



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

October 28, 2004

REPLY TO
ATTENTION OF:

Formerly Utilized Sites Remedial Action Program

SUBJECT: Transmittal of Third Quarter (July 1 – September 30, 2004) Calendar Year 2004
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 5th Street
Kansas City, Kansas 66101

Dear Mr. Wall:

Please find enclosed the Third Quarter (July 1 – September 30, 2004) Calendar Year 2004 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 and includes the data compact disk. Also identified are planned but not accomplished activities during the quarter and activities planned for the next quarter.

Copies of this report have been forwarded to Mr. Robert Geller (with data compact disk), Mr. Eric Gilstrap, and Mr. Peter Price of the Missouri Department of Natural Resources (with data compact disk). 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

Cotner-
Manningly
Buehr
Hempen
Mueller-

THIRD QUARTER CY04 FEDERAL FACILITY AGREEMENT PROGRESS REPORT

ACTIVITIES ACCOMPLISHED FOR THIRD QUARTER 2004 (July 1, 2004 – September 30, 2004)

Community Relations

- Conducted three St. Louis Oversight Committee Meetings this quarter (July 9th, August 13th, and September 10th).
- Issued the Draft Final Five-Year Review report for EPA concurrence.
- Conducted the annual meeting with local utilities on July 13, 2004.
- Conducted a long-term stewardship meeting with local interests on August 13, 2004.
- Provided site tours for Ms. Katy Swaney (Congressman Talent's office) on August 11th and Mr. John Woodly (Assistant Secretary of the Army - Civil Works).
- Updated the FUSRAP web pages to provide monthly updates for project schedules and documents and including monthly meeting minutes and presentations for the St. Louis Oversight Committee web page.
- The documents of Table 1 were issued in the quarter.

Table 1. Documents issued by FUSRAP SLS.

Document Title	Review Status	Document Date
<i>Initial Five-Year Review Report for FUSRAP St. Louis Sites</i>	Final	August 2004
<i>North St. Louis County - Derivation of Site-Specific DCGLs for North County Structures – Public Review Draft</i>	Public Review	July 2004
<i>North St. Louis County - Record of Decision for the North County Sites – Draft Final</i>	Regulatory Review	September 2004
<i>SLDS - Pre-Design Investigation Data Summary Report, Thomas & Proetz Lumber Company Vicinity Property (DT-10), FUSRAP St. Louis Downtown Site, St. Louis, Missouri (Appendix A.6.1 of the Small Area Remediation Work Area-Specific Description, Rev. 0, May 3, 2001)</i>	Revision 0	July 2004
<i>SLDS - Pre-Design Investigation Data Summary Report, Plants 7 North and 7 South, FUSRAP St. Louis Downtown Site</i>	Revision B Revision 0	July 2004 September 2004
<i>SLDS – Thomas & Proetz Lumber Company Vicinity Property (DT-10), Remediation Activity Work Description, FUSRAP St. Louis Downtown Site, St. Louis, Missouri (Appendix A.6.2 of the Small Area Remediation Work Area-Specific Description, FUSRAP St. Louis Downtown Site, Rev. 0, May 3, 2001)</i>	Revision B Revision 0	August 2004 September 2004
<i>SLDS – Pre-Design Investigation Work Scope, Mallinckrodt Plants 3, 8, 9, and 11 and Mallinckrodt Parking Lot (Appendix B.1 of the Pre-Design Investigation Work Description, FUSRAP St. Louis Downtown Site)</i>	Revision 0	September 2004
(Continued on next page)		

(Continued from prior page)		
SLDS – <i>Pre-Design Investigation Work Description</i> (overall document), FUSRAP St. Louis Downtown Site	Revision 0	September 2004
SLDS – <i>Post-Remedial Action Report for the Accessible Soils within the St. Louis Downtown Site, Plant 1 Property</i>	Revision 0	September 2004

Note: Only Final and Regulatory Review Documents are listed in this report.

St. Louis Airport Sites (SLAPS)

- Continued excavation in Phases 3, 4, 5, 6 and VP13. Excavated and shipped a total of 27,472 cubic yards (cyd) of contaminated material in the third quarter. A total of 3,082 cyd of contaminated material was shipped to Envirocare in Utah. A total of 24,390 cyd of contaminated material was shipped to U.S. Ecology in Idaho.
- Completed remediation and drainage improvements in Coldwater Creek (Phase 4 & 5).
- Discharged 174,861 gallons of water in accordance with MSD permit in the third quarter. Since the beginning of the calendar year, a total of 2,353,690 gallons of water has been released.
- There were no lost time accidents in the quarter. There have been 765 days without a lost-time accident.

St. Louis Downtown Site (SLDS)

- Continued excavation in Plant 6 West Half. Shipped a total of 3,760 cubic yards (cyd) of contaminated material in the third quarter. A total of 80 cyd of contaminated material was shipped to Envirocare in Utah. A total of 3,680 of contaminated material was shipped to U.S. Ecology in Idaho.
- Completed the pre-design investigation at Plant 7 West.
- Discharged 55,000 gallons of water in accordance with MSD permit in the third quarter. There was no water previously discharged this calendar year.
- There were no lost time accidents in the quarter. There have been 1,001 days without a lost-time accident.

ACTIVITIES PLANNED FOR THE THIRD QUARTER 2004 BUT NOT ACCOMPLISHED

All Sites

- The Environmental Monitoring Implementation for Fiscal Year 2005 (EMIFY05) was not completed due to coordination with other documents. The EMIFY05 should be finalized early in the quarter.

ACTIVITIES PLANNED FOR FOURTH QUARTER 2004 (October 1, 2004 – December 31, 2004)

All Sites

- Complete the EMIFY05.

St. Louis Airport Site (SLAPS)

- Continue current actions.

St. Louis Downtown Site (SLDS)

- Complete the Phase I Sewer Study for Regulator Review.
- Begin remediation activities at the Thomas & Proetz Lumber Company Vicinity Property (DT-10) and the Midtown Garage Vicinity Property (DT-29).
- Complete remediation and restoration of Plant 6 West Half South of Building 101.

DATA OBTAINED IN THIRD QUARTER CY 2004 (July 1, 2004 – September 30, 2004)

Table 2 summarizes the samples obtained from each site and their respective purposes. 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 (See Attachment A).

The Quarterly MSD Self-Monitoring Reports for the St. Louis Sites are included (See Attachment B).

ATTACHMENT A

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



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

October 28, 2004

REPLY TO
ATTENTION OF:

Formerly Utilized Sites Remedial Action Program

SUBJECT: Third Quarter 2004 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
7545 South Lindbergh, Suite 210
St. Louis, Missouri 63125

Dear Mr. Riebeling:

In accordance with the substantive requirements for storm-water discharge to 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 third quarter of 2004. Enclosed are the analytical results for storm-water Outfall 001 at SLAPS.

During the third quarter of 2004 there were three rainfall events. There were no exceedances to report per the monitoring requirements of the permit.

COD monitoring had been modified from quarterly to annually per email from Mr. Philip Schroeder to Ms. Elizabeth Pitrolo and the letter from Ms. Sharon Cotner to Mr. Philip Schroeder. As of January 2004, Outfalls 001a and 001b are now a single discharge point simply called Outfall 001. Sampling of Outfall 002, conducted annually, was reported for the year in the second quarter.

If you have any questions concerning this report, please contact me at (314) 260-3905.

Sincerely,

Sharon R. Cotner
FUSRAP Program Manager

Enclosures

Third Quarter 2004 Groundwater Discharge Monitoring Report
St. Louis Airport Site (SLAPS), St. Louis, MO

FACILITY NAME	PERMIT NUMBER	COUNTY	OWNER	FACILITY CONTACT
St. Louis Airport Site (SLAPS) ¹	No permit exists, currently working to the ARAR provided 10.02.98	St. Louis	St. Louis Airport Authority	S.R. Cotner, Program Manager, USACE
OPERATOR OF FACILITY		TYPE OF FACILITY		
United States Army Corps of Engineers (USACE)		Standard Industrial Classification-9999, non-classifiable		
REQUIRED FREQUENCY OF MONITORING				THIS REPORT COVERS
Flow-monthly, 24 hour estimate, Effluent Parameters: Chemical and radiological ^{2a,b} , monthly during rainfall that results in a discharge; Radiological ¹ , per rainfall event that results in a discharge; Radon -semi-annually during rainfall that results in a discharge. Monitoring Report-quarterly				3rd Quarter - July 1, 2004 to September 30, 2004
SAMPLES COLLECTED BY: Baywest, Shaw and Pangea personnel				
ANALYSIS PERFORMED BY: ARDL (chemical analyses); St. Louis Sites Radioanalytical Laboratory (radiological analyses); General Engineering Laboratories (radon in water analyses)				
SAMPLE LOCATION ¹⁰	EVENT ⁴ 1	EVENT 2	EVENT 3	
Outfall 001 ¹⁵	07/06/04 - 07/07/04	08/02/04 - 08/06/04	08/26/04 - 08/31/04	
Outfall 002				
REPORT APPROVED BY OWNER <i>Sharon Cotner in my capacity as Project Manager for & on behalf of US Army Corps of Engineers</i>				DATE 10/28/04

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

¹ SLAPS is a CERCLA NPL site.

^{2a} Collect monthly grab samples for the following parameters: oil and grease, total petroleum hydrocarbons, pH, 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.

^{2b} As per letter from Sharon Cotner dated 11/18/03, chemical oxygen demand sampling requirement has been reduced from monthly to annual sampling.

³ 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.

⁴ 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.

⁵ 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.

⁶ ND - No Discharge

Results are reported in required units.

⁷ DL - Detection Limit

⁸ 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.

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

¹⁰ 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

¹¹ 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.

¹² These samples will be included in the next report.

¹³ NS - not sampled during this reporting period. Semi-annual reporting requirement only.

¹⁴ As per January 2004, Outfalls 001a and 001b are considered a single discharge point now called Outfall 001.

¹⁶ Outfall 003 is no longer being included in this report since it was discontinued.

Third Quarter 2004 - Storm-water Discharge Monitoring Report
St. Louis Airport Site (SLAPS), St. Louis, MO

MONITORING PARAMETER	FINAL EFFLUENT LIMITATIONS		UNITS ⁷	ANALYTICAL RESULTS			SAMPLE TYPE	REMARKS and COMMENTS
	Daily Maximum	Monthly Average		Outfall 001 ¹⁵				
				Chemical Parameters				
				July	August	September		
Flow	Monitor only	Monitor only	MGID	0.1	0.2	*	24-hr estimate	
Oil and Grease	15	10	mg/l	non-detect	non-detect	*	Grab	
Total Petroleum Hydrocarbons	10	10	mg/l	non-detect	non-detect	*	Grab	
pH Units	6.0-9.0	N/A	SIU	7.4	9.6	*	Grab	
Chemical Oxygen Demand ²⁶	120	90	mg/l	26	26	*	Grab	Annual monitoring
Settleable Solids	1.5	1	ml./l./hr	non-detect	non-detect	*	Grab	DL ⁸ = 0.1 ml/l./hr
Arsenic, Total Recoverable	100	100	µg/l	non-detect	non-detect	*	Grab	
Lead, Total Recoverable	190	190	µg/l	non-detect	non-detect	*	Grab	
Chromium, Total Recoverable	280	280	µg/l	0.008	0.006	*	Grab	
Copper, Total Recoverable	84	84	µg/l	non-detect	non-detect	*	Grab	
Cadmium, Total Recoverable	94	94	µg/l	non-detect	non-detect	*	Grab	
Polychlorinated Biphenyls	No release	No release	µg/l	non-detect	non-detect	*	Grab	DL ⁸ = 0.1 ml/l./hr
				Radiological Parameters ^{9,12}				
				Event 1	Event 2	Event 3	SAMPLE TYPE	REMARKS and COMMENTS
Uranium, Total ^{10,11}	Monitor only	Monitor only	µg/l	5 E+00	5 E+00	4 E+00	Grab	Calculated estimates
Radium, Total ^{10,11}	Monitor only	Monitor only	µg/l	3 E+08	8 E+08	7 E+07	Grab	Calculated estimates
Thorium, Total ^{10,11}	Monitor only	Monitor only	µg/l	1 E+00	2 E+00	2 E+00	Grab	Calculated estimates
Gross Alpha ¹⁰	Monitor only	Monitor only	pCi/l	2 E+00	5 E+00	0 E+00	Grab	
Gross Beta ¹⁰	Monitor only	Monitor only	pCi/l	6 E+00	0 E+00	5 E+00	Grab	
Protactinium-231 ¹⁰	Monitor only	Monitor only	pCi/l	9 E+00	1 E+01	3 E+00	Grab	
Actinium-227 ¹⁰	Monitor only	Monitor only	pCi/l	9 E+01	5 E+02	2 E+00	Grab	
Radon (semi-annual monitoring)	Monitor only	Monitor only	pCi/l	non-detect	NS ¹⁴	NS ¹⁴		
Uranium, Total ^{10,11}	Monitor only	Monitor only	µg/l	5 E+00	5 E+00	4 E+00	Grab	Calculated estimates
Radium, Total ^{10,11}	Monitor only	Monitor only	µg/l	3 E+08	8 E+08	7 E+07	Grab	Calculated estimates
Thorium, Total ^{10,11}	Monitor only	Monitor only	µg/l	1 E+00	2 E+00	2 E+00	Grab	Calculated estimates
Gross Alpha ¹⁰	Monitor only	Monitor only	pCi/l	2 E+00	5 E+00	0 E+00	Grab	
Gross Beta ¹⁰	Monitor only	Monitor only	pCi/l	6 E+00	0 E+00	5 E+00	Grab	
Protactinium-231 ¹⁰	Monitor only	Monitor only	pCi/l	9 E+00	1 E+01	3 E+00	Grab	
Actinium-227 ¹⁰	Monitor only	Monitor only	pCi/l	9 E+01	5 E+02	2 E+00	Grab	
Radon (semi-annual monitoring)	Monitor only	Monitor only	pCi/l	non-detect	NS ¹⁴	NS ¹⁴		

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

¹ SLAPS is a CERCLA NPL site

²² Collect monthly grab samples for the following parameters: oil and grease, total petroleum hydrocarbons, pH, 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.

²⁶ As per letter from Sharon Cotner dated 11/18/03, chemical oxygen demand sampling requirement has been reduced from quarterly to annual sampling.

⁸ 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.

⁴ 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.

⁵ 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.

⁶ ND - No Discharge

⁷ Results are reported in required units

⁸ DL = Detection Limit

⁹ 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.

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¹¹ 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.

¹² 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.

¹³ These samples will be included in the next report

¹⁴ NS = not sampled during this reporting period. Semi-annual reporting requirement only.

¹⁵ As per January 2004, Outfalls 001a and 001b are considered a single discharge point now called Outfall 001.

¹⁶ Outfall 003 is no longer being included in this report since it was discontinued.

Date	(inches)	Outfall	Outfall
2004	24-hour total	001*	002**
1-Jul	0.03		
2-Jul	0.22		
3-Jul	0.41		
4-Jul	0.00		
5-Jul	1.51		
6-Jul	0.19	0.14	
7-Jul	0.00	0.18	
8-Jul	Trace		
9-Jul	0.00		
10-Jul	0.00		
11-Jul	0.10		
12-Jul	0.00		
13-Jul	0.00		
14-Jul	0.00		
15-Jul	0.00		
16-Jul	0.02		
17-Jul	0.00		
18-Jul	0.00		
19-Jul	0.00		
20-Jul	0.00		
21-Jul	0.00		
22-Jul	0.09		
23-Jul	0.00		
24-Jul	0.15		
25-Jul	0.48		
26-Jul	0.00		
27-Jul	0.00		
28-Jul	0.00		
29-Jul	0.07		
30-Jul	2.25		
31-Jul	0.00		
Monthly Average		0.010	

Date	(inches)	Outfall	Outfall
2004	24-hour total	001*	002**
1-Aug	0.00		
2-Aug	Trace	0.17	
3-Aug	0.07	0.22	
4-Aug	1.18	0.22	
5-Aug	0.00	0.22	
6-Aug	0.00	0.05	
7-Aug	0.00		
8-Aug	0.00		
9-Aug	0.00		
10-Aug	0.00		
11-Aug	0.00		
12-Aug	Trace		
13-Aug	0.00		
14-Aug	0.00		
15-Aug	0.00		
16-Aug	0.00		
17-Aug	0.00		
18-Aug	0.00		
19-Aug	0.05		
20-Aug	0.49		
21-Aug	0.00		
22-Aug	0.00		
23-Aug	0.45		
24-Aug	0.37		
25-Aug	1.30		
26-Aug	0.08	0.19	
27-Aug	0.09		
28-Aug	Trace		
29-Aug	0.02		
30-Aug	0.00	0.20	
31-Aug	0.00	0.05	
Monthly Average		0.043	

Date	(inches)	Outfall	Outfall
2004	24-hour total	001*	002**
1-Sep	0.00		
2-Sep	0.00		
3-Sep	0.00		
4-Sep	0.00		
5-Sep	0.00		
6-Sep	0.00		
7-Sep	0.00		
8-Sep	0.00		
9-Sep	0.00		
10-Sep	0.00		
11-Sep	0.00		
12-Sep	0.00		
13-Sep	Trace		
14-Sep	0.00		
15-Sep	0.21		
16-Sep	0.01		
17-Sep	0.00		
18-Sep	0.00		
19-Sep	0.00		
20-Sep	0.00		
21-Sep	0.00		
22-Sep	0.00		
23-Sep	0.00		
24-Sep	0.00		
25-Sep	0.00		
26-Sep	0.00		
27-Sep	0.00		
28-Sep	0.00		
29-Sep	0.00		
30-Sep	0.00		
Monthly Average		0.000	

Notes:

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

Rainfall data is obtained from the National Weather Service Station at Lambert-St. Louis International Airport.

* A flow meter and automatic sampler are currently installed at Outfall 001. As per January 2004, Outfalls 001a and 001b are considered a single discharge point now called Outfall 001.

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



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

October 28, 2004

REPLY TO
ATTENTION OF:

Formerly Utilized Sites Remedial Action Program

Subject: Quarterly Metropolitan Sewer District (MSD) Self-Monitoring Report for July through September 2004, FUSRAP St. Louis Sites

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

Dear Mr. Biehl:

The U.S. Army Corps of Engineers (USACE) is submitting the July through September 2004 quarterly self-monitoring report in Calendar Year 2004 for the St. Louis Sites. During this quarter, one batch of wastewater from the St. Louis Airport Site (SLAPS) was discharged to the Metropolitan Sewer District (MSD). There were four batches of wastewater discharged during this quarter from the St. Louis Downtown Site (SLDS) to MSD.

In this quarter, 174,861 gallons of SLAPS wastewater were discharged with a total activity of $6.0\text{E-}06$ curies for thorium; $6.0\text{E-}06$ curies for uranium (isotopic method); and $2.4\text{E-}06$ curies for radium. This batch had no detectable barium or lead. The selenium value was below the limit. Data for the discharge, including total suspended solids, are presented on the attached page for your review.

In this quarter, 55,000 gallons of SLDS wastewater were discharged from Plant 6 West Half and Plant 7 South with a total activity of $1.4\text{E-}06$ curies for thorium; $6.2\text{E-}05$ curies for uranium (KPA); and $6.3\text{E-}07$ curies for radium. Data for each batch, including total suspended solids, are presented on the attached pages for your review.

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

Enclosures

Self Monitoring Report for 3rd Quarter

Parameter	Batch Number	Date of Discharge	Batch Results	Amount Discharged (Gallons)	Total Activity per Discharge (Ci)	MSD Limits	BATCH Sum of the Ratios	10CFR20 Limits	10CFR20 Sum of the Ratios
Gross Alpha (raw water)	SLAPS-025	08/25/04 - 09/21/04 (Phase 3)	13 pCi/L	174,861	8.6E-06	3000 pCi/L		3000 pCi/L	
Gross Beta			<12 ¹ pCi/L		4.0E-06	N/A pCi/L		N/A pCi/L	
TH-228			3 pCi/L		1.8E-06	2000 pCi/L		2000 pCi/L	
TH-230			6 pCi/L		4.2E-06	1000 pCi/L		1000 pCi/L	
Uranium (KPA)			9 pCi/L		6.0E-06	3000 pCi/L		3000 pCi/L	
RA-226			<1.7 pCi/L		6.6E-07	10 pCi/L		600 pCi/L	
RA-228 ²			3 pCi/L		1.6E-06	30 pCi/L	0.20	600 pCi/L	0.02
Banum			<0.01 mg/L			10 mg/L			
Lead			<0.025 mg/L			0.40 mg/L			
Selenium			0.08 mg/L			0.20 mg/L			
BOD ³			1260 mg/L						
COD ³			831 mg/L						
Gross Alpha (TSS filter pad)			<7						
Total Suspended Solids			76 mg/L			30 mg/L			

NOTES:

¹Non detect sample results are converted to half the detection limit.

² Ra-228 assumed to be in equilibrium with Th-228

³MSD surcharges apply for BOD concentrations greater than 300 mg/l and COD concentrations greater than 600 mg/l

⁴Isopolitics were not run since Gross Alpha and Total U were so close in value.

⁵The weighted average was used to calculate the total activity.

NA - Not applicable

Total Activity Discharged in 3rd Quarter (Ci)

TH-228	1.3E-06
TH-230	4.2E-06
Uranium (KPA)	6.0E-06
RA-228	6.6E-07
RA-228 ²	1.8E-06

Total Activity Discharged through 09/30/04 (Ci)

TH-228	1.1E-05
TH-230	4.7E-05
Uranium (KPA)	2.6E-03
RA-228	1.4E-05
RA-228 ²	1.1E-05

Total Volume Discharged in 3rd Quarter (gal)

Gallons	174,861
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Volume Discharged through the CY (gal)

Gallons	2,353,690
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FUSRAP SLDS Self Monitoring Report for 3rd Quarter 2004

Parameter	Batch Number	Date of Discharge	Batch Results	Amount Discharged (gallons)	Total Activity per Discharge (Ci)	MSD Limits	BATCH Sum of Ratios	10CFR20 Limits	10CFR20 Sum of Ratios
Gross Alpha (raw water)	SLDS-BK375	8/6/2004 (Plant 7S, WT Area)	26 pCi/L	11,000	1.1E-06	3,000 pCi/L	0.15	3,000 pCi/L	0.02
Gross Beta			<12 ¹ pCi/L		2.4E-07	N/A		N/A	
Th-228			<2 pCi/L		4.7E-08	2,000 pCi/L		2,000 pCi/L	
Th-230			3 pCi/L		1.2E-07	1,000 pCi/L		1,000 pCi/L	
Th-232			<1 pCi/L		2.8E-08	300 pCi/L		300 pCi/L	
Uranium (KPA)			37 pCi/L		1.5E-06	3,000 pCi/L		3,000 pCi/L	
RA-226			<2 pCi/L		4.0E-08	10 pCi/L		600 pCi/L	
RA-228 ²			<2 pCi/L		4.7E-08	30 pCi/L		600 pCi/L	
Total Suspended Solids			0.4 mg/L			30 mg/L			
Gross Alpha (raw water)	SLDS-BK376	8/10/2004 (Plant 6WH South of Bldg. 101)	41 pCi/L	12,000	1.8E-06	3,000 pCi/L	0.16	3,000 pCi/L	0.02
Gross Beta			14 pCi/L		6.5E-07	N/A		N/A	
Th-228			1 pCi/L		5.8E-08	2,000 pCi/L		2,000 pCi/L	
Th-230			2 pCi/L		7.8E-08	1,000 pCi/L		1,000 pCi/L	
Th-232			<1 pCi/L		1.3E-08	300 pCi/L		300 pCi/L	
Uranium (KPA)			35 pCi/L		1.6E-06	3,000 pCi/L		3,000 pCi/L	
RA-226			<2 pCi/L		4.8E-08	10 pCi/L		600 pCi/L	
RA-228 ²			1 pCi/L		5.8E-08	30 pCi/L		600 pCi/L	
Total Suspended Solids			1 mg/L			30 mg/L			
Gross Alpha (raw water)	SLDS-BK377	9/7/2004 (Plant 6WH South of Bldg. 101)	623 pCi/L	14,500	3.4E-05	3,000 pCi/L	0.59	3,000 pCi/L	0.27
Gross Beta			126 pCi/L		6.9E-06	N/A		N/A	
Th-228			<1 pCi/L		3.4E-08	2,000 pCi/L		2,000 pCi/L	
Th-230			10 pCi/L		5.5E-07	1,000 pCi/L		1,000 pCi/L	
Th-232			<1 pCi/L		1.5E-08	300 pCi/L		300 pCi/L	
Uranium (KPA)			761 pCi/L		4.2E-05	3,000 pCi/L		3,000 pCi/L	
RA-226			3 pCi/L		1.6E-07	10 pCi/L		600 pCi/L	
RA-228 ²			<1 pCi/L		3.4E-08	30 pCi/L		600 pCi/L	
Total Suspended Solids			8 mg/L			30 mg/L			
Gross Alpha (raw water)	SLDS-BK379	9/16/2004 (Plant 6WH South of Bldg. 101)	246 pCi/L	17,500	1.6E-05	3,000 pCi/L	0.41	3,000 pCi/L	0.10
Gross Beta			58 pCi/L		3.9E-06	N/A		N/A	
Th-228			<1 pCi/L		4.2E-08	2,000 pCi/L		2,000 pCi/L	
Th-230			7 pCi/L		4.3E-07	1,000 pCi/L		1,000 pCi/L	
Th-232			<1 pCi/L		1.7E-08	300 pCi/L		300 pCi/L	
Uranium (KPA)			254 pCi/L		1.7E-05	3,000 pCi/L		3,000 pCi/L	
RA-226			3 pCi/L		2.0E-07	10 pCi/L		600 pCi/L	
RA-228 ²			<1 pCi/L		4.2E-08	30 pCi/L		600 pCi/L	
Total Suspended Solids			4 mg/L			30 mg/L			

NOTES:

¹Non detect sample results are converted to half the detection limit

²Ra-228 assumed to be in equilibrium with Th-228

N/A--Not applicable

Total Activity Discharged in 3rd Quarter (Ci)

Th-228	1.8E-07
Th-230	1.2E-06
Th-232	7.4E-08
Uranium (KPA)	6.2E-05
RA-226	4.5E-07
RA-228 ²	1.8E-07

Total Activity Discharged through 9/30/2004 (Ci)

Th-228	1.8E-07
Th-230	1.2E-06
Th-232	7.4E-08
Uranium (KPA)	6.2E-05
RA-226	4.5E-07
RA-228 ²	1.8E-07

Total Volume Discharged in 3rd Quarter (gal)

Gallons	55,000
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Total Volume Discharged through 9/30/2004 (gal)

Gallons	55,000
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Total Suspended Solids (mg/L)	Maximum Weekly	Monthly Average
July	0.00	0.00
August	1.00	0.70
September	7.67	6.00

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Further Info?
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St. Louis Sites

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Area

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