

Maxey Flats Disposal Site Semi-Annual Report

Reporting Period: January 2005 – June 2005

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 Requirement (O&M).

Surface Water (PSVP 3.1.2)

Surface water sampling for locations 102D, 103E, 106, C107, 122A, 122C, 143, and 144 is performed using automatic sequential samplers that collect and composite a daily sample. The sampler located at the East Detention Basin (EDB) collects a sample based on a storm event of 2.8 inches during a twenty-four period.

A total of 1,446 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.

Alluvial Wells (PSVP 3.1.2.2)

The United States Geological Survey (USGS), Kentucky District staff members were on site to measure and sample scheduled Alluvial Wells in January and April. These sampling events yielded ten samples. Tritium analysis completed by site staff ranged from 0.00 to 13.66 pCi/ml; these values are compared to the drinking water standard of 20 pCi/ml. Table 2 is a summary of the data obtained during this reporting period.

Monitoring Wells

USGS staff members were on site to measure and sample the monitoring wells in January and April. Fifteen monitoring wells are measured quarterly with select wells sampled on a semi-annual basis. Table 3 contains a 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 PSVP, Section 2.3 Sump Measurements. Data loggers were downloaded quarterly but numerous problems with the system required many of the sumps to be manually measured. A Change of Request has been initiated to do away with the current automated monitoring system and collect all measurements manually until a new automated system is obtained. Table 4 contains the leachate level measurements obtained from January through June 2005.

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)

Table 5 contains data obtained from surveys performed by USGS staff.

Inspections, Maintenance and Repair Activities Relative to the IRP

Inspections

Inspections were conducted in accordance with the Operations 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.

Items requiring attention were leaf removal from headwall inlets and rip-rap replacement in East Drainage basin. All other items viewed during the inspections were in satisfactory condition and performing as expected.

Repairs

A total of 47 repairs were made to the geo-membrane liner during this reporting period. Nineteen repairs were of field seams with the remainder being holes or tears. A quality control check was performed on each of the repaired sections.

Reporting

All validated sampling data acquired on site has been forwarded to United States Environmental Protection Agency (USEPA), Project Coordinator for the Steering Committee, Louis McGee, United States Department of Energy (USDOE) and the Commonwealth.

Conclusion

There was no anomalous data reported during this period from 1,446 analyzed samples. The data indicates the remedy is performing as expected and is protective of human health and the environment. The data indicates that human health is being protected.

Table 1
Surface Water Data
2005

Location	Minimum Activity (pCi/ml)	Date	Maximum Activity (pCi/ml)	Date	Average Activity (pCi/ml)	Sampling Period
ISCO 122A	0.00	01/01/05	0.36	05/30/05	0.05	1/1-6/30/05
ISCO 106	1.68	05/14/05	16.52	05/14/05	5.32	1/1-6/30/05
ISCO 122C	0.13	06/29/05	3.17	06/04/05	1.25	1/1-6/30/05
ISCO 102D	0.13	06/05/05	2.64	06/28/05	0.98	1/1-6/30/05
ISCO 103E	0.14	06/17/05	2.36	04/24/05	0.99	1/1-6/30/05
ISCO EDB	0.00	06/07/05	0.74	01/13/05	0.22	1/1-6/30/05
ISCO 143	0.00	01/02/05	0.40	04/17/05	0.11	1/1-6/30/05
ISCO 144	1.32	06/29/05	152.25	05/12/05	66.51	1/1-6/30/05
ISCO C107	4.78	06/28/05	37.86	04/23/05	20.17	1/1-6/30/05

Table 2
Alluvial Well Data
2005

Well ID	Date	Tritium Activity (pCi/ml)	Specific Conductivity (μmho)	pH	Temperature [C]	Dissolved Oxygen (mg/L)	Turbidity (NTU Units)
AW-1	01/19/05	13.66 +/- 0.27	236	6.39	12.9	0.17	3.0
AW-1	04/13/05	15.52 +/- 0.26	241	6.53	11.8	0.25	0.0
AW-4	04/13/05	0.50 +/- 0.14	210	4.53	10.5	3.62	392
AW-5	01/19/05	0.36 +/- 0.14	569	6.71	10.2	0.26	26.7
AW-7	01/19/05	6.97 +/- 0.22	177	5.80	12.8	0.27	0.0
AW-7	04/13/05	6.72 +/- 0.21	183	6.13	12.2	0.35	0.0
AW-9	04/13/05	0.65 +/- 0.15	450	6.47	10.5	0.35	9.3
AW-13	01/19/05	0.04 +/- 0.13	285	5.63	11.2	0.26	58.9
AW-14	01/19/05	0.73 +/- 0.14	626	6.95	12.2	0.17	1.6
AW-15	04/13/05	0.47 +/- 0.14	988	6.83	10.2	0.30	0.0

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

Table 3
USGS Monitoring Well Data
2005

Well ID	Top of Casing to Bottom (ft)	Ground Level to Bottom (ft)	Ground Level to Liquid (ft) January 18, 2005	Ground Level to Liquid (ft) April 12, 2005	Tritium Activity (pCi/ml)
ESI-1	24.10	22.13	11.00	10.84	measurement only
ESI-2	17.50	14.67	15.27	14.54	measurement only
ESI-4	26.30	24.48	14.89	14.12	measurement only
ESI-5	24.50	22.87	15.31	15.06	measurement only
ESI-12	41.30	38.92	22.19	21.82	measurement only
ESI-19	21.65	19.52	16.82	16.19	measurement only
ESI-20			105.41	105.14	measurement only
N2B*	12.40	9.75	Dry	11.70	38,165 +/- 12
UE-2*	18.50	15.60	17.42	16.76	465,575 +/- 43
UE-11	20.15	16.70	17.75	17.35	measurement only
UF-1	21.50	18.20	17.86	17.35	measurement only
UF-2*	17.30	13.15	13.72	13.01	188,903 +/- 28
UF-5*	21.30	17.50	8.79	7.62	61.28 +/- 0.52
UF-10a*			30.49	30.33	37,544 +/- 12
UF-37	22.80	21.90	15.14	15.69	measurement only
UF-45		18.90	18.34	18.39	measurement only
UK-1*	15.70	12.60	14.01	13.25	167,677 +/- 26

Note: Top of Casing to Bottom measurements taken from O&M Plan, Table 7-1

* - Sampled by USGS April and October

Table 4
Trench Sump Leachate Measurements
2005

Sump ID	Top of Casing to Bottom (ft)	Elevation Top of Casing (ft)	Elevation at Bottom (ft)	January (ft)	February (ft)	March (ft)	April (ft)	May (ft)	June (ft)
1-2	21.70	1056.17	1034.47	19.30	19.30	19.40	19.39	19.39	19.41
		Elevation at Liquid	1036.87	1036.87	1036.77	1036.78	1036.78	1036.78	1036.76
		Feet of liquid in sump	2.40	2.40	2.30	2.31	2.31	2.31	2.29
2-6	26.30	1057.55	1031.24	20.75	20.75	20.60	20.67	20.67	20.60
		Elevation at Liquid	1036.80	1036.80	1036.95	1036.88	1036.88	1036.88	1036.95
		Feet of liquid in sump	5.55	5.55	5.70	5.63	5.63	5.70	
3-2	24.30	1059.50	1035.18	22.31	22.30	22.32	22.32	22.32	23.00
		Elevation at Liquid	1037.19	1037.20	1037.18	1037.18	1037.18	1037.18	1036.50
		Feet of liquid in sump	1.99	2.00	1.98	1.98	1.98	1.98	1.30
3-4	18.00	1054.41	1036.96	16.00	16.00	16.00	16.00	16.00	16.00
		Elevation at Liquid	1038.41	1038.41	1038.41	1038.41	1038.41	1038.41	1038.41
		Feet of liquid in sump	2.00	2.00	2.00	2.00	2.00	2.00	2.00
7-4	15.80	1052.41	1037.70	13.30	13.28	13.30	13.30	13.30	11.60
		Elevation at Liquid	1039.11	1039.13	1039.11	1039.11	1039.11	1039.11	1040.81
		Feet of liquid in sump	2.50	2.52	2.50	2.50	2.50	2.50	4.20
7-5	22.40	1057.98	1035.40	18.70	18.70	18.70	18.70	18.70	19.10
		Elevation at Liquid	1039.28	1039.28	1039.28	1039.28	1039.28	1039.28	1038.88
		Feet of liquid in sump	3.70	3.70	3.70	3.70	3.70	3.70	3.30
7-7	23.20	1059.12	1036.22	19.85	19.89	19.89	19.89	20.00	20.10
		Elevation at Liquid	1039.27	1039.23	1039.23	1039.23	1039.23	1039.12	1039.02
		Feet of liquid in sump	3.35	3.31	3.31	3.31	3.31	3.20	3.10
10-7	29.20	1060.30	1028.82	27.90	27.92	27.88	27.88	27.50	27.50
		Elevation at Liquid	1032.40	1032.38	1032.42	1032.42	1032.42	1032.80	1032.80
		Feet of liquid in sump	1.30	1.28	1.32	1.32	1.32	1.70	1.70
10-8	29.20	1058.70	1030.48	27.75	27.75	27.64	27.64	27.70	27.70
		Elevation at Liquid	1030.95	1030.95	1031.06	1031.06	1031.06	1031.00	1031.00
		Feet of liquid in sump	1.45	1.45	1.56	1.56	1.56	1.50	1.50
10-9	27.70	1054.90	1027.20	25.60	25.60	25.44	25.44	25.40	25.41
		Elevation at Liquid	1029.30	1029.30	1029.46	1029.46	1029.46	1029.50	1029.49
		Feet of liquid in sump	2.10	2.10	2.26	2.26	2.30		2.29

Table 4
Trench Sump Leachate Measurements
2005

Sump ID	Top of Casing to Bottom (ft)	Elevation Top of Casing (ft)	Elevation at Bottom (ft)	January (ft)	February (ft)	March (ft)	April (ft)	May (ft)	June (ft)
11S-5	23.10	1057.10	1033.93	20.90	20.90	20.90	20.90	21.00	21.00
			Elevation at Liquid	1036.20	1036.20	1036.20	1036.20	1036.10	1036.10
			Feet of liquid in sump	2.20	2.20	2.20	2.20	2.10	2.10
11S-6	27.10	1063.20	1036.50	24.18	24.20	24.14	24.14	24.24	24.25
			Elevation at Liquid	1039.02	1039.00	1039.06	1039.06	1038.96	1038.95
			Feet of liquid in sump	2.92	2.90	2.96	2.96	2.86	2.85
15-4	27.60	1062.00	1034.42	26.60	26.60	26.65	26.65	25.00	26.70
			Elevation at Liquid	1035.40	1035.40	1035.35	1035.35	1037.00	1035.30
			Feet of liquid in sump	1.00	1.00	0.95	0.95	2.60	0.90
15-5	26.50	1061.20	1034.70	24.97	24.98	25.01	25.01	25.50	25.03
			Elevation at Liquid	1036.23	1036.22	1036.19	1036.19	1035.70	1036.17
			Feet of liquid in sump	1.53	1.52	1.49	1.49	1.00	1.47
15-6	32.50	1059.50	1027.10	28.60	28.60	28.53	28.53	28.50	28.51
			Elevation at Liquid	1030.90	1030.90	1030.97	1030.97	1031.00	1030.99
			Feet of liquid in sump	3.90	3.90	3.97	3.97	4.00	3.99
15-8	23.80	1055.80	1032.25	22.52	22.52	22.50	22.50	22.50	22.70
			Elevation at Liquid	1033.28	1033.28	1033.30	1033.30	1033.30	1033.10
			Feet of liquid in sump	1.28	1.28	1.30	1.30	1.30	1.10
18-6	31.20	1065.50	1034.08	30.53	30.53	30.52	30.52	30.52	30.50
			Elevation at Liquid	1034.97	1034.97	1034.98	1034.98	1034.98	1035.00
			Feet of liquid in sump	0.67	0.67	0.68	0.68	0.68	0.70
18-9	22.40	1059.60	1037.50	22.00	22.00	22.00	22.00	22.03	22.03
			Elevation at Liquid	1037.60	1037.60	1037.60	1037.60	1037.57	1037.57
			Feet of liquid in sump	0.40	0.40	0.40	0.40	0.37	0.37
19-5	30.50	1063.30	1032.81	29.02	29.00	28.97	28.97	28.97	29.00
			Elevation at Liquid	1034.28	1034.30	1034.33	1034.33	1034.33	1034.30
			Feet of liquid in sump	1.48	1.50	1.53	1.53	1.53	1.50
19-6	25.90	1058.74	1033.30	23.25	23.23	23.20	23.20	23.20	23.40
			Elevation at Liquid	1035.49	1035.51	1035.54	1035.54	1035.54	1035.34
			Feet of liquid in sump	2.65	2.67	2.70	2.70	2.70	2.50

Table 4
Trench Sump Leachate Measurements
2005

Sump ID	Top of Casing to Bottom (ft)	Elevation Top of Casing (ft)	Elevation at Bottom (ft)	January (ft)	February (ft)	March (ft)	April (ft)	May (ft)	June (ft)
19-7	32.10	1064.30	1032.00	30.10	30.10	30.01	30.01	30.01	29.98
		Elevation at Liquid	1034.20	1034.20	1034.29	1034.29	1034.29	1034.29	1034.32
		Feet of liquid in sump	2.00	2.00	2.09	2.09	2.09	2.09	2.12
20W	29.30	1065.60	1036.17	28.05	28.05	28.00	28.00	28.00	28.03
		Elevation at Liquid	1037.55	1037.55	1037.60	1037.60	1037.60	1037.60	1037.57
		Feet of liquid in sump	1.25	1.25	1.30	1.30	1.30	1.30	1.27
20-7	33.00	1063.30	1030.40	29.90	29.90	29.87	29.87	29.87	29.88
		Elevation at Liquid	1033.40	1033.40	1033.43	1033.43	1033.43	1033.43	1033.42
		Feet of liquid in sump	3.10	3.10	3.13	3.13	3.13	3.13	3.12
20-9	30.80	1065.40	1034.37	30.28	30.28	30.30	30.30	30.30	30.32
		Elevation at Liquid	1035.12	1035.12	1035.10	1035.10	1035.10	1035.10	1035.08
		Feet of liquid in sump	0.52	0.52	0.50	0.50	0.50	0.50	0.48
20-11	24.70	1059.08	1034.42	24.25	24.24	24.25	24.25	24.25	24.20
		Elevation at Liquid	1034.83	1034.84	1034.83	1034.83	1034.83	1034.83	1034.88
		Feet of liquid in sump	0.45	0.46	0.45	0.45	0.45	0.45	0.50
23-5	32.50	1063.70	1030.83	31.06	31.05	31.04	31.04	31.02	31.00
		Elevation at Liquid	1032.64	1032.65	1032.66	1032.66	1032.68	1032.68	1032.70
		Feet of liquid in sump	1.44	1.45	1.46	1.46	1.48	1.48	1.50
23-6	32.10	1064.30	1032.25	30.84	30.84	30.85	30.85	30.85	30.90
		Elevation at Liquid	1033.46	1033.46	1033.45	1033.45	1033.45	1033.45	1033.40
		Feet of liquid in sump	1.26	1.26	1.25	1.25	1.25	1.25	1.20
23-9	24.40	1059.10	1034.72	24.36	24.36	21.77	21.77	21.72	24.30
		Elevation at Liquid	1034.74	1034.74	1037.33	1037.33	1037.38	1037.38	1034.80
		Feet of liquid in sump	0.04	0.04	2.63	2.63	2.68	2.68	0.10
24-5	24.80	1058.90	1034.04	23.37	23.37	23.37	23.37	23.40	23.39
		Elevation at Liquid	1035.53	1035.53	1035.53	1035.53	1035.50	1035.50	1035.51
		Feet of liquid in sump	1.43	1.43	1.43	1.43	1.40	1.40	1.41
24-6	26.90	1062.40	1035.40	26.68	26.68	26.68	26.68	26.70	26.60
		Elevation at Liquid	1035.72	1035.72	1035.72	1035.72	1035.70	1035.70	1035.80
		Feet of liquid in sump	0.22	0.22	0.22	0.22	0.20	0.20	0.30

Table 4
Trench Sump Leachate Measurements
2005

Sump ID	Top of Casing to Bottom (ft)	Elevation Top of Casing (ft)	Elevation at Bottom (ft)	January (ft)	February (ft)	March (ft)	April (ft)	May (ft)	June (ft)
25-5	24.80	1059.80	1036.00	23.20	23.20	23.20	23.20	23.20	23.30
		Elevation at Liquid	1036.60	1036.60	1036.60	1036.60	1036.60	1036.60	1036.50
		Feet of liquid in sump	1.60	1.60	1.60	1.60	1.60	1.60	1.50
25-7	25.70	1060.70	1035.05	25.25	25.25	25.21	25.22	25.22	25.23
		Elevation at Liquid	1035.45	1035.45	1035.49	1035.48	1035.48	1035.47	
		Feet of liquid in sump	0.45	0.45	0.49	0.48	0.48	0.48	0.47
25-9	23.30	1057.00	1034.00	22.47	22.47	22.47	22.58	22.60	22.60
		Elevation at Liquid	1034.53	1034.53	1034.53	1034.42	1034.40	1034.40	
		Feet of liquid in sump	0.83	0.83	0.83	0.72	0.70	0.70	
26-2	30.10	1059.30	1029.15	27.95	27.95	27.95	27.95	27.90	27.80
		Elevation at Liquid	1031.35	1031.35	1031.35	1031.35	1031.40	1031.50	
		Feet of liquid in sump	2.15	2.15	2.15	2.15	2.20	2.20	2.30
26-3	28.30	1058.48	1030.17	26.78	26.78	26.75	26.71	26.77	26.75
		Elevation at Liquid	1031.70	1031.70	1031.73	1031.77	1031.71	1031.73	
		Feet of liquid in sump	1.52	1.52	1.55	1.59	1.53	1.53	1.55
26-4	23.60	1056.40	1033.14	21.91	21.91	21.90	21.90	21.92	22.00
		Elevation at Liquid	1034.49	1034.49	1034.50	1034.50	1034.48	1034.40	
		Feet of liquid in sump	1.69	1.69	1.70	1.70	1.68	1.68	1.60
27-9	35.70	1062.90	1026.24	27.15	27.15	27.15	27.15	27.15	27.00
		Elevation at Liquid	1035.75	1035.75	1035.75	1035.75	1035.75	1035.75	1035.90
		Feet of liquid in sump	8.55	8.55	8.55	8.55	8.55	8.55	8.70
28W	27.50	1064.20	1036.67	25.95	24.98	25.93	25.93	25.94	25.93
		Elevation at Liquid	1038.25	1039.22	1038.27	1038.27	1038.26	1038.27	
		Feet of liquid in sump	1.55	2.52	1.57	1.57	1.56	1.56	1.57
29-5	27.80	1065.50	1037.80	27.80	27.80	27.78	27.78	27.80	27.78
		Elevation at Liquid	1037.70	1037.70	1037.72	1037.72	1037.70	1037.72	
		Feet of liquid in sump	0.00	0.00	0.02	0.02	0.00	0.00	
29-6	25.80	1064.10	1038.10	25.59	25.59	25.60	25.60	25.60	25.60
		Elevation at Liquid	1038.51	1038.51	1038.50	1038.50	1038.50	1038.50	1038.50
		Feet of liquid in sump	0.21	0.21	0.20	0.20	0.20	0.20	

Table 4
Trench Sump Leachate Measurements
2005

Sump ID	Top of Casing to Bottom (ft)	Elevation Top of Casing (ft)	Elevation at Bottom (ft)	January (ft)	February (ft)	March (ft)	April (ft)	May (ft)	June (ft)
29W	27.10	1063.50	1036.82	24.97	24.98	25.00	25.00	25.00	25.40
		Elevation at Liquid	1038.53	1038.52	1038.50	1038.50	1038.50	1038.50	1038.10
		Feet of liquid in sump	2.13	2.12	2.10	2.10	2.10	2.10	1.70
30-4	23.30	1062.30	1038.85	23.01	23.00	23.00	23.00	23.00	23.00
		Elevation at Liquid	1039.29	1039.30	1039.30	1039.30	1039.30	1039.30	1039.30
		Feet of liquid in sump	0.29	0.30	0.30	0.30	0.30	0.30	0.30
30-8	30.00	1067.41	1037.41	29.58	29.60	29.52	29.59	29.59	29.62
		Elevation at Liquid	1037.83	1037.81	1037.89	1037.82	1037.82	1037.79	
		Feet of liquid in sump	0.42	0.40	0.48	0.41	0.41	0.41	0.38
31-2	26.30	1065.90	1040.03	25.00	25.00	25.04	25.00	25.00	25.10
		Elevation at Liquid	1040.90	1040.90	1040.86	1040.90	1040.90	1040.90	1040.80
		Feet of liquid in sump	1.30	1.30	1.26	1.30	1.30	1.30	1.20
31-5	23.30	1062.00	1038.86	23.00	23.00	23.00	23.00	23.00	23.10
		Elevation at Liquid	1039.00	1039.00	1039.00	1039.00	1039.00	1039.00	1038.90
		Feet of liquid in sump	0.30	0.30	0.30	0.30	0.30	0.30	0.20
31-7	25.60	1065.30	1040.25	24.81	24.81	24.81	24.80	24.80	24.90
		Elevation at Liquid	1040.49	1040.49	1040.49	1040.50	1040.50	1040.50	1040.40
		Feet of liquid in sump	0.79	0.79	0.79	0.80	0.80	0.80	0.70
31-9	27.40	1066.40	1039.29	25.00	25.00	25.02	25.02	25.00	25.01
		Elevation at Liquid	1041.40	1041.40	1041.38	1041.38	1041.40	1041.40	1041.39
		Feet of liquid in sump	2.40	2.40	2.38	2.38	2.40	2.40	2.39
32E	29.40	1064.80	1035.54	29.33	29.33	29.30	29.38	29.38	29.43
		Elevation at Liquid	1035.47	1035.47	1035.50	1035.42	1035.42	1035.37	
		Feet of liquid in sump	0.07	0.07	0.10	0.02	0.02	-0.03	
32-9	29.50	1065.30	1035.71	28.64	28.64	28.65	28.65	28.65	28.90
		Elevation at Liquid	1036.66	1036.66	1036.65	1036.65	1036.65	1036.65	1036.40
		Feet of liquid in sump	0.86	0.86	0.85	0.85	0.85	0.85	0.60
35-2	29.60	1064.08	1034.19	27.49	27.49	27.61	27.67	27.67	27.66
		Elevation at Liquid	1036.59	1036.59	1036.47	1036.41	1036.41	1036.42	
		Feet of liquid in sump	2.11	2.11	1.99	1.93	1.93	1.93	1.94

Table 4
Trench Sump Leachate Measurements
2005

Sump ID	Top of Casing to Bottom (ft)	Elevation Top of Casing (ft)	Elevation at Bottom (ft)	January (ft)	February (ft)	March (ft)	April (ft)	May (ft)	June (ft)
35-6	28.50	1063.04	1034.41	27.30	27.30	27.27	27.32	27.32	27.31
		Elevation at Liquid	1035.74	1035.74	1035.77	1035.72	1035.72	1035.72	1035.73
		Feet of liquid in sump	1.20	1.20	1.23	1.18	1.18	1.18	1.19
36-3	22.20	1062.90	1039.97	20.73	20.73	20.76	20.81	20.80	20.78
		Elevation at Liquid	1042.17	1042.17	1042.14	1042.09	1042.10	1042.12	
		Feet of liquid in sump	1.47	1.47	1.44	1.39	1.40	1.42	
36-6	27.10	1066.60	1039.35	24.00	24.00	24.00	24.00	24.00	24.00
		Elevation at Liquid	1042.60	1042.60	1042.60	1042.60	1042.60	1042.60	1042.60
		Feet of liquid in sump	3.10	3.10	3.10	3.10	3.10	3.10	3.10
37-3	24.40	1055.30	1030.92	22.80	22.80	22.77	22.78	22.78	22.78
		Elevation at Liquid	1032.50	1032.50	1032.53	1032.52	1032.52	1032.52	1032.52
		Feet of liquid in sump	1.60	1.60	1.63	1.62	1.62	1.62	1.62
37-4	23.50	1055.90	1032.28	23.55	23.55	23.55	23.55	23.55	23.55
		Elevation at Liquid	1032.35	1032.35	1032.35	1032.35	1032.35	1032.35	1032.35
		Feet of liquid in sump	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
38-4	22.90	1055.80	1034.05	21.72	21.70	21.57	21.74	21.74	21.72
		Elevation at Liquid	1034.08	1034.10	1034.23	1034.06	1034.06	1034.06	1034.08
		Feet of liquid in sump	1.18	1.20	1.33	1.16	1.16	1.16	1.18
38-5	23.30	1055.60	1032.06	21.30	21.30	21.30	21.30	21.31	21.30
		Elevation at Liquid	1034.30	1034.30	1034.30	1034.30	1034.29	1034.29	1034.30
		Feet of liquid in sump	2.00	2.00	2.00	2.00	1.99	1.99	2.00
39-1	22.30	1053.70	1031.70	19.20	19.19	19.20	19.20	19.15	cannot measure
		Elevation at Liquid	1034.50	1034.51	1034.50	1034.50	1034.55	1034.55	
		Feet of liquid in sump	3.10	3.11	3.10	3.10	3.15	3.15	
39-4	19.20	1057.00	1037.81	19.20	19.20	19.20	19.20	19.20	19.20
		Elevation at Liquid	1037.80	1037.80	1037.80	1037.80	1037.80	1037.80	1037.80
		Feet of liquid in sump	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40-15	21.40	1045.00	1025.60	21.39	21.39	21.41	21.41	21.41	21.41
		Elevation at Liquid	1023.61	1023.61	1023.59	1023.59	1023.59	1023.59	1023.59
		Feet of liquid in sump	0.01	0.01	-0.01	-0.01	-0.01	-0.01	-0.01

Table 4
Trench Sump Leachate Measurements
2005

Sump ID	Top of Casing to Bottom (ft)	Elevation Top of Casing (ft)	Elevation at Bottom (ft)	January (ft)	February (ft)	March (ft)	April (ft)	May (ft)	June (ft)
40-17	30.30	1051.40	1021.08	28.70	28.20	28.68	28.69	28.69	28.68
		Elevation at Liquid	1022.70	1023.20	1022.72	1022.71	1022.71	1022.71	1022.72
		Feet of liquid in sump	1.60	2.10	1.62	1.61	1.61	1.61	1.62
40-19	33.40	1049.40	1022.40	30.13	30.15	30.15	30.15	30.15	30.10
		Elevation at Liquid	1019.27	1019.25	1019.25	1019.25	1019.25	1019.25	1019.30
		Feet of liquid in sump	3.27	3.25	3.25	3.25	3.25	3.25	3.30
40-22	35.40	1056.96	1021.10	32.15	32.15	32.11	32.09	32.09	25.59
		Elevation at Liquid	1024.81	1024.81	1024.85	1024.87	1024.87	1024.87	1031.37
		Feet of liquid in sump	3.25	3.25	3.29	3.31	3.31	3.31	9.81
42-11	32.20	1049.52	1017.72	28.49	28.50	28.50	28.50	28.50	28.40
		Elevation at Liquid	1021.03	1021.02	1021.02	1021.02	1021.02	1021.02	1021.12
		Feet of liquid in sump	3.71	3.70	3.70	3.70	3.70	3.70	3.80
42-19	31.10	1047.25	1016.41	27.75	27.75	27.74	27.77	27.80	27.79
		Elevation at Liquid	1019.50	1019.50	1019.51	1019.48	1019.45	1019.45	1019.46
		Feet of liquid in sump	3.35	3.35	3.36	3.33	3.30	3.30	3.31
42-20	39.20	1052.10	1016.90	38.55	38.55	38.41	38.53	38.53	38.55
		Elevation at Liquid	1013.55	1013.55	1013.69	1013.57	1013.57	1013.57	1013.55
		Feet of liquid in sump	0.65	0.65	0.79	0.67	0.67	0.67	0.65
43-7	37.30	1047.24	1010.00	34.95	34.95	34.98	35.00	35.00	35.01
		Elevation at Liquid	1012.29	1012.29	1012.26	1012.24	1012.24	1012.24	1012.23
		Feet of liquid in sump	2.35	2.35	2.32	2.30	2.30	2.30	2.29
43-9	36.70	1045.20	1008.93	34.30	34.30	34.33	34.34	34.37	34.34
		Elevation at Liquid	1010.90	1010.90	1010.87	1010.86	1010.83	1010.83	1010.86
		Feet of liquid in sump	2.40	2.40	2.37	2.36	2.33	2.33	2.36
43-13	32.50	1041.39	1008.50	30.57	35.60	35.60	30.60	30.60	30.60
		Elevation at Liquid	1010.82	1005.79	1005.79	1010.79	1010.79	1010.79	1010.79
		Feet of liquid in sump	1.93	-3.10	-3.10	1.90	1.90	1.90	1.90
44-5	43.50	1057.35	1013.71	41.40	41.40	41.50	41.42	41.42	41.50
		Elevation at Liquid	1015.95	1015.95	1015.85	1015.93	1015.93	1015.85	
		Feet of liquid in sump	2.10	2.10	2.00	2.08	2.08	2.08	2.00

Table 4
Trench Sump Leachate Measurements
2005

Sump ID	Top of Casing to Bottom (ft)	Elevation Top of Casing (ft)	Elevation at Bottom (ft)	January (ft)	February (ft)	March (ft)	April (ft)	May (ft)	June (ft)
44-14	34.60	1048.45	1013.83	34.10	34.10	34.15	34.15	34.15	34.30
		Elevation at Liquid	1014.35	1014.35	1014.30	1014.30	1014.30	1014.30	1014.15
		Feet of liquid in sump	0.50	0.50	0.45	0.45	0.45	0.45	0.30
44-20	39.30	1052.28	1013.10	38.45	38.48	38.41	38.40	38.40	38.43
		Elevation at Liquid	1013.83	1013.80	1013.87	1013.88	1013.88	1013.88	1013.85
		Feet of liquid in sump	0.85	0.82	0.89	0.90	0.90	0.90	0.87
44-22	40.90	1055.09	1014.17	39.80	39.80	39.81	39.87	39.87	39.88
		Elevation at Liquid	1015.29	1015.29	1015.28	1015.22	1015.22	1015.22	1015.21
		Feet of liquid in sump	1.10	1.10	1.09	1.03	1.03	1.03	1.02
45-1	35.20	1055.31	1020.33	29.53	29.53	29.50	29.50	29.50	29.50
		Elevation at Liquid	1025.78	1025.78	1025.81	1025.81	1025.81	1025.81	1025.81
		Feet of liquid in sump	5.67	5.67	5.70	5.70	5.70	5.70	5.70
46-1	27.50	1052.10	1026.45	25.30	25.30	25.28	25.25	25.30	24.40
		Elevation at Liquid	1026.80	1026.80	1026.82	1026.85	1026.80	1026.80	1027.70
		Feet of liquid in sump	2.20	2.20	2.22	2.25	2.20	2.20	3.10
46-2	24.80	1053.07	1028.46	21.20	21.20	21.18	21.18	21.18	21.20
		Elevation at Liquid	1031.87	1031.87	1031.89	1031.89	1031.89	1031.89	1031.87
		Feet of liquid in sump	3.60	3.60	3.62	3.62	3.62	3.62	3.60
46-3	37.30	1052.92	1015.27	18.90	18.95	18.90	18.90	18.90	19.20
		Elevation at Liquid	1034.02	1033.97	1034.02	1034.02	1034.02	1034.02	1033.72
		Feet of liquid in sump	18.40	18.35	18.40	18.40	18.40	18.40	18.10

Table 5
Erosion Monitoring – East Drain
2005

East Drain Cross Section #3.5

Elevation in Feet

Station	Date
April-05	
0	747.67
2	746.67
4	746.61
6	746.00
8	745.87
10	745.98
12	746.27
14	746.13
16	746.67
18	746.88
20	747.18
22	747.08
24	746.99
26	747.21
28	747.04
30	747.46
30.5	747.46

East Drain Cross Section #5.0

Elevation in Feet

Station	Date
April-05	
0	767.45
2	767.45
4	767.91
6	764.83
7.5	764.46
8	764.30
10	763.40
12	763.09
14	762.99
16	762.76
18	764.87
20	765.27
22	765.47
24	765.70
26	766.65
28	768.06
29.5	768.06

East Drain Cross Section #5.5

Elevation in Feet

Station	Date
April-05	
0	769.31
2	769.31
4	767.31
6	766.23
8	765.07
10	765.02
12	765.08
14	765.43
16	765.07
18	767.32
20	769.12
21	769.44
22.5	769.44

East Drain Cross Section #6.0

Elevation in Feet

Station	Date
April-05	
0	780.64
1	780.64
2	780.28
3	779.78
4	777.67
5	775.31
6	773.21
8	772.90
10	772.81
12	773.24
14	773.68
16	777.31
21	782.48

East Drain Cross Section #6.5

Elevation in Feet

Station	Date
April-05	
0	781.07
2	781.07
4	780.58
6	779.66
8	778.67
10	778.73
12	778.22
14	779.39
16	780.08
18	781.57
18.5	782.96

East Drain Cross Section #6.75

Elevation in Feet

Station	Date
April-05	
0	793.40
1	791.47
2	790.92
4	788.73
6	791.04
8	790.15
10	790.29
12	790.29
14	790.63
16	791.44
17	792.22
18	793.33

Table 5
Erosion Monitoring – East Drain
2005

East Drain Cross Section #8.0		East Drain Cross Section #12.0	
Station	Date April-05	Station	Date April-05
0	925.19	0	984.89
2	925.19	6	984.89
4	925.71	8	985.01
6	922.60	10	984.83
8	922.82	12	984.60
10	922.28	14	984.05
12	923.73	16	983.76
14	923.17	18	982.08
16	924.13	20	982.00
18	925.67	22	983.97
20	926.40	24	984.34
22	925.64	26	983.67
24	926.28	28	983.95
26	926.18	30	983.22
28	926.15	32	984.56
28.7	926.15	34	984.88
		36	985.17
		38	984.64
		40	984.90
		42	985.43
		44	985.85
		45.7	985.85