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

July 25, 2002

Formerly Utilized Sites Remedial Action Program

Subject: Transmittal of Second Quarter of 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
10805 Sunset Office Dr., Suite 100
St. Louis, MO 63127-1038

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 second quarter of Calendar Year (CY) 2002. Attachment A of this report contains the available analytical results for the second quarter of CY 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 second quarter of CY 2002, permit-specified parameters were measured in April, May, and June. Data results indicate that total organic halogen (TOX) values were positive for all outfalls; therefore, volatile (VOC) and semi-volatile (SVOC) organic compounds were taken to identify the specific constituent as specified in the permit. Acetone and toluene were present at estimated quantities below the detection limit in all samples at all outfalls. These constituents are often associated with laboratory contamination.

- St. Louis Airport Site (SLAPS)
  During the second quarter of CY 2002 there were seven rainfall events. For the data that has been received to date, one exceedence was noted per the monitoring requirements of the permit. On April 8, 2002 a compliance sample at Outfall 001a exceeded the daily maximum limit of 84 ug/L for total recoverable copper. The result reported was 100 ug/L. The May 15, 2002 letter notification is attached. (See Attachment C).

Outfall 003 is still plugged to accommodate excavation activities in the area. The water from Outfall 003 is collected in a temporary sedimentation basin and pumped to another sedimentation basin, which then flows to Outfall 001a.

Extreme rainfall during event 4 necessitated pumping from the sedimentation basin at Outfall 001a through emergency Outfall 001b. Over 250,000 gallons were pumped to Outfall 001b and compliance samples were collected.

As per MDNR letter, dated February 19, 2002, sampling at Outfall 002 has been reduced to once a year.

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

Sincerely,

Sharon R. Cotner
FUSRAP Program Manager

Attachments

ATTACHMENT A

SECOND QUARTER CY 2002 RESULTS FOR THE
HAZELWOOD INTERIM STORAGE SITE

Second Quarter 2002 - Ha[redacted]ood Interim Storage Site
Daily Rainfall and Daily Maximum Flow

Table 1 - NPDES Daily Flow and Rainfall Data

Date	Rainfall (inches)	Maximum Daily Flow (MGD)[1]		
		Outfall 001	Outfall 002	Outfall 003
01-Apr-02		FME	FME	
02-Apr-02	0.01	FME	FME	
03-Apr-02		FME	FME	
04-Apr-02		FME	FME	
05-Apr-02		FME		
06-Apr-02		FME		
07-Apr-02	0.09	FME		
08-Apr-02	0.44	FME	0.02	
09-Apr-02		FME		
10-Apr-02		FME		
11-Apr-02		FME		
12-Apr-02	0.02	FME		
13-Apr-02		FME		
14-Apr-02	0.02	FME		
15-Apr-02		FME		
16-Apr-02	0.03	FME		
17-Apr-02		FME		
18-Apr-02		FME		
19-Apr-02	0.98	FME	0.11	
20-Apr-02	0.46	FME	0.05	
21-Apr-02	0.11	FME	0.03	
22-Apr-02		FME		
23-Apr-02	0.01	FME		
24-Apr-02	0.03	FME		
25-Jan-02		FME		
26-Apr-02		FME		
27-Apr-02	0.91	FME	0.07	
28-Apr-02		FME		
29-Apr-02		FME		
30-Apr-02		FME		
Monthly Average			0.01[2]	0.00

Date	Rainfall (inches)	Maximum Daily Flow (MGD)[1]		
		Outfall 001	Outfall 002	Outfall 003
1-May-02		FME		FME
2-May-02	0.07	FME		FME
3-May-02		FME		
4-May-02	0.01	FME		
5-May-02		FME		
6-Feb-02	0.47	FME	0.03	0.01
7-May-02	1.19	FME	0.16	0.12
8-May-02	0.41	FME	0.05	0.01
9-May-02	0.61	FME	0.07	
10-May-02		FME		
11-May-02	0.01	FME		
12-May-02	1.64	FME	0.13	
13-May-02	0.40	FME	0.07	0.01
14-May-02		FME		
15-May-02		FME		
16-May-02	0.41	FME	0.03	0.01
17-May-02	0.50	FME	0.07	0.04
18-May-02		FME		
19-May-02		FME		
20-May-02		FME		
21-May-02		FME		
22-May-02		FME		
23-May-02		FME		
24-May-02	0.16	FME		
25-May-02	0.01	FME		
26-May-02		FME		
27-May-02		FME		
28-May-02	0.35	FME		
29-May-02		FME		
30-May-02		FME		
31-May-02		FME		
Monthly Average			0.02	0.03[2]

Date	Rainfall (inches)	Maximum Daily Flow (MGD)[1]		
		Outfall 001	Outfall 002	Outfall 003
1-Jun-02		FME		
2-Jun-02		FME		
3-Jun-02		FME		
4-Jun-02		FME		
5-Jun-02	0.99	FME	0.07	0.06
6-Jun-02		FME	0.01	
7-Jun-02		FME		
8-Jun-02		FME		
9-Jun-02	0.15	FME		
10-Jun-02	0.41	FME		
11-Jun-02	1.34	FME	0.04	
12-Mar-02	1.13	FME	0.21	0.02
13-Jun-02		FME		
14-Jun-02		FME		
15-Jun-02		FME		
16-Jun-02		FME		
17-Jun-02		FME		
18-Jun-02		FME		
19-Jun-02		FME		
20-Jun-02		FME		
21-Jun-02		FME		
22-Jun-02		FME		
23-Jun-02		FME		
24-Jun-02	0.01	FME		
25-Jun-02	0.21	FME		
26-Jun-02		FME		
27-Jun-02		FME		
28-Jun-02		FME		
29-Jun-02		FME		
30-Jun-02		FME		
Monthly Average			0.03	0.04

NOTES:
[1]Daily maximum flow values are based on 24-hour flow and recorded as million gallons per day.
[2]Monthly Average does not include FME fields
FME = Flow Meter Error. No flow data available.
Flow was measured continuously using ISCO Model 4210 Ultrasonic flow meters installed at each outfall.

Second Quarter 2002 - Hazelwood Interim Storage Site
Table 2 - Analytical Data Results

Outfall	Sample ID	Date Collected	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN01	HIS66616	04/08/02	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN01	HIS66619	05/06/02	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN01	HIS66622	06/05/02	Gross Alpha	9.9	9.3	pCi/L	J
HN01	HIS66622	06/05/02	Gross Beta	5.3	26	pCi/L	UJ
HN01	HIS66622	06/05/02	Radium-226	0	1.7	pCi/L	UJ
HN01	HIS66622	06/05/02	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN01	HIS66622	06/05/02	1,1,1-Trichloroethane	5	5	ug/L	U
HN01	HIS66622	06/05/02	1,1,2,2-Tetrachloroethane	5	5	ug/L	U
HN01	HIS66622	06/05/02	1,1,2-Trichloro-1,2,2-trifluoroethane	5	5	ug/L	U
HN01	HIS66622	06/05/02	1,1,2-Trichloroethane	5	5	ug/L	U
HN01	HIS66622	06/05/02	1,1-Dichloroethane	5	5	ug/L	U
HN01	HIS66622	06/05/02	1,1-Dichloroethene	5	5	ug/L	U
HN01	HIS66622	06/05/02	1,2-Dichloroethane	5	5	ug/L	U
HN01	HIS66622	06/05/02	1,2-Dichloroethene (Total)	10	10	ug/L	U
HN01	HIS66622	06/05/02	1,2-Dichloropropane	5	5	ug/L	U
HN01	HIS66622	06/05/02	2-Butanone	20	20	ug/L	U
HN01	HIS66622	06/05/02	2-Hexanone	20	20	ug/L	U
HN01	HIS66622	06/05/02	4-Methyl-2-pentanone	20	20	ug/L	U
HN01	HIS66622	06/05/02	Acetone	6.4	20	ug/L	U
HN01	HIS66622	06/05/02	Benzene	5	5	ug/L	U
HN01	HIS66622	06/05/02	Bromodichloromethane	5	5	ug/L	U
HN01	HIS66622	06/05/02	Bromoform	5	5	ug/L	U
HN01	HIS66622	06/05/02	Bromomethane	10	10	ug/L	U
HN01	HIS66622	06/05/02	Carbon disulfide	5	5	ug/L	U
HN01	HIS66622	06/05/02	Carbon tetrachloride	5	5	ug/L	U
HN01	HIS66622	06/05/02	Chlorobenzene	5	5	ug/L	U
HN01	HIS66622	06/05/02	Chlorodibromomethane	5	5	ug/L	U
HN01	HIS66622	06/05/02	Chloroethane	10	10	ug/L	U
HN01	HIS66622	06/05/02	Chloroform	5	5	ug/L	U
HN01	HIS66622	06/05/02	Chloromethane	10	10	ug/L	U
HN01	HIS66622	06/05/02	cis-1,3-Dichloropropene	5	5	ug/L	U
HN01	HIS66622	06/05/02	Ethylbenzene	5	5	ug/L	U
HN01	HIS66622	06/05/02	Methylene chloride	5	5	ug/L	U
HN01	HIS66622	06/05/02	Styrene	5	5	ug/L	U
HN01	HIS66622	06/05/02	Tetrachloroethene	5	5	ug/L	U
HN01	HIS66622	06/05/02	Toluene	1.8	5	ug/L	U
HN01	HIS66622	06/05/02	trans-1,3-Dichloropropene	5	5	ug/L	U
HN01	HIS66622	06/05/02	Trichloroethene	5	5	ug/L	U
HN01	HIS66622	06/05/02	Vinyl chloride	5	5	ug/L	U
HN01	HIS66622	06/05/02	Xylenes, total	10	10	ug/L	U
HN01	HIS66622	06/05/02	1,2,4-Trichlorobenzene	10	10	ug/L	U
HN01	HIS66622	06/05/02	1,2-Dichlorobenzene	10	10	ug/L	U
HN01	HIS66622	06/05/02	1,3-Dichlorobenzene	10	10	ug/L	U
HN01	HIS66622	06/05/02	1,4-Dichlorobenzene	10	10	ug/L	U
HN01	HIS66622	06/05/02	2,4,5-Trichlorophenol	10	10	ug/L	U
HN01	HIS66622	06/05/02	2,4,6-Trichlorophenol	10	10	ug/L	U
HN01	HIS66622	06/05/02	2,4-Dichlorophenol	10	10	ug/L	U
HN01	HIS66622	06/05/02	2,4-Dimethylphenol	10	10	ug/L	U
HN01	HIS66622	06/05/02	2,4-Dinitrophenol	50	50	ug/L	U
HN01	HIS66622	06/05/02	2,4-Dinitrotoluene	10	10	ug/L	U
HN01	HIS66622	06/05/02	2,6-Dinitrotoluene	10	10	ug/L	U
HN01	HIS66622	06/05/02	2-Chloronaphthalene	10	10	ug/L	U
HN01	HIS66622	06/05/02	2-Chlorophenol	10	10	ug/L	U
HN01	HIS66622	06/05/02	2-Methylnaphthalene	10	10	ug/L	U
HN01	HIS66622	06/05/02	2-Methylphenol	10	10	ug/L	U
HN01	HIS66622	06/05/02	2-Nitroaniline	50	50	ug/L	U
HN01	HIS66622	06/05/02	2-Nitrophenol	10	10	ug/L	U
HN01	HIS66622	06/05/02	3,3'-Dichlorobenzidine	50	50	ug/L	U
HN01	HIS66622	06/05/02	3-Nitroaniline	50	50	ug/L	U
HN01	HIS66622	06/05/02	4,6-Dinitro-2-methylphenol	50	50	ug/L	J

Second Quarter 2002 - Hazelwood Interim Storage Site
Table 2 - Analytical Data Results

Outfall	Sample ID	Date Collected	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN01	HIS66622	06/05/02	4-Bromophenyl phenyl ether	10	10	ug/L	U
HN01	HIS66622	06/05/02	4-Chloro-3-methylphenol	10	10	ug/L	U
HN01	HIS66622	06/05/02	4-Chloroaniline	10	10	ug/L	U
HN01	HIS66622	06/05/02	4-Chlorophenyl phenyl ether	10	10	ug/L	U
HN01	HIS66622	06/05/02	4-Methylphenol	20	20	ug/L	U
HN01	HIS66622	06/05/02	4-Nitroaniline	50	50	ug/L	U
HN01	HIS66622	06/05/02	4-Nitrophenol	50	50	ug/L	U
HN01	HIS66622	06/05/02	Acenaphthene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Acenaphthylene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Anthracene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Benzo(a)anthracene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Benzo(a)pyrene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Benzo(b)fluoranthene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Benzo(g,h,I)perylene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Benzo(k)fluoranthene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Bis(2-chloroethoxy) methane	10	10	ug/L	U
HN01	HIS66622	06/05/02	Bis(2-chloroethyl) ether	10	10	ug/L	U
HN01	HIS66622	06/05/02	Bis(2-chloroisopropyl) ether	10	10	ug/L	U
HN01	HIS66622	06/05/02	Bis(2-ethylhexyl) phthalate	10	10	ug/L	U
HN01	HIS66622	06/05/02	Butyl benzyl phthalate	10	10	ug/L	U
HN01	HIS66622	06/05/02	Carbazole	10	10	ug/L	U
HN01	HIS66622	06/05/02	Chrysene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Di-n-butyl phthalate	10	10	ug/L	U
HN01	HIS66622	06/05/02	Di-n-octyl phthalate	10	10	ug/L	U
HN01	HIS66622	06/05/02	Dibenzo(a,h)anthracene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Dibenzofuran	10	10	ug/L	U
HN01	HIS66622	06/05/02	Diethyl phthalate	10	10	ug/L	U
HN01	HIS66622	06/05/02	Dimethyl phthalate	10	10	ug/L	U
HN01	HIS66622	06/05/02	Fluoranthene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Fluorene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Hexachlorobenzene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Hexachlorobutadiene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Hexachlorocyclopentadiene	50	50	ug/L	U
HN01	HIS66622	06/05/02	Hexachloroethane	10	10	ug/L	U
HN01	HIS66622	06/05/02	Indeno(1,2,3-cd)pyrene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Isophorone	10	10	ug/L	U
HN01	HIS66622	06/05/02	N-Nitroso-di-n-propylamine	10	10	ug/L	U
HN01	HIS66622	06/05/02	N-Nitrosodiphenylamine	10	10	ug/L	U
HN01	HIS66622	06/05/02	Naphthalene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Nitrobenzene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Pentachlorophenol	50	50	ug/L	U
HN01	HIS66622	06/05/02	Phenanthrene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Phenol	10	10	ug/L	U
HN01	HIS66622	06/05/02	Pyrene	10	10	ug/L	U
HN01	HIS66622	06/05/02	Total Organic Halogens (TOX)	21.7	10	ug/L	=
HN01	HIS66622	06/05/02	Total Organic Carbon (TOC)	15.5	2	mg/L	=
HN01	HIS66622	06/05/02	Thorium-228	1.76	1.58	pCi/L	J
HN01	HIS66622	06/05/02	Thorium-230	6.5	0.6	pCi/L	J
HN01	HIS66622	06/05/02	Thorium-232	0.2	0.6	pCi/L	UJ
HN01	HIS66622	06/05/02	Uranium-234	2.6	0.54	pCi/L	J
HN01	HIS66622	06/05/02	Uranium-235	0	0.7	pCi/L	U
HN01	HIS66622	06/05/02	Uranium-238	0.7	1.2	pCi/L	UJ
HN02	HIS66617	04/08/02	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN02	HIS66620	05/02/02	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN02	HIS66623	06/05/02	Gross Alpha	51	9.2	pCi/L	=
HN02	HIS66623	06/05/02	Gross Beta	7.5	25.6	pCi/L	UJ
HN02	HIS66623	06/05/02	Radium-226	1.9	1.75	pCi/L	J
HN02	HIS66623	06/05/02	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN02	HIS66623	06/05/02	1,1,1-Trichloroethane	5	5	ug/L	U
HN02	HIS66623	06/05/02	1,1,2,2-Tetrachloroethane	5	5	ug/L	U

Second Quarter 2002 - Hazelwood Interim Storage Site
Table 2 - Analytical Data Results

Outfall	Sample ID	Date Collected	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN02	HIS66623	06/05/02	1,1,2-Trichloro-1,2,2-trifluoroethane	5	5	ug/L	U
HN02	HIS66623	06/05/02	1,1,2-Trichloroethane	5	5	ug/L	U
HN02	HIS66623	06/05/02	1,1-Dichloroethane	5	5	ug/L	U
HN02	HIS66623	06/05/02	1,1-Dichloroethene	5	5	ug/L	U
HN02	HIS66623	06/05/02	1,2-Dichloroethane	5	5	ug/L	U
HN02	HIS66623	06/05/02	1,2-Dichloroethene (Total)	10	10	ug/L	U
HN02	HIS66623	06/05/02	1,2-Dichloropropane	5	5	ug/L	U
HN02	HIS66623	06/05/02	2-Butanone	20	20	ug/L	U
HN02	HIS66623	06/05/02	2-Hexanone	20	20	ug/L	U
HN02	HIS66623	06/05/02	4-Methyl-2-pentanone	20	20	ug/L	U
HN02	HIS66623	06/05/02	Acetone	7.7	20	ug/L	U
HN02	HIS66623	06/05/02	Benzene	5	5	ug/L	U
HN02	HIS66623	06/05/02	Bromodichloromethane	5	5	ug/L	U
HN02	HIS66623	06/05/02	Bromoform	5	5	ug/L	U
HN02	HIS66623	06/05/02	Bromomethane	10	10	ug/L	U
HN02	HIS66623	06/05/02	Carbon disulfide	5	5	ug/L	U
HN02	HIS66623	06/05/02	Carbon tetrachloride	5	5	ug/L	U
HN02	HIS66623	06/05/02	Chlorobenzene	5	5	ug/L	U
HN02	HIS66623	06/05/02	Chlorodibromomethane	5	5	ug/L	U
HN02	HIS66623	06/05/02	Chloroethane	10	10	ug/L	U
HN02	HIS66623	06/05/02	Chloroform	5	5	ug/L	U
HN02	HIS66623	06/05/02	Chloromethane	1.4	10	ug/L	UJ
HN02	HIS66623	06/05/02	cis-1,3-Dichloropropene	5	5	ug/L	U
HN02	HIS66623	06/05/02	Ethylbenzene	5	5	ug/L	U
HN02	HIS66623	06/05/02	Methylene chloride	5	5	ug/L	U
HN02	HIS66623	06/05/02	Styrene	5	5	ug/L	U
HN02	HIS66623	06/05/02	Tetrachloroethene	5	5	ug/L	U
HN02	HIS66623	06/05/02	Toluene	0.6	5	ug/L	U
HN02	HIS66623	06/05/02	trans-1,3-Dichloropropene	5	5	ug/L	U
HN02	HIS66623	06/05/02	Trichloroethene	5	5	ug/L	U
HN02	HIS66623	06/05/02	Vinyl chloride	5	5	ug/L	U
HN02	HIS66623	06/05/02	Xylenes, total	10	10	ug/L	U
HN02	HIS66623	06/05/02	1,2,4-Trichlorobenzene	10	10	ug/L	U
HN02	HIS66623	06/05/02	1,2-Dichlorobenzene	10	10	ug/L	U
HN02	HIS66623	06/05/02	1,3-Dichlorobenzene	10	10	ug/L	U
HN02	HIS66623	06/05/02	1,4-Dichlorobenzene	10	10	ug/L	U
HN02	HIS66623	06/05/02	2,4,5-Trichlorophenol	10	10	ug/L	U
HN02	HIS66623	06/05/02	2,4,6-Trichlorophenol	10	10	ug/L	U
HN02	HIS66623	06/05/02	2,4-Dichlorophenol	10	10	ug/L	U
HN02	HIS66623	06/05/02	2,4-Dimethylphenol	10	10	ug/L	U
HN02	HIS66623	06/05/02	2,4-Dinitrophenol	50	50	ug/L	U
HN02	HIS66623	06/05/02	2,4-Dinitrotoluene	10	10	ug/L	U
HN02	HIS66623	06/05/02	2,6-Dinitrotoluene	10	10	ug/L	U
HN02	HIS66623	06/05/02	2-Chloronaphthalene	10	10	ug/L	U
HN02	HIS66623	06/05/02	2-Chlorophenol	10	10	ug/L	U
HN02	HIS66623	06/05/02	2-Methylnaphthalene	10	10	ug/L	U
HN02	HIS66623	06/05/02	2-Methylphenol	10	10	ug/L	U
HN02	HIS66623	06/05/02	2-Nitroaniline	50	50	ug/L	U
HN02	HIS66623	06/05/02	2-Nitrophenol	10	10	ug/L	U
HN02	HIS66623	06/05/02	3,3'-Dichlorobenzidine	50	50	ug/L	U
HN02	HIS66623	06/05/02	3-Nitroaniline	50	50	ug/L	U
HN02	HIS66623	06/05/02	4,6-Dinitro-2-methylphenol	50	50	ug/L	UJ
HN02	HIS66623	06/05/02	4-Bromophenyl phenyl ether	10	10	ug/L	U
HN02	HIS66623	06/05/02	4-Chloro-3-methylphenol	10	10	ug/L	U
HN02	HIS66623	06/05/02	4-Chloroaniline	10	10	ug/L	U
HN02	HIS66623	06/05/02	4-Chlorophenyl phenyl ether	10	10	ug/L	U
HN02	HIS66623	06/05/02	4-Methylphenol	20	20	ug/L	UJ
HN02	HIS66623	06/05/02	4-Nitroaniline	50	50	ug/L	U
HN02	HIS66623	06/05/02	4-Nitrophenol	50	50	ug/L	U
HN02	HIS66623	06/05/02	Acenaphthene	10	10	ug/L	U

Second Quarter 2002 - Hazelwood Interim Storage Site
Table 2 - Analytical Data Results

Outfall	Sample ID	Date Collected	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN02	HIS66623	06/05/02	Acenaphthylene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Anthracene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Benzo(a)anthracene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Benzo(a)pyrene	10	10	ug/L	=
HN02	HIS66623	06/05/02	Benzo(b)fluoranthene	10	10	ug/L	=
HN02	HIS66623	06/05/02	Benzo(g,h,I)perylene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Benzo(k)fluoranthene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Bis(2-chloroethoxy) methane	10	10	ug/L	U
HN02	HIS66623	06/05/02	Bis(2-chloroethyl) ether	10	10	ug/L	U
HN02	HIS66623	06/05/02	Bis(2-chloroisopropyl) ether	10	10	ug/L	U
HN02	HIS66623	06/05/02	Bis(2-ethylhexyl) phthalate	10	10	ug/L	U
HN02	HIS66623	06/05/02	Butyl benzyl phthalate	10	10	ug/L	U
HN02	HIS66623	06/05/02	Carbazole	10	10	ug/L	U
HN02	HIS66623	06/05/02	Chrysene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Di-n-butyl phthalate	10	10	ug/L	U
HN02	HIS66623	06/05/02	Di-n-octyl phthalate	10	10	ug/L	U
HN02	HIS66623	06/05/02	Dibenzo(a,h)anthracene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Dibenzofuran	10	10	ug/L	U
HN02	HIS66623	06/05/02	Diethyl phthalate	10	10	ug/L	U
HN02	HIS66623	06/05/02	Dimethyl phthalate	10	10	ug/L	U
HN02	HIS66623	06/05/02	Fluoranthene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Fluorene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Hexachlorobenzene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Hexachlorobutadiene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Hexachlorocyclopentadiene	50	50	ug/L	U
HN02	HIS66623	06/05/02	Hexachloroethane	10	10	ug/L	U
HN02	HIS66623	06/05/02	Indeno(1,2,3-cd)pyrene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Isophorone	10	10	ug/L	U
HN02	HIS66623	06/05/02	N-Nitroso-di-n-propylamine	10	10	ug/L	U
HN02	HIS66623	06/05/02	N-Nitrosodiphenylamine	10	10	ug/L	U
HN02	HIS66623	06/05/02	Naphthalene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Nitrobenzene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Pentachlorophenol	50	50	ug/L	U
HN02	HIS66623	06/05/02	Phenanthrene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Phenol	10	10	ug/L	U
HN02	HIS66623	06/05/02	Pyrene	10	10	ug/L	U
HN02	HIS66623	06/05/02	Total Organic Halogens (TOX)	17.7	10	ug/L	=
HN02	HIS66623	06/05/02	Total Organic Carbon (TOC)	9.4	2	mg/L	=
HN02	HIS66623	06/05/02	Thorium-228	1.18	1.76	pCi/L	UJ
HN02	HIS66623	06/05/02	Thorium-230	5.13	1.26	pCi/L	J
HN02	HIS66623	06/05/02	Thorium-232	0	0.57	pCi/L	U
HN02	HIS66623	06/05/02	Uranium-234	19.1	0.53	pCi/L	=
HN02	HIS66623	06/05/02	Uranium-235	0.72	0.65	pCi/L	J
HN02	HIS66623	06/05/02	Uranium-238	19	0.53	pCi/L	=
HN03	HIS66618	04/08/02	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN03	HIS66621	05/06/02	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN03	HIS66624	06/05/02	Gross Alpha	2.43	9.21	pCi/L	UJ
HN03	HIS66624	06/05/02	Gross Beta	13.27	25.7	pCi/L	UJ
HN03	HIS66624	06/05/02	Radium-226	0.48	0.66	pCi/L	UJ
HN03	HIS66624	06/05/02	Settleable Solids (SS)	0	0.2	mL/L/hr	U
HN03	HIS66624	06/05/02	1,1,1-Trichloroethane	5	5	ug/L	U
HN03	HIS66624	06/05/02	1,1,2,2-Tetrachloroethane	5	5	ug/L	U
HN03	HIS66624	06/05/02	1,1,2-Trichloro-1,2,2-trifluoroethane	5	5	ug/L	U
HN03	HIS66624	06/05/02	1,1,2-Trichloroethane	5	5	ug/L	U
HN03	HIS66624	06/05/02	1,1-Dichloroethane	5	5	ug/L	U
HN03	HIS66624	06/05/02	1,1-Dichloroethene	5	5	ug/L	U
HN03	HIS66624	06/05/02	1,2-Dichloroethane	5	5	ug/L	U
HN03	HIS66624	06/05/02	1,2-Dichloroethene (Total)	10	10	ug/L	U
HN03	HIS66624	06/05/02	1,2-Dichloropropane	5	5	ug/L	U
HN03	HIS66624	06/05/02	2-Butanone	20	20	ug/L	U

Second Quarter 2002 - Hazelwood Interim Storage Site
Table 2 - Analytical Data Results

Outfall	Sample ID	Date Collected	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN03	HIS66624	06/05/02	2-Hexanone	20	20	ug/L	U
HN03	HIS66624	06/05/02	4-Methyl-2-pentanone	20	20	ug/L	U
HN03	HIS66624	06/05/02	Acetone	5.4	20	ug/L	U
HN03	HIS66624	06/05/02	Benzene	5	5	ug/L	U
HN03	HIS66624	06/05/02	Bromodichloromethane	5	5	ug/L	U
HN03	HIS66624	06/05/02	Bromoform	5	5	ug/L	U
HN03	HIS66624	06/05/02	Bromomethane	10	10	ug/L	U
HN03	HIS66624	06/05/02	Carbon disulfide	5	5	ug/L	U
HN03	HIS66624	06/05/02	Carbon tetrachloride	5	5	ug/L	U
HN03	HIS66624	06/05/02	Chlorobenzene	5	5	ug/L	U
HN03	HIS66624	06/05/02	Chlorodibromomethane	5	5	ug/L	U
HN03	HIS66624	06/05/02	Chloroethane	10	10	ug/L	U
HN03	HIS66624	06/05/02	Chloroform	5	5	ug/L	U
HN03	HIS66624	06/05/02	Chloromethane	10	10	ug/L	U
HN03	HIS66624	06/05/02	cis-1,3-Dichloropropene	5	5	ug/L	U
HN03	HIS66624	06/05/02	Ethylbenzene	5	5	ug/L	U
HN03	HIS66624	06/05/02	Methylene chloride	5	5	ug/L	U
HN03	HIS66624	06/05/02	Styrene	5	5	ug/L	U
HN03	HIS66624	06/05/02	Tetrachloroethene	5	5	ug/L	U
HN03	HIS66624	06/05/02	Toluene	1.2	5	ug/L	U
HN03	HIS66624	06/05/02	trans-1,3-Dichloropropene	5	5	ug/L	=
HN03	HIS66624	06/05/02	Trichloroethene	5	5	ug/L	=
HN03	HIS66624	06/05/02	Vinyl chloride	5	5	ug/L	U
HN03	HIS66624	06/05/02	Xylenes, total	10	10	ug/L	U
HN03	HIS66624	06/05/02	1,2,4-Trichlorobenzene	10	10	ug/L	U
HN03	HIS66624	06/05/02	1,2-Dichlorobenzene	10	10	ug/L	U
HN03	HIS66624	06/05/02	1,3-Dichlorobenzene	10	10	ug/L	U
HN03	HIS66624	06/05/02	1,4-Dichlorobenzene	10	10	ug/L	U
HN03	HIS66624	06/05/02	2,4,5-Trichlorophenol	10	10	ug/L	U
HN03	HIS66624	06/05/02	2,4,6-Trichlorophenol	10	10	ug/L	U
HN03	HIS66624	06/05/02	2,4-Dichlorophenol	10	10	ug/L	U
HN03	HIS66624	06/05/02	2,4-Dimethylphenol	10	10	ug/L	U
HN03	HIS66624	06/05/02	2,4-Dinitrophenol	50	50	ug/L	U
HN03	HIS66624	06/05/02	2,4-Dinitrotoluene	10	10	ug/L	U
HN03	HIS66624	06/05/02	2,6-Dinitrotoluene	10	10	ug/L	U
HN03	HIS66624	06/05/02	2-Chloronaphthalene	10	10	ug/L	U
HN03	HIS66624	06/05/02	2-Chlorophenol	10	10	ug/L	U
HN03	HIS66624	06/05/02	2-Methylnaphthalene	10	10	ug/L	U
HN03	HIS66624	06/05/02	2-Methylphenol	10	10	ug/L	U
HN03	HIS66624	06/05/02	2-Nitroaniline	50	50	ug/L	U
HN03	HIS66624	06/05/02	2-Nitrophenol	10	10	ug/L	U
HN03	HIS66624	06/05/02	3,3'-Dichlorobenzidine	50	50	ug/L	U
HN03	HIS66624	06/05/02	3-Nitroaniline	50	50	ug/L	U
HN03	HIS66624	06/05/02	4,6-Dinitro-2-methylphenol	50	50	ug/L	U
HN03	HIS66624	06/05/02	4-Bromophenyl phenyl ether	10	10	ug/L	U
HN03	HIS66624	06/05/02	4-Chloro-3-methylphenol	10	10	ug/L	U
HN03	HIS66624	06/05/02	4-Chloroaniline	10	10	ug/L	U
HN03	HIS66624	06/05/02	4-Chlorophenyl phenyl ether	10	10	ug/L	U
HN03	HIS66624	06/05/02	4-Methylphenol	20	20	ug/L	U
HN03	HIS66624	06/05/02	4-Nitroaniline	50	50	ug/L	U
HN03	HIS66624	06/05/02	4-Nitrophenol	50	50	ug/L	U
HN03	HIS66624	06/05/02	Acenaphthene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Acenaphthylene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Anthracene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Benzo(a)anthracene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Benzo(a)pyrene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Benzo(b)fluoranthene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Benzo(g,h,i)perylene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Benzo(k)fluoranthene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Bis(2-chloroethoxy) methane	10	10	ug/L	U

Second Quarter 2002 - Hazelwood Interim Storage Site
Table 2 - Analytical Data Results

Outfall	Sample ID	Date Collected	Analyte	Result	Detection Limit	Units	Validation Qualifier
HN03	HIS66624	06/05/02	Bis(2-chloroethyl) ether	10	10	ug/L	U
HN03	HIS66624	06/05/02	Bis(2-chloroisopropyl) ether	10	10	ug/L	U
HN03	HIS66624	06/05/02	Bis(2-ethylhexyl) phthalate	10	10	ug/L	U
HN03	HIS66624	06/05/02	Butyl benzyl phthalate	10	10	ug/L	U
HN03	HIS66624	06/05/02	Carbazole	10	10	ug/L	U
HN03	HIS66624	06/05/02	Chrysene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Di-n-butyl phthalate	10	10	ug/L	U
HN03	HIS66624	06/05/02	Di-n-octyl phthalate	10	10	ug/L	U
HN03	HIS66624	06/05/02	Dibenzo(a,h)anthracene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Dibenzofuran	10	10	ug/L	U
HN03	HIS66624	06/05/02	Diethyl phthalate	10	10	ug/L	U
HN03	HIS66624	06/05/02	Dimethyl phthalate	10	10	ug/L	U
HN03	HIS66624	06/05/02	Fluoranthene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Fluorene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Hexachlorobenzene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Hexachlorobutadiene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Hexachlorocyclopentadiene	50	50	ug/L	U
HN03	HIS66624	06/05/02	Hexachloroethane	10	10	ug/L	U
HN03	HIS66624	06/05/02	Indeno(1,2,3-cd)pyrene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Isophorone	10	10	ug/L	U
HN03	HIS66624	06/05/02	N-Nitroso-di-n-propylamine	10	10	ug/L	U
HN03	HIS66624	06/05/02	N-Nitrosodiphenylamine	10	10	ug/L	U
HN03	HIS66624	06/05/02	Naphthalene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Nitrobenzene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Pentachlorophenol	50	50	ug/L	U
HN03	HIS66624	06/05/02	Phenanthrene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Phenol	10	10	ug/L	U
HN03	HIS66624	06/05/02	Pyrene	10	10	ug/L	U
HN03	HIS66624	06/05/02	Total Organic Halogens (TOX)	10.2	10	ug/L	=
HN03	HIS66624	06/05/02	Total Organic Carbon (TOC)	9.89	2	mg/L	=
HN03	HIS66624	06/05/02	Thorium-228	0.23	2.09	pCi/L	UJ
HN03	HIS66624	06/05/02	Thorium-230	4.95	0.61	pCi/L	J
HN03	HIS66624	06/05/02	Thorium-232	0.45	0.61	pCi/L	UJ
HN03	HIS66624	06/05/02	Uranium-234	1.23	1.34	pCi/L	U
HN03	HIS66624	06/05/02	Uranium-235	0.14	1.65	pCi/L	UJ
HN03	HIS66624	06/05/02	Uranium-238	0.89	0.6	pCi/L	J

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 analyte in the sample.

UJ indicates the analyte was not detected above the detection 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.

Second Quarter 2002 – Storm-w[redacted]Discharge Monitoring Report
Hazelwood Interim Storage Site, St. Louis, MO

FACILITY NAME	PERMIT NUMBER	COUNTY	OWNER	FACILITY CONTACT
Hazelwood Interim Storage Site (HISS)[1]	MO-0111252	St. Louis	Jarboe Realty Investment	S.R. Colner, Program Manager, USACE
OPERATOR OF FACILITY			TYPE OF FACILITY	
United States Army Corps of Engineers (USACE)			Standard Industrial Classification –9999, non-classifiable[1]	
REQUIRED FREQUENCY OF MONITORING				THIS REPORT COVERS
Flow and rainfall – daily; Settleable solids – monthly; Other parameters[2] – quarterly				2nd Quarter- April 2002 – June 2002
SAMPLES COLLECTED BY				
Nick Tweston and Lon Hoover				
ANALYSIS PERFORMED BY				
Severn-Trent (chemical analyses) and FUSRAP Laboratory (radiological analyses)				
SAMPLE LOCATION	MONTH and TIME		MONTH and TIME	MONTH and TIME
Outfall 1	4/8/02@850		5/6/02@1234	6/5/02@1230
Outfall 2	4/8/02@855		5/6/02@1240	6/5/02@1245
Outfall 3	4/8/02@900		5/6/02@1245	6/5/02@1255

MONITORING PARAMETER	LIMITS[3]	UNITS[4]	ANALYTICAL RESULTS AND DATA QUALIFIERS			SAMPLE TYPE	REMARKS and COMMENTS
			OUTFALL 1	OUTFALL 2	OUTFALL 3		
Settleable solids[5]: April	Daily max=1.5 Monthly avg=1.0	mL/L/hr	0	0	0	Grab	
May		mL/L/hr	0	0	0	Grab	
June		mL/L/hr	0	0	0	Composite	
pH	6.0-9.0	SU	6.75	7.67	7.64	Composite	
Specific conductance	Monitor Only	µmhos/cm	0.375	0.359	0.274	Composite	
Total organic carbon[6]	Monitor Only	mg/L	15.5	9.4	9.89	Composite	
Total organic halogen[6]	Monitor Only	mg/L	21.7	17.7	10.2	Composite	
Gross alpha	Monitor Only	pCi/L	9.9	51	9.21[7]	Composite	
Gross beta	Monitor Only	pCi/L	26[7]	25.6[7]	25.7[7]	Composite	
Lead 210	Monitor Only	pCi/L	1.7[7]	1.9	0.66[7]	Composite	Assumes secular equilibrium with Ra-226
Radium 226	Monitor Only	pCi/L	1.7[7]	1.9	0.66[7]	Composite	
Radium 228	Monitor Only	pCi/L	1.76	1.76[7]	2.09[7]	Composite	Assumes secular equilibrium with Th-228
Uranium, total	Monitor Only	pCi/L	4.5[7]	38.82	3.88[7]	Composite	Calculated Value: addition of iso-analysis
Thorium 230	Monitor Only	pCi/L	6.5	5.13	4.95	Composite	
Thorium 232	Monitor Only	pCi/L	0.6[7]	0.57[7]	0.61[7]	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

REPORT APPROVED BY OWNER Sharon Colner for US Army Corps of Engrs DATE 7/25/02

NOTES:

1. HISS is a CERCLA NPL.
2. 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.
3. Final limits as specified in the permit for settleable solids and pH, (*) indicates monitoring requirement only.
4. Results are reported in required units per permit.
5. Settleable Solids Sample Method = EPA 160.5. See Table 2 for Data Qualifiers.
6. See Table 2 for VOC and SVOC data.
7. Reporting MDA as the result was reported below the MDA for the analysis.

ATTACHMENT B

SECOND QUARTER CY 2002 RESULTS FOR THE
ST. LOUIS AIRPORT SITE

Second Quarter 2002 - St. Lou[illegible]rport Site Rainfall and Flow

Date	(inches)	Outfall	Outfall	Outfall
2002	24-hour total	001a[1]	002[2]	003[3]
1-Apr	0			
2-Apr	0			
3-Apr	0			
4-Apr	0			
5-Apr	0			
6-Apr	0			
7-Apr	0.13			
8-Apr	0.54	0.06		
9-Apr	0.17			
10-Apr	0			
11-Apr	0			
12-Apr	0.07			
13-Apr	Trace			
14-Apr	0			
15-Apr	0			
16-Apr	0.06			
17-Apr	0			
18-Apr	0			
19-Apr	1.76	0.16		
20-Apr	0.53	0.46		
21-Apr	0.01	0.24		
22-Apr	0	0.28		
23-Apr	0			
24-Apr	0.07			
25-Apr	0			
26-Apr	0			
27-Apr	1.03	0.24		
28-Apr	0	0.17		
29-Apr	0			
30-Apr	0			
Monthly Average		0.23		

Date	(inches)	Outfall	Outfall	Outfall	Outfall
2002	24-hour total	001a[1]	001b[1]	002[2]	003[3]
1-May	Trace				
2-May	0.13				
3-May	0				
4-May	0.03				
5-May	0				
6-May	0.51	0.07			
7-May	1.40	0.48			
8-May	0.86	0.58	C.13		
9-May	0.19	0.63	C.12		
10-May	0	0.18	C.03		
11-May	0.01	0.01			
12-May	2.18	0.59			
13-May	0.48	1.10	C.14		
14-May	0	0.31			
15-May	Trace				
16-May	0.47	0.17			
17-May	0.72	0.48			
18-May	0	0.21			
19-May	0				
20-May	0	0.16			
21-May	0				
22-May	0				
23-May	0				
24-May	0.19				
25-May	0				
26-May	0				
27-May	0				
28-May	0.57				
29-May	0				
30-May	0.05				
31-May	0				
Monthly Average		0.38	0.11		

Date	(inches)	Outfall	Outfall	Outfall
2002	24-hour total	001a[1]	002[2]	003[3]
1-Jun	0			
2-Jun	0			
3-Jun	0			
4-Jun	0.56			
5-Jun	0.58	0.18		
6-Jun	0			
7-Jun	0	0.11		
8-Jun	0			
9-Jun	0.15			
10-Jun	0.44	0.01		
11-Jun	1.53	0.30		
12-Jun	0.96	1.07		
13-Jun	Trace	0.37		
14-Jun	0			
15-Jun	0			
16-Jun	0			
16-Jun	0.47			
17-Jun	0			
18-Jun	0			
19-Jun	0			
20-Jun	0			
21-Jun	0			
22-Jun	0			
23-Jun	0			
24-Jun	1.01			
25-Jun	0.03			
26-Jun	0			
27-Jun	Trace			
28-Jun	0			
29-Jun	0			
30-Jun	0			
Monthly Average		0.34		

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.
[1]A flow meter and automatic sampler are currently installed at Outfall 001a. Outfall 001b is an emergency spillway only.
[2]Outfall 002 is sampled annually per MDNR letter dated 2/19/02, as a result flow is not measured until a sample is collected.
[3] Outfall 003 is currently plugged due to construction activities.

Second Quarter 2002 -Stormwater Dis[redacted] Monitoring Report - Outfall 001a
St. Louis Airport Site (SLAPS), St. Louis, MO

MONITORING PARAMETER	FINAL EFFLUENT LIMITATIONS		UNITS[1]	ANALYTICAL RESULTS Outfall 001a Chemical Parameters			SAMPLE TYPE	REMARKS and COMMENTS
	Daily Maximum	Monthly Average		April	May	June		
Flow	Monitor only	Monitor only	MGD	0.058	0.070	0.176	24-hr estimate	
Oil and Grease	15	10	mg/L	non-detect	non-detect	non-detect	Grab	
Total Petroleum Hydrocarbons	10	10	mg/L	non-detect	non-detect	non-detect	Grab	
pH-Units	6.0-9.0	NA	SU	7.8	7.9	7.8	Grab	
Chemical Oxygen Demand	120	90	mg/L	non-detect	non-detect	non-detect	Grab	
Settleable Solids	1.5	1	mL/L/hr	0.1	non-detect	non-detect	Grab	DL[2] = 0.1 mL/L/hr
Arsenic, Total Recoverable	100	100	µg/L	non-detect	non-detect	non-detect	Grab	
Lead, Total Recoverable	190	190	µg/L	non-detect	non-detect	non-detect	Grab	
Chromium, Total Recoverable	280	280	µg/L	non-detect	non-detect	non-detect	Grab	
Copper, Total Recoverable	84	84	µg/L	100	15	24	Grab	
Cadmium, Total Recoverable	94	94	µg/L	non-detect	non-detect	non-detect	Grab	
Polychlorinated Biphenyls	No release	No release	µg/L	non-detect	non-detect	non-detect	Grab	DL[2] = 1 µg/L
				Radiological Parameters[3,6]				
				Event 1	Event 2	Event 3	Event 4	Event 5		
Uranium, Total[4,5]	Monitor only	Monitor only	µg/L	3.70E+02	2.2E+02	3.09E+02	2.1E+02	3.2E+02	Grab	Calculated estimates
Radium, Total[4,5]	Monitor only	Monitor only	µg/L	2.E-06	5.E-06	4.E-06	6.E-07	1.E-06	Grab	Calculated estimates
Thorium, Total[4,5]	Monitor only	Monitor only	µg/L	5.E-04	6.E-01	5.E+00	4.E+00	7.E-01	Grab	Calculated estimates
Gross Alpha[4]	Monitor only	Monitor only	pCi/L	3.0E+02	2.4E+02	2.8E+02	1.9E+02	3.2E+02	Grab	
Gross Beta[4]	Monitor only	Monitor only	pCi/L	2.E+01	4.E+01	3.E+01	6.E+01	5.E+01	Grab	
Protactinium-231[4]	Monitor only	Monitor only	pCi/L	1.7E-01	9.E-01	8.E-01	2.6E-01	5.E-01	Grab	
Actinium-227[4]	Monitor only	Monitor only	pCi/L	1.7E-01	9.E-01	8.E-01	2.6E-01	5.E-01	Grab	
Radon	Monitor only	Monitor only	pCi/L						Grab	
				Event 6	Event 7					
Uranium, Total[4,5]	Monitor only	Monitor only	µg/L	[7]	[7]				Grab	Calculated estimates
Radium, Total[4,5]	Monitor only	Monitor only	µg/L	[7]	[7]				Grab	Calculated estimates
Thorium, Total[4,5]	Monitor only	Monitor only	µg/L	[7]	[7]				Grab	Calculated estimates
Gross Alpha[4]	Monitor only	Monitor only	pCi/L	[7]	[7]				Grab	
Gross Beta[4]	Monitor only	Monitor only	pCi/L	[7]	[7]				Grab	
Protactinium-231[4]	Monitor only	Monitor only	pCi/L	[7]	[7]				Grab	
Actinium-227[4]	Monitor only	Monitor only	pCi/L	[7]	[7]				Grab	

[1] Results are reported in required units.

[2] DL= Detection Limit

[3] 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.

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

[5] 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

[6] 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.

[7] Waiting on data results from the laboratory.

Second Quarter 2002 -Stormwater Di[illegible] Monitoring Report - Outfall 001b
St. Louis Airport Site (SLAPS), St. Louis, MO

MONITORING PARAMETER	FINAL EFFLUENT LIMITATIONS		UNITS[1]	ANALYTICAL RESULTS Outfall 001b Chemical Parameters						SAMPLE TYPE	REMARKS and COMMENTS
	Daily Maximum	Monthly Average		April		May		June			
Flow	Monitor only	Monitor only	MGD	[2]		0.133		[2]		24-hr estimate	
Oil and Grease	15	10	mg/L	[2]		non-detect		[2]		Grab	
Total Petroleum Hydrocarbons	10	10	mg/L	[2]		non-detect		[2]		Grab	
pH-Units	6.0-9.0	NA	SU	[2]		7.5		[2]		Grab	
Chemical Oxygen Demand	120	90	mg/L	[2]		non-detect		[2]		Grab	
Settleable Solids	1.5	1	mL/L/hr	[2]		0.1		[2]		Grab	DL[3]= 0.1 mL/L/hr
Arsenic, Total Recoverable	100	100	µg/L	[2]		non-detect		[2]		Grab	
Lead, Total Recoverable	190	190	µg/L	[2]		6.7		[2]		Grab	
Chromium, Total Recoverable	280	280	µg/L	[2]		10		[2]		Grab	
Copper, Total Recoverable	84	84	µg/L	[2]		10		[2]		Grab	
Cadmium, Total Recuverable	94	94	µg/L	[2]		non-detect		[2]		Grab	
Polychlorinated Biphenyls	No release	No release	µg/L	[2]		2		[2]		Grab	DL[3] = 1 µg/L
				Radiological Parameters[4,7]							
				Event 1	Event 2	Event 3	Event 4	Event 5			
Uranium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]	[2]	1.0E+02	[2]		Grab	Calculated estimates
Radium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]	[2]	7.E-08	[2]		Grab	Calculated estimates
Thorium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]	[2]	7.E+00	[2]		Grab	Calculated estimates
Gross Alpha[5]	Monitor only	Monitor only	pCi/L	[2]	[2]	[2]	1.E+02	[2]		Grab	
Gross Beta[5]	Monitor only	Monitor only	pCi/L	[2]	[2]	[2]	4.E+01	[2]		Grab	
Protactinium-231[5]	Monitor only	Monitor only	pCi/L	[2]	[2]	[2]	9.E-02	[2]		Grab	
Actinium-227[5]	Monitor only	Monitor only	pCi/L	[2]	[2]	[2]	9.E-02	[2]		Grab	
Radon	Monitor only	Monitor only	pCi/L							Grab	
				Event 6	Event 7						
Uranium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]					Grab	Calculated estimates
Radium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]					Grab	Calculated estimates
Thorium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]					Grab	Calculated estimates
Gross Alpha[5]	Monitor only	Monitor only	pCi/L	[2]	[2]					Grab	
Gross Beta[5]	Monitor only	Monitor only	pCi/L	[2]	[2]					Grab	
Protactinium-231[5]	Monitor only	Monitor only	pCi/L	[2]	[2]					Grab	
Actinium-227[5]	Monitor only	Monitor only	pCi/L	[2]	[2]					Grab	

[1] Results are reported in required units.

[2] ND = No Discharge

[3] DL= Detection Limit

[4] 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.

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

[6] 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

[7] 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.

Second Quarter 2002-Stormwater D[illegible]e Monitoring Report - Outfall 002
St. Louis Airport Site (SLAPS), St. Louis, MO

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

[1] Results are reported in required units.

[2] As per MDNR letter from Matthew Sikes addressed to Sharon Comer dated 02/19/02, sampling at outfall 002 has been reduced to once a year.

[3] DL= Detection Limit

[4] 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.

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

[6] 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

[7] 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.

Second Quarter 2002-Stormwater Di[redacted]e Monitoring Report - Outfall 003
St. Louis Airport Site (SLAPS), St. Louis, MO

MONITORING PARAMETER	FINAL EFFLUENT LIMITATIONS		UNITS[1]	ANALYTICAL RESULTS						SAMPLE TYPE	REMARKS and COMMENTS
	Daily Maximum	Monthly Average		Outfall 003							
				Chemical Parameters							
				April		May		June			
Flow	Monitor only	Monitor only	MGD	[2]		[2]		[2]		estimate	
Oil and Grease	15	10	mg/L	[2]		[2]		[2]		Grab	
Total Petroleum Hydrocarbons	10	10	mg/L	[2]		[2]		[2]		Grab	
pH-Units	6.0-9.0	NA	SU	[2]		[2]		[2]		Grab	
Chemical Oxygen Demand	120	90	mg/L	[2]		[2]		[2]		Grab	
Settleable Solids	1.5	1	mL/L/hr	[2]		[2]		[2]		Grab	DL[3] = 0.1 mL/L/hr
Arsenic, Total Recoverable	100	100	µg/L	[2]		[2]		[2]		Grab	
Lead, Total Recoverable	190	190	µg/L	[2]		[2]		[2]		Grab	
Chromium, Total Recoverable	280	280	µg/L	[2]		[2]		[2]		Grab	
Copper, Total Recoverable	84	84	µg/L	[2]		[2]		[2]		Grab	
Cadmium, Total Recoverable	94	94	µg/L	[2]		[2]		[2]		Grab	
Polychlorinated Biphenyls	No release	No release	µg/L	[2]		[2]		[2]		Grab	DL[3] = 1 µg/L
				Radiological Parameters[4,7]							
				Event 1	Event 2	Event 3	Event 4	Event 5			
Uranium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]	[2]	[2]	[2]		Grab	Calculated estimates
Radium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]	[2]	[2]	[2]		Grab	Calculated estimates
Thorium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]	[2]	[2]	[2]		Grab	Calculated estimates
Gross Alpha[5]	Monitor only	Monitor only	pCi/L	[2]	[2]	[2]	[2]	[2]		Grab	
Gross Beta[5]	Monitor only	Monitor only	pCi/L	[2]	[2]	[2]	[2]	[2]		Grab	
Protactinium-231[5]	Monitor only	Monitor only	pCi/L	[2]	[2]	[2]	[2]	[2]		Grab	
Actinium-227[5]	Monitor only	Monitor only	pCi/L	[2]	[2]	[2]	[2]	[2]		Grab	
Radon	Monitor only	Monitor only	pCi/L							Grab	
				Event 6	Event 7						
Uranium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]					Grab	Calculated estimates
Radium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]					Grab	Calculated estimates
Thorium, Total[5,6]	Monitor only	Monitor only	µg/L	[2]	[2]					Grab	Calculated estimates
Gross Alpha[5]	Monitor only	Monitor only	pCi/L	[2]	[2]					Grab	
Gross Beta[5]	Monitor only	Monitor only	pCi/L	[2]	[2]					Grab	
Protactinium-231[5]	Monitor only	Monitor only	pCi/L	[2]	[2]					Grab	
Actinium-227[5]	Monitor only	Monitor only	pCi/L	[2]	[2]					Grab	

[1] Results are reported in required units.

[2] Outfall plugged due to construction activities

[3] DL= Detection Limit

[4] 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.

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

[6] 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 Radiolcgical Health Handbook, 1992 Edition

[7] 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.

Second Quarter 2002 -Stormw[illegible]scharge Monitoring Report
St. Louis Airport Site (SLAPS), St. Louis, MO

FACILITY NAME	PERMIT NUMBER	COUNTY	OWNER	FACILITY CONTACT
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
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*[1]: monthly during rainfall that results in a discharge; *Radiological*[2]: per rainfall event that results in a discharge; *Radon*-semi-annually during rainfall that results in a discharge; Monitoring Report-quarterly				2nd Quarter- April 1 through June 30, 2002
SAMPLES COLLECTED BY				
Environmenta Dimensions, Inc. and Pangea personnel				
ANALYSIS PERFORMED BY				
ARDL for chemical analysis; HISS on-site laboratory for radiological analysis; Radon in water analysis performed by General Engineering Laboratories.				

SAMPLE LOCATION	EVENT[3] 1	EVENT 2	EVENT 3	EVENT 4	EVENT 5
Outfall 001a	4/8/2002	04/19/02-04/23/02	04/27/02-04/28/02	05/06/02-05/14/02	05/16/02-05/20/02
Outfall 001b	[4]	[4]	[4]	05/08/02-05/10/02,05/13/02	[4]
Outfall 002[5]	[5]	[5]	[5]	[5]	[5]
Outfall 003	[6]	[6]	[6]	[6]	[6]
SAMPLE LOCATION	EVENT 6	EVENT 7			
Outfall 001a	06/5/02-06/07/02	06/10/02-06/13/02			
Outfall 002[5]	[5]	[5]			
Outfall 003	[6]	[6]			

REPORT APPROVED BY OWNER Sharon Cotner for USACE DATE 7/25/02

[1] 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.

[2] 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.

[3] 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.

[4] ND = No Discharge

[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] Outfall plugged due to construction activities

ATTACHMENT C

ST. LOUIS AIRPORT SITE MAY 15, 2002,
"NOTIFICATION OF EXCEEDANCE" LETTER

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

REPLY TO
ATTENTION OF:

May 15, 2002

Formerly Utilized Sites Remedial Action Program

SUBJECT: Applicable or Relevant and Appropriate Requirements (ARARs) Discharges to Waters of the State at the St. Louis Airport Site (SLAPS), "Notification of Exceedence" for Outfall 001a

Philip A. Schroeder
Chief, Permit Section
Missouri Department of Natural Resources
Water Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176

Dear Mr. Schroeder:

On April 8, 2002, compliance samples were collected according to the Applicable or Relevant and Appropriate Requirements (ARARs), Discharges to Waters of the State at the St. Louis Airport Site (SLAPS) Outfall 001a. The results of the data were received on May 7, 2002 and an exceedence of the daily maximum limit of 84 µg/L for total recoverable Copper was observed. The result reported was 100 µg/L. All other sample results were within the limits of the permit. Mr. Ron Frerker of the Corps verbally reported the exceedence on May 7, 2002 at 5:30 p.m. The message was left on the voice mail of Mr. Sikes. Due to Mr. Sikes' leave of absence, the message was also left on the voicemail of Mr. Laux on May 9, 2002.

Historically there have been no problems with elevated Copper results except occasionally during heavy (typically those greater than .5 inches in 5 hours) rain events. On the subject date compliance samples were collected as a result of a 0.54-inch rain event in a 5-hour period as reported by the onsite weather station. There have been two other similar elevated results for Copper analysis at Outfall 003, both occurred during heavy rain events. Although this most recent rain event was not quite the same magnitude as the two previous events that resulted in elevated Copper readings, the rain was impacting newly backfilled areas on the East End of the SLAPS. Outfall 003, which drains a majority of the East End, is currently plugged due to the ongoing backfilling effort. The watershed area that would normally exit there has been diverted to the sedimentation basin and Outfall 001a.

Corrective actions undertaken to date include inspecting the erosion control measures in the area to ensure they were still in working order and completion of backfill to final grade on the East End so vegetation can be established in the affected areas as soon as possible. It is also important to note that the acceptable range for duplicate analyses of total Copper is +/-20%. Therefore it is possible that this result is anomalous, which means it can statistically occur on the average of once in twenty analyses. While an anomaly is possible, the USACE will continue to investigate the exceedence. Additionally, the United States Army Corps of Engineers (USACE) waste profile for the soils at SLAPS does not indicate a potential problem with Copper levels (TCLP results for Copper are 0.004 –0.0066 mg/L).

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

Sincerely,

Sharon Cotner

Sharon Cotner
FUSRAP Program Manager

CF: Mr. Thomas Siegel, MDNR-DEQ
Mr. Eric Gilstrap, MDNR-FFS

FUSRAP Document Management System

Year: 00
ID: 3315
Further Info? ☐
Operating Unit: North County
Site:
Area:
MARKS Number: FN:1110-1-8100g
Primary Document Type: Site Management
Secondary Document Type: Correspondence

Subject or Title: Transmittal of Second Quarter of 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 SLAPS

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