.42	1.41	1.39	1.42	1.40
24-6	26.90	1062.4	1035.4	26.70	26.69	26.69	26.69	26.70	26.69
			Elevation to Liquid	1035.60	1035.61	1035.61	1035.61	1035.60	1035.61
			Feet of liquid in sump	0.20	0.21	0.21	0.21	0.20	0.21
25-5	24.80	1059.8	1036	23.07	23.07	23.07	23.17	23.09	23.11
			Elevation to Liquid	1037.73	1037.73	1037.73	1037.63	1037.71	1037.69
			Feet of liquid in sump	1.73	1.73	1.73	1.63	1.71	1.69
25-7	25.70	1060.7	1035.05	25.32	25.25	25.30	25.33	25.21	25.26
			Elevation to Liquid	1035.43	1035.50	1035.45	1035.42	1035.54	1035.49
			Feet of liquid in sump	0.38	0.45	0.40	0.37	0.49	0.44
25-9	23.30	1057	1034	22.46	22.45	22.53	22.64	22.62	22.66
			Elevation to Liquid	1034.84	1034.85	1034.77	1034.66	1034.68	1034.64
			Feet of liquid in sump	0.84	0.85	0.77	0.66	0.68	0.64
26-2	30.10	1059.3	1029.15	28.08	28.08	28.07	28.05	28.04	28.04
			Elevation to Liquid	1031.17	1031.17	1031.18	1031.20	1031.21	1031.21
			Feet of liquid in sump	2.02	2.02	2.03	2.05	2.06	2.06
26-3	28.30	1058.48	1030.17	26.90	26.78	26.79	26.85	26.82	26.83
			Elevation to Liquid	1031.57	1031.69	1031.68	1031.62	1031.65	1031.64
			Feet of liquid in sump	1.40	1.52	1.51	1.45	1.48	1.47
26-4	23.60	1056.4	1033.14	21.84	21.84	21.85	21.85	21.90	21.90
			Elevation to Liquid	1034.90	1034.90	1034.89	1034.89	1034.84	1034.84
			Feet of liquid in sump	1.76	1.76	1.75	1.75	1.70	1.70

Table 4
Trench Sump Leachate Measurements
2004

SUMP ID #	Top of Casing to Bottom	Elevation top of casing	Elevation at bottom	MONTH					
				Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04
27-9	35.70	1062.9	1026.24	27.42	27.35	27.32	27.39	27.34	27.34
			Elevation to Liquid	1034.52	1034.59	1034.62	1034.55	1034.60	1034.60
			Feet of liquid in sump	8.28	8.35	8.38	8.31	8.36	8.36
28W	27.50	1064.2	1036.67	25.94	25.94	25.96	25.97	25.96	25.97
			Elevation to Liquid	1038.23	1038.23	1038.21	1038.20	1038.21	1038.20
			Feet of liquid in sump	1.56	1.56	1.54	1.53	1.54	1.53
29-5	27.80	1065.5	1037.8	27.80	27.79	27.79	25.27	27.79	27.79
			Elevation to Liquid	1037.80	1037.81	1037.81	1040.33	1037.81	1037.81
			Feet of liquid in sump	0.00	0.01	0.01	2.53	0.01	0.01
29-6	25.80	1064.1	1038.1	25.61	25.61	25.60	27.79	25.61	25.60
			Elevation to Liquid	1038.29	1038.29	1038.30	1036.11	1038.29	1038.30
			Feet of liquid in sump	0.19	0.19	0.20	-1.99	0.19	0.20
29W	27.10	1063.5	1036.82	25.00	25.14	25.18	25.61	25.20	25.19
			Elevation to Liquid	1038.92	1038.78	1038.74	1038.31	1038.72	1038.73
			Feet of liquid in sump	2.10	1.96	1.92	1.49	1.90	1.91
30-4	23.30	1062.3	1038.85	23.01	23.01	23.01	23.01	22.99	23.03
			Elevation to Liquid	1039.14	1039.14	1039.14	1039.14	1039.16	1039.12
			Feet of liquid in sump	0.29	0.29	0.29	0.29	0.31	0.27
30-8	30.00	1067.41	1037.41	29.35	29.32	29.35	29.40	29.40	29.43
			Elevation to Liquid	1038.06	1038.09	1038.06	1038.01	1038.01	1037.98
			Feet of liquid in sump	0.65	0.68	0.65	0.60	0.60	0.57
31-2	26.30	1065.9	1040.03	25.16	25.14	25.15	25.21	25.17	25.21
			Elevation to Liquid	1041.17	1041.19	1041.18	1041.12	1041.16	1041.12
			Feet of liquid in sump	1.14	1.16	1.15	1.09	1.13	1.09
31-5	23.30	1062	1038.86	23.07	23.10	23.00	23.00	23.00	23.00
			Elevation to Liquid	1039.09	1039.06	1039.16	1039.16	1039.16	1039.16
			Feet of liquid in sump	0.23	0.20	0.30	0.30	0.30	0.30

Table 4
Trench Sump Leachate Measurements
2004

SUMP ID #	Top of Casing to Bottom	Elevation top of casing	Elevation at bottom	MONTH					
				Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04
31-7	25.60	1065.3	1040.25	24.80	24.79	24.81	24.86	24.86	24.87
			Elevation to Liquid	1041.05	1041.06	1041.04	1040.99	1040.99	1040.98
			Feet of liquid in sump	0.80	0.81	0.79	0.74	0.74	0.73
31-9	27.40	1066.4	1039.29	25.04	25.04	25.03	25.03	25.04	25.04
			Elevation to Liquid	1041.65	1041.65	1041.66	1041.66	1041.65	1041.65
			Feet of liquid in sump	2.36	2.36	2.37	2.37	2.36	2.36
32-E	29.40	1064.8	1035.54	29.34	29.33	29.34	29.34	29.35	29.35
			Elevation to Liquid	1035.60	1035.61	1035.60	1035.60	1035.59	1035.59
			Feet of liquid in sump	0.06	0.07	0.06	0.06	0.05	0.05
32-9	29.50	1065.3	1035.71	28.65	28.63	28.60	28.67	28.58	28.58
			Elevation to Liquid	1036.56	1036.58	1036.61	1036.54	1036.63	1036.63
			Feet of liquid in sump	0.85	0.87	0.90	0.83	0.92	0.92
35-2	29.60	1064.08	1034.19	27.38	27.42	27.45	27.52	27.51	27.52
			Elevation to Liquid	1036.41	1036.37	1036.34	1036.27	1036.28	1036.27
			Feet of liquid in sump	2.22	2.18	2.15	2.08	2.09	2.08
35-6	28.50	1063.04	1034.41	27.45	27.44	27.44	27.43	27.41	27.42
			Elevation to Liquid	1035.46	1035.47	1035.47	1035.48	1035.50	1035.49
			Feet of liquid in sump	1.05	1.06	1.06	1.07	1.09	1.08
36-3	22.20	1062.9	1039.97	20.75	20.76	20.77	20.83	20.80	20.81
			Elevation to Liquid	1041.42	1041.41	1041.40	1041.34	1041.37	1041.36
			Feet of liquid in sump	1.45	1.44	1.43	1.37	1.40	1.39
36-6	27.10	1066.6	1039.35	23.81	23.81	23.82	23.86	23.75	23.75
			Elevation to Liquid	1042.64	1042.64	1042.63	1042.59	1042.70	1042.70
			Feet of liquid in sump	3.29	3.29	3.28	3.24	3.35	3.35
37-3	24.40	1055.3	1030.92	22.86	22.85	22.86	22.88	22.90	22.85
			Elevation to Liquid	1032.46	1032.47	1032.46	1032.44	1032.42	1032.47
			Feet of liquid in sump	1.54	1.55	1.54	1.52	1.50	1.55

Table 4
Trench Sump Leachate Measurements
2004

SUMP ID #	Top of Casing to Bottom	Elevation top of casing	Elevation at bottom	MONTH					
				Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04
37-4	23.50	1055.9	1032.28	23.50	23.50	23.56	23.56	23.55	23.56
			Elevation to Liquid	1032.28	1032.28	1032.22	1032.22	1032.23	1032.22
			Feet of liquid in sump	0.00	0.00	-0.06	-0.06	-0.05	-0.06
38-4	22.90	1055.8	1034.05	21.82	21.80	21.83	21.88	21.89	21.23
			Elevation to Liquid	1035.13	1035.15	1035.12	1035.07	1035.06	1035.72
			Feet of liquid in sump	1.08	1.10	1.07	1.02	1.01	1.67
38-5	23.30	1055.6	1032.06	21.40	21.40	21.40	21.43	21.40	21.42
			Elevation to Liquid	1033.96	1033.96	1033.96	1033.93	1033.96	1033.94
			Feet of liquid in sump	1.90	1.90	1.90	1.87	1.90	1.88
39-1	22.30	1053.7	1031.7	20.75	20.76	20.75	20.87	20.87	20.88
			Elevation to Liquid	1033.25	1033.24	1033.25	1033.13	1033.13	1033.12
			Feet of liquid in sump	1.55	1.54	1.55	1.43	1.43	1.42
39-4	19.20	1057	1037.81	19.20	19.20	19.24	19.24	19.25	19.34
			Elevation to Liquid	1037.81	1037.81	1037.77	1037.77	1037.76	1037.67
			Feet of liquid in sump	0.00	0.00	-0.04	-0.04	-0.05	-0.14
40-15	21.40	1045	1025.6	21.41	21.41	21.41	21.41	21.41	21.42
			Elevation to Liquid	1025.59	1025.59	1025.59	1025.59	1025.59	1025.58
			Feet of liquid in sump	-0.01	-0.01	-0.01	-0.01	-0.01	-0.02
40-17	30.30	1051.4	1021.08	28.75	28.75	28.76	28.76	28.75	28.75
			Elevation to Liquid	1022.63	1022.63	1022.62	1022.62	1022.63	1022.63
			Feet of liquid in sump	1.55	1.55	1.54	1.54	1.55	1.55
40-19	33.40	1049.4	1022.4	30.10	30.09	30.11	30.09	30.06	30.06
			Elevation to Liquid	1025.70	1025.71	1025.69	1025.71	1025.74	1025.74
			Feet of liquid in sump	3.30	3.31	3.29	3.31	3.34	3.34
40-22	35.40	1056.98	1021.1	32.24	32.24	32.20	32.20	32.17	32.19
			Elevation to Liquid	1024.26	1024.26	1024.30	1024.30	1024.33	1024.31
			Feet of liquid in sump	3.16	3.16	3.20	3.20	3.23	3.21

Table 4
Trench Sump Leachate Measurements
2004

SUMP ID #	Top of Casing to Bottom	Elevation top of casing	Elevation at bottom	MONTH					
				Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04
42-11	32.20	1049.52	1017.72	28.48	28.48	28.48	28.49	28.45	28.46
			Elevation to Liquid	1021.44	1021.44	1021.44	1021.43	1021.47	1021.46
			Feet of liquid in sump	3.72	3.72	3.72	3.71	3.75	3.74
42-19	31.10	1047.25	1016.41	27.66	27.67	27.67	27.72	27.22	27.22
			Elevation to Liquid	1019.85	1019.84	1019.84	1019.79	1020.29	1020.29
			Feet of liquid in sump	3.44	3.43	3.43	3.38	3.88	3.88
42-20	39.20	1052.1	1016.9	38.50	38.50	38.55	32.20	28.54	38.55
			Elevation to Liquid	1017.60	1017.60	1017.55	1023.90	1027.56	1017.55
			Feet of liquid in sump	0.70	0.70	0.65	7.00	10.66	0.65
43-7	37.30	1047.24	1010	34.93	34.93	34.24	34.96	34.95	34.97
			Elevation to Liquid	1012.37	1012.37	1013.06	1012.34	1012.35	1012.33
			Feet of liquid in sump	2.37	2.37	3.06	2.34	2.35	2.33
43-9	36.70	1045.2	1008.93	34.22	34.20	34.24	34.27	34.27	34.28
			Elevation to Liquid	1011.41	1011.43	1011.39	1011.36	1011.36	1011.35
			Feet of liquid in sump	2.48	2.50	2.46	2.43	2.43	2.42
43-13	32.50	1041.39	1008.5	30.47	30.46	30.52	30.55	30.54	30.55
			Elevation to Liquid	1010.53	1010.54	1010.48	1010.45	1010.46	1010.45
			Feet of liquid in sump	2.03	2.04	1.98	1.95	1.96	1.95
44-5	43.50	1057.35	1013.71	41.47	41.46	41.44	41.46	41.45	41.45
			Elevation to Liquid	1015.74	1015.75	1015.77	1015.75	1015.76	1015.76
			Feet of liquid in sump	2.03	2.04	2.06	2.04	2.05	2.05
44-14	34.60	1048.45	1013.83	34.34	34.35	34.35	34.35	34.35	34.35
			Elevation to Liquid	1014.09	1014.08	1014.08	1014.08	1014.08	1014.08
			Feet of liquid in sump	0.26	0.25	0.25	0.25	0.25	0.25
44-20	39.30	1052.28	1013.1	38.47	38.43	38.47	38.48	38.45	38.55
			Elevation to Liquid	1013.93	1013.97	1013.93	1013.92	1013.95	1013.85
			Feet of liquid in sump	0.83	0.87	0.83	0.82	0.85	0.75

Table 4
Trench Sump Leachate Measurements
2004

SUMP ID #	Top of Casing to Bottom	Elevation top of casing	Elevation at bottom	MONTH					
				Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04
44-22	40.90	1055.09	1014.17	39.85	39.85	39.88	39.85	39.81	39.81
			Elevation to Liquid	1015.22	1015.22	1015.19	1015.22	1015.26	1015.26
			Feet of liquid in sump	1.05	1.05	1.02	1.05	1.09	1.09
45-1	35.20	1055.31	1020.33	29.60	29.58	29.60	29.60	29.63	29.63
			Elevation to Liquid	1025.93	1025.95	1025.93	1025.93	1025.90	1025.90
			Feet of liquid in sump	5.60	5.62	5.60	5.60	5.57	5.57
46-1	27.50	1052.1	1026.45	25.26	25.29	25.30	25.31	25.29	25.29
			Elevation to Liquid	1028.69	1028.66	1028.65	1028.64	1028.66	1028.66
			Feet of liquid in sump	2.24	2.21	2.20	2.19	2.21	2.21
46-2	24.80	1053.07	1028.46	21.82	21.82	21.82	21.80	21.80	21.77
			Elevation to Liquid	1031.44	1031.44	1031.44	1031.46	1031.46	1031.49
			Feet of liquid in sump	2.98	2.98	2.98	3.00	3.00	3.03
46-3	37.30	1052.92	1015.27	19.01	19.13	19.37	19.74	19.70	19.47
			Elevation to Liquid	1033.56	1033.44	1033.20	1032.83	1032.87	1033.10
			Feet of liquid in sump	18.29	18.17	17.93	17.56	17.60	17.83

Table 4
Trench Sump Leachate Measurements
2004

Table 5
Erosion Monitoring
2004

East Drain Cross Section #3.5

Elevation in Feet

Station	Date April-04
0	746.66
2	746.66
4	746.58
6	745.98
8	745.75
10	745.89
12	745.88
14	746.04
16	746.62
18	747.11
20	747.16
22	746.95
24	746.94
26	747.15
28	746.99
30	747.37
30.5	747.37

East Drain Cross Section #5.0

Elevation in Feet

Station	Date April-04
0	767.49
2	767.49
4	768.07
7	764.97
7.5	764.53
8	764.52
10	763.48
12	763.34
14	763.03
16	763.12
18	765.00
20	765.38
22	765.54
24	765.78
26	766.73
28	768.07
29.5	768.07

East Drain Cross Section #5.5

Elevation in Feet

Station	Date April-04
0	769.26
2	769.26
4	767.53
6	766.27
8	765.03
10	764.89
12	765.08
14	765.29
16	765.19
18	767.31
20	769.11
21	769.31
22.5	769.31

East Drain Cross Section #6.0

Elevation in Feet

Station	Date April-04
0	780.67
1	780.67
2	780.17
3	779.74
4	778.12
5	776.87
6	774.39
8	772.93
10	772.87
12	773.22
14	773.66
16	776.72
21	782.49

East Drain Cross Section #6.5

Elevation in Feet

Station	Date April-04
0	780.91
2	780.91
4	780.53
6	778.51
8	778.56
10	778.82
12	778.16
14	779.41
16	779.90
18	781.80

East Drain Cross Section #6.75

Elevation in Feet

Station	Date April-04
0	793.40
1	791.39
2	790.65
4	788.84
6	791.14
8	790.25
10	790.19
12	790.21
14	790.49
16	790.85

Table 4
Trench Sump Leachate Measurements
2004

18.5	782.95	17	792.29
		18	793.37

Table 5
Erosion Monitoring
2004

East Drain Cross Section #8.0

Elevation in Feet

Station	Date April-04
0	925.61
2	925.61
4	925.84
6	922.31
8	922.71
10	922.19
12	923.68
14	922.26
16	923.81
18	925.18
20	926.43
22	925.73
24	926.36
26	926.13
28	925.81
28.7	925.81

East Drain Cross Section #12.0

Elevation in Feet

Station	Date April-04
0	985.06
6	985.06
8	985.09
10	985.01
12	984.65
14	984.20
16	984.00
18	982.17
20	982.11
22	984.10
24	984.48
26	983.77
28	984.10
30	983.32
32	984.66
34	984.96
36	985.29
38	984.85
40	984.80
42	985.49
44	985.86
45.7	985.86