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DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
MAXEY FLATS PROJECT
2597 MAXEY FLAT ROAD
HILLSBORO, KENTUCKY 41049

TERESA J. HILL
SECRETARY

March 19, 2007

Ms. Pam Scully, SRPM, Kentucky/Tennessee Section
North Site Management Branch
Waste Management Division
USEPA-Region IV
Sam Nunn Atlantic Federal Center
Tower-11th Floor (Mail Code: 4WD-NSMB)
61 Forsyth Street, SW
Atlanta, GA 30303-8960


**Subject: Maxey Flats Disposal Site –
2006 Annual Report**

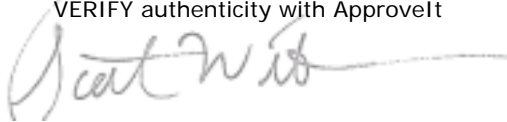
Dear Ms. Scully;

The Commonwealth of Kentucky is submitting the 2006 Annual Report for the Maxey Flats Disposal Site to fulfill the requirements of Section 4.0 of the Performance Verification Standard Plan (PSVP). The report was prepared by the Maxey Flats Section and summarizes information from the period of January 2006 through December 2006.

If you have any questions, please contact me at (606) 784-6612.

Sincerely,

E-Signed by Wilburn, Scott
VERIFY authenticity with ApproveIt 



Scott Wilburn
Environmental Control Supervisor
Maxey Flats Project

attachment

cc: Derek Matory, USEPA
Jon Richards, USEPA
Bennie Underwood, *de maximis, inc.*
Nicole Barkasi, *de maximis, inc.*
Fazi Sherkat, EPPC, Superfund

**MAXEY FLATS PROJECT
ANNUAL REPORT
2006**

March 19, 2007



Environmental and Public Protection Cabinet
Department for Environmental Protection
Division of Waste Management
Superfund Branch

Maxey Flats Project
2597 Maxey Flat Road
Hillsboro, KY 41049
606-784-6612

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List of Acronyms

BoRP	Balance of Remedial Phase
Commonwealth	Commonwealth of Kentucky
DCSW	Drainage Channels Surface Water
IRP	Initial Remedial Phase
IMP	Interim Maintenance Period
MFP	Maxey Flats Project
O&M	Operation and Maintenance Requirement Summary
PSVP	Performance Standards Verification Plan
PSSW	Perennial Streams Surface Water
RA	Remedial Action
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey

List of Appendices

Appendix A – Maxey Flats Project Annual Rainfall Data – 2003-2006

Appendix B – East Hillside Erosion Measurements – 2003-2006

1.0 Introduction

The Commonwealth is submitting this report in accordance with Section 4.0 of the PSVP. The report summarizes sampling and maintenance activities listed in the PSVP and the O&M.

2.0 Scope of Work

The IMP is ongoing pursuant to the Consent Decree (Civil Action Number 95-58) signed by the USEPA, the Maxey Flats Steering Committee (Settling Private Parties), and the Commonwealth. The Commonwealth is responsible for completion of the BoRP that includes the Interim Maintenance Period, Final Closure Period and Associated Remedial Activities and Performance Monitoring.

The Interim Maintenance Period Work Plan describes the tasks to be completed including:

- Surface/ground water monitoring
- IRP cap maintenance and replacement
- Trench leachate management and monitoring
- Subsidence monitoring and surveys
- Erosion evaluation
- General site maintenance
- Contaminated liquid and waste disposal
- Data collection, analysis, and reporting
- Site drainage and erosion control features
- Installation of a horizontal flow barrier, if necessary

3.0 Surface Water Monitoring

The 2006 annual tritium data averaged lower than previous IMP years due to laboratory procedure changes that produced lower backgrounds and higher counting efficiencies. The changes in procedure include switching from glass vials to polypropylene vials and revising the vial handling procedure to reduce static. Both changes contributed to an increase in efficiency and a lowering of background.

3.1 East Detention Basin

The first point of monitoring surface water runoff from the MFP is at the East Detention Basin (EDB). Sampling is performed at the EDB based on storm events of 2.8 inches of rainfall in a 24-hour period. In order for the sequential sampler to collect a storm event sample, the sampler is programmed to collect a sample based on 0.11 inches of rainfall per hour. A total of 54 samples were collected and analyzed for tritium. Results ranged from 0.0 to 0.92 pCi/ml providing an average of 0.16 pCi/ml. Annual averages for 2003, 2004 and 2005 were of 0.13 pCi/ml, 0.14 pCi/ml and 0.16 pCi/ml respectively.

3.2 Perennial Streams Surface Water

Perennial Streams Surface Water (PSSW) monitoring is conducted at five locations in three streams inside and outside the MFP's boundary. These locations are monitored using sequential samplers that collect a four aliquot, daily composite.

Sample location 122A serves as the background sample; it is located on Rock Lick Creek up-gradient from site influence. Tritium results for this location ranged from 0.00 to 2.54 pCi/ml, producing an average of 0.05 pCi/ml. Annual averages for 2003, 2004 and 2005 were 0.06 pCi/ml, 0.06 pCi/ml, and 0.05 pCi/ml respectively.

Sample location 106 is located on No Name Branch, a tributary to Rock Lick Creek. Location 106 receives direct influence from drain 144. Tritium results for this location ranged from 0.30 to 15.22 pCi/ml, producing an average of 3.41 pCi/ml. Annual averages for 2003, 2004 and 2005 were 4.46 pCi/ml, 4.55 pCi/ml, and 4.23 pCi/ml respectively.

Sample location 122C is located on Rock Lick Creek, downstream of 106 influence. Tritium results from this location ranged from 0.13 to 7.36 pCi/ml, producing an average of 0.86 pCi/ml. Annual averages for 2003, 2004 and 2005 were 0.99 pCi/ml, 1.10 pCi/ml, and 1.01 pCi/ml respectively.

Sample location 103E is located on Drip Springs Creek and received influence from Drain 107. Tritium results for this location ranged from 0.00 to 2.85 pCi/ml, producing an average of 0.47 pCi/ml. Annual averages for 2003, 2004 and 2005 were 0.53 pCi/ml, 0.90 pCi/ml, and 0.67 pCi/ml respectively.

Sample location 102D is the only PSSW sampler located outside the Buffer Zone. Due to its location below the confluence of three streams and its location outside the Buffer Zone, 102D is designated as the compliance point for site runoff. In addition to the 4-mrem/year dose limit, this location is also compared to the USEPA tritium in drinking water standard of 20 pCi/ml. Tritium results for 2006 at this location ranged from 0.04 to 3.27 pCi/ml, producing an average of 0.62 pCi/ml. Annual averages for 2003, 2004 and 2005 were 0.67 pCi/ml, 0.78 pCi/ml, and 0.79 pCi/ml respectively.

A total of 1,822 PSSW samples were collected and analyzed for tritium during this period with no anomalous data reported. For 2006 all PSSW locations were below the average annual tritium concentration action limit of 20 pCi/ml; assuring that the 4 mrem/yr drinking water standard has been met.

3.3 Drainage Channels Surface Water

Drainage channels upstream of the perennial streams are monitored using sequential samplers that collect a four aliquot daily composite. These locations are monitored for comparison to a 25-mrem/yr total effective dose equivalent (TEDE). All locations were below the annual average activity action limit of 100 pCi/ml; this assures that the 25 mrem/yr TEDE was not exceeded.

Sample location C107 is located at the base of the West Drain which discharges into Drip Springs Creek. For 2006 this location yielded 219 samples for tritium analysis. Results ranged from 0.57 pCi/ml to 18.53 pCi/ml and averaged 8.62 pCi/ml. Annual averages for 2003, 2004 and 2005 were 9.86 pCi/ml, 14.58 pCi/ml, and 16.97 pCi/ml respectively.

Sample location 143 is located near the base of the South Drain which discharges into Rock Lick Creek. For 2006 this location yielded 363 samples for tritium analysis. Results ranged from 0.00 pCi/ml to 0.75 pCi/ml and averaged 0.10 pCi/ml. For comparison, averages for 2003, 2004 and 2005 were 0.22 pCi/ml, 0.21 pCi/ml and 0.10 pCi/ml respectively.

Sample location 144 is located at the base of the East Drain which discharges into No Name Branch. This location yielded 362 samples for tritium analysis. Results ranged from 0.57 pCi/ml to 144.46 pCi/ml and averaged 43.35 pCi/ml. For comparison, averages for 2003, 2004 and 2005 were 63.36 pCi/ml, 60.66 pCi/ml and 40.03 pCi/ml respectively.

3.4 Sampling Equipment Status

Samples were collected in accordance with the PSVP unless problems occurred beyond the site's control such as freezing lines, washouts, equipment failure, no flow, or power outages. A second backup sampler was obtained this year.

4.0 Groundwater Monitoring

4.1 Alluvial Wells

Alluvial well samples for 2006 were collected as outlined in the PSVP. During this reporting period, a total of 20 samples were collected and analyzed for tritium. All alluvial wells were sampled once for the year except for AW-1 and AW-7 which were sampled four times (once each quarter). Only AW-1 and AW-7 had results above 1.00 pCi/ml; their highest detection of tritium was 5.94 pCi/ml and 7.82 pCi/ml respectively.

Access to the alluvium within the buffer zone is controlled by the Commonwealth, therefore the alluvial wells are not considered a drinking water source and do not represent a potential radiological dose to the public.

4.2 USGS Monitoring Wells

The 2003-2006 October water levels for the sixteen USGS monitoring wells indicate only two wells UF-5 & ESI-1 with fluctuation greater than one inch. Historic data indicates considerable water level fluctuation for both UF-5 and ESI-1. The 2006 tritium results for the USGS wells were all typical of historical data and trends except for UF-10A which for April was one order of magnitude lower than typical. No basis has been identified for the atypical analysis of UF-10A.

5.0 Data Management

A data package is prepared for each group of samples analyzed on site. The data package contains the tritium instrument's QC charts (efficiency and background), chain of custody form(s), raw data sheet and data reduction sheet. Data is reviewed and validated through on-site procedures. An employee of the Commonwealth whose normal duties are not involved with the Maxey Flats Project validates the data on a monthly basis. Following data validation, the data is entered into the site's database and transmitted to USEPA, USDOE, *de maximis, inc.* and the Commonwealth. These packets are available on site for review.

6.0 Rainfall Data

Presently there are three rain gauges on site; East Detention Basin (EDB), Well UF-37 and the main office. The official annual rainfall data is obtained from the rain gauge located at the EDB. This data was chosen because the gauge is used in conjunction with the sampler at the EDB. A total of 42.45 inches of rainfall was measured at the EDB gauge during 2006. The 2006 rainfall total was below the annual area precipitation average of 44.08 inches while the two previous years exceeded this average (see Appendix A). The range of precipitation data over the past four years appears to have negligible impact on trench levels and perimeter USGS wells.

7.0 Initial Remedial Phase Cap Maintenance

7.1 Geo-membrane Liner and Boots

The annual inspection of the geo-membrane liner covering the trench cap began in April 2006 and was completed in June 2006. Air lancing of the field seams and visual inspection of the factory seams were conducted as required in O&M, Sections 3.1.1, Geo-membrane Liner Maintenance and 3.1.2, Geo-membrane Liner Boots. During the annual inspection a total of 55 defects were found and repaired as compared to 42 defects in 2005 and 19 defects in 2004. While conducting other inspections additional liner defects were discovered and repaired.

The trench sump boots were inspected during the monthly liner inspections and during the collection of trench sump liquid level measurements. During this period there were no signs of any defects to the liner material of the sump boots. However, deterioration of many extrusion welds was observed and is suspected to be the source of water retained within five boots.

7.2 Headwall Maintenance

Headwall maintenance includes the four headwalls and associated items along the North Channel and the northeast corner piping, geo-membrane liner batten and the liquid collection system.

During this reporting period, debris/leaves were removed numerous times from the trash grate and restricting plate of the upstream headwall of the northeast corner piping. Removal of the leaves/debris will be a continuous maintenance issue for the site.

Extensive work was conducted on downstream headwall of the northeast corner piping in accordance to Technical Change 5. In an attempt to prevent water from infiltrating under the liner from sources between the discharge and batten bar, concrete was placed from the discharge beyond the first roll of articulating blocks. Technical Change 6 appears successful in reducing the flow volume between the liner and sub-grade of the northeast drainage channel.

7.3 Subsidence Monitoring and Repair

Subsidence inspections were conducted monthly in accordance with the O&M, Section 3.3.3, and Subsidence Monitoring. A nine foot diameter, six inch deep subsidence over trench 46 was repaired. Approximately eight hundred pounds of sand was used to fill and grade the subsidence. Another subsidence on liner panels 84 and 85 is being closely monitored for repair criteria.

Curd Surveying, Inc. was on site during May 2006 performing the annual engineering survey of the trench cap. Elevations were obtained for the 28 locations established during the remedial work and compared to the 2005 survey data. The variations between the 2005 and 2006 subsidence control points ranged from +0.02 feet to -0.13 feet, with no particular area of significant subsidence indicated. The variations between the 2004 (baseline) and the 2006 subsidence control points ranged from -0.03 feet to -0.17 feet.

7.4 Diversion Berms

The diversion berms were inspected twice a month as required by the O&M. Excluding possible liner repairs, all were found to be in satisfactory condition.

7.5 Anchor Trenches

The anchor trenches were inspected twice a month as required by the O&M. Problems with liquid retention in an anchor trench along the west perimeter were solved by removing the water and patching several extrusion welds. All interior anchor trenches meet satisfactory criteria.

7.6 Drainage Channels

All drainage channels were inspected during this period as required by the O&M. Control of weeds and vegetation in the Articulating Block mats and at the gabions was performed by spraying the areas with weed killer and/or manually removing the vegetation.

Water was observed in the northeast drainage channel several times following rain events in excess of 0.5 inches. This problem appears to at least be minimized by completing Technical Change 6 and repairing several defects in the area.

7.7 Articulating Concrete Block Mat (AB Mat) System

The AB mat system was inspected monthly as required by the O&M. Buildup of sediment within the AB-mats has reduced their effectiveness at reducing the velocity of water flowing to the EDB and increased vegetation growth. This buildup of sediment

should be expected as this is an inherent design feature of AB mats. The cable linking the blocks is showing signs of stress; this will continue to be closely monitored. The signs of stress indicate movement which could impact liner integrity.

7.8 Former Leachate Storage Facility Area

The covered area of the former leachate storage facility was found to be in satisfactory condition. The area shows no signs of subsidence or any damage to the geo-membrane liner or boots around the tank extensions.

7.9 Inspections

A total of 94 inspections were performed during the period of January 2006 through December 2006. Excluding the water retention mentioned in Section 8.2, no unsatisfactory reviews were recorded that presented a major problem, mostly leaf collection and liner defects. All unsatisfactory items received attention to return them to satisfactory status.

7.10 Equipment Status

All liner repair equipment remains in good working condition.

8.0 Trench Leachate Management and Monitoring

Trench sump liquid level measurements were obtained in accordance with the PSVP, Section 2.3, Sump Measurement. The purpose of collection and evaluation of the trench sump leachate levels are to detect recharge conditions that may require leachate management and provide data for future evaluation of the horizontal flow barriers.

A comparison of the baseline to the manual measurements collected in October 2005 indicates little change in freeboard. The average loss of freeboard for all sumps is less than one percent. Only two sumps indicate a greater than 10% loss of freeboard. Sump 7-4 and Sump 46-1 have a freeboard percentage loss of 38% and 12%, respectively. Trending of both sumps indicates 7-4 is losing 10% freeboard per year and 46-1 is losing 5% freeboard per year. An investigation and close monitoring of sump 7-4 will occur during 2007.

9.0 Contaminated Liquid and Solid Waste

Contaminated liquid and waste generated on-site will be disposed of in accordance with the IMP Work Plan; Section 3.2, Treatment of Other Contaminate Liquids and Section 3.3, Waste Burial.

A total of 8.5 gallons of liquid removed from the trench cap area required management this reporting period. No solid waste was disposed of on-site during this reporting period. Solid and liquid waste generated from laboratory, radiological activities and site maintenance is temporarily stored in a secured area. Permanent disposal will be arranged based on volume and waste type.

10.0 Erosion Monitoring

Erosion monitoring consists of obtaining elevation measurements and observations of the east drainage channel. The U.S. Geological Survey monitored the East Main Drainage Channel twice during the reporting period. Tables for the 2003-2006 erosion measurements and the calculated areas are presented in Appendix B.

There were no major water erosion or mud/rock slides evident in the channel during this reporting period.

Inspections of the south and west channels were completed in the spring and fall with minimal erosion observed.

11.0 IMP Work Plan Revisions, Changes and Correspondence

Revisions and changes to the IMP Work Plan are required to be submitted in writing to USEPA for approval. During this reporting period, two change requests were submitted and implemented:

- Technical Change 4 – combined the two liner repair forms into one comprehensive form.
- Technical Change 5 – Addressed changes to Headwall Downstream commonly referred to as Headwall D. Concrete was placed from the outlet into the first roll of articulating blocks. The concrete was placed in a manner that would not restrict flow but would stop standing water from seeping under the liner.

12.0 Custodial Care Activities

12.1 Vegetation

All vegetation was maintained below required height limits.

12.2 Building and Grounds Maintenance

Construction of a five bay heavy equipment storage building was completed in January 2006. A new sampling house for 122A was constructed in September 2006. All established buildings received routine maintenance.

12.3 Security Fence

The security fence surrounding the site remains in satisfactory condition with minor maintenance required. The gates and locking mechanisms were checked and maintenance was performed as indicated by the O&M plan.

12.4 Roadway Maintenance

Numerous repairs were required to the perimeter road to maintain good condition.

13.0 Cathodic Protection

The cathodic protection for the underground waste disposal tank was checked monthly. All readings were within the accepted range according to the operating instructions. Tom Stewart, Certified Cathodic Protection Tester, completed the annual inspection of the Cathodic Protection System in May 2006 and determined the system was working as designed.

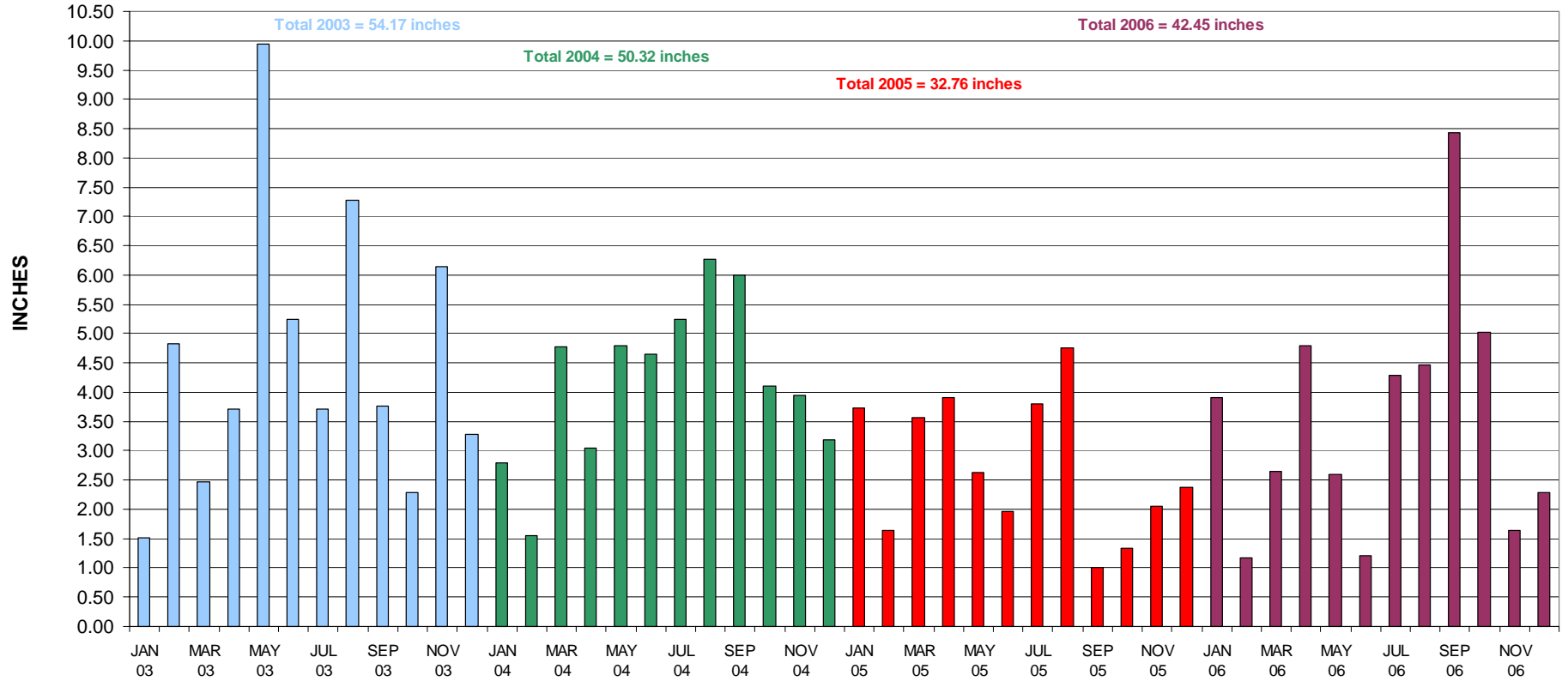
14.0 Conclusion

This concludes the textual outlining of the IMP activities at the Maxey Flats Project for 2006. If you would like to receive copies of or review any environmental data, inspections or deliverables not included in this report, please contact the MFP office.

APPENDIX A

Maxey Flats Project Annual Rainfall Data
2003-2006

**Maxey Flats Project
East Detention Basin Gauge
Monthly Precipitation Measurements
2003-2006**



APPENDIX B

East Hillside Erosion Measurements
2003-2006

MAXEY FLATS, EAST DRAIN CROSS SECTION # 3.5**ELEVATION IN FEET**

Station	April 2003	June 2003	November 2003	April 2004	October 2004	April 2005	October 2005	April 2006	October 2006
0	747.08	746.66	746.66	746.66	747.04	746.67	746.68	746.65	746.82
2	747.08	746.66	746.66	746.66	747.04	746.67	746.68	746.65	746.82
4	746.58	746.50	746.59	746.58	746.50	746.61	746.46	746.59	746.50
6	746.08	746.03	745.98	745.98	745.98	746.00	745.98	746.07	746.16
8	745.96	745.97	745.87	745.75	745.89	745.87	745.80	745.94	746.01
10	746.44	745.96	745.92	745.89	745.98	745.98	746.02	745.94	746.07
12	746.27	746.19	746.13	745.88	746.32	746.27	746.19	746.20	746.32
14	746.22	746.18	746.08	746.04	746.13	746.13	746.08	746.08	746.26
16	746.76	746.69	746.67	746.62	746.70	746.67	746.61	746.59	746.95
18	747.23	747.18	747.16	747.11	746.80	746.88	746.77	747.02	746.97
20	747.26	747.23	747.21	747.16	747.11	747.18	747.18	747.19	747.30
22	747.08	747.03	747.01	746.95	747.06	747.08	747.04	747.12	747.15
24	747.00	747.06	746.96	746.94	747.00	746.99	746.96	746.97	747.03
26	747.21	747.19	747.17	747.15	747.26	747.21	747.18	747.20	747.24
28	747.10	747.06	746.99	746.99	747.10	747.04	747.04	747.02	747.09
30	747.47	747.51	747.36	747.37	747.44	747.46	747.46	747.47	747.45
30.5	747.47	747.51	747.36	747.37	747.44	747.46	747.46	747.47	747.45

MAXEY FLATS, EAST DRAIN CROSS SECTION # 5.0**ELEVATION IN FEET**

Station	April 2003	June 2003	November 2003	April 2004	October 2004	April 2005	October 2005	April 2006	October 2006
0	767.49	767.51	767.51	767.49	767.45	767.45	767.47	767.44	767.41
2	767.49	767.51	767.51	767.49	767.45	767.45	767.47	767.44	767.41
4	768.17	767.37	768.09	768.07	767.92	767.91	767.94	767.89	767.79
7	764.89	764.93	764.92	764.97	764.89	764.83	764.10	764.75	765.08
7.5	764.60	764.61	764.57	764.53	764.52	764.46	764.80	764.42	764.66
8	764.10	764.18	764.28	764.52	764.37	764.30	764.43	764.31	764.27
10	763.48	764.43	763.53	763.48	763.42	763.40	764.55	763.37	763.27
12	763.12	763.11	763.23	763.34	763.06	763.09	763.30	762.94	762.97
14	763.01	762.97	763.14	763.03	762.96	762.99	763.19	762.86	762.82
16	763.21	762.93	763.12	763.12	762.76	762.76	763.04	763.10	763.06
18	765.02	764.93	765.04	765.00	764.91	764.87	765.03	764.84	764.88
20	765.63	765.31	765.33	765.38	765.35	765.27	765.41	765.40	765.29
22	765.47	765.43	765.52	765.54	765.50	765.47	765.60	765.47	765.49
24	765.70	765.61	765.78	765.78	765.73	765.70	765.77	765.77	765.68
26	766.75	766.71	766.72	766.73	766.67	766.65	766.72	766.72	766.67
28	768.11	768.03	767.92	768.07	768.06	768.06	768.09	768.05	768.08
29.5	768.11	768.03	767.92	768.07	768.06	768.06	768.09	768.05	768.08

MAXEY FLATS, EAST DRAIN CROSS SECTION # 5.5

ELEVATION IN FEET

Station	April 2003	June 2003	November 2003	April 2004	October 2004	April 2005	October 2005	April 2006	October 2006
0	769.31	769.27	769.25	769.26	769.10	769.31	769.14	769.27	769.09
2	769.31	769.27	769.25	769.26	769.10	769.31	769.14	769.27	769.09
4	767.45	767.23	767.36	767.53	767.29	767.31	767.58	767.51	767.32
6	766.19	766.53	766.20	766.27	766.25	766.23	766.62	766.40	766.25
8	765.18	764.86	765.01	765.03	765.10	765.07	765.14	765.18	765.37
10	764.99	764.85	764.96	764.89	764.85	765.02	765.11	764.93	765.48
12	765.19	765.09	765.13	765.08	764.98	765.08	765.13	765.10	765.55
14	765.29	765.25	765.18	765.29	765.45	765.43	765.40	765.36	765.08
16	765.17	765.14	765.18	765.19	765.04	765.07	765.00	765.05	764.75
18	767.89	767.91	767.20	767.31	767.30	767.32	767.42	767.35	767.39
20	769.27	769.09	769.09	769.11	769.09	769.12	769.12	769.12	769.11
21	769.46	769.35	769.33	769.31	769.36	769.44	769.51	769.53	769.46
22.5	769.46	769.35	769.33	769.31	769.36	769.44	769.51	769.53	769.49

MAXEY FLATS, EAST DRAIN CROSS SECTION # 6.0

ELEVATION IN FEET

Station	April 2003	June 2003	November 2003	April 2004	October 2004	April 2005	October 2005	April 2006	October 2006
0	780.54	780.66	780.70	780.67	780.62	780.64	780.61	780.66	780.63
1	780.54	780.66	780.70	780.67	780.62	780.64	780.61	780.66	780.63
2	780.23	780.26	780.37	780.17	780.21	780.28	780.24	780.30	780.28
3	779.55	779.58	779.68	779.74	779.74	779.78	779.79	779.77	779.81
4	777.52	777.78	778.74	778.12	778.01	777.67	778.09	778.08	777.53
5	774.44	777.11	775.51	776.87	776.90	775.31	775.55	775.29	775.38
6	774.09	774.94	773.83	774.39	773.76	773.21	774.21	774.03	773.83
8	772.92	773.24	773.07	772.93	772.85	772.90	772.96	773.06	773.19
10	773.01	772.99	773.02	772.87	772.67	772.81	772.83	772.96	772.79
12	773.38	773.26	773.22	773.22	773.23	773.24	773.24	773.35	773.25
14	773.74	773.62	773.72	773.66	773.61	773.68	774.29	774.38	773.65
16	777.27	776.98	776.78	776.72	777.21	777.31	777.24	777.24	777.22
21	782.45	782.49	782.49	782.49	782.49	782.48	782.49	782.49	782.50

MAXEY FLATS, EAST DRAIN CROSS SECTION # 6.5

ELEVATION IN FEET

Station	April 2003	June 2003	November 2003	April 2004	October 2004	April 2005	October 2005	April 2006	October 2006
0	781.14	781.15	781.14	780.91	781.01	781.07	781.08	781.08	781.05
2	781.14	781.15	781.14	780.91	781.01	781.07	781.08	781.08	781.05
4	780.71	780.60	780.64	780.53	780.52	780.58	780.46	780.23	780.4
6	779.50	779.55	779.49	778.51	779.27	779.66	779.48	779.57	779.37
8	778.75	779.03	778.73	778.56	778.72	778.67	778.72	778.68	778.62
10	778.86	779.00	778.78	778.82	778.83	778.73	778.99	778.70	778.93
12	778.12	778.18	778.07	778.16	778.05	778.22	778.40	778.04	777.77
14	779.59	779.73	779.43	779.41	779.40	779.39	779.41	779.43	779.48
16	779.57	779.68	779.69	779.90	779.82	780.08	779.83	779.82	779.81
18	781.52	781.58	781.53	781.80	781.61	781.57	781.81	781.94	781.93
18.5	782.96	782.97	782.97	782.95	782.96	782.96	782.95	782.94	782.93

MAXEY FLATS, EAST DRAIN CROSS SECTION # 6.75

ELEVATION IN FEET

Station	April 2003	June 2003	November 2003	April 2004	October 2004	April 2005	October 2005	April 2006	October 2006
0	793.43	793.43	793.43	793.40	793.43	793.40	793.39	793.35	793.37
1	791.42	791.23	791.57	791.39	791.26	791.47	791.40	791.48	791.28
2	790.71	790.38	790.42	790.65	790.45	790.92	789.63	789.52	789.50
4	788.83	788.81	788.88	788.84	788.80	788.73	788.79	788.74	788.70
6	791.31	791.18	791.08	791.14	791.15	791.04	788.97	790.95	791.00
8	789.57	790.23	790.23	790.25	790.24	790.15	789.97	790.35	789.90
10	790.02	790.00	789.98	790.19	790.36	790.29	790.35	790.08	790.08
12	789.85	790.09	790.07	790.21	790.33	790.23	790.23	790.05	790.23
14	790.19	790.29	790.32	790.49	790.38	790.63	790.62	790.52	790.59
16	790.42	790.53	790.44	790.85	791.64	791.44	791.37	791.35	791.53
17	792.23	791.98	791.87	792.29	792.25	792.22	792.38	792.33	792.33
18	793.41	793.41	793.40	793.37	793.37	793.33	793.31	793.29	793.31

MAXEY FLATS, EAST DRAIN CROSS SECTION # 8.0

ELEVATION IN FEET

Station	April 2003	June 2003	November 2003	April 2004	October 2004	April 2005	October 2005	April 2006	January 2007*
0	925.38	925.69	925.17	925.61	925.64	925.19	925.22	927.40	925.58
2	925.38	925.69	925.17	925.61	925.64	925.19	925.22	927.40	925.58
4	925.73	925.79	925.83	925.84	925.69	925.71	925.68	925.20	925.63
6	922.72	922.55	922.08	922.31	922.61	922.60	922.70	922.36	922.30
8	922.65	923.31	922.84	922.71	923.03	922.82	922.68	922.95	922.85
10	922.18	922.71	922.20	922.19	922.41	922.28	922.00	922.30	922.37
12	923.33	923.61	923.66	923.68	923.67	923.73	923.80	923.45	923.54
14	922.93	923.49	923.39	923.26	922.86	923.17	923.33	922.87	923.35
16	924.28	924.09	924.13	923.81	923.61	924.13	923.86	924.20	923.58
18	925.76	925.87	925.74	925.18	925.38	925.67	925.54	925.51	926.19
20	926.34	926.57	926.45	926.43	926.44	926.40	926.30	926.39	926.47
22	925.62	925.77	925.68	925.73	925.70	925.64	925.54	925.64	925.79
24	926.50	926.43	926.34	926.36	926.49	926.28	926.38	926.27	926.43
26	926.20	926.13	926.20	926.13	926.19	926.18	926.15	926.18	926.24
28	926.22	926.29	926.09	925.81	926.17	926.15	926.11	926.30	926.25
28.7	926.22	926.29	926.09	925.81	926.17	926.15	926.11	926.30	926.25

* - Cross-section measurements 8.0 for October 2006 had to be rescheduled for January 2007

MAXEY FLATS, EAST DRAIN CROSS SECTION # 12.0

ELEVATION IN FEET

Station	April 2003	June 2003	November 2003	April 2004	October 2004	April 2005	October 2005	April 2006	October 2006
0	984.97	984.95	985.05	985.06	984.94	984.89	984.96	984.91	985.04
6	984.97	984.95	985.05	985.06	984.94	984.89	984.96	984.91	985.04
8	985.07	985.08	984.26	985.09	984.96	985.01	985.09	985.05	985.16
10	984.93	984.93	985.06	985.01	984.88	984.83	984.92	984.88	984.99
12	984.60	984.64	984.77	984.65	984.66	984.60	984.66	984.49	984.75
14	984.07	984.20	984.37	984.20	984.16	984.05	984.20	984.09	984.34
16	983.73	983.68	983.84	984.00	984.70	983.76	983.89	983.74	984.06
18	983.35	983.60	983.66	982.17	982.01	982.08	982.08	982.02	982.16
20	981.97	982.08	982.20	982.11	981.96	982.00	982.02	981.96	982.14
22	983.98	984.12	984.19	984.10	983.97	983.97	984.01	983.89	984.11
24	984.35	984.48	984.54	984.48	984.32	984.34	984.36	984.28	984.47
26	983.64	983.78	983.84	983.77	983.62	983.67	983.69	983.63	983.82
28	983.97	984.10	984.13	984.10	983.96	983.95	983.95	983.91	984.13
30	983.21	983.40	983.43	983.32	983.18	983.22	983.25	983.18	983.38
32	984.55	984.66	984.70	984.66	984.54	984.56	984.56	984.48	984.76
34	984.84	984.98	985.03	984.96	984.87	984.88	984.89	984.76	984.97
36	985.17	985.26	985.33	985.29	985.19	985.17	985.17	985.14	985.27
38	984.63	984.76	984.76	984.85	984.64	984.64	984.64	984.58	984.70
40	984.84	984.81	984.85	984.80	984.70	984.90	984.77	984.69	984.85
42	985.41	985.52	985.44	985.49	985.90	985.43	985.40	985.39	985.45
44	985.85	985.88	985.90	985.86	985.81	985.85	985.87	985.86	985.45
45.7	985.85	985.88	985.90	985.86	985.81	985.85	985.87	985.86	985.86

MAXEY FLATS, EAST DRAIN CROSS SECTIONAL AREAS

Area in Square Feet

Cross Section	April 2003	June 2003	Nov 2003	April 2004	Oct 2004	April 2005	Oct 2005	April 2006	Oct 2006
3.5	34.79	37.47	39.06	40.45	37.62	38.55	39.71	38.54	35.21
5.0	103.9	103.71	104.5	103.84	106.48	107.03	103.93	107.05	107.35
5.5	114.52	117.09	117.74	116.98	121.26	116.68	115.75	116.04	116.22
6.0	123.07	119.88	122.97	122.48	122.28	124.01	120.97	120.51	123.12
6.5	58.68	57.42	59.4	61.26	59.73	58.37	57.94	59.42	59.52
6.75	53.26	52.53	52.29	49.46	49.25	47.93	53.81	49.95	50.63
8.0	134.02	130.63	134.26	136.1	133.92	133.94	135.23	130.28	132.65 *
12.0	166.96	163.5	162.09	164.82	167.47	170.02	168.51	171.20	164.38

* - Cross-section measurements 8.0 for October 2006 had to be rescheduled for January 2007