



DEPARTMENT OF THE ARMY  
ST. LOUIS DISTRICT, CORPS OF ENGINEERS  
8945 LATTY AVENUE  
BERKELEY, MISSOURI 63134

REPLY TO  
ATTENTION OF:

January 24, 2003

Formerly Utilized Sites Remedial Action Program

SUBJECT: Transmittal of Fourth Quarter (October 31, 2002 – December 31, 2002) Calendar Year 2002 Federal Facility Agreement (FFA) Progress Report for the FUSRAP St. Louis Sites

Mr. Dan Wall  
U. S. Environmental Protection Agency  
Region VII, Superfund Branch  
901 North 5<sup>th</sup> Street  
Kansas City, Kansas 66101

Dear Mr. Wall:

Please find enclosed the Fourth Quarter (October 1, 2002 – December 31, 2002) Calendar Year 2002 Federal Facility Agreement (FFA) Progress Report for the Formerly Utilized Sites Remedial Action Program (FUSRAP) St. Louis Sites. This report summarizes activities accomplished during the quarter. Also identified are planned but not accomplished activities for the fourth quarter of 2002 and activities planned for the first quarter of 2003.

Copies of this report have been forwarded to Mr. Robert Geller and Mr. Eric Gilstrap of the Missouri Department of Natural Resources. If you have any questions concerning this report, please contact Dr. Greg Hempen at (314) 260-3939.

Sincerely,

Sharon R. Cotner  
FUSRAP Program Manager

Enclosure

**FOURTH QUARTER CALENDAR YEAR (CY) 2002  
FEDERAL FACILITY AGREEMENT PROGRESS REPORT**

**1. ACTIVITIES ACCOMPLISHED IN THE FOURTH QUARTER CY 2002 (October 1, 2002 – December 31, 2002)**

Community Outreach

- Conducted three St. Louis Oversight Committee Meetings this quarter (October 11<sup>th</sup>, November 8<sup>th</sup>, December 13<sup>th</sup>).
- Updated the FUSRAP web pages by providing monthly updates for project schedules and documents and including monthly meeting minutes and presentations for the St. Louis Oversight Committee web page.
- Presented project information and manned display set up for Woerther Elementary School students and their parents at the Rockwood School District's annual science fair on November 7<sup>th</sup>.
- Published and issued the Fall 2002 newsletter in November.

No documents were issued during the quarter.

Hazelwood Interim Storage Site (HISS)/Latty Avenue Vicinity Properties

- Completed pre-design investigation of VP 01L.
- Completed characterization of VP 4L and VP 5L.
- Completed radiological support and disposal of radiologically contaminated debris generated by the roof replacement at VP 2L.

St. Louis Airport Sites (SLAPS)

- Continued removal action in Phase 1. A total of 32,253 cyd of contaminated material has been shipped to U.S. Ecology in Idaho this fiscal year 2003 (October 1, 2002 through December 31, 2002).
- Discharged two batches of SLAPS excavation water to the Metropolitan Sewer District (MSD) after successfully treating the excavation water to MSD influent criteria through pilot and full-scale tests. The first batch consisted of 12,000-gallon pilot treated water. The pilot batch was discharged to MSD from October 10, 2002 to October 14, 2002. The second discharge consisted of a 120,000-gallon discharged to MSD from November 13, 2002 to November 20, 2002.

St. Louis Airport Site Vicinity Properties (SLAPS VPs)

- Completed characterization of VP48, VP48A, VP49, and VP31A.

St. Louis Downtown Site (SLDS)

- Completed backfilling Survey Units 3 and 4 at DT-7 (Midwest Waste Vicinity Property).
- Excavated 1,720 cubic yards of soil from Excavation Areas 5, 7, 8, and 9 in Plant 6EH, Phase 3. Backfilled Survey Unit 4 Phase 3 in Plant 6EH, Phase I. Shipped 2,035 cubic yards of soil from Plant 6EH to U.S. Ecology of Idaho.
- Treated 356,490 gallons of water for release in accordance with MSD permit in the fourth quarter. Released 356,490 gallons of water during the fourth quarter. Since the beginning of the project, a total of 6,488,369 gallons of water has been released.

## **2. ACTIVITIES PLANNED FOR THE FOURTH QUARTER CY 2002 BUT NOT ACCOMPLISHED**

### North County Site (HISS, SLAPS, and SLAPS VPs)

- Phase 1 excavation was not completed in the quarter. Excavation depths have been deeper than predicted.

## **3. ACTIVITIES PLANNED FOR FIRST QUARTER CY 2003 (January 1, 2003 – March 31, 2003)**

### St. Louis Airport Site (SLAPS)

- Complete remaining removal activities in Phase 1 excavation area.

### St. Louis Downtown Site (SLDS)

- Complete remedial actions at DT-7 (Midwest Waste Vicinity Property).
- Complete remedial actions at Plant 6EH.

## **4. DATA OBTAINED IN FOURTH QUARTER CY 2002 (October 1, 2002 – December 30, 2002)**

Table 2 summarizes the analytical results that were evaluated and or validated during the quarter for each site, their media, number, and their purpose. All data is available in electronic form. Any request for actual data, in part or total, will be provided to the requestor as the entire electronic quarterly data file.

The Quarterly Discharge Monitoring Report for the North County Sites is included as Attachment A.

The Quarterly MSD Self-Monitoring Reports for the St. Louis Airport and Downtown Sites are included as Attachment B.

**Table 2. Fourth Quarter CY 2002 Sample Summary**

<b>FUSRAP Site</b>	<b>Event Description</b>	<b>Media</b>	<b>Sample type</b>	<b>Number</b>	<b>Purpose</b>
<b>HISS</b>	HISS Air (Particulate Air)-Environmental Monitoring	Air	39	Grab	Environmental
	HISS Characterization	Soil	35	Grab	Characterization
	HISS NPDES-Environmental Monitoring	Water	6	Composite	Environmental
	Environmental Alpha Tracks-Environmental Monitoring--1st Semi-Annual-2002	Air	8	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--1Q2002	Air	8	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--2Q2002	Air	8	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--3Q2002	Air	8	Grab	Environmental
	Groundwater-Environmental Monitoring--1Q2002	Water	1	Grab	Environmental
	Groundwater-Environmental Monitoring--3Q2002	Water	10	Grab	Environmental
<b>HISS VP</b>	VP 01L-PDI	Soil	2	Grab	Characterization
	VP 02L Roof Removal - Perimeter Monitoring	Air	19	Grab	Characterization
	VP 04L-Characterization	Soil	2	Grab	Characterization
<b>SLAPS</b>	SLAPS Air (Particulate Air)-Environmental Monitoring	Air	210	Grab	Environmental
	SLAPS MSD-Compliance	Water	1	Grab	Characterization
	SLAPS NPDES-Environmental Monitoring	Water	9	Grab	Environmental
	SLAPS Phase 1 (SU #25)-Verification-Class 1	Soil	25	Grab	Verification
	Environmental Alpha Tracks-Environmental Monitoring--1st Semi-Annual-2002	Air	7	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--1Q2002	Air	7	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--2Q2002	Air	7	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--3Q2002	Air	7	Grab	Environmental
	Groundwater-Environmental Monitoring--3Q2002	Water	31	Grab	Environmental
<b>SLAPS VP</b>	Radium Pits (SU #20)-Re-Verification	Soil	13	Grab	Verification
	VP 13-Characterization	Soil	1	Grab	Characterization
	VP 14A-Characterization	Soil	3	Grab	Characterization
	VP 14-Verification-Class 1	Soil	20	Grab	Verification
	VP 14-Verification-Class 3	Soil	11	Grab	Verification
	VP 35-Characterization	Soil	20	Grab	Characterization
	VP 35-Verification-Class 2	Soil	30	Grab	Verification
	VP 35-Verification-Class 3	Soil	16	Grab	Verification
	VP 37-Characterization	Soil	10	Grab	Characterization
	VP 38-PDI	Soil	288	Grab	Characterization
	VP 39-Characterization	Soil	30	Grab	Characterization
	VP 48A-Characterization	Soil	7	Grab	Characterization
	VP 49-Characterization	Soil	2	Grab	Characterization

**Table 2. Fourth Quarter CY 2002 Sample Summary**

<b>FUSRAP Site</b>	<b>Event Description</b>	<b>Media</b>	<b>Sample type</b>	<b>Number</b>	<b>Purpose</b>
SLDS	Baker Tank (MSD)	Water	9	Grab	Characterization
	Plant 1-PDI	Soil	1	Grab	Characterization
	Plant 6EH (SU #4)-Verification-Class 1	Soil	5	Grab	Verification
	Plant 6EH (SU #7)-Preferential Pathway Investigation	Soil	2	Grab	Characterization
	Plant 6EH (SU #7)-Verification	Soil	3	Grab	Verification
	Environmental Alpha Tracks-Environmental Monitoring--1st Semi-Annual-2002	Air	5	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--1Q2002	Air	5	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--2Q2002	Air	5	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--3Q2002	Air	5	Grab	Environmental
	Groundwater-Environmental Monitoring--3Q2002	Water	13	Grab	Environmental
	Groundwater-Environmental Monitoring-4Q2002	Water	3	Grab	Environmental
SLDS VP	City of St. Louis-PDI	Soil	4	Grab	Characterization
	City of Venice-PDI	Soil	46	Grab	Characterization
	City of Venice-Verification-Class 2	Soil	25	Grab	Verification
	Hjersted (DT #34)-Characterization	Soil	2	Grab	Characterization
	Metropolitan Sewer District (MSD)-Permit Renewal	Water	1	Grab	Characterization
	Midwest Waste (DT-7) SU# 1-Verification-Class 1	Soil	4	Grab	Verification
	Midwest Waste (DT-7) SU# 3-Verification-Class 1	Soil	42	Grab	Verification
	Midwest Waste (DT-7) SU# 4-Verification-Class 1	Soil	59	Grab	Verification
	Midwest Waste (DT-7)-Verification-Class 1	Soil	9	Grab	Verification
	Midwest Waste (DT-7)-Verification-Class 2	Soil	63	Grab	Verification
	PSC Metals (DT-8)-PDI	Soil	11	Grab	Characterization
	PSC Metals (DT-8)-Verification-Class 2	Soil	11	Grab	Verification
	Thomas & Proetz Lumber Company (DT-10)-PDI / Investigation	Soil	18	Grab	Characterization

**ATTACHMENT A**

**NPDES QUARTERLY DISCHARGE MONITORING REPORT  
FOR THE NORTH COUNTY SITES**



DEPARTMENT OF THE ARMY  
ST. LOUIS DISTRICT, CORPS OF ENGINEERS  
8945 LATTY AVENUE  
BERKELEY, MISSOURI 63134

January 24, 2003

REPLY TO  
ATTENTION OF:

Formerly Utilized Sites Remedial Action Program

SUBJECT: Transmittal of Fourth Quarter Calendar Year 2002 Discharge Report for NPDES Permit MO-0111252 and Applicable or Relevant and Appropriate Requirements (ARARs) for Discharges to the Waters of the State at the St. Louis Airport Site (SLAPS), St. Louis, MO

Mr. Kurt Riebeling  
Chief, Water Unit  
Missouri Department of Natural Resources  
9200 Watson Road, Suite 201  
St. Louis, MO 63126

Dear Mr. Riebeling:

In accordance with NPDES Permit MO-0111252 for the Hazelwood Interim Storage Site (HISS), and the substantive requirements for storm-water discharge to the waters of the state at the St. Louis Airport Site (SLAPS), St. Louis, MO, this letter transmits the storm-water discharge monitoring report for the fourth quarter of 2002. Attachment A of this report contains the available analytical results for the fourth quarter of 2002 for storm-water Outfalls 001, 002, and 003 at HISS. Attachment B contains the analytical results for storm-water Outfalls 001a, 001b, 002, and 003 at SLAPS.

- Hazelwood Interim Storage Site (HISS)

During the fourth quarter of 2002, permit-specified parameters were measured in October, November, and December. Data results indicate that total organic halogen (TOX) values were positive for all outfalls; therefore, volatile (VOC) and semi-volatile (SVOC) organic compound samples were analyzed to identify the specific constituent as specified in the permit and the results are included. Toluene was present at an estimated quantity below the practical quantitation limit (PQL) for HN02. These constituents are often associated with laboratory contamination; however, toluene was not present in the associated method blank and therefore could not be qualified. No other parameters were identified in the remaining samples.

An enclosure was installed at the location of HN03 to house the flow meter and the power pak, in an effort to minimize weather influences on data results as recommended by the manufacturer.

- St. Louis Airport Site (SLAPS)

During the fourth quarter of 2002 there were eight rainfall events. There are no exceedences to report per the monitoring requirements of the permit.

As per MDNR letter from Mr. Matthew Sikes addressed to Ms. Sharon Cotner dated February 19, 2002, sampling at Outfall 002 has been reduced to once a year and sampling at Outfall 003 has been discontinued.

If you have any questions concerning this report, please contact Dr. Greg Hempen at (314) 260-3939 or Mr. Ron Frerker at (314) 260-3936.

Sincerely,

A handwritten signature in cursive script that reads "Sharon Cotner".

Sharon Cotner  
FUSRAP Program Manager

Attachments

**ATTACHMENT A**

**QUARTERLY DISCHARGE MONITORING REPORT FOR THE  
HAZELWOOD INTERIM STORAGE SITE**

**Fourth Quarter 2002 – Storm-water Discharge Monitoring Report  
Hazelwood Interim Storage Site, St. Louis, MO**

<b>FACILITY NAME</b>	<b>PERMIT NUMBER</b>	<b>COUNTY</b>	<b>OWNER</b>	<b>FACILITY CONTACT</b>		
Hazelwood Interim Storage Site (HISS) <sup>1</sup>	MO-0111252	St. Louis	Jarboe Realty Investment	S.R. Cotner, Program Manager, USACE		
<b>OPERATOR OF FACILITY</b>			<b>TYPE OF FACILITY</b>			
United States Army Corps of Engineers (USACE)			Standard Industrial Classification - 9999, non-classifiable <sup>1</sup>			
<b>REQUIRED FREQUENCY OF MONITORING</b>						<b>THIS REPORT COVERS</b>
Flow and rainfall – daily; Settleable solids – monthly; Other parameters <sup>2</sup> – quarterly						4 <sup>th</sup> Quarter- October 2002 – December 2002
<b>SAMPLES COLLECTED BY</b>						
David Lee and Lon Hoover						
<b>ANALYSIS PERFORMED BY</b>						
Severn-Trent (chemical analyses) and FUSRAP Laboratory (radiological analyses)						
<b>SAMPLE LOCATION</b>	<b>MONTH and TIME</b>	<b>MONTH and TIME</b>			<b>MONTH and TIME</b>	
Outfall 1	10/25/02@0754	11/05/02@1051			12/19/02@1315	
Outfall 2	10/25/02@0803	11/05/02@1057			12/19/02@1332	
Outfall 3	10/25/02@0815	11/05/02@1043			12/19/02@1402	
<b>MONITORING PARAMETER</b>	<b>LIMITS<sup>3</sup></b>	<b>UNITS<sup>4</sup></b>	<b>ANALYTICAL RESULTS AND DATA QUALIFIERS</b>			<b>SAMPLE TYPE</b>
			<b>OUTFALL 1</b>	<b>OUTFALL 2</b>	<b>OUTFALL 3</b>	<b>REMARKS and COMMENTS</b>
Settleable solids <sup>5</sup> :      October	Daily max=1.5 Monthly avg=1.0	mL/L/hr	<0.2	<0.2	<0.2	Grab
November		mL/L/hr	<0.2	<0.2	<0.2	Grab
December		mL/L/hr	<0.2	<0.2	<0.2	Composite
pH	6.0-9.0	SU	7.71	7.43	7.71	Composite
Specific conductance	Monitor Only	µmhos/cm	0.16	0.25	0.16	Composite
Total organic carbon <sup>6</sup>	Monitor Only	mg/L	10.8	11.5	5.8	Composite
Total organic halogen <sup>6</sup>	Monitor Only	mg/L	5.5	12.1	10.2	Composite
Gross alpha	Monitor Only	pCi/L	<8.3 <sup>7</sup>	26.8	11.13	Composite
Gross beta	Monitor Only	pCi/L	<26 <sup>8</sup>	<26 <sup>8</sup>	<26 <sup>8</sup>	Composite
Lead 210	Monitor Only	pCi/L	<1.35 <sup>7</sup>	<1.45 <sup>7</sup>	1.38	Composite Assumes secular equilibrium with Ra-226
Radium 226	Monitor Only	pCi/L	<1.35 <sup>7</sup>	<1.45 <sup>7</sup>	1.38	Composite
Radium 228	Monitor Only	pCi/L	0.89	0.74	1.57	Composite Assumes secular equilibrium with Th-228
Uranium, total	Monitor Only	pCi/L	<4.87 <sup>8</sup>	20.75 <sup>7</sup>	5.35 <sup>7</sup>	Composite Calculated Value: addition of iso-analysis
Thorium 230	Monitor Only	pCi/L	2.63	1.65	3.57	Composite
Thorium 232	Monitor Only	pCi/L	<0.47 <sup>7</sup>	<0.5 <sup>7</sup>	<0.52 <sup>7</sup>	Composite
Rainfall	Monitor Only	inches	See Table 1	See Table 1	See Table 1	24-hr total Continuous recorder
Flow	Monitor Only	MGD	See Table 1	See Table 1	See Table 1	24-hr total Continuous recorder
<b>REPORT APPROVED BY OWNER</b> <i>Sharon Cotner for USACE</i>						<b>DATE</b> 1-23-03

**NOTES:**

- <sup>1</sup> HISS is a CERCLA NPL.
- <sup>2</sup> Collect quarterly samples in the months of March, June, September, and December for: pH, specific conductance, total organic carbon (TOC), total organic halogen (TOX), gross alpha, gross beta, Pb-210, Ra-226, Ra-228, Uranium (total), Th-230, and Th-232.
- <sup>3</sup> Final limits as specified in the permit for settleable solids and pH.
- <sup>4</sup> Results are reported in required units per permit.
- <sup>5</sup> Settleable Solids Sample Method – EPA 160.5. See Table 2 for Data Qualifiers.
- <sup>6</sup> See Table 2 for VOC and SVOC data.
- <sup>7</sup> Reporting MDA as the result was reported below the MDA for the analysis.
- <sup>8</sup> Reporting MDA as the result was negative.

**Fourth Quarter 2002 - Hazelwood Interim Storage Site  
Daily Rainfall and Daily Maximum Flow**

**Table 1 - NPDES Daily Flow and Rainfall Data**

Date	Rainfall (inches)	Maximum Daily Flow (MGD) <sup>a</sup>		
		Outfall 001	Outfall 002	Outfall 003
01-Oct-02				
02-Oct-02	1.50	0.41	0.36	0.08
03-Oct-02	0.14	0.13	0.25	0.04
04-Oct-02	0.14 <sup>b</sup>			
05-Oct-02				
06-Oct-02	0.22 <sup>c</sup>			
07-Oct-02				
08-Oct-02				
09-Oct-02				
10-Oct-02				
11-Oct-02				
12-Oct-02	0.07 <sup>c</sup>			
13-Oct-02				
14-Oct-02				
15-Oct-02				
16-Oct-02				
17-Oct-02				
18-Oct-02	0.28 <sup>c</sup>			
19-Oct-02	0.14 <sup>b</sup>			
20-Oct-02	0.01 <sup>b</sup>			
21-Oct-02				
22-Oct-02	0.07 <sup>c</sup>			
23-Oct-02	0.11 <sup>b</sup>			
24-Oct-02				
25-Oct-02 <sup>b</sup>	0.28	0.08	0.12	0.01
26-Oct-02	0.22 <sup>b</sup>			
27-Oct-02	0.05 <sup>c</sup>			
28-Oct-02	0.02 <sup>c</sup>			
29-Oct-02	0.04	0.07 <sup>d</sup>	0.07 <sup>d</sup>	
30-Oct-02	0.03 <sup>c</sup>			
31-Oct-02				
Monthly Average <sup>c</sup>		0.02	0.02	0.00

Date	Rainfall (inches)	Maximum Daily Flow (MGD) <sup>a</sup>		
		Outfall 001	Outfall 002	Outfall 003
1-Nov-02	0.02 <sup>c</sup>			
2-Nov-02	0.02 <sup>c</sup>			
3-Nov-02	0.07 <sup>c</sup>			
4-Nov-02	0.03 <sup>c</sup>			
5-11-02 <sup>b</sup>	0.56	0.04	0.03	0.02
6-Nov-02	0.05 <sup>c</sup>			
7-Nov-02	0.04 <sup>c</sup>			
8-Nov-02	0.03 <sup>c</sup>			
9-Nov-02	0.02 <sup>c</sup>			
10-Nov-02	0.01 <sup>c</sup>			
11-Nov-02				
12-Nov-02				
13-Nov-02				
14-Nov-02				
15-Nov-02				
16-Nov-02				
17-Nov-02	0.37 <sup>c</sup>			
18-Nov-02				
19-Nov-02				
20-Nov-02				
21-Nov-02				
22-Nov-02				
23-Nov-02				
24-Nov-02				
25-Nov-02				
26-Nov-02		0.36 <sup>d</sup>		
27-Nov-02				
28-Nov-02				
29-Nov-02				
30-Nov-02				
Monthly Average <sup>c</sup>		0.00	0.00	0.00

Date	Rainfall (inches)	Maximum Daily Flow (MGD) <sup>a</sup>		
		Outfall 001	Outfall 002	Outfall 003
1-Dec-02				
2-Dec-02				
3-Dec-02				
4-Dec-02				
5-Dec-02	0.01	0.33 <sup>d</sup>		
6-Dec-02	0.02		0.06 <sup>d</sup>	
7-Dec-02				
8-Dec-02				
9-Dec-02				
10-Dec-02				
11-Dec-02				
12-Dec-02		0.33 <sup>d</sup>		
13-Dec-02	0.02			
14-Dec-02				
15-Dec-02				
16-Dec-02				
17-Dec-02	0.01			
18-Dec-02				
19-Dec-02 <sup>b</sup>	0.75	0.45	0.29	0.13
20-Dec-02				
21-Dec-02				
22-Dec-02				
23-Dec-02				
24-Dec-02				
25-Dec-02				
26-Dec-02				
27-Dec-02				
28-Dec-02				
29-Dec-02				
30-Dec-02				
31-Dec-02				
Monthly Average <sup>c</sup>		0.01	0.01	0.00

NOTES: <sup>a</sup>Daily maximum flow values are based on 24-hour flow and recorded as million gallons per day. All blank spaces represent zero flow.

<sup>b</sup>Compliance samples collected on this day for the month indicated.

<sup>c</sup>Monthly average does not include readings associated with calibration.

<sup>d</sup>Data results are due to calibrating flowmeter/sensor. Therefore, the activity was interpreted as a level reading by the sensor and converted to flow reading by the meter.

<sup>e</sup>Data results may be due to small animal interference or actual rainfall. In most cases flow was never recorded.

Flow was measured continuously using ISCO Model 4210 Ultrasonic flow meters installed at each outfall.

**Fourth Quarter 2002 - Hazelwood Interim Storage Site- Table 2 Analytical Results**

Station Name	SampleName	Collection Date	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN01	HIS66640	12/19/2002	Total Organic Carbon	10.8	1	mg/L	J
HN01	HIS66640	12/19/2002	TOX	5.5	5	ug/L	=
HN01	HIS66640	12/19/2002	1,1,1-Trichloroethane	5	5	ug/L	U
HN01	HIS66640	12/19/2002	1,1,2,2-Tetrachloroethane	5	5	ug/L	U
HN01	HIS66640	12/19/2002	1,1,2-Trichloro-1,2,2-trifluoroethane	5	5	ug/L	U
HN01	HIS66640	12/19/2002	1,1,2-Trichloroethane	5	5	ug/L	U
HN01	HIS66640	12/19/2002	1,1-Dichloroethane	5	5	ug/L	U
HN01	HIS66640	12/19/2002	1,1-Dichloroethene	5	5	ug/L	U
HN01	HIS66640	12/19/2002	1,2-Dichloroethane	5	5	ug/L	U
HN01	HIS66640	12/19/2002	1,2-Dichloroethene (total)	10	10	ug/L	U
HN01	HIS66640	12/19/2002	1,2-Dichloropropane	5	5	ug/L	U
HN01	HIS66640	12/19/2002	2-Butanone	20	20	ug/L	U
HN01	HIS66640	12/19/2002	2-Hexanone	20	20	ug/L	U
HN01	HIS66640	12/19/2002	4-Methyl-2-pentanone	20	20	ug/L	U
HN01	HIS66640	12/19/2002	Acetone	6	20	ug/L	U
HN01	HIS66640	12/19/2002	Benzene	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Bromodichloromethane	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Bromoform	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Bromomethane	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Carbon disulfide	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Carbon tetrachloride	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Chlorobenzene	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Chloroethane	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Chloroform	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Chloromethane	10	10	ug/L	U
HN01	HIS66640	12/19/2002	cis-1,3-Dichloropropene	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Dibromochloromethane	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Ethylbenzene	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Methylene chloride	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Styrene	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Tetrachloroethene	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Toluene	5	5	ug/L	U
HN01	HIS66640	12/19/2002	trans-1,3-Dichloropropene	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Trichloroethene	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Vinyl chloride	5	5	ug/L	U
HN01	HIS66640	12/19/2002	Xylenes (total)	10	10	ug/L	U
HN01	HIS66640	12/19/2002	1,2,4-Trichlorobenzene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	1,2-Dichlorobenzene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	1,3-Dichlorobenzene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	1,4-Dichlorobenzene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2,2'-oxybis(1-Chloropropane)	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2,4,5-Trichlorophenol	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2,4,6-Trichlorophenol	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2,4-Dichlorophenol	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2,4-Dimethylphenol	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2,4-Dinitrophenol	25	25	ug/L	U
HN01	HIS66640	12/19/2002	2,4-Dinitrotoluene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2,6-Dinitrotoluene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2-Chloronaphthalene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2-Chlorophenol	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2-Methylnaphthalene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2-Methylphenol	10	10	ug/L	U
HN01	HIS66640	12/19/2002	2-Nitroaniline	25	25	ug/L	U
HN01	HIS66640	12/19/2002	2-Nitrophenol	10	10	ug/L	U
HN01	HIS66640	12/19/2002	3,3'-Dichlorobenzidine	10	10	ug/L	U
HN01	HIS66640	12/19/2002	3-Nitroaniline	25	25	ug/L	U
HN01	HIS66640	12/19/2002	4,6-Dinitro-2-methylphenol	25	25	ug/L	U
HN01	HIS66640	12/19/2002	4-Bromophenyl phenyl ether	10	10	ug/L	U
HN01	HIS66640	12/19/2002	4-Chloro-3-methylphenol	10	10	ug/L	U
HN01	HIS66640	12/19/2002	4-Chloroaniline	10	10	ug/L	U
HN01	HIS66640	12/19/2002	4-Chlorophenyl phenyl ether	10	10	ug/L	U
HN01	HIS66640	12/19/2002	4-Methylphenol	20	20	ug/L	U
HN01	HIS66640	12/19/2002	4-Nitroaniline	25	25	ug/L	U
HN01	HIS66640	12/19/2002	4-Nitrophenol	25	25	ug/L	U
HN01	HIS66640	12/19/2002	Acenaphthene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Acenaphthylene	10	10	ug/L	U

**Fourth Quarter 2002 - Hazelwood Interim Storage Site- Table 2 Analytical Results**

Station Name	SampleName	Collection Date	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN01	HIS66640	12/19/2002	Anthracene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Benzo(a)anthracene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Benzo(a)pyrene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Benzo(b)fluoranthene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Benzo(ghi)perylene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Benzo(k)fluoranthene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	bis(2-Chloroethoxy)methane	10	10	ug/L	U
HN01	HIS66640	12/19/2002	bis(2-Chloroethyl) ether	10	10	ug/L	U
HN01	HIS66640	12/19/2002	bis(2-Ethylhexyl) phthalate	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Butyl benzyl phthalate	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Carbazole	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Chrysene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Dibenzo(a,h)anthracene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Dibenzofuran	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Diethyl phthalate	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Dimethyl phthalate	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Di-n-butyl phthalate	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Di-n-octyl phthalate	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Fluoranthene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Fluorene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Hexachlorobenzene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Hexachlorobutadiene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Hexachlorocyclopentadiene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Hexachloroethane	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Indeno(1,2,3-cd)pyrene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Isophorone	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Naphthalene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Nitrobenzene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	N-Nitrosodi-n-propylamine	10	10	ug/L	U
HN01	HIS66640	12/19/2002	N-Nitrosodiphenylamine	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Pentachlorophenol	25	25	ug/L	U
HN01	HIS66640	12/19/2002	Phenanthrene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Phenol	10	10	ug/L	U
HN01	HIS66640	12/19/2002	Pyrene	10	10	ug/L	U
HN01	HIS66640	12/19/2002	TH-228	0.89	0.47	pCi/L	J
HN01	HIS66640	12/19/2002	TH-230	2.63	0.47	pCi/L	J
HN01	HIS66640	12/19/2002	TH-232	0.17	0.47	pCi/L	UJ
HN01	HIS66640	12/19/2002	RA-226	0.79	1.35	pCi/L	UJ
HN01	HIS66640	12/19/2002	U-234	1.91	0.65	pCi/L	J
HN01	HIS66640	12/19/2002	U-235	-0.15	1.77	pCi/L	UJ
HN01	HIS66640	12/19/2002	U-238	1.19	0.65	pCi/L	J
HN01	HIS66640	12/19/2002	Gross Alpha	6.51	8.3	pCi/L	U
HN01	HIS66640	12/19/2002	Gross Beta	-3.75	25.54	pCi/L	UJ
HN01	HIS66640	12/19/2002	Settleable Solids	0.1	0.2	mL/L/hr	U
HN01	HIS66634	10/25/2002	Settleable Solids	0	0.2	mL/L/hr	U
HN01	HIS66637	11/5/2002	Settleable Solids	0	0.2	mL/L/hr	U
HN02	HIS66641	12/19/2002	Total Organic Carbon	11.5	1	mg/L	J
HN02	HIS66641	12/19/2002	TOX	12.1	5	ug/L	=
HN02	HIS66641	12/19/2002	1,1,1-Trichloroethane	5	5	ug/L	U
HN02	HIS66641	12/19/2002	1,1,2,2-Tetrachloroethane	5	5	ug/L	U
HN02	HIS66641	12/19/2002	1,1,2-Trichloro-1,2,2-trifluoroethane	5	5	ug/L	U
HN02	HIS66641	12/19/2002	1,1,2-Trichloroethane	5	5	ug/L	U
HN02	HIS66641	12/19/2002	1,1-Dichloroethane	5	5	ug/L	U
HN02	HIS66641	12/19/2002	1,1-Dichloroethene	5	5	ug/L	U
HN02	HIS66641	12/19/2002	1,2-Dichloroethane	5	5	ug/L	U
HN02	HIS66641	12/19/2002	1,2-Dichloroethene (total)	10	10	ug/L	U
HN02	HIS66641	12/19/2002	1,2 Dichloropropane	5	5	ug/L	U
HN02	HIS66641	12/19/2002	2-Butanone	20	20	ug/L	U
HN02	HIS66641	12/19/2002	2-Hexanone	20	20	ug/L	U
HN02	HIS66641	12/19/2002	4-Methyl-2-pentanone	20	20	ug/L	U
HN02	HIS66641	12/19/2002	Acetone	7.3	20	ug/L	U
HN02	HIS66641	12/19/2002	Benzene	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Bromodichloromethane	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Bromoform	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Bromomethane	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Carbon disulfide	5	5	ug/L	U

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Station Name	SampleName	Collection Date	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN02	HIS66641	12/19/2002	Carbon tetrachloride	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Chlorobenzene	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Chloroethane	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Chloroform	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Chloromethane	10	10	ug/L	U
HN02	HIS66641	12/19/2002	cis-1,3-Dichloropropene	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Dibromochloromethane	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Ethylbenzene	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Methylene chloride	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Styrene	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Tetrachloroethene	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Toluene	U.57	8	ug/L	J
HN02	HIS66641	12/19/2002	trans-1,3-Dichloropropene	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Trichloroethene	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Vinyl chloride	5	5	ug/L	U
HN02	HIS66641	12/19/2002	Xylenes (total)	10	10	ug/L	U
HN02	HIS66641	12/19/2002	1,2,4-Trichlorobenzene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	1,2-Dichlorobenzene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	1,3-Dichlorobenzene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	1,4-Dichlorobenzene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2,2'-oxybis(1-Chloropropane)	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2,4,5-Trichlorophenol	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2,4,6-Trichlorophenol	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2,4-Dichlorophenol	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2,4-Dimethylphenol	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2,4-Dinitrophenol	25	25	ug/L	U
HN02	HIS66641	12/19/2002	2,4-Dinitrotoluene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2,6-Dinitrotoluene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2-Chloronaphthalene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2-Chlorophenol	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2-Methylnaphthalene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2-Methylphenol	10	10	ug/L	U
HN02	HIS66641	12/19/2002	2-Nitroaniline	25	25	ug/L	U
HN02	HIS66641	12/19/2002	2-Nitrophenol	10	10	ug/L	U
HN02	HIS66641	12/19/2002	3,3'-Dichlorobenzidine	10	10	ug/L	U
HN02	HIS66641	12/19/2002	3-Nitroaniline	25	25	ug/L	U
HN02	HIS66641	12/19/2002	4,6-Dinitro-2-methylphenol	25	25	ug/L	U
HN02	HIS66641	12/19/2002	4-Bromophenyl phenyl ether	10	10	ug/L	U
HN02	HIS66641	12/19/2002	4-Chloro-3-methylphenol	10	10	ug/L	U
HN02	HIS66641	12/19/2002	4-Chloroaniline	10	10	ug/L	U
HN02	HIS66641	12/19/2002	4-Chlorophenyl phenyl ether	10	10	ug/L	U
HN02	HIS66641	12/19/2002	4-Methylphenol	20	20	ug/L	U
HN02	HIS66641	12/19/2002	4-Nitroaniline	25	25	ug/L	U
HN02	HIS66641	12/19/2002	4-Nitrophenol	25	25	ug/L	U
HN02	HIS66641	12/19/2002	Acenaphthene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Acenaphthylene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Anthracene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Benzo(a)anthracene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Benzo(a)pyrene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Benzo(b)fluoranthene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Benzo(ghi)perylene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Benzo(k)fluoranthene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	bis(2-Chloroethoxy)methane	10	10	ug/L	U
HN02	HIS66641	12/19/2002	bis(2-Chloroethyl) ether	10	10	ug/L	U
HN02	HIS66641	12/19/2002	bis(2-Ethylhexyl) phthalate	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Butyl benzyl phthalate	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Carbazole	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Chrysene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Dibenzo(a,h)anthracene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Dibenzofuran	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Diethyl phthalate	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Dimethyl phthalate	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Di-n-butyl phthalate	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Di-n-octyl phthalate	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Fluoranthene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Fluorene	10	10	ug/L	U

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Station Name	SampleName	Collection Date	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN02	HIS66641	12/19/2002	Hexachlorobenzene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Hexachlorobutadiene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Hexachlorocyclopentadiene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Hexachloroethane	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Indeno(1,2,3-cd)pyrene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Isophorone	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Naphthalene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Nitrobenzene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	N-Nitrosodi-n-propylamine	10	10	ug/L	U
HN02	HIS66641	12/19/2002	N-Nitrosodiphenylamine	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Pentachlorophenol	25	25	ug/L	U
HN02	HIS66641	12/19/2002	Phenanthrene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Phenol	10	10	ug/L	U
HN02	HIS66641	12/19/2002	Pyrene	10	10	ug/L	U
HN02	HIS66641	12/19/2002	TH-228	0.74	0.5	pCi/L	J
HN02	HIS66641	12/19/2002	TH-230	1.65	0.5	pCi/L	J
HN02	HIS66641	12/19/2002	TH-232	0.37	0.5	pCi/L	UJ
HN02	HIS66641	12/19/2002	RA-226	0.84	1.45	pCi/L	UJ
HN02	HIS66641	12/19/2002	U-234	11.36	0.68	pCi/L	=
HN02	HIS66641	12/19/2002	U-235	0.31	0.84	pCi/L	UJ
HN02	HIS66641	12/19/2002	U-238	8.55	0.68	pCi/L	=
HN02	HIS66641	12/19/2002	Gross Alpha	26.8	8.38	pCi/L	=
HN02	HIS66641	12/19/2002	Gross Beta	6.81	25.61	pCi/L	UJ
HN02	HIS66641	12/19/2002	Settleable Solids	0.1	0.2	mL/L/hr	U
HN02	HIS66635	10/25/2002	Settleable Solids	0	0.2	mL/L/hr	U
HN02	HIS66638	11/5/2002	Settleable Solids	0	0.2	mL/L/hr	U
HN03	HIS66642	12/19/2002	Total Organic Carbon	5.8	1	mg/L	J
HN03	HIS66642	12/19/2002	TOX	10.2	5	ug/L	=
HN03	HIS66642	12/19/2002	1,1,1-Trichloroethane	5	5	ug/L	U
HN03	HIS66642	12/19/2002	1,1,2,2-Tetrachloroethane	5	5	ug/L	U
HN03	HIS66642	12/19/2002	1,1,2-Trichloro-1,2,2-trifluoroethane	5	5	ug/L	U
HN03	HIS66642	12/19/2002	1,1,2-Trichloroethane	5	5	ug/L	U
HN03	HIS66642	12/19/2002	1,1-Dichloroethane	5	5	ug/L	U
HN03	HIS66642	12/19/2002	1,1-Dichloroethene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	1,2-Dichlorobenzene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	1,2-Dichloroethane	5	5	ug/L	U
HN03	HIS66642	12/19/2002	1,2-Dichloroethene (total)	10	10	ug/L	U
HN03	HIS66642	12/19/2002	1,2-Dichloropropane	5	5	ug/L	U
HN03	HIS66642	12/19/2002	1,3-Dichlorobenzene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	1,4-Dichlorobenzene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	2-Butanone	20	20	ug/L	U
HN03	HIS66642	12/19/2002	2-Hexanone	20	20	ug/L	U
HN03	HIS66642	12/19/2002	4-Methyl-2-pentanone	20	20	ug/L	U
HN03	HIS66642	12/19/2002	Acetone	6.6	20	ug/L	U
HN03	HIS66642	12/19/2002	Benzene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Bromodichloromethane	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Bromoform	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Bromomethane	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Carbon disulfide	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Carbon tetrachloride	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Chlorobenzene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Chloroethane	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Chloroform	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Chloromethane	10	10	ug/L	U
HN03	HIS66642	12/19/2002	cis-1,3-Dichloropropene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Dibromochloromethane	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Ethylbenzene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Methylene chloride	5	5	ug/L	U
HN03	HIS66642	12/19/2002	m-Xylene & p-Xylene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	o-Xylene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Styrene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Tetrachloroethene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Toluene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	trans-1,3-Dichloropropene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Trichloroethene	5	5	ug/L	U
HN03	HIS66642	12/19/2002	Vinyl chloride	5	5	ug/L	U

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Station Name	SampleName	Collection Date	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN03	HIS66642	12/19/2002	Xylenes (total)	10	10	ug/L	U
HN03	HIS66642	12/19/2002	1,2,4-Trichlorobenzene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	1,2-Dichlorobenzene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	1,3-Dichlorobenzene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	1,4-Dichlorobenzene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2,2'-oxybis(1-Chloropropane)	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2,4,5-Trichlorophenol	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2,4,6-Trichlorophenol	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2,4-Dichlorophenol	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2,4-Dimethylphenol	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2,4-Dinitrophenol	25	25	ug/L	U
HN03	HIS66642	12/19/2002	2,4-Dinitrotoluene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2,6-Dinitrotoluene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2-Chloronaphthalene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2-Chlorophenol	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2-Methylnaphthalene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2-Methylphenol	10	10	ug/L	U
HN03	HIS66642	12/19/2002	2-Nitroaniline	25	25	ug/L	U
HN03	HIS66642	12/19/2002	2-Nitrophenol	10	10	ug/L	U
HN03	HIS66642	12/19/2002	3,3'-Dichlorobenzidine	10	10	ug/L	U
HN03	HIS66642	12/19/2002	3-Nitroaniline	25	25	ug/L	U
HN03	HIS66642	12/19/2002	4,6-Dinitro-2-methylphenol	25	25	ug/L	U
HN03	HIS66642	12/19/2002	4-Bromophenyl phenyl ether	10	10	ug/L	U
HN03	HIS66642	12/19/2002	4-Chloro-3-methylphenol	10	10	ug/L	U
HN03	HIS66642	12/19/2002	4-Chloroaniline	10	10	ug/L	U
HN03	HIS66642	12/19/2002	4-Chlorophenyl phenyl ether	10	10	ug/L	U
HN03	HIS66642	12/19/2002	4-Methylphenol	20	20	ug/L	U
HN03	HIS66642	12/19/2002	4-Nitroaniline	25	25	ug/L	U
HN03	HIS66642	12/19/2002	4-Nitrophenol	25	25	ug/L	U
HN03	HIS66642	12/19/2002	Acenaphthene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Acenaphthylene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Anthracene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Benzo(a)anthracene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Benzo(a)pyrene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Benzo(b)fluoranthene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Benzo(ghi)perylene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Benzo(k)fluoranthene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	bis(2-Chloroethoxy)methane	10	10	ug/L	U
HN03	HIS66642	12/19/2002	bis(2-Chloroethyl) ether	10	10	ug/L	U
HN03	HIS66642	12/19/2002	bis(2-Ethylhexyl) phthalate	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Butyl benzyl phthalate	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Carbazole	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Chrysene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Dibenzo(a,h)anthracene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Dibenzofuran	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Diethyl phthalate	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Dimethyl phthalate	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Di-n-butyl phthalate	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Di-n-octyl phthalate	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Fluoranthene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Fluorene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Hexachlorobenzene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Hexachlorobutadiene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Hexachlorocyclopentadiene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Hexachloroethane	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Indeno(1,2,3-cd)pyrene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Isophorone	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Naphthalene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Nitrobenzene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	N-Nitrosodi-n-propylamine	10	10	ug/L	U
HN03	HIS66642	12/19/2002	N-Nitrosodiphenylamine	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Pentachlorophenol	25	25	ug/L	U
HN03	HIS66642	12/19/2002	Phenanthrene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Phenol	10	10	ug/L	U
HN03	HIS66642	12/19/2002	Pyrene	10	10	ug/L	U
HN03	HIS66642	12/19/2002	TH-228	1.57	0.52	pCi/L	J

**Fourth Quarter 2002 - Hazelwood Interim Storage Site- Table 2 Analytical Results**

Station Name	SampleName	Collection Date	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN03	HIS66642	12/19/2002	TH-230	3.57	1.16	pCi/L	J
HN03	HIS66642	12/19/2002	TH-232	0	0.52	pCi/L	U
HN03	HIS66642	12/19/2002	RA-226	1.38	0.62	pCi/L	J
HN03	HIS66642	12/19/2002	U-234	2.49	0.75	pCi/L	J
HN03	HIS66642	12/19/2002	U-235	0	0.93	pCi/L	U
HN03	HIS66642	12/19/2002	U-238	1.93	0.75	pCi/L	J
HN03	HIS66642	12/19/2002	Gross Alpha	11.13	8.34	pCi/L	J
HN03	HIS66642	12/19/2002	Gross Beta	-5.02	25.58	pCi/L	UJ
HN03	HIS66642	12/19/2002	Settleable Solids	0	0.2	mL/L/hr	U
HN03	HIS66636	10/25/2002	Settleable Solids	0	0.2	mL/L/hr	U
HN03	HIS66639	11/5/2002	Settleable Solids	0	0.2	mL/L/hr	U

U indicates that the analyte was analyzed for but was not detected above the reported sample quantitation limit.

J indicates that the analyte was positively identified. The associated numerical value is the approximate concentration of the radionuclide in the sample.

UJ indicates the analyte was not detected above the minimum detectable value (limit). However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

= indicates that the analyte has been positively identified and the associated concentration value is accurate.

**ATTACHMENT B**

**QUARTERLY DISCHARGE MONITORING REPORT FOR THE  
ST. LOUIS AIRPORT SITE**

2002

**Fourth Quarter Stormwater Discharge Monitoring Report  
St. Louis Airport Site (SLAPS), St. Louis, MO**

<b>FACILITY NAME</b>	<b>PERMIT NUMBER</b>	<b>COUNTY</b>	<b>OWNER</b>	<b>FACILITY CONTACT</b>	
St. Louis Airport Site (SLAPS)	No permit exists, currently working to the ARAR provided 10/02/98	St. Louis	U.S. Army Corps of Engineers, St. Louis District	S.R. Cotner, Program Manager, USACE	
<b>OPERATOR OF FACILITY</b>			<b>TYPE OF FACILITY</b>		
United States Army Corps of Engineers (USACE)			Standard Industrial Classification-9999, non-classifiable		
<b>REQUIRED FREQUENCY OF MONITORING</b>				<b>THIS REPORT COVERS</b>	
Flow-monthly, 24 hour estimate; Effluent Parameters- Chemical and radiological <sup>1</sup> : monthly during rainfall that results in a discharge; Radiological <sup>2</sup> : per rainfall event that results in a discharge; Radon -semi-annually during rainfall that results in a discharge; Monitoring Report-quarterly				4th Quarter- October 1, 2002 - December 31, 2002	
<b>SAMPLES COLLECTED BY</b>					
Baywest and Pangea personnel					
<b>ANALYSIS PERFORMED BY</b>					
ARDL for chemical analysis; HISS on-site laboratory for radiological analysis; Radon in water analysis performed by General Engineering Laboratories.					
<b>SAMPLE LOCATION</b>	<b>EVENT<sup>3</sup> 1</b>	<b>EVENT 2</b>	<b>EVENT 3</b>	<b>EVENT 4</b>	<b>EVENT 5</b>
Outfall 001a	10/02/02 - 10/04/02	10/18/02 - 10/19/02, 10/21/02	10/25/2002	10/29/2002	11/03/02 - 11/04/02
Outfall 002 <sup>4</sup>	4	4	4	4	4
Outfall 003	10/3/2002	12	12	12	12
<b>SAMPLE LOCATION</b>	<b>EVENT 6</b>	<b>EVENT 7</b>	<b>EVENT 8</b>		
Outfall 001a	11/05/02 - 11/06/02	11/15/02 - 11/16/02	12/18/2002		
Outfall 002 <sup>4</sup>	4	4	4		
Outfall 003	12	12	12		
<b>REPORT APPROVED BY OWNER</b> Sharon Cotner for USACE				<b>DATE</b> 1-23-03	

**NOTES: (NUMBERING SYSTEM HAS BEEN KEPT CONSISTENT ON EACH PAGE TO REDUCE CONFUSION)**

<sup>1</sup> Collect monthly grab samples for the following parameters: oil and grease, total petroleum hydrocarbons, pH, chemical oxygen demand, settleable solids, total recoverable arsenic, total recoverable lead, total recoverable chromium, total recoverable copper, total recoverable cadmium, polychlorinated biphenyls, total uranium, total radium, total thorium, gross alpha, gross beta, protactinium-231, and actinium-227.

<sup>2</sup> Collect grab samples per rainfall event for the following parameters: total uranium, total radium, total thorium, gross alpha, gross beta, protactinium-231, and actinium-227.

<sup>3</sup> An event is defined as a measurable increase in discharge rate from precipitation producing 0.1 inch or more of liquid in a 24 hour period, or from pumping operation (such as following treatment). An event may exceed duration of 24 hours, and two events experienced within 48 hours may be reported together.

<sup>4</sup> As per MDNR letter from Matthew Sikes addressed to Sharon Cotner dated 02/19/02, sampling at outfall 002 has been reduced to once a year.

<sup>5</sup> ND = No Discharge

<sup>6</sup> Results are reported in required units.

<sup>7</sup> DL= Detection Limit

<sup>8</sup> Value reported is based on a volume weighted average of analyte activity concentrations for samples collected during the defined event. Corresponding radiological samples were collected on the same date as chemical samples, however, the radiological results are incorporated into the volume weighted average for the specified event.

<sup>9</sup> As specified in the permit, radionuclides require monitoring only, and limits are not permit specified.

<sup>10</sup> Total nuclide values in ug/L units were calculated using the activity concentration values reported by the laboratory and values for specific activity listed in Table 8.4.1 of The Health Physics and Radiological Health Handbook, 1992 Edition

<sup>11</sup> It is assumed that Ra-228 and Th-228 are in secular equilibrium with Th-232, therefore, Th-232 results are used to estimate Ra-228 and Th-228 values.

<sup>12</sup> As per MDNR letter from Matthew Sikes addressed to Sharon Cotner dated 02/19/02, sampling at outfall 003 has been discontinued.

<sup>13</sup> Waiting on data results from the laboratory

**2002 Fourth Quarter-Stormwater Discharge Monitoring Report - Outfall 001a**  
**St. Louis Airport Site (SLAPS), St. Louis, MO**

MONITORING PARAMETER	FINAL EFFLUENT LIMITATIONS		UNITS <sup>6</sup>	ANALYTICAL RESULTS						SAMPLE TYPE	REMARKS and COMMENTS
	Daily Maximum	Monthly Average		Outfall 001a							
				Chemical Parameters							
				October	November	December					
Flow	Monitor only	Monitor only	MGD	0.29	0.04	13			24-hr estimate		
Oil and Grease	15	10	mg/L	0	0	13			Grab		
Total Petroleum Hydrocarbons	10	10	mg/L	0	0	13			Grab		
pH-Units	6.0-9.0	NA	SU	7.4	7.5	13			Grab		
Chemical Oxygen Demand	120	90	mg/L	20.6	0	13			Grab		
Settleable Solids	1.5	1	mL/L/hr	0	0	13			Grab	DL <sup>7</sup> = 0.1 mL/L/hr	
Arsenic, Total Recoverable	100	100	µg/L	0	0	13			Grab		
Lead, Total Recoverable	190	190	µg/L	0	0	13			Grab		
Chromium, Total Recoverable	280	280	µg/L	0	0	13			Grab		
Copper, Total Recoverable	84	84	µg/L	0	0	13			Grab		
Cadmium, Total Recoverable	94	94	µg/L	0	0	13			Grab		
Polychlorinated Biphenyls	No release	No release	µg/L	0	0	13			Grab	DL <sup>7</sup> = 1 µg/L	
				Radiological Parameters <sup>8,11</sup>							
				Event 1	Event 2	Event 3	Event 4	Event 5	Event 6		
Uranium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	1.60E+02	3.47E+02	5.2E+02	3.6E+02	1.1E+03	3.7E+02	Grab	Calculated estimates
Radium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	2.E-06	2.E-06	6.E-06	1.E-06	5.E-06	2.E-06	Grab	Calculated estimates
Thorium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	1.E+00	5.E+00	4.E+00	4.E-04	3.E-01	3.E+00	Grab	Calculated estimates
Gross Alpha <sup>9</sup>	Monitor only	Monitor only	pCi/L	1.7E+02	3.5E+02	6.2E+02	3.1E+02	8.0E+02	4.5E+02	Grab	
Gross Beta <sup>9</sup>	Monitor only	Monitor only	pCi/L	7.E+01	4.E+01	9.E+01	3.E+01	1.4E+02	6.E+01	Grab	
Protactinium-231 <sup>9</sup>	Monitor only	Monitor only	pCi/L	3.E-01	1.E-01	1.E+00	1.E-01	7.E-02	5.E-02	Grab	
Actinium-227 <sup>9</sup>	Monitor only	Monitor only	pCi/L	3.E-01	1.E-01	1.E+00	1.E-01	7.E-02	5.E-02	Grab	
Radon	Monitor only	Monitor only	pCi/L							Grab	
				Event 7	Event 8						
Uranium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	6.9E+02	4.5E+01					Grab	Calculated estimates
Radium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	5.E-06	13					Grab	Calculated estimates
Thorium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	4.E+00	13					Grab	Calculated estimates
Gross Alpha <sup>9</sup>	Monitor only	Monitor only	pCi/L	5.7E+02	13					Grab	
Gross Beta <sup>9</sup>	Monitor only	Monitor only	pCi/L	2.E+02	13					Grab	
Protactinium-231 <sup>9</sup>	Monitor only	Monitor only	pCi/L	6.E-02	13					Grab	
Actinium-227 <sup>9</sup>	Monitor only	Monitor only	pCi/L	6.E-02	13					Grab	

NOTES: (NUMBERING SYSTEM HAS BEEN KEPT CONSISTENT ON EACH PAGE TO REDUCE CONFUSION)

<sup>5</sup> ND = No Discharge

<sup>6</sup> Results are reported in required units.

<sup>7</sup> DL = Detection Limit

<sup>8</sup> Value reported is based on a volume weighted average of analyte activity concentrations for samples collected during the defined event. Corresponding radiological samples were collected on the same date as chemical samples, however, the radiological results are incorporated into the volume weighted average for the specified event.

<sup>9</sup> As specified in the permit, radionuclides require monitoring only, and limits are not permit specified.

<sup>10</sup> Total nuclide values in µg/L units were calculated using the activity concentration values reported by the laboratory and values for specific activity listed in Table 8.4.1 of The Health Physics and Radiological Health Handbook, 1992 Edition

<sup>11</sup> It is assumed that Ra-228 and Th-228 are in secular equilibrium with Th-232, therefore, Th-232 results are used to estimate Ra-228 and Th-228 values.

<sup>12</sup> As per MDNR letter from Matthew Sikes addressed to Sharon Cotner dated 02/19/02, sampling at outfall 003 has been discontinued.

ing on data results from the laboratory.

**2002 Fourth Quarter-Stormwater Discharge Monitoring Report - Outfall 002**  
**St. Louis Airport Site (SLAPS), St. Louis, MO**

MONITORING PARAMETER	FINAL EFFLUENT LIMITATIONS		UNITS <sup>6</sup>	ANALYTICAL RESULTS						SAMPLE TYPE	REMARKS and COMMENTS
	Daily Maximum	Monthly Average		Outfall 002							
				Chemical Parameters							
				October	November	December					
Flow	Monitor only	Monitor only	MGD	4	4	4				estimate	
Oil and Grease	15	10	mg/L	4	4	4				Grab	
Total Petroleum Hydrocarbons	10	10	mg/L	4	4	4				Grab	
pH-Units	6.0-9.0	NA	SU	4	4	4				Grab	
Chemical Oxygen Demand	120	90	mg/L	4	4	4				Grab	
Settleable Solids	1.5	1	mL/L/hr	4	4	4				Grab	DL <sup>7</sup> = 0.1 mL/L/hr
Arsenic, Total Recoverable	100	100	µg/L	4	4	4				Grab	
Lead, Total Recoverable	190	190	µg/L	4	4	4				Grab	
Chromium, Total Recoverable	280	280	µg/L	4	4	4				Grab	
Copper, Total Recoverable	84	84	µg/L	4	4	4				Grab	
Cadmium, Total Recoverable	94	94	µg/L	4	4	4				Grab	
Polychlorinated Biphenyls	No release	No release	µg/L	4	4	4				Grab	DL <sup>7</sup> = 1 µg/L
				Radiological Parameters <sup>8,11</sup>							
				Event 1	Event 2	Event 3	Event 4	Event 5	Event 6		
Uranium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	4	4	4	4	4	4	Grab	Calculated estimates
Radium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	4	4	4	4	4	4	Grab	Calculated estimates
Thorium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	4	4	4	4	4	4	Grab	Calculated estimates
Gross Alpha <sup>9</sup>	Monitor only	Monitor only	pCi/L	4	4	4	4	4	4	Grab	
Gross Beta <sup>9</sup>	Monitor only	Monitor only	pCi/L	4	4	4	4	4	4	Grab	
Protactinium-231 <sup>9</sup>	Monitor only	Monitor only	pCi/L	4	4	4	4	4	4	Grab	
Actinium-227 <sup>9</sup>	Monitor only	Monitor only	pCi/L	4	4	4	4	4	4	Grab	
Radon	Monitor only	Monitor only	pCi/L							Grab	
				Event 7	Event 8						
Uranium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	4	4					Grab	Calculated estimates
Radium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	4	4					Grab	Calculated estimates
Thorium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	4	4					Grab	Calculated estimates
Gross Alpha <sup>9</sup>	Monitor only	Monitor only	pCi/L	4	4					Grab	
Gross Beta <sup>9</sup>	Monitor only	Monitor only	pCi/L	4	4					Grab	
Protactinium-231 <sup>9</sup>	Monitor only	Monitor only	pCi/L	4	4					Grab	
Actinium-227 <sup>9</sup>	Monitor only	Monitor only	pCi/L	4	4					Grab	

NOTES: (NUMBERING SYSTEM HAS BEEN KEPT CONSISTENT ON EACH PAGE TO REDUCE CONFUSION)

<sup>4</sup> As per MDNR letter from Matthew Sikas addressed to Sharon Cotner dated 02/19/02, sampling at outfall 002 has been reduced to once a year.

<sup>5</sup> ND = No Discharge

<sup>6</sup> Results are reported in required units.

<sup>7</sup> DL= Detection Limit

<sup>8</sup> Value reported is based on a volume weighted average of analyte activity concentrations for samples collected during the defined event. Corresponding radiological samples were collected on the same date as chemical samples, however, the radiological results are incorporated into the volume weighted average for the specified event.

<sup>9</sup> As specified in the permit, radionuclides require monitoring only, and limits are not permit specified.

<sup>10</sup> Total nuclide values in ug/L units were calculated using the activity concentration values reported by the laboratory and values for specific activity listed in Table 8.4.1 of The Health Physics and Radiological Health Handbook, 1992 Edition

<sup>11</sup> It is assumed that Ra-228 and Th-228 are in secular equilibrium with Th-232, therefore, Th-232 results are used to estimate Ra-228 and Th-228 values.

<sup>12</sup> As per MDNR letter from Matthew Sikas addressed to Sharon Cotner dated 02/19/02, sampling at outfall 003 has been discontinued.

<sup>13</sup> Waiting on data results from the laboratory.

**2002 Fourth Quarter-Stormwater Discharge Monitoring Report - Outfall 003**  
**St. Louis Airport Site (SLAPS), St. Louis, MO**

MONITORING PARAMETER	FINAL EFFLUENT LIMITATIONS		UNITS <sup>6</sup>	ANALYTICAL RESULTS						SAMPLE TYPE	REMARKS and COMMENTS
	Daily Maximum	Monthly Average		Outfall 003							
				Chemical Parameters							
				October	November	December					
Flow	Monitor only	Monitor only	MGD	0.06	12	12				estimate	
Oil and Grease	15	10	mg/L	0	12	12				Grab	
Total Petroleum Hydrocarbons	10	10	mg/L	0	12	12				Grab	
pH-Units	6.0-9.0	NA	SU	7.7	12	12				Grab	
Chemical Oxygen Demand	120	90	mg/L	0	12	12				Grab	
Settleable Solids	1.5	1	mL/L/hr	0	12	12				Grab	DL <sup>7</sup> = 0.1 mL/L/hr
Arsenic, Total Recoverable	100	100	µg/L	0	12	12				Grab	
Lead, Total Recoverable	190	190	µg/L	0	12	12				Grab	
Chromium, Total Recoverable	280	280	µg/L	0	12	12				Grab	
Copper, Total Recoverable	84	84	µg/L	0	12	12				Grab	
Cadmium, Total Recoverable	94	94	µg/L	0	12	12				Grab	
Polychlorinated Biphenyls	No release	No release	µg/L	0	12	12				Grab	DL <sup>7</sup> = 1 µg/L
				Radiological Parameters <sup>8,11</sup>							
				Event 1	Event 2	Event 3	Event 4	Event 5	Event 6		
Uranium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	1.8E+00	12	12	12	12	12	Grab	Calculated estimates
Radium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	2.E-07	12	12	12	12	12	Grab	Calculated estimates
Thorium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	2.E+00	12	12	12	12	12	Grab	Calculated estimates
Gross Alpha <sup>9</sup>	Monitor only	Monitor only	pCi/L	3.0E+00	12	12	12	12	12	Grab	
Gross Beta <sup>9</sup>	Monitor only	Monitor only	pCi/L	4.E+00	12	12	12	12	12	Grab	
Protactinium-231 <sup>9</sup>	Monitor only	Monitor only	pCi/L	4.E-02	12	12	12	12	12	Grab	
Actinium-227 <sup>9</sup>	Monitor only	Monitor only	pCi/L	4.E-02	12	12	12	12	12	Grab	
Radon	Monitor only	Monitor only	pCi/L							Grab	
				Event 7	Event 8						
Uranium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	12	12					Grab	Calculated estimates
Radium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	12	12					Grab	Calculated estimates
Thorium, Total <sup>9,10</sup>	Monitor only	Monitor only	µg/L	12	12					Grab	Calculated estimates
Gross Alpha <sup>9</sup>	Monitor only	Monitor only	pCi/L	12	12					Grab	
Gross Beta <sup>9</sup>	Monitor only	Monitor only	pCi/L	12	12					Grab	
Protactinium-231 <sup>9</sup>	Monitor only	Monitor only	pCi/L	12	12					Grab	
Actinium-227 <sup>9</sup>	Monitor only	Monitor only	pCi/L	12	12					Grab	

NOTES: (NUMBERING SYSTEM HAS BEEN KEPT CONSISTENT ON EACH PAGE TO REDUCE CONFUSION)

<sup>5</sup> ND = No Discharge

<sup>6</sup> Results are reported in required units.

<sup>7</sup> DL = Detection Limit

<sup>8</sup> Value reported is based on a volume weighted average of analyte activity concentrations for samples collected during the defined event. Corresponding radiological samples were collected on the same date as chemical samples, however, the radiological results are incorporated into the volume weighted average for the specified event.

<sup>9</sup> As specified in the permit, radionuclides require monitoring only, and limits are not permit specified.

<sup>10</sup> Total nuclide values in µg/L units were calculated using the activity concentration values reported by the laboratory and values for specific activity listed in Table 8.4.1 of The Health Physics and Radiological Health Handbook, 1992 Edition

<sup>11</sup> It is assumed that Ra-228 and Th-228 are in secular equilibrium with Th-232, therefore, Th-232 results are used to estimate Ra-228 and Th-228 values.

<sup>12</sup> As per MDNR letter from Matthew Sikes addressed to Sharon Comer dated 02/19/02, sampling at outfall 003 has been discontinued.

<sup>13</sup> Waiting on data results from the laboratory.

# RAINFALL TABLE FOR SLAPS

Date	(inches)	Outfall	Outfall	Outfall
2002	24-hour total	001a*	002**	003***
1-Oct	0.00			
2-Oct	1.82	0.29		
3-Oct	1.82	0.19		0.06
4-Oct	0.24	0.09		
5-Oct	0.24			
6-Oct	1.82			
7-Oct	0.00			
8-Oct	0.00			
9-Oct	0.00			
10-Oct	0.00			
11-Oct	0.00			
12-Oct	0.11			
13-Oct	0.00			
14-Oct	0.00			
15-Oct	0.00			
16-Oct	0.00			
17-Oct	0.50			
18-Oct	0.70	0.00		
19-Oct	0.00	0.01		
20-Oct	0.00			
21-Oct	0.00	0.00		
22-Oct	0.00			
23-Oct	Trace			
24-Oct	Trace			
25-Oct	0.84	0.04		
26-Oct	0.03			
27-Oct	Trace			
28-Oct	0.05			
29-Oct	0.78	0.18		
30-Oct	0.05			
31-Oct	0.01			
Monthly Average		0.10		0.06

Date	(Inches)	Outfall	Outfall	Outfall
2002	24-hour total	001a*	002**	003***
1-Nov	0.00			
2-Nov	0.21			
3-Nov	0.07	0.01		
4-Nov	0.00	0.00		
5-Nov	0.35	0.04		
6-Nov	0.00	0.01		
7-Nov	0.00			
8-Nov	0.00			
9-Nov	0.02			
10-Nov	Trace			
11-Nov	0.00			
12-Nov	0.00			
13-Nov	0.00			
14-Nov	0.00			
15-Nov	0.07	0.02		
16-Nov	0.00	0.01		
17-Nov	0.00			
18-Nov	Trace			
19-Nov	0.00			
20-Nov	0.00			
21-Nov	Trace			
22-Nov	0.00			
23-Nov	Trace			
24-Nov	Trace			
25-Nov	0.00			
26-Nov	0.00			
27-Nov	0.00			
28-Nov	0.00			
29-Nov	0.00			
30-Nov	0.00			
Monthly Average		0.02		

Date	(inches)	Outfall	Outfall	Outfall
2002	24-hour total	001a*	002**	003***
1-Dec	0.00			
2-Dec	0.00			
3-Dec	0.00			
4-Dec	3.50			
5-Dec	0.00			
6-Dec	0.00			
7-Dec	0.00			
8-Dec	0.00			
9-Dec	0.00			
10-Dec	0.00			
11-Dec	0.00			
12-Dec	0.00			
13-Dec	0.00			
14-Dec	0.00			
15-Dec	0.00			
16-Dec	Trace			
17-Dec	0.01			
18-Dec	1.18	0.27		
19-Dec	0.01			
20-Dec	0.00			
21-Dec	0.00			
22-Dec	0.00			
23-Dec	0.00			
24-Dec	0.47			
25-Dec	Trace			
26-Dec	0.00			
27-Dec	Trace			
28-Dec	0.00			
29-Dec	0.00			
30-Dec	0.06			
31-Dec	0.09			
Monthly Average		0.27		

## Notes:

Flow measurements for the three outfalls are reported in million gallons per day (MGD) and reported to two decimal places. All blank spaces represent zero flow.

\*A flow meter and automatic sampler are currently installed at Outfall 001a. Outfall 001b is an emergency spillway only.

\*\* Outfall 002 is sampled annually per MDNR letter dated 2/19/02 as a result flow is not measured until a sample is collected.

\*\*\* As per MDNR letter from Matthew Sikes addressed to Sharon Cotner dated 02/19/02, sampling at outfall 003 has been discontinued.

DEPARTMENT OF THE ARMY  
ST. LOUIS DISTRICT, CORPS OF ENGINEERS  
8945 LATTY AVENUE  
BERKELEY, MISSOURI 63134

January 24, 2003

Formerly Utilized Sites Remedial Action Program Project Office

Subject: Quarterly Metropolitan Sewer District (MSD) Self-Monitoring Report for  
October 2002 Through December 2002, St. Louis Downtown Site (SLDS)

Mr. Ronald Biehl  
St. Louis Metropolitan Sewer District  
Department of Environmental Compliance  
10 East Grand Avenue  
St. Louis, Missouri 63147-2913

Dear Mr. Biehl:

The USACE is submitting the October 2002 Through December 2002 quarterly self-monitoring report for the St. Louis Downtown Site (SLDS). During this period seventeen (17) discharges of wastewater from Plant 6EH operations occurred to the Metropolitan Sewer District (MSD) Base Map Inlet 17D3-022C.

For the calendar quarter a total of 356,490 gallons of wastewater from Plant 6 and Plant 1 operations were discharged with a total activity of  $4.5\text{E-}06$  curies for Thorium;  $9.9\text{E-}07$  curies for Uranium (isotopic); and  $3.0\text{E-}06$  curies for Radium. The total activity that has been discharged for the calendar year 2002 through December is  $1.7\text{E-}05$  curies for Thorium;  $6.4\text{E-}06$  curies for Uranium (isotopic); and  $1.1\text{E-}05$  curies for Radium. Data for each batch are presented on the attached pages for your review.

Also included in this report are the results of analysis for uranium (KPA method) and total suspended solids for each discharge.

Should you have any comments or questions regarding this letter, please feel free to contact either Dr. Greg Hempen at (314) 260-3939 or Mr. Ron Frerker at (314) 260-3936.

Sincerely,



Sharon R. Cotner  
FUSRAP Program Manager

Enclosure

# FUSRAP SLDS

## Self Monitoring Report for 4th Quarter for Inlet 17D3-022C

Parameter	Batch Number	Date of Discharge	Batch Results (pCi/L)	Amount Discharged (gal)	Total Activity per Discharge (Ci)	MSD Limits	Sum of the Ratios
Gross Alpha	BK-345	10/07/2002	1.5	27,160	1.5E-07	3,000	0.0
Gross Beta			10		1.0E-06	N/A	
TH-228			0.6		5.8E-08	2,000	
TH-230			2.0		2.0E-07	1,000	
TH-232			0.2		2.3E-08	300	
Uranium (Nat)			0.0		0.0E+00	3,000	
RA-226			0.6		8.5E-08	800	
RA-228*			0.6		5.8E-08	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			2.3 mg/l			30	
Gross Alpha	BK-346	10/14/2002	1.4	26,970	1.5E-07	3,000	0.0
Gross Beta			9.7		9.9E-07	N/A	
TH-228			0.9		8.9E-08	2,000	
TH-230			1.7		1.7E-07	1,000	
TH-232			0.2		2.1E-08	300	
Uranium (Nat)			1.1		1.1E-07	3,000	
RA-226			0.0		0.0E+00	600	
RA-228*			0.9		8.9E-08	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			1.3 mg/l			30	
Gross Alpha	BK-347	10/17/2002	1.4	31,400	1.7E-07	3,000	0.0
Gross Beta			13		1.6E-06	N/A	
TH-228			0.5		6.3E-08	2,000	
TH-230			0.6		7.5E-08	1,000	
TH-232			0.0		0.0E+00	300	
Uranium (Nat)			1.1		1.3E-07	3,000	
RA-226			0.1		1.3E-08	600	
RA-228*			0.5		6.3E-08	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.8 mg/l			30	
Gross Alpha	BK-348	10/24/2002	1.3	30,660	1.5E-07	3,000	0.0
Gross Beta			20		2.3E-06	N/A	
TH-228			0.6		7.1E-08	2,000	
TH-230			1.6		1.8E-07	1,000	
TH-232			0.2		2.8E-08	300	
Uranium (Nat)			2.0		2.3E-07	3,000	
RA-226			0.4		4.1E-08	600	
RA-228*			0.6		7.1E-08	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			1.1 mg/l			30	

# FUSRAP SLDS

## Self Monitoring Report for 4th Quarter for Inlet 17D3-022C

Parameter	Batch Number	Date of Discharge	Batch Results (pCi/L)	Amount Discharged (gal)	Total Activity per Discharge (Ci)	MSD Limits	Sum of the Ratios
Gross Alpha	BK-349	10/24/2002	1.4	15,270	8.0E-08	3,000	0.0
Gross Beta			8.8		5.1E-07	N/A	
TH-228			1.3		7.4E-08	2,000	
TH-230			2.3		1.3E-07	1,000	
TH-232			0.1		6.9E-09	300	
Uranium (Nat)			0.5		3.0E-08	3,000	
RA-226			3.4		2.0E-07	600	
RA-228*			1.3		7.4E-08	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.5 mg/l			30	
Gross Alpha	BK-350	10/28/2002	3.8	19,390	2.8E-07	3,000	0.0
Gross Beta			9.6		7.0E-07	N/A	
TH-228			0.5		3.4E-08	2,000	
TH-230			2.3		1.7E-07	1,000	
TH-232			0.2		1.7E-08	300	
Uranium (Nat)			0.6		4.1E-08	3,000	
RA-226			0.0		0.0E+00	600	
RA-228*			0.5		3.4E-08	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.1 mg/l			30	
Gross Alpha	BK-351	10/30/2002	1.4	19,260	1.0E-07	3,000	0.0
Gross Beta			8.0		5.9E-07	N/A	
TH-228			0.5		3.6E-08	2,000	
TH-230			3.3		2.4E-07	1,000	
TH-232			0.0		0.0E+00	300	
Uranium (Nat)			1.4		1.0E-07	3,000	
RA-226			0.4		3.1E-08	600	
RA-228*			0.5		3.6E-08	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.1 mg/l			30	
Gross Alpha	BK-352	10/30/2002	0.0	19,730	0.0E+00	3,000	0.0
Gross Beta			5.0		3.7E-07	N/A	
TH-228			1.1		7.8E-08	2,000	
TH-230			0.8		6.0E-08	1,000	
TH-232			0.2		1.7E-08	300	
Uranium (Nat)			0.0		0.0E+00	3,000	
RA-226			0.0		0.0E+00	600	
RA-228*			1.1		7.8E-08	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.2 mg/l			30	

# FUSRAP SLDS

## Self Monitoring Report for 4th Quarter for Inlet 17D3-022C

Parameter	Batch Number	Date of Discharge	Batch Results (pCi/L)	Amount Discharged (gal)	Total Activity per Discharge (Ci)	MSD Limits	Sum of the Ratios
Gross Alpha	BK-353	11/01/2002	0.7	20,010	5.3E-08	3,000	0.0
Gross Beta			9.3		7.0E-07	N/A	
TH-228			0.0		0.0E+00	2,000	
TH-230			1.7		1.3E-07	1,000	
TH-232			0.1		8.3E-09	300	
Uranium (Nat)			0.5		4.1E-08	3,000	
RA-226			0.2		1.7E-08	600	
RA-228*			0.0		0.0E+00	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.0 mg/l			30	
Gross Alpha	BK-354	11/01/2002	2.4	10,570	9.6E-08	3,000	0.0
Gross Beta			21		8.4E-07	N/A	
TH-228			0.9		3.7E-08	2,000	
TH-230			1.2		4.6E-08	1,000	
TH-232			0.5		1.8E-08	300	
Uranium (Nat)			0.3		1.1E-08	3,000	
RA-226			1.4		5.6E-08	600	
RA-228*			0.9		3.7E-08	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.1 mg/l			30	
Gross Alpha	BK-355	11/06/2002	2.5	19,630	1.8E-07	3,000	0.0
Gross Beta			0.1		5.5E-09	N/A	
TH-228			3.1		2.3E-07	2,000	
TH-230			3.7		2.7E-07	1,000	
TH-232			0.0		0.0E+00	300	
Uranium (Nat)			0.4		3.0E-08	3,000	
RA-226			0.2		1.6E-08	600	
RA-228*			3.1		2.3E-07	2,000	
Uranium (KPA)			0.3			3,000	
Total Suspended Solids			0.2 mg/l			30	
Gross Alpha	BK-356	11/11/2002	6.6	19,200	4.8E-07	3,000	0.0
Gross Beta			13		9.4E-07	N/A	
TH-228			3.2		2.3E-07	2,000	
TH-230			2.9		2.1E-07	1,000	
TH-232			0.4		3.0E-08	300	
Uranium (Nat)			0.3		2.5E-08	3,000	
RA-226			0.5		3.3E-08	600	
RA-228*			3.2		2.3E-07	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.4 mg/l			30	

# FUSRAP SLDS

## Self Monitoring Report for 4th Quarter for Inlet 17D3-022C

meter	Batch Number	Date of Discharge	Batch Results (pCi/L)	Amount Discharged (gal)	Total Activity per Discharge (Ci)	MSD Limits	Sum of the Ratios
Gross Alpha	BK-357	11/18/2002	1.9	20,280	1.5E-07	3,000	0.0
Gross Beta			51		3.9E-06	N/A	
TH-228			2.4		1.8E-07	2,000	
TH-230			2.3		1.8E-07	1,000	
TH-232			0.0		0.0E+00	300	
Uranium (Nat)			0.2		1.8E-08	3,000	
RA-226			10		7.9E-07	600	
RA-228*			2.4		1.8E-07	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.1 mg/l			30	
Gross Alpha	BK-358	11/17/2002	1.3	19,720	9.5E-08	3,000	0.0
Gross Beta			4.9		3.6E-07	N/A	
TH-228			2.1		1.6E-07	2,000	
TH-230			2.8		2.1E-07	1,000	
TH-232			0.1		8.6E-09	300	
Uranium (Nat)			1.3		9.6E-08	3,000	
RA-226			0.0		0.0E+00	600	
RA-228*			2.1		1.6E-07	2,000	
Uranium (KPA)			0.4			3,000	
Total Suspended Solids			0.4 mg/l			30	
Gross Alpha	BK-359	12/06/2002	4.7	20,110	3.6E-07	3,000	0.0
Gross Beta			9.6		7.3E-07	N/A	
TH-228			1.5		1.1E-07	2,000	
TH-230			0.7		5.1E-08	1,000	
TH-232			0.0		0.0E+00	300	
Uranium (Nat)			0.4		2.7E-08	3,000	
RA-226			0.3		2.5E-08	600	
RA-228*			1.5		1.1E-07	2,000	
Uranium (KPA)			0.3			3,000	
Total Suspended Solids			0.4 mg/l			30	
Gross Alpha	BK-360	12/09/2002	0.0	19,460	0.0E+00	3,000	0.0
Gross Beta			21		1.6E-06	N/A	
TH-228			0.8		5.8E-08	2,000	
TH-230			2.4		1.8E-07	1,000	
TH-232			0.0		0.0E+00	300	
Uranium (Nat)			0.9		6.6E-08	3,000	
RA-226			0.8		6.0E-08	600	
RA-228*			0.8		5.8E-08	2,000	
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.3 mg/l			30	

# FUSRAP SLDS

## Self Monitoring Report for 4th Quarter for Inlet 17D3-022C

Parameter	Batch Number	Date of Discharge	Batch Results (pCi/L)	Amount Discharged (gal)	Total Activity per Discharge (Ci)	MSD Limits	Sum of the Ratios
Gross Alpha	BK-361	12/16/2002	1.6	17,670	1.1E-07	3,000	
Gross Beta			23		1.6E-06	N/A	
TH-228			1.1		7.1E-08	2,000	
TH-230			3.6		2.4E-07	1,000	
TH-232			0.1		6.7E-09	300	
Uranium (Nat)			0.4		2.9E-08	3,000	
RA-226			0.2		1.6E-08	600	
RA-228*			1.1		7.1E-08	2,000	0.0
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.3 mg/l			30	

### NOTES:

1. Negative values are excluded from the calculation for total activity discharged.
2. Ra-228 assumed to be in equilibrium with Th-228.

### Total Activity Discharged in 4th Quarter (Ci)

TH-228	1.6E-06
TH-230	2.7E-06
TH-232	1.8E-07
Uranium (Nat)	9.9E-07
RA-226	1.4E-06
RA-228*	1.6E-06

### Total Activity Discharged YTD through 12/31/02 (Ci)

TH-228	4.8E-06
TH-230	1.1E-05
TH-232	7.4E-07
Uranium (Nat)	6.4E-06
RA-226	5.8E-06
RA-228*	4.8E-06

### Total Volume Discharged in 4th Quarter (gal)

Gallons	356,490
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### Total Volume Discharged YTD through 12/31/02

Gallons	1,361,150
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### Total Suspended Solids (mg/l)

#### Maximum Weekly

#### Monthly Average

October	2.3	0.8
November	0.4	0.2
December	0.4	0.3



DEPARTMENT OF THE ARMY  
ST. LOUIS DISTRICT, CORPS OF ENGINEERS  
8945 LATTY AVENUE  
BERKELEY, MISSOURI 63134

REPLY TO  
ATTENTION OF:

January 24, 2003

Formerly Utilized Sites Remedial Action Program Project Office

Subject: Quarterly Metropolitan Sewer District (MSD) Self-Monitoring Report for  
October 2002 Through December 2002, St. Louis Airport Site (SLAPS)

Mr. Ronald Biehl  
St. Louis Metropolitan Sewer District  
Department of Environmental Compliance  
10 East Grand Avenue  
St. Louis, Missouri 63147-2913

Dear Mr. Biehl:

The USACE is submitting the October 2002 through December 2002 quarterly self-monitoring report for the St. Louis Airport Site (SLAPS). During this period two (2) discharges of excavation water from SLAPS operations occurred to the Metropolitan Sewer District (MSD) sewer main under Eva Avenue at or very near MSD manhole 10K4-004S (located approximately 400 ft. north of McDonnell Blvd.).

In this quarter, 132,000 gallons of excavation water were discharged with a total activity of 1.4E-06 curies for thorium; 2.9E-06 curies for uranium (isotopic method); and 0.0E+00 curies for radium. The first batch consisted of 12,000 gallons and had no detectable barium or lead. A concentration of 0.092 mg/l of selenium was found which is less than the 0.20 mg/l MSD limit. The Chemical Oxygen Demand (COD) value of 775 mg/l was found to be greater than the MSD limit, so the surcharge applies. The second batch consisted of 120,000 gallons and again had no detectable barium or lead. The selenium value was below the limit, however the Biological Oxygen Demand (BOD) value of 3,900 mg/l and the COD value of 5,000 mg/l were both above the limits, so both surcharges apply.

Attached to this report are the results of other analyses including uranium (KPA method) and total suspended solids for each discharge.

Should you have any comments or questions regarding this letter, please feel free to contact either Dr. Greg Hempen at (314) 260-3939 or Mr. Ron Frerker at (314) 260-3936.

Sincerely,

Sharon R. Cotner  
FUSRAP Program Manager

Enclosure

# FUSRAP SLAPS

## Self Monitoring Report for 4th Quarter

Parameter	Batch Number	Date of Discharge	Batch Results (pCi/L)	Amount Discharged (gal)	Total Activity per Discharge (Ci)	MSD Limits	Sum of the Ratios
Gross Alpha (raw water)	SLAPS-001	10/10/2002	0.00	12,000	0.0E+00	3,000	0.00
Gross Beta			9.92		4.5E-07	N/A	
TH-228			0.00		0.0E+00	2,000	
TH-230			1.11		5.0E-08	1,000	
Uranium (Nat)			0.00		0.0E+00	3,000	
RA-226			0.00		0.0E+00	10	
RA-228 <sub>m</sub>			0.00		0.0E+00	30	
Barium			0.00 mg/l			10	
Lead			0.00 mg/l			0	
Selenium			0.092 mg/l			0	
BOD <sub>m</sub>			43.60 mg/l				
COD <sub>m</sub>			775.00 mg/l				
Gross Alpha (TSS filter pad)			0.00				
Uranium (KPA)			0.61			3,000	
Total Suspended Solids			10.60 mg/l			30	
Gross Alpha (raw water)	SLAPS-002	11/13/2002	0.00	120,000	0.0E+00	3,000	0.00
Gross Beta			0.00		0.0E+00	N/A	
TH-228			0.00		0.0E+00	2,000	
TH-230			2.96		1.3E-06	1,000	
Uranium (Nat)			6.32		2.9E-06	3,000	
RA-226			0.00		0.0E+00	10	
RA-228 <sub>m</sub>			0.00		0.0E+00	30	
Barium			0.00 mg/l			10	
Lead			0.00 mg/l			0	
Selenium			0.13 mg/l			0	
BOD <sub>m</sub>			3900.00 mg/l				
COD <sub>m</sub>			5000.00 mg/l				
Gross Alpha (TSS filter pad)			1.18				
Uranium (KPA)			5.90			3,000	
Total Suspended Solids			23.80 mg/l			30	

### NOTES:

1. Negative values are excluded from the calculation for total activity discharged.
2. Ra-228 assumed to be in equilibrium with Th-228
3. MSD surcharges apply for BOD concentrations greater than 300 mg/l and COD concentrations greater than 600 mg/l.

### Total Activity Discharged in 4th Quarter (Ci)

TH-228	0.0E+00
TH-230	1.4E-06
Uranium (Nat)	2.9E-06
RA-226	0.0E+00
RA-228 <sub>m</sub>	0.0E+00

### Total Activity Discharged TYD through 12/31/2002

TH-228	0.0E+00
TH-230	1.4E-06
Uranium (Nat)	2.9E-06
RA-226	0.0E+00
RA-228 <sub>m</sub>	0.0E+00

### Total Volume Discharged in 4th Quarter (gal)

Gallons	132,000
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### Total Volume Discharged YTD through 12/31/2002 (gal)

Gallons	132,000
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**ATTACHMENT C**

**ENVIRONMENTAL DATA CD  
(1 copy each to EPA and MDNR)**

# FUSRAP Document Management System

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Further Info?  
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St. Louis Sites

Site

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