

## Department of Energy

Oak Ridge Operations  
P.O. Box 2001  
Oak Ridge, Tennessee 37831—8723

July 29, 1994

Mr. Daniel Wall  
Site Assessment and Federal  
Facility Section - Superfund Branch  
U.S. Environmental Protection Agency  
Region VII  
726 Minnesota Avenue  
Kansas City, Kansas 66101

Dear Mr. Wall:

### QUARTERLY PROGRESS REPORT FOR THE PERIOD APRIL - JUNE 1994 FOR THE FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM (FUSRAP) ST. LOUIS SITE

The following items represent the significant activities and achievements related to the FUSRAP St. Louis Site for the period April - June 1994:

- There were no Federal Facilities Agreement (FFA) milestones scheduled during this period. However, DOE and EPA held numerous discussions related to the remaining process leading toward selection of a remedy.
- In order to provide affected parties an opportunity to hear various points of view, DOE has been working with the County of St. Louis to host a workshop for "key stakeholders" that will allow affected decisionmakers an opportunity to address the issues related to various cleanup options. The workshop is planned for August 8th in St. Louis.
- Following the decision by DOE Assistant Secretary Grumbly to reconsider all options presented in the feasibility study, DOE and EPA have also reviewed the possibility of undertaking interim removal actions that would mitigate the potential for exposure to members of the general public. On April 18th & 19th, management representatives from DOE-Oak Ridge met with counterparts from EPA and MDNR to exchange ideas on how to followup on the concepts presented in letters exchanged by senior DOE and EPA management.

DOE is preparing a list of options for interim vicinity property cleanups -- including combining sets of properties into logical groups for cleanup, as well as developing order of magnitude cost estimates for those cleanup "packages."

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- During June, DOE and the City of St. Louis received a second Notice of Violation from State of Missouri because neither party has submitted an application for a stormwater permit for the St. Louis Airport Site (SLAPS) to the state. Both DOE and the City of St. Louis continue to maintain that they are not legally obligated to obtain a stormwater permit.
- DOE met with representatives of the City of St. Louis and the St. Louis Airport Authority on May 9th to discuss future operations and maintenance activities at the airport site. There was agreement in principal on a division of responsibility for activities at the site. Based on that meeting, DOE undertook actions to resume environmental surveillance and maintenance of the gabion wall at SLAPS (see Enclosure 1).

Subsequent to this meeting, the Airport Authority expressed reservations with the arrangements as discussed in the May 9th meeting. Senior representatives from the Airport Authority and DOE arranged to meet in late July to discuss this matter further.

- The Environmental Surveillance Report for the Hazelwood Interim Storage Site was issued to EPA, state and local officials, and members of the public on June 1st. The report indicated that there were no significant changes in environmental conditions from previous years, and that the site posed no imminent health risk to the public.
- DOE is continuing to work with researchers from the Ames Laboratory to coordinate a test program of innovative characterization technologies at SLAPS. The Ames researchers are developing new, cost-effective site screening and characterization methodologies based on holistic assessments of site conditions combined with new, innovative sampling and analysis tools. The Ames researchers expect to mobilize at SLAPS on August 9th to begin the first of two phases of work.

In Phase I, the Ames researchers will concentrate on geophysical testing and gamma logging of wells at the site. During Phase II, scheduled for September 5th-16th, they expect to perform tests such as age-dating of the deep aquifer and testing of mobile screening technologies for detecting radioactivity in soils.

- DOE has initiated an effort to evaluate recent technology developments in the area of soil treatment. During the Initial Screening of Alternatives completed in 1991 as a prelude to the Feasibility Study, it had been determined that treatment of soils at the St. Louis had a very low likelihood of success based on the available technology. However, recent developments in treatment technology are causing FUSRAP to re-evaluate the feasibility and cost-effectiveness of treatment for St. Louis soils.

FUSRAP expects to conduct bench-scale laboratory tests on representative soils samples from St. Louis later this Fall. If the bench-scale tests yield promising results, larger-scale pilot tests will be undertaken next year.

- Mallinckrodt has resumed construction of a new building in the area immediately south of the 50-series buildings at the St. Louis Downtown Site. This area of contaminated soil had been excavated by Mallinckrodt last Fall; however, work was suspended over the winter. The excavation was backfilled with gravel in May and concrete foundations and a floor slab were poured in June.
- There were two water main breaks along the streets near SLAPS in areas of suspected soil contamination. The first was on Banshee Road near FUSRAP well #B53W19S; the second was along McDonnell Boulevard approximately 1/4-mile east of SLAPS. In both cases, the St. Louis County Water Company excavated the areas around the broken water mains in order to repair them. The St. Louis Airport Authority permitted the water company to place the excavation spoils on SLAPS.

There was a third water line break on private property at the Industrial facility across from HISS on Latty Avenue. DOE provided consultation to the property owner during the repair work regarding the areas of contamination and appropriate precautions for performing the repair work.

- The tenant and the landlord for the property adjacent to HISS (9150 Latty Avenue) have a need to expand the industrial facilities on that property. The work could involve excavation of up 3,000 cubic yards of soil -- which the tenant/landlord propose to place into an interim storage pile on the property. The tenant/landlord have agreed to solicit DOE's concurrence on all actions prior to undertaking them. DOE has reviewed a site management plan proposed by the landlord for all actions at the site involving contaminated materials.
- The tenant at 9060 Latty Avenue undertook an oil remediation effort that has resulted in the construction of an interim storage pile containing radioactively contaminated soil on that property. The tenant had arranged for the remediation and removal of oil-contaminated soils on the property; however, soils that were contaminated with both oil and radioactivity were placed into the onsite pile that contains approximately 2,500 cubic yards. The tenant has covered the pile with an impermeable membrane to prevent erosion.

Other soils contaminated with oil, but which the tenant and its contractors determined did not have radioactive contamination above the DOE cleanup guidelines, were shipped for disposal at a landfill in Illinois.

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- The owner of a property on Pershall Road, adjacent to Coldwater Creek and the Ford manufacturing plant, completed construction of a new parking lot on that property. The owner had consulted with DOE prior to beginning this work; it was determined that because contamination levels on this property were very low, the work would pose no health risk to the workers or the public.
- FUSRAP continued to work closely with the St. Louis County Radioactive and Hazardous Waste Oversight Commission. The Commission met formally on May 9th and the DOE Site Manager provided an update of the progress leading toward remedy selection. There was also a discussion regarding the Commission members' involvement in the August 8th stakeholder workshop.
- A FUSRAP representative provided the Florissant Rotary Club with a briefing on the status of the remedy selection process for the St. Louis Site cleanup on June 14th.

During this quarterly period, environmental sampling consisted of routine surveillance, limited radiological surveys, and sampling associated with ongoing site activities. A summary of these activities and the analytical results received to date is enclosed. As always, all raw data and analyses are available for your review and inspection to the extent that you request.

During the third quarter of 1994, the FFA schedule calls for submittal of a draft Record of Decision (ROD) to EPA by September 30, 1994. DOE Assistant Secretary Grumbly requested, in writing, that EPA extend this date to allow DOE and EPA an opportunity to integrate the feedback from the August 8th stakeholders' workshop into the draft ROD. To date, however, EPA has requested that DOE remain on the current schedule despite the workshop; as such, DOE is in the process of developing a draft ROD that can be submitted by the September 30th milestone date. This draft ROD will likely more closely reflect the current discussions between EPA and DOE related to vicinity property cleanups and site surveillance maintenance than it does the draft proposed plan. DOE will continue to work with EPA toward a technically implementable, as well as a politically acceptable, solution for remedial action in St. Louis.

Please advise if you have questions or comments regarding this quarterly report.



David G. Adler, Site Manager  
Former Sites Restoration Division

Enclosure

cc: R. Geller (MDNR)  
D.M. Tschirgi (MDNR)

## ENCLOSURE 1

SCOPE OF CURRENT DOE  
SLAPS SURVEILLANCE ACTIVITIES

## 1) Groundwater sampling

- Three shallow wells bounding the site will be sampled to detect the potential movement of a future plume from the site (see attached figure). Review of hydrogeological data (water movement, soil properties, and contamination migration times) indicated no reason to sample deep wells on a regular basis.
- Sampling will occur semiannually (first sampling completed July 8th).
- Analysis for  $^{238}\text{U}$ ,  $^{230}\text{Th}$ ,  $^{232}\text{Th}$ ,  $^{226}\text{Ra}$ , pH, turbidity, specific conductance, oxidation/reduction potential, temperature, and dissolved oxygen. A QC field duplicate is taken from one well.

## 2) Gamma/Radon monitoring

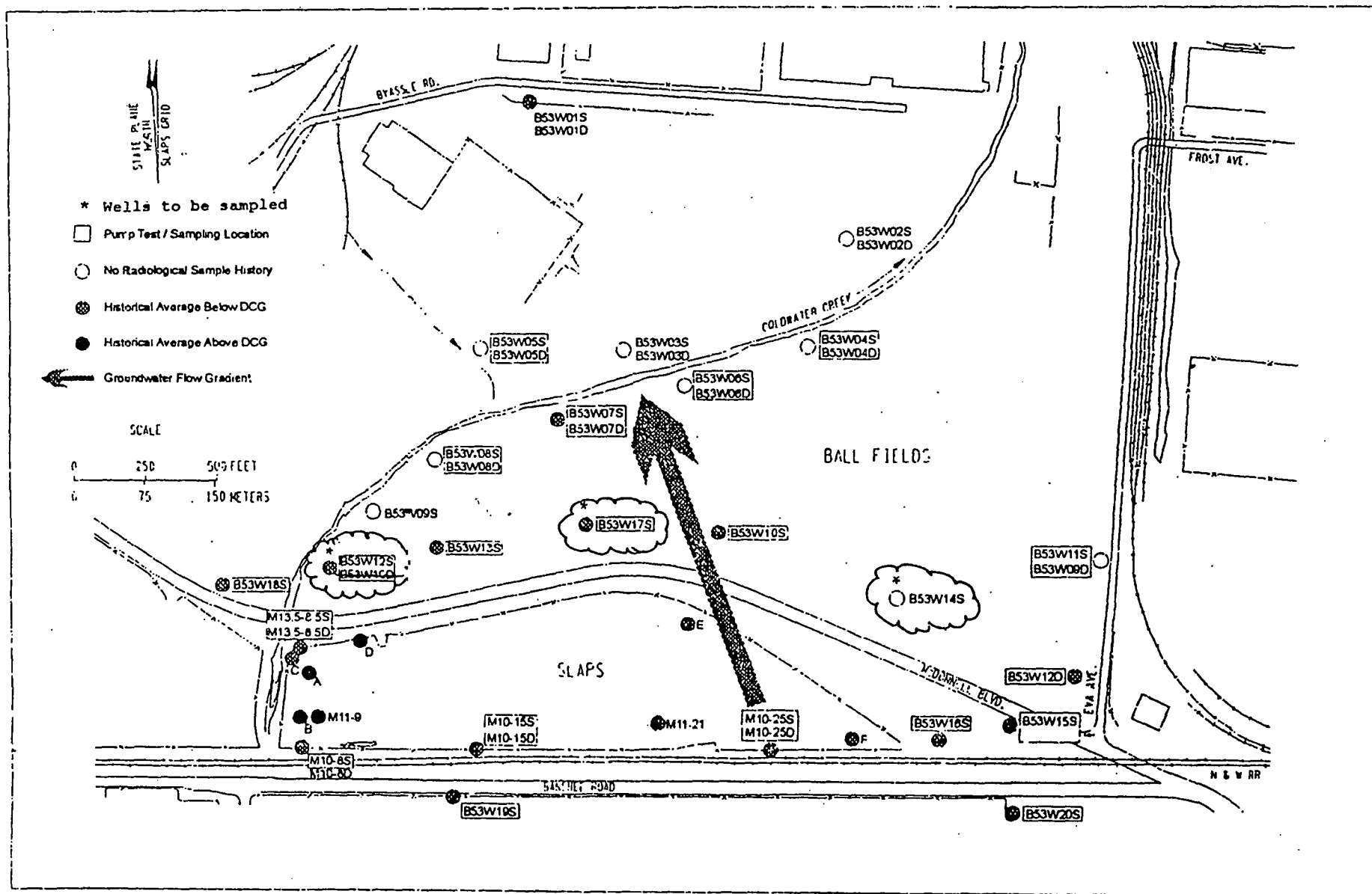
- TETLDs have been placed at four locations (see attached figure); one location will have a field duplicate. They will be analyzed semiannually.
- Radon detectors have been co-located at the same four locations as the TETLDs; a duplicate is at the same location as the duplicate TETLD. They will be analyzed semiannually.

## 3) Stormwater sampling

- Two point source outfalls have been identified at SLAPS. They will be sampled semiannually -- typically July (summer) and January (winter) -- using a grab sample.
- Analysis for gross alpha, gross beta,  $^{238}\text{U}$ ,  $^{230}\text{Th}$ ,  $^{232}\text{Th}$ ,  $^{226}\text{Ra}$ ,  $^{228}\text{Ra}$ , and  $^{210}\text{Pb}$ .

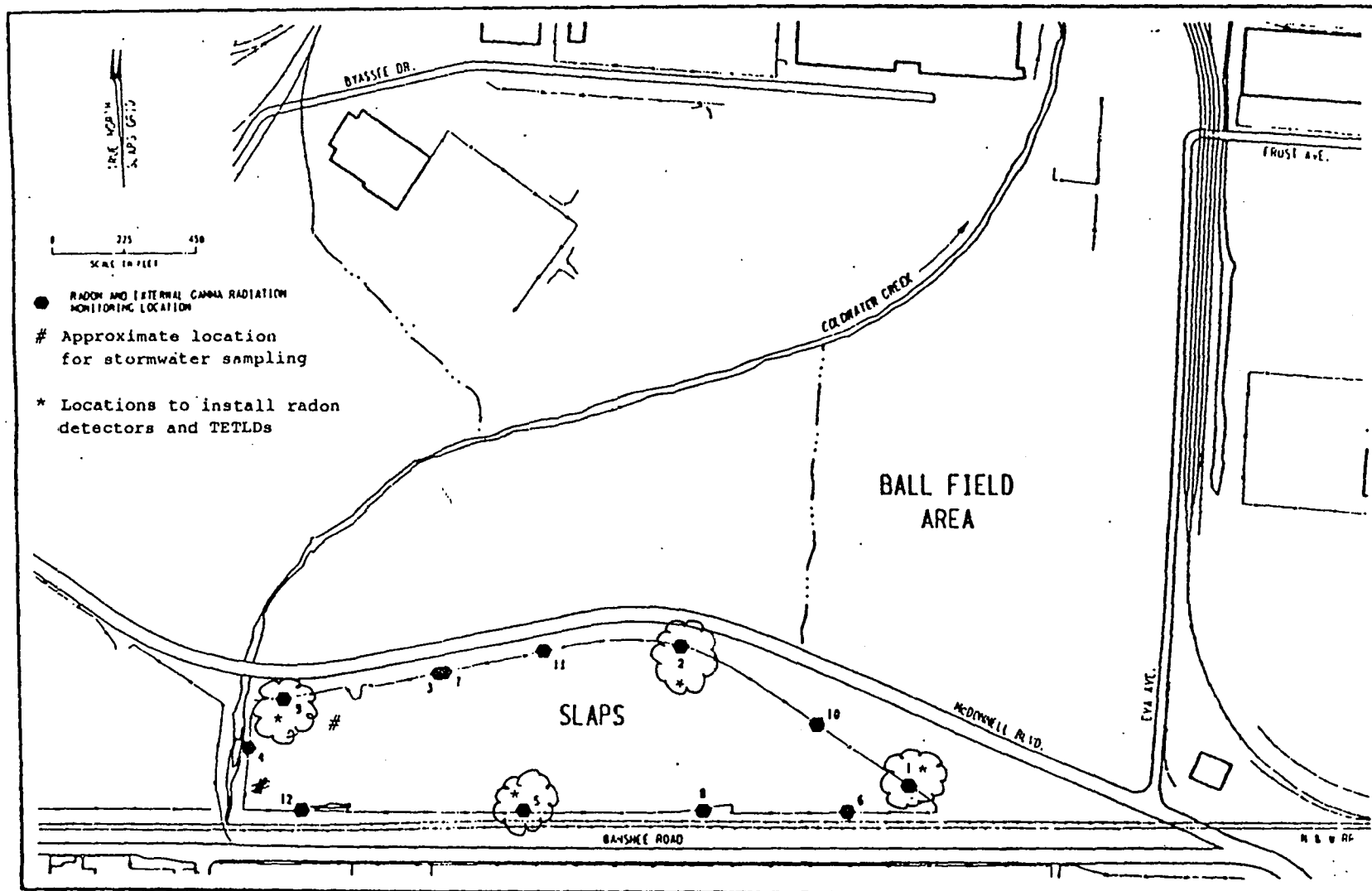
## 4) Gabion Wall maintenance

- The wall will be inspected on a monthly basis. Vegetation will be removed from the wall. Any deterioration of the gabions will be repaired as necessary.



Current sampling  
locations

# Groundwater Monitoring Wells at SLAPS



Current TETLD/Radon  
Monitoring locations

Radon and External Gamma Radiation Monitoring Stations  
and Possible Stormwater Collection Locations at SLAPS

## ENCLOSURE 2

Summary of Second Quarter 1994  
Sampling and Analysis

The following is a summary of environmental data collected for FUSRAP sites in St. Louis, Missouri during the second quarter of 1994. Samples were collected and analyzed in support of environmental surveillance of the sites. A total of 138 samples and measurements were collected during the quarter and submitted for various radiological and non-radiological analyses.

Analytical results for these radiological analyses have been compiled and validated. Preliminary evaluation of the data indicate results consistent with past characterization findings at the sites. There are no anomalies or significant changes in the conditions at the St. Louis Site.

At HISS, 12 radon detectors were collected and analyzed. The maximum concentration of radon detected at the boundary of the site was 0.4 pCi/L, which is less than 15% of the DOE radon guideline of 3.0 pCi/L for occupied or habitable structures. Additionally radon flux measurements were taken using detectors placed at grid locations across the surface of piles A and B. These detectors were left in place over a 24-hour period to obtain a measurement of the daily emission rates from the piles. Of the 88 detectors used for radon flux measurements, 18 were collected from pile A and 70 were collected from pile B. Radon flux results have not been received at the time of this report.

Six groundwater samples were taken at HISS and analyzed for total uranium, thorium-230 (Th-230), thorium-232 (Th-232), and radium-226 (Ra-226). Maximum concentrations were 11.93 pCi/L for total uranium, 0.46 pCi/L for Th-230, 0.16 pCi/L for Th-232, and 2.22 pCi/L for Ra-226.

Six sediment samples were taken from Coldwater Creek upstream and downstream of HISS. These samples were analyzed for total uranium, Th-230, Th-232, and Ra-226. Maximum concentrations were 3.45 pCi/g for total uranium, 3.5 pCi/g for Th-230, 1.5 pCi/g for Th-232, and 1.4 pCi/g for Ra-226.

Six surface water samples were taken from Coldwater Creek upstream and downstream of HISS. Surface water samples were analyzed for total uranium, Th-230, Th-232, and Ra-226. Maximum concentrations were 9.24 pCi/L for total uranium, 0.17 pCi/L for Th-230, 0.06 pCi/L for Th-232, and 0.3 pCi/L for Ra-226.

Stormwater samples were collected from the two outfalls at HISS to comply with NPDES permit number MO-0111252. The following table provides the number of samples and the maximum concentrations for stormwater analytes at HISS;



Radionuclide concentrations were less than the DOE derived concentration guide (DCG) reference values for all groundwater, surface water, and stormwater samples collected in the second quarter of 1994. The DCG is a reference value calculated in DOE Order 5400.5, "Radiation Protection of the Public and the Environment." The DCGs for the radionuclide analytes included in the second quarter environmental surveillance at HISS are: radium-226, 100 pCi/L; radium-228, 100 pCi/L; thorium-230, 300 pCi/L; thorium-232, 50 pCi/L; lead-210, 30 pCi/L; and total uranium, 600 pCi/L.

#### MAXIMUM CONCENTRATIONS OF STORMWATER ANALYTES AT HISS

Constituent	Number of Samples	Peak Concentration	Units
SS	8	0.5	ML/L/H
TOC	4	6.9	MG/L
TOX	4	83.0	μG/L
Gross Alpha	4	35.6	pCi/L
Gross Beta	4	12.7	pCi/L
Pb-210	4	3.0	pCi/L
Ra-228	4	4.4	pCi/L
Ra-226	4	1.28	pCi/L
Total Uranium	4	28.41	pCi/L
Th-230	4	22.24	pCi/L
Th-232	4	0.14	pCi/L
pH	4	6.99 to 7.75	pH units

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Formerly Utilized Sites Remedial Action Program (FUSRAP)

# ADMINISTRATIVE RECORD

for the St. Louis Site, Missouri



U.S. Department of Energy

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