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

REPLY TO
ATTENTION OF:

April 26, 2004

Formerly Utilized Sites Remedial Action Program

SUBJECT: Transmittal of First Quarter (January 1 – March 31, 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 First Quarter (January 1 – March 31, 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. Also identified are planned but not accomplished activities for the second quarter and activities planned for the first quarter of 2004.

Copies of this report have been forwarded to Mr. Robert Geller, Mr. Eric Gilstrap and Mr. Peter Price 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

FIRST QUARTER CY04 FEDERAL FACILITY AGREEMENT PROGRESS REPORT

ACTIVITIES ACCOMPLISHED FOR FIRST QUARTER 2004 (January 1, 2004 – March 31, 2004)

Community Relations

- Conducted two St. Louis Oversight Committee Meetings this quarter (January 9th and February 13).
- Received regulatory comments on the draft Initial Five Year Review Report for the FUSRAP St. Louis Sites in St. Louis, Missouri.
- Attended discussion with EPA and MDNR in Jefferson City on the draft North St. Louis County Sites ROD on March 24th.
- Provided interview for St. Louis Post Dispatch regarding utility support activities conducted in the southwest corner of SLAPS on January 5th and 14th.
- Updated the FUSRAP web pages with current site schedules and Oversight Committee presentations/meeting minutes.

All Sites

- Hosted the Technical Working Group Meeting at the Latty Avenue offices on March 25, 2004.
- Listed in Table 1 are submitted documents for the quarter.

Table 1. Document Submittal

Document Title	Review Status	Document Date
5-Year Review Report, Second Regulatory Review Draft	Rev B	January 2004
Record of Decision for the North St. Louis County Sites	Rev B	February 2004

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

St. Louis Airport Sites (SLAPS)

- Continued excavation in Phases 2, 3, 4, 5 & 6. Excavated and shipped a total of 25,241 cubic yards (cyd) of contaminated material in the first quarter. A total of 2,194 cyd of contaminated material was shipped to Envirocare in Utah. A total of 23,047 cyd of contaminated material was shipped to U.S. Ecology in Idaho.
- Discharged 224,131 gallons of water in accordance with MSD permit in the first quarter. Since the beginning of the project, a total of 2,405,037 gallons of water has been released.
- There were no lost time accidents in the quarter. There have been 587 days without a lost-time accident.

St. Louis Downtown Site (SLDS)

- Excavated and shipped a total of 628 cyd of contaminated material from the City of Venice, Illinois Vicinity Property (DT-11) to U.S. Ecology in Idaho in the first quarter. Completed soil excavation activities at DT-11.
- Completed the excavation related to property-owner support action at the Thomas and Proetz Lumber Company Vicinity Property (DT-10).
- There were no lost time accidents in the quarter. There have been 818 days without a lost-time accident.

ACTIVITIES PLANNED FOR THE FIRST QUARTER 2004 BUT NOT ACCOMPLISHED

St. Louis Airport Sites (SLAPS)

- Coldwater Creek Removal Action and Restoration (Phases 4 & 5) has been rescheduled because of delays due to utility relocations.

St. Louis Downtown Site (SLDS)

- Repairs to well DW18. Mallinckrodt has determined that the flush mount can be replaced with above-ground protective casing and bollards. The repair to this well will be completed in the upcoming quarter.
- Transfer four wells, (B16W02S, B16W04S, B16W10S and B16W13SR) to Mallinckrodt. The action to complete the transfer is controlled by Mallinckrodt.

ACTIVITIES PLANNED FOR SECOND QUARTER 2004 (April 1, 2004 – June 30, 2004)

All Sites

- Host the Technical Working Group Meeting on April 27, 2004 at the FUSRAP Program Management Offices on Latty Avenue.

St. Louis Airport Site (SLAPS)

- Utility relocations of power lines along the western boundary of SLAPS are scheduled for completion by others in the second quarter. The initiation of the Coldwater Creek Remediation is scheduled for the third quarter, pending the utility relocations.
- The Water Treatment system is planned to be tested and placed into operation.

St. Louis Downtown Site (SLDS)

- Repair well DW18.

DATA OBTAINED IN FIRST QUARTER CY 2004 (January 1, 2004 – March 31, 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 Downtown Site are included (See Attachment B).

The Quarterly MSD Self-Monitoring Reports for the St. Louis Airport Site are included (See Attachment C).

Table 2. First Quar[illegible]04 Sample Summary

Property Category	Sampling Event Name	Sample Matrix	Count	Sample Type	Purpose
ALL	Coldwater Creek-Environmental Monitoring-3Q2003	Surface Water	12	Grab	Environmental
	Coldwater Creek-Shaw	Surface Water	3	Grab	Environmental
HISS	Groundwater-Environmental Monitoring--1Q2004	Groundwater	4	Grab	Environmental
	Groundwater-Environmental Monitoring--4Q2003	Groundwater	10	Grab	Environmental
	Environmental Alpha Tracks-Environmental Monitoring--2nd Semi-Annual-2003	Track Etch Detectors	7	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--4Q2003	Thermoluminescent Dosimeters	7	Grab	Environmental
	HISS Air (Particulate Air)-Environmental Monitoring	Cellulose Filter	129	Grab	Environmental
HISS_VP	VP 01L-PDI	Soil	6	Grab	Characterization
SLAPS	Shaw HTR Hot Zones	Soil	61	Grab	Other
	Radium Pits (SU #16)-Verification-Class 1	Soil	3	Grab	Verification
	SLAPS Phase 2 (SU #28)-Verification-Class 1	Soil	3	Grab	Verification
	SLAPS Phase 2 (SU #31)-Verification	Soil	3	Grab	Verification
	SLAPS Phase 2 (SU #32)-Verification	Soil	2	Grab	Verification
	SLAPS PHASE 2 (SU #33)-Verification	Soil	6	Grab	Verification
	SLAPS Phase 2 (SU #34)-Verification	Soil	8	Grab	Verification
	SLAPS Phase 5 (SU #42)-Verification-Class 1	Soil	6	Grab	Verification
	Environmental Alpha Tracks-Environmental Monitoring--2nd Semi-Annual-2003	Track Etch Detectors	7	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--4Q2003	Thermoluminescent Dosimeters	7	Grab	Environmental
	Groundwater-Environmental Monitoring--4Q2003	Groundwater	13	Grab	Environmental
	SLAPS Air (Particulate Air)-Environmental Monitoring	Cellulose Filter	494	Grab	Environmental
	SLAPS MSD-Compliance	Process Water	9	Grab	Characterization
	SLAPS NPDES-Environmental Monitoring	Stormwater	23	Grab	Environmental
	SLAPS Phase 2 (SU #31)-Verification	Soil	1	Grab	Verification
	SLAPS Phase 2 (SU #32)-Verification	Soil	1	Grab	Verification
	SLAPS PHASE 2 (SU #33)-Verification	Soil	25	Grab	Verification
	SLAPS Phase 2 (SU #34)-Verification	Soil	6	Grab	Verification
	SLAPS Phase 5 (SU #42)-Characterization	Soil	2	Grab	Characterization
	SLAPS Phase 5 (SU #42)-Verification-Class 1	Soil	7	Grab	Verification
	SLAPS Phase 5 (SU #43)-Verification-Class 1	Soil	2	Grab	Verification
	SLAPS Phase 6 (SU #46)-Verification-Class 1	Soil	2	Grab	Verification
	SLAPS Waste Characterization	Soil	3	Grab	Characterization
SLAPS VP	VP 08-Characterization	Soil	2	Grab	Characterization
	VP 16-Characterization-Class 3	Soil	1	Grab	Characterization
	VP 20-Characterization	Soil	8	Grab	Characterization
	VP 44-Characterization	Soil	1	Grab	Characterization
	VP 47-Characterization	Soil	1	Grab	Characterization
	Groundwater-Environmental Monitoring--1Q2004	Groundwater	3	Grab	Environmental
	VP 01L-Characterization	Soil	76	Grab	Characterization
	VP 01L-PDI	Soil	13	Grab	Characterization
	VP 06C-Characterization	Soil	12	Grab	Characterization
	VP 06-PDI	Soil	13	Grab	Characterization
	VP 07C-PDI	Soil	20	Grab	Characterization
	VP 08-Characterization	Soil	34	Grab	Characterization
	VP 08-PDI	Soil	6	Grab	Characterization
	VP 10C-Characterization	Soil	1	Grab	Characterization
SLAPS VP	VP 10-Verification	Soil	14	Grab	Verification
	VP 15-Characterization	Soil	67	Grab	Characterization
	VP 16-Characterization	Soil	44	Grab	Characterization

Table 2. First Quarter 2004 Sample Summary

Property Category	Sampling Event Name	Sample Matrix	Count	Sample Type	Purpose
	VP 16-Characterization-Class 3	Soil	64	Grab	Characterization
	VP 20-Characterization	Soil	38	Grab	Characterization
	VP 21-Characterization	Soil	12	Grab	Characterization
	VP 23-Characterization	Soil	37	Grab	Characterization
	VP 28-Characterization	Soil	18	Grab	Characterization
	VP 29-Characterization	Soil	18	Grab	Characterization
	VP 40A & VP 08C-PDI	Soil	193	Grab	Characterization
	VP 40A (Parcel 2)-Characterization	Soil	37	Grab	Characterization
	VP 43-Characterization	Soil	15	Grab	Characterization
	VP 44-Characterization	Soil	15	Grab	Characterization
	VP 53-Characterization-Class 2	Soil	10	Grab	Characterization
	VP 60-Characterization	Soil	14	Grab	Characterization
	VP 62-Characterization	Soil	13	Grab	Characterization
	VP 01L-Water Line Break	Soil	1	Grab	Characterization
SLDS	Environmental Alpha Tracks-Environmental Monitoring--2nd Semi-Annual-2003	Track Etch Detectors	5	Grab	Environmental
	Environmental TLDs-Environmental Monitoring--4Q2003	Thermoluminescent Dosimeters	5	Grab	Environmental
	Groundwater-Environmental Monitoring--4Q2003	Groundwater	6	Grab	Environmental
	Plant 6EH (SU #5)-Inaccessible Soils Evaluation	Soil	1	Grab	Verification
	Plant 6EH (SU #6)-Verification-Class 1	Soil	1	Grab	Verification
	Plant 6EH (SU #8)-Verification-Class 1	Soil	1	Grab	Characterization
	Plant 6-PDI	Soil	1	Grab	Characterization
	Plant 6WH-PDI	Soil	65	Grab	Characterization
	Plant 7N-PDI	Soil	20	Grab	Characterization
	Plant 7N-Verification-Class 1	Soil	10	Grab	Verification
	Plant 7N-Verification-Class 2	Soil	3	Grab	Verification
	Plant 7S-PDI	Soil	16	Grab	Characterization
	Plant 7S-Verification-Class 2	Soil	4	Grab	Verification
	Plant 7W-PDI	Soil	21	Grab	Characterization
SLDS VP	City of Venice (DT-11)-SU1A-Verification-Class 1	Soil	3	Grab	Verification
	City of Venice (DT-11)-SU1E-Verification-Class 1	Soil	5	Grab	Verification
	City of Venice-(DT-11)-SU1D-Verification-Class 1	Soil	1	Grab	Verification
	Lange-Stegmann-Characterization	Soil	7	Grab	Characterization
	Richie & Son's Automotive (DT-20)-Characterization	Soil	2	Grab	Characterization
	Thomas & Proetz Lumber Company (DT-10)	Soil	3	Grab	Characterization
	City of Venice (DT-11)-SU 1C-Inaccessible Soils Evaluation	Soil	1	Grab	Verification
	City of Venice (DT-11)-SU1A-Verification-Class 1	Soil	2	Grab	Verification
	City of Venice (DT-11)-SU1B-Verification-Class 1	Soil	6	Grab	Verification
	City of Venice (DT-11)-SU1E-Verification-Class 1	Soil	31	Grab	Verification
	City of Venice (DT-2)-PDI	Soil	5	Grab	Characterization
	City of Venice-(DT 11) -SU1C-Verification-Class 1	Soil	8	Grab	Verification
	City of Venice-(DT-11)-SU1D-Verification-Class 1	Soil	20	Grab	Verification
	Thomas & Proetz Lumber Company (DT-10)-Characterization	Soil	8	Grab	Characterization
SLDS VP	Thomas & Proetz Lumber Company (DT-10)-PDI	Soil	4	Grab	Characterization
	Thomas & Proetz Lumber Company (DT-10)-Preferential Pathway Investigation	Soil	5	Grab	Characterization
	Thomas & Proetz Lumber Company (DT-10)-Verification-Class 1	Soil	13	Grab	Verification
	Thomas & Proetz Lumber Company (DT-10)-Verification-Class 2	Soil	39	Grab	Verification

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

REPLY TO
ATTENTION OF:

April 26, 2004

Formerly Utilized Sites Remedial Action Program

SUBJECT: First 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 first quarter of 2004. Attachment A of this report contains the analytical results for storm-water Outfalls 001 and 002 at SLAPS.

During the first quarter of 2004 there were four rainfall events. Event 4 will be included in the next report. There was an exceedance to report per the monitoring requirements of the permit. On January 4, 2004, compliance sample at Outfall 001 exceeded the daily maximum limit of 84 ug/l for copper with a result of 120 ug/l. All proper notifications were made. The February 25, 2004 notification is attached.

COD monitoring has 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.

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

Sincerely,

Ms. Sharon Cotner
Program Manager

Enclosures

First Quarter 2004 - Storm-water 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. Comer, 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*[3]: per rainfall event that results in a discharge; *Radon*- semi-annually during rainfall that results in a discharge; Monitoring Report-quarterly				1st Quarter - January 1, 2004 to March 31, 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[17]	EVENT[4] 11[16]	EVENT 12[16]	EVENT 1	EVENT 2	EVENT 3	EVENT 4[13]
Outfall 001[15]	12/23/2003	12/29/03 - 12/30/03	01/04/04 - 01/10/04, 1/12/04 - 1/14/04	02/12/04 - 02/13/04, 2/16/04, 02/18/04	03/09/04 - 03/10/04	03/29/04 - 03/31/04
Outfall 002	[5]	[5]	[5]	[5]	[5]	[5]

REPORT APPROVED BY OWNER Sharon Comer in my capacity as Proj Mgr for on behalf of USACE DATE 4/26/04

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 Colner dated 11/18/03, chemical oxygen demand sampling requirement has been reduced from quarterly 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 Colner 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.

[10] As specified in the permit, radionuclides require monitoring only, and limits are not permit specified.

[11] 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

[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] Event 11 and 12 were not included in 4th Quarter NPDES Report.

[17] Outfall 003 is no longer being included in this report since it was discontinued.

First Quarter 2004 - [redacted]water Discharge Monitoring Report
St. Louis Airpor[redacted]LAPS), St. Louis, MO

MONITORING PARAMETER	FINAL EFFLUENT LIMITATIONS		UNITS[7]	ANALYTICAL RESULTS Outfall 001[15]				SAMPLE TYPE	REMARKS and COMMENTS
	Daily Maximum	Monthly Average		Chemical Parameters					
				December	January	February	March		
Flow	Monitor only	Monitor only	MGD	0.14	0.3	0.1	[13]	24-hr estimate	
Oil and Grease	15	10	mg/L	non-detect	non-detect	non-detect	[13]	Grab	
Total Petroleum Hydrocarbons	10	10	mg/L	non-detect	non-detect	non-detect	[13]	Grab	
pH-Units	6.0-9.0	NA	SU	7.1	7.7	7.5	[13]	Grab	
Chemical Oxygen Demand[2b]	120	90	mg/L	29.4	49.2	[2b]	[2b]	Grab	Annual monitoring
Settleable Solids	1.5	1	mL/L/hr	non-detect	non-detect	non-detect	[13]	Grab	DL[8] = 0.1 mL/L/hr
Arsenic, Total Recoverable	100	100	µg/L	12	37	non-detect	[13]	Grab	
Lead, Total Recoverable	190	190	µg/L	54	83	3.5	[13]	Grab	
Chromium, Total Recoverable	280	280	µg/L	24	46	non-detect	[13]	Grab	
Copper, Total Recoverable	84	84	µg/L	46	120	non-detect	[13]	Grab	
Cadmium, Total Recoverable	94	94	µg/L	non-detect	non-detect	non-detect	[13]	Grab	
Polychlorinated Biphenyls	No release	No release	µg/L	3.8	non-detect	non-detect	[13]	Grab	DL[8] = 0.1 mL/L/hr
				Radiological Parameters[9,12]					
				Event 11	Event 12	Event 1	Event 2	SAMPLE TYPE	REMARKS and COMMENTS
Uranium, Total[10,11]	Monitor only	Monitor only	µg/L	2.2E+02	6.1E+01	2.E+02	7.E+01	Grab	Calculated estimates
Radium, Total[10,11]	Monitor only	Monitor only	µg/L	3.E-06	4.E-07	2.E-05	8.E-07	Grab	Calculated estimates
Thorium, Total[10,11]	Monitor only	Monitor only	µg/L	1.E+00	7.E-01	1.E+01	1.E+00	Grab	Calculated estimates
Gross Alpha[10]	Monitor only	Monitor only	pCi/L	1.9E+02	3.8E+01	4.0E+02	6.2E+01	Grab	
Gross Beta[10]	Monitor only	Monitor only	pCi/L	1.1E+02	1.8E+01	2.E+02	2.E+01	Grab	
Protactinium-231[10]	Monitor only	Monitor only	pCi/L	1.E+00	1.E-02	5.4E+00	2.E-02	Grab	
Actinium-227[10]	Monitor only	Monitor only	pCi/L	1.E+00	1.E-02	5.4E+00	2.E-02	Grab	
Radon (semi-annual monitoring)	Monitor only	Monitor only	pCi/L	NS[14]	NS[14]	non-detect	NS[14]		
				Event 3	Event 4	[redacted]	[redacted]		
Uranium, Total[10,11]	Monitor only	Monitor only	µg/L	7.E+01	[13]	[redacted]	[redacted]	Grab	Calculated estimates
Radium, Total[10,11]	Monitor only	Monitor only	µg/L	1.E-07	[13]	[redacted]	[redacted]	Grab	Calculated estimates
Thorium, Total[10,11]	Monitor only	Monitor only	µg/L	5.E+00	[13]	[redacted]	[redacted]	Grab	Calculated estimates
Gross Alpha[10]	Monitor only	Monitor only	pCi/L	5.E+01	[13]	[redacted]	[redacted]	Grab	
Gross Beta[10]	Monitor only	Monitor only	pCi/L	2.E+01	[13]	[redacted]	[redacted]	Grab	
Protactinium-231[10]	Monitor only	Monitor only	pCi/L	1.E-02	[13]	[redacted]	[redacted]	Grab	
Actinium-227[10]	Monitor only	Monitor only	pCi/L	1.E-02	[13]	[redacted]	[redacted]	Grab	
Radon (semi-annual monitoring)	Monitor only	Monitor only	pCi/L	NS[14]	NS[14]	[redacted]	[redacted]		

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 quarterly 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

[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.

[10] As specified in the permit, radionuclides require monitoring only, and limits are not permit specified.

[11] 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

[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] Event t1 and t2 were not included in 4th Quarter NPDES Report.

[17] Outfall 003 is no longer being included in this report since it was discontinued.

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

MONITORING PARAMETER	FINAL EFFLUENT LIMITATIONS		UNITS[7]	ANALYTICAL RESULTS Outfall 002				SAMPLE TYPE	REMARKS and COMMENTS
	Daily Maximum	Monthly Average		Chemical Parameters					
				December	January	February	March		
Flow	Monitor only	Monitor only	MGD	[5]	[5]	[5]	[5]	24-hr estimate	
Oil and Grease	15	10	mg/L	[5]	[5]	[5]	[5]	Grab	
Total Petroleum Hydrocarbons	10	10	mg/L	[5]	[5]	[5]	[5]	Grab	
pH-Units	6.0-9.0	NA	SU	[5]	[5]	[5]	[5]	Grab	
Chemical Oxygen Demand[2b]	120	90	mg/L	[5]	[5]	[5]	[5]	Grab	Annual monitoring
Settleable Solids	1.5	1	mL/L/hr	[5]	[5]	[5]	[5]	Grab	DL[8] = 0.1 mL/L/hr
Arsenic, Total Recoverable	100	100	µg/L	[5]	[5]	[5]	[5]	Grab	
Lead, Total Recoverable	190	190	µg/L	[5]	[5]	[5]	[5]	Grab	
Chromium, Total Recoverable	280	280	µg/L	[5]	[5]	[5]	[5]	Grab	
Copper, Total Recoverable	84	84	µg/L	[5]	[5]	[5]	[5]	Grab	
Cadmium, Total Recoverable	94	94	µg/L	[5]	[5]	[5]	[5]	Grab	
Polychlorinated Biphenyls	No release	No release	µg/L	[5]	[5]	[5]	[5]	Grab	DL[8] = 0.1 mL/L/hr
				Radiological Parameters[9,12]					
				Event 11	Event 12	Event 1	Event 2	SAMPLE TYPE	REMARKS and COMMENTS
Uranium, Total[10,11]	Monitor only	Monitor only	µg/L	[5]	[5]	[5]	[5]	Grab	Calculated estimates
Radium, Total[10,11]	Monitor only	Monitor only	µg/L	[5]	[5]	[5]	[5]	Grab	Calculated estimates
Thorium, Total[10,11]	Monitor only	Monitor only	µg/L	[5]	[5]	[5]	[5]	Grab	Calculated estimates
Gross Alpha[10]	Monitor only	Monitor only	pCi/L	[5]	[5]	[5]	[5]	Grab	
Gross Beta[10]	Monitor only	Monitor only	pCi/L	[5]	[5]	[5]	[5]	Grab	
Protactinium-231[10]	Monitor only	Monitor only	pCi/L	[5]	[5]	[5]	[5]	Grab	
Actinium-227[10]	Monitor only	Monitor only	pCi/L	[5]	[5]	[5]	[5]	Grab	
Radon (semi-annual monitoring)	Monitor only	Monitor only	pCi/L	NS[14]	NS[14]	NS[14]	NS[14]		
				Event 3	Event 4				
Uranium, Total[10,11]	Monitor only	Monitor only	µg/L	[5]	[5]			Grab	Calculated estimates
Radium, Total[10,11]	Monitor only	Monitor only	µg/L	[5]	[5]			Grab	Calculated estimates
Thorium, Total[10,11]	Monitor only	Monitor only	µg/L	[5]	[5]			Grab	Calculated estimates
Gross Alpha[10]	Monitor only	Monitor only	pCi/L	[5]	[5]			Grab	
Gross Beta[10]	Monitor only	Monitor only	pCi/L	[5]	[5]			Grab	
Protactinium-231[10]	Monitor only	Monitor only	pCi/L	[5]	[5]			Grab	
Actinium-227[10]	Monitor only	Monitor only	pCi/L	[5]	[5]			Grab	
Radon (semi-annual monitoring)	Monitor only	Monitor only	pCi/L	NS[14]	NS[14]				

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 quarterly 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

[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.

[10] As specified in the permit, radionuclides require monitoring only, and limits are not permit specified.

[11] 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

[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] Event 11 and 12 were not included in 4th Quarter NPDES Report.

[17] Outfall 003 is no longer being included in this report since it was discontinued.

2004 1st Quarte[redacted]S RAINFALL DATA

Date	(inches)	Outfall	Outfall
2004	24-hour total	001*	002**
1-Jan	0.03		
2-Jan	0.00		
3-Jan	0.12		
4-Jan	2.20	0.34	
5-Jan	Trace	0.12	
6-Jan	0.00	0.06	
7-Jan	0.00	0.06	
8-Jan	0.00	0.09	
9-Jan	0.00	0.09	
10-Jan	0.00	0.06	
11-Jan	0.00		
12-Jan	0.00	0.10	
13-Jan	0.00	0.08	
14-Jan	0.00	0.03	
15-Jan	0.00		
16-Jan	0.10		
17-Jan	1.02		
18-Jan	Trace		
19-Jan	Trace		
20-Jan	0.00		
21-Jan	0.00		
22-Jan	0.00		
23-Jan	0.00		
24-Jan	0.00		
25-Jan	0.45		
26-Jan	0.02		
27-Jan	0.03		
28-Jan	0.00		
29-Jan	Trace		
30-Jan	Trace		
31-Jan	0.00		
Monthly Average		0.033	

Date	(inches)	Outfall	Outfall
2004	24-hour total	001*	002**
1-Feb	0.06		
2-Feb	0.64		
3-Feb	0.00		
4-Feb	Trace		
5-Feb	0.06		
6-Feb	0.02		
7-Feb	Trace		
8-Feb	0.00		
9-Feb	0.00		
10-Feb	0.00		
11-Feb	0.00		
12-Feb	Trace	0.09	
13-Feb	0.00	0.17	
14-Feb	0.00		
15-Feb	0.00		
16-Feb	0.00	0.13	
17-Feb	0.00		
18-Feb	0.00	0.05	
19-Feb	0.00		
20-Feb	0.01		
21-Feb	0.00		
22-Feb	0.00		
23-Feb	0.03		
24-Feb	0.00		
25-Feb	0.00		
26-Feb	0.00		
27-Feb	0.00		
28-Feb	0.00		
29-Feb	0.03		
Monthly Average		0.015	

Date	(inches)	Outfall	Outfall
2004	24-hour total	001*	002**
1-Mar	Trace		
2-Mar	0.00		
3-Mar	0.25		
4-Mar	1.26		
5-Mar	0.09		
6-Mar	Trace		
7-Mar	0.00		
8-Mar	0.00		
9-Mar	0.01	0.21	
10-Mar	0.00	0.17	
11-Mar	0.00		
12-Mar	0.00		
13-Mar	0.06		
14-Mar	0.05		
15-Mar	0.02		
16-Mar	0.07		
17-Mar	0.05		
18-Mar	Trace		
19-Mar	0.00		
20-Mar	Trace		
21-Mar	0.00		
22-Mar	0.00		
23-Mar	0.06		
24-Mar	0.00		
25-Mar	0.46		
26-Mar	1.57		
27-Mar	0.07		
28-Mar	0.31		
29-Mar	0.02	0.21	
30-Mar	Trace	0.20	
31-Mar	0.01	0.14	
Monthly Average		0.030	

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, Outfal s 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

February 25, 2004

Formerly Utilized Sites Remedial Action Program (FUSRAP)

SUBJECT: Applicable or Relevant and Appropriate Requirements (ARARs) Discharges to Waters of the State at St. Louis Airport Site (SLAPS) Noncompliance for Outfall 001a in January 2004

Thomas Siegel
Chief, Permits and Engineering
Missouri Department of Natural Resources
Water Pollution Control Program
7545 S. Lindbergh Blvd., Suite 210
St. Louis, MO. 63125

Dear Mr. Siegel:

This letter is to inform the Water Pollution Control Program (WPCP) of a copper exceedence which occurred at outfall 001A at the SLAPS of the FUSRAP. The January NPDES sample was confirmed as 120ug/L exceeding the daily maximum.

The compliance sample was taken for Outfall 001a as a grab sample in the sedimentation basin as flooding prevented sampling from the normal discharge point. This sample was collected on Sunday January 4, 2004 according to the NPDES requirements. All other results for this sample were within the limits of the permit including PCBs. Notification was made to WPCP by USACE via phone.

USACE has investigated the conditions at the time of this event. The site recorded 2.2 inches of rain and this event of record for that date resulted in Coldwater Creek overtopping a bermed excavation area. Excavation of this area near the southwest corner of the site was nearly complete and verification was in process (the excavation included the intersecting area of SUs 42, 43, and 46).

The sedimentation basin resides uphill of this excavation area and the basin itself was not overtopped by the floodwaters. The basin collects surface water runoff from undisturbed areas of the site. The only area safely accessible for sampling was within the north side of the basin near a newly constructed road.

There are no clear indications of the source of the elevated copper. Elevated copper levels in the past have correlated with excessive rain events when fill materials have been recently placed. A potential correlation to our fill material is being investigated.

Please contact Ron Frerker at (314) 260-3936 or Dr. Greg Hempen at (314) 260-3939, if you have any questions.

Sincerely,

Sharon Cotner
FUSRAP Program Manager

ATTACHMENT B

MSD QUARTERLY SELF-MONITORING REPORT FOR SLS

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

REPLY TO
ATTENTION OF:

April 26, 2004

Formerly Utilized Sites Remedial Action Program

Subject: Quarterly Metropolitan Sewer District (MSD) Self-Monitoring Report for January through March 2004, St. Louis Site

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 January through March 2004 quarterly self-monitoring report for the St. Louis Sites. During this period, three (3) batches of wastewater from the St. Louis Airport Site (SLAPS) were discharged to the Metropolitan Sewer District (MSD). There were no discharges during this period from the St. Louis Downtown Site (SLDS) to MSD.

The three batches for the quarter were indentified as SLAPS-011, SLAPS-012, and SLAPS-013. In this quarter, 224,131 gallons of wastewater were discharged from SLAPS with a total activity of 3.8E-06 curies for thorium; 1.2E-04 curies for uranium (natural); and 1.8E-06 curies for radium. The eleventh batch from SLAPS rainwater runoff consisted of 32,954 gallons. The twelfth batch from Phase 2 consisted of 61,638 gallons. The thirteenth batch from Phase 2 consisted of 129,539 gallons. The three batches were below the MSD limit for barium and lead. The selenium value for the three batches was at or below the 0.20 mg/l MSD limit. Data for each discharge is presented on the attached page 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

FUSRAP SLAPS
Self Monitoring Report for 1st 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-011	01/26/04 - 02/26/04	104 pCi/L	32,954	1.30E-05	3000 pCi/L		3000 pCi/L	
Gross Beta		(Surface rainwater)	15 pCi/L		1.92E-06	N/A pCi/L		N/A pCi/L	
TH-228			0.9 pCi/L		1.15E-07	2000 pCi/L		2000 pCi/L	
TH-230			6.1 pCi/L		7.58E-07	1000 pCi/L		1000 pCi/L	
Uranium (Nat)			139 pCi/L		1.74E-05	3000 pCi/L		3000 pCi/L	
RA-226			<2.6 pCi/L		1.60E-07	10 pCi/L		600 pCi/L	
RA-228(1)			0.9 pCi/L		1.15E-07	30 pCi/L	0.21	600 pCi/L	0.06
Barium			0.048 mg/L			10 mg/L			
Lead			<0.003 mg/L			0.40 mg/L			
Selenium			0.018 mg/L			0.20 mg/L			
BOD(2)			NA mg/L						
COD(2)			NA mg/L						
Gross Alpha (TSS filter pad)(3)									
Total Suspended Solids			1.33 mg/L			30 mg/L			
Gross Alpha (raw water)	SLAPS-012	02/20/04 - 03/04/04	180 pCi/L	61,638	4.2E-05	3000 pCi/L		3000 pCi/L	
Gross Beta		(Phase 2)	103 pCi/L		2.4E-05	N/A pCi/L		N/A pCi/L	
TH-228			0.7 pCi/L		1.7E-07	2000 pCi/L		2000 pCi/L	
TH-230			2.1 pCi/L		4.8E-07	1000 pCi/L		1000 pCi/L	
Uranium (Nat)			178 pCi/L		4.1E-05	3000 pCi/L		3000 pCi/L	
RA-226(5)			<2 pCi/L		2.3E-07	10 pCi/L		600 pCi/L	
RA-228(1)			<1.8 pCi/L		1.7E-07	30 pCi/L	0.18	600 pCi/L	0.06
Barium			<0.01 mg/L			10 mg/L			
Lead			0.003 mg/L			0.40 mg/L			
Selenium			0.17 mg/L			0.20 mg/L			
BOD(2)			NA mg/L						
COD(2)			NA mg/L						
Gross Alpha (TSS filter pad)(3)									
Total Suspended Solids			18.24 mg/L			30 mg/L			
Gross Alpha (raw water)	SLAPS-013	02/27/04 - 03/08/04	169 pCi/L	129,539	8.3E-05	3000 pCi/L		3000 pCi/L	
Gross Beta		(Phase 2)	75 pCi/L		3.7E-05	N/A pCi/L		N/A pCi/L	
TH-228			1.1 pCi/L		5.4E-07	2000 pCi/L		2000 pCi/L	
TH-230			3.5 pCi/L		1.7E-06	1000 pCi/L		1000 pCi/L	
Uranium (Nat)			132 pCi/L		6.5E-05	3000 pCi/L		3000 pCi/L	
RA-226			<2.3 pCi/L		5.6E-07	10 pCi/L		600 pCi/L	
RA-228(1)			1.1 pCi/L		5.4E-07	30 pCi/L	0.20	600 pCi/L	0.05
Barium			0.013 mg/L			10 mg/L			
Lead			0.003 mg/L			0.40 mg/L			
Selenium			0.20 mg/L			0.20 mg/L			
BOD(2)			NA mg/L						
COD(2)			NA mg/L						
Gross Alpha (TSS filter pad)(3)									
Total Suspended Solids			65 mg/L			30 mg/L			

NOTES:

1. Ra-228 assumed to be in equilibrium with Th-228
2. MSD surcharges apply for BOD concentrations greater than 300 mg/l and COD concentrations greater than 600 mg/l.
3. The low values of the gross alpha of the raw water, taken together with the associated error bar, establish that the rad is below discharge limits for all parameters and that it is soluble and/or readily dispersible.
4. Non detect sample results are converted to half the detection limit.
5. The weighted average was used to calculate the total activity.

NA - Not applicable since BOD and COD only has to be run on treated water.
NR - Waiting for data from the lab

Total Activity Discharged in 1st Quarter (Ci)

TH-228	8.2E-07
TH-230	3.0E-06
Uranium (Nat)	1.2E-04
RA-226	9.5E-07
RA-228(2)	8.2E-07

Total Activity Discharged through 03/31/2004 (Ci)

TH-228	8.2E-07
TH-230	3.0E-06
Uranium (Nat)	1.2E-04
RA-226	9.5E-07
RA-228(2)	8.2E-07

Total Volume Discharged in 1st Quarter (gal)

Gallons	224,131

Volume Discharged through the CY (gal)

Gallons	224,131

FUSRAP Document Management System

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Further Info? ☐

Operating Unit: St. Louis Sites | Site: | Area: | MARKS Number: FN:1110-1-8100g

Primary Document Type: Site Management | Secondary Document Type: Interagency Agreements

Subject or Title: Transmittal of First Quarter (January 1 - March 31, 2004) Calendar Year 2004 Federal Facility Agreement (FFA) Progress Report for the FUSRAP St. Louis Sites.

Author/Originator: Sharon Cotner | Company: FUSRAP | Date: 4/26/2004

Recipient (s): Dan Wall | Company (-ies): USEPA | Version: Final

Original's Location: Central Files | Document Format: paper | Confidential File? ☐

Include in which AR(s)?

- ☒ North County
- ☐ Madison
- ☐ Downtown
- ☐ Iowa

Comments:

SAIC number:

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