



Department of Energy

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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 THROUGH JUNE
1997 FOR THE ST. LOUIS SITE**

The following items represent the significant activities and achievements related to the St. Louis Site for the period April through June 1997:

- There were no Federal Facility Agreement (FFA) milestones scheduled during this period. However, during this quarter, the Environmental Protection Agency (EPA), the Department of Energy (DOE), and the Missouri Department of Natural Resources (MDNR) project managers had several meetings and bi-weekly teleconferences to address technical, cost, and schedule issues related to the St. Louis Site.
- On May 12, Steve McCracken and Ed Valdez officially assumed their positions as the DOE Site Manager and Deputy Site Manager respectively for the St. Louis Site. Their full-time presence at the St. Louis Site meets the commitment made by Undersecretary Grumbly at a December 5, 1996, public meeting in St. Louis.
- Representatives from the DOE, MDNR, Missouri Department of Geology and Land Survey (MDGLS), EPA, and other state and local government officials attended a "workout session" on May 6 and 7 to discuss issues related to the cleanup of the St. Louis Site. The meeting focused on establishing a process for achieving continued public participation in the remediation process. The group also established cleanup priorities for fiscal year 1997.
- A SLAPS technology demonstration pre-solicitation conference was held on Tuesday, July 1, 1997 at the World Trade Center in Clayton. Numerous subcontractors attended

technology demonstration is under development to be released on or about August 8, 1997. The purpose of the technology demonstration solicitation is to identify one or more technologies that will assist DOE in reducing the cost of remediating the St. Louis Airport Site and the other St. Louis Site properties.

- In early April, decontamination activities were completed at the St. Louis Downtown Site (SLDS) "K" building. The primary goal of this cleanup was to remediate surface radioactivity that exceeded guidelines in DOE Order 5400.5 and to release the building without radiological restrictions for demolition by Mallinckrodt Group Inc. Decontamination activities were primarily focused on the K1E section of the building where work for the Manhattan Engineer District (MED) took place and where 90 percent of the contamination existed. Standard decontamination techniques were used to remove contamination from the building surfaces. During decontamination activities, deteriorated brick was discovered during abrasive decontamination of the eastern exterior upper wall. To ensure the safety of workers and the structural integrity of the wall, decontamination activities were discontinued until a structural assessment was completed. The assessment determined that no visible integral structural elements existed within the wall that would allow for partial removal or abrasive decontamination to continue without structurally affecting the integrity of the wall. Based on this assessment, Mallinckrodt agreed to dismantle the contaminated portion of the east wall and remove a contaminated wooden column in the K1E section, segregate these materials, and turn over the contaminated materials to St. Louis Site personnel for offsite disposal at Envirocare.

The independent verification contractor (IVC) has released the "K" building without radiological restrictions with the exception of a portion of the east wall and the K1E wooden column. Demolition of the "K" building by Mallinckrodt is slated to be completed by the end of the calendar year.

- DOE and Mallinckrodt finalized an agreement to demolish the Plant 6 & 7 SLDS buildings that are scheduled for remediation during the fourth quarter of fiscal year 1997. Nine buildings (#100, 116, 117, 700, 704, 705, 706, 707, 708) are slated for demolition. These buildings will be demolished to their foundations with the concrete and masonry debris materials generated during the demolition activities being crushed and staged onsite. The crushed materials are slated to be used as backfill during the SLDS subsurface remediation activities. Debris from demolition activities which are above the cleanup standard will be removed from the demolition area and shipped offsite for appropriate disposal. Demolition activities are expected to begin by the end of July.
- In preparation of the upcoming SLDS building demolition, asbestos abatement activities are being conducted at eight of the nine buildings slated for demolition. The work performed included the removal of asbestos containing materials from the all building components and equipment, packaging the waste material, and relocating the material to the Lot 7S staging area for shipment off-site. To date, approximately 5,100 linear feet of asbestos-containing materials, pipe insulation; 8,000 square feet of asbestos-containing roofing materials, and 15,000 square feet of asbestos-containing floor tile materials have

- Community Relations activities in the second quarter included a Speakers' Bureau presentation on the St. Louis Site and the Formerly Utilized Sites Remediation Program (FUSRAP) to a class of non-science majors at Washington University. Other activities included supporting the St. Louis Site technology demonstration pre-solicitation conference and a site tour for prospective technology providers.

During the month of June, a series of eight briefing sessions were conducted for North County Vicinity Property Owners. These sessions provided both the owners and tenants an overview of upcoming North County excavation activities along Hazelwood Avenue. A media advisory pertaining to excavation activities was distributed prior to the briefing sessions. During this quarter, reporters from the St. Louis Post Dispatch and the North County Journal interviewed the new DOE Site Manager. These interviews focused on Steve McCracken's new position at the St. Louis Site as well as site progress and revised clean-up schedule.


Looking ahead to the next quarter, the St. Louis Site will be holding a public meeting to obtain public and regulator input on the SLAPS remediation EE/CA. Planning and implementation of additional public participation opportunities in accordance with the CERCLA/NEPA process will also continue.

During this quarterly period, environmental sampling conducted by the St. Louis Site consisted of routine surveillance, radiological surveys, and sampling associated with ongoing site remediation activities. A summary of these sampling/surveying activities and the analytical results received to date is attached. All raw data and analyses are available for your review and inspection.

There are no scheduled FFA milestones during the fourth quarter of fiscal year 1997. The DOE will continue to work with the EPA and MDNR to facilitate the process of selecting the final cleanup remedy for the St. Louis Site and to implement appropriate removal actions.

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

Sincerely,


S. McCracken
St. Louis Site Manager

Attachment:
As stated

cc: R. Geller (MDNR)

Summary of Second Quarter 1997 Sampling and Analysis

The following is a summary of environmental data collected for FUSRAP sites in St. Louis, Missouri, during the second quarter of 1997. Samples were collected and analyzed in support of environmental surveillance, characterization, and waste management. Preliminary evaluation of the data indicates results consistent with past characterization and environmental surveillance findings at the sites.

Stormwater Surveillance

Six stormwater samples were collected from the two outfalls at HISS to comply with the requirements delineated in the NPDES permit number MO-0111252. Samples are taken monthly for settleable solids analysis and quarterly for chemical and radiological analysis. The concentration of settleable solids was well below the 1.0 mL/L/hr permit requirement. The radionuclide concentration data is not yet available from the analytical laboratory but will be included in the report for next quarter. The maximum chemical concentrations were:

<u>Analyte</u>	<u>Concentration</u>	<u>Units</u>	<u>Applicable Limit</u>
Settleable solids	< 0.20	mL/L/hr	1.0
Total organic halides	0.0164	mg/L	---
Total organic carbon	11.2	mg/L	---

Groundwater

Seven groundwater samples were taken at HISS and four at the SLAPS ballfields in support of the routine environmental surveillance activities and analyzed for total uranium, thorium-230, and radium-226. Maximum concentrations were:

<u>Analyte</u>	<u>HISS (pCi/L)</u>	<u>SLAPS (pCi/L)</u>	<u>DCG (pCi/L)</u>
Radium-226	2.28	0.43	100
Thorium-230	0.69	1.39	300
Total uranium	28.8	13.0	600

In addition, the four groundwater samples from SLAPS were analyzed for selenium. The selenium concentration ranged from < 1.4 µg/L to 198 µg/L.

Environmental Surveillance - Surface Water and Sediment

Also in support of the routine environmental surveillance activities at HISS, seven surface water and seven sediment samples were collected from near-by Coldwater Creek. Maximum concentrations were:

Analyte	Surface Water (pCi/L)	DCG (pCi/L)
Radium-226	0.88	100
Thorium-230	0.92	300
Total uranium	3.19	600

Analyte	Sediment (pCi/g)	Surface Soil Guideline (pCi/g)
Radium-226	4.87	5
Thorium-230	8.12	5
Total uranium	1.95	100

Environmental Surveillance Summary

The above radionuclide concentrations were less than the DOE Derived Concentration Guide (DCG) reference values for all groundwater, surface water, and stormwater samples collected in the first quarter of 1996. The DCG is a reference value calculated in DOE Order 5400.5, "Radiation Protection of the Public and the Environment." The DCGs (for ingested water) for the radionuclide analytes included in the second quarter environmental surveillance are: radium-226, 100 pCi/L; radium-228, 100 pCi/L; thorium-230, 300 pCi/L; thorium-232, 50 pCi/L; and total uranium, 600 pCi/L.

Because there are no standards for sediment, the DOE residual soil cleanup criteria specified in DOE Order 5400.5 are used as a basis for evaluating the analytical results in sediment. Because environmental surveillance sediment samples are collected from the first 15 cm of sediment, only the surface soil criteria are used (5 pCi/g above background for radium-226 and thorium-230). The site-specific soil cleanup criterion for the St. Louis Sites for uranium (50 pCi/g for uranium-238 or 100 pCi/g for total uranium) is used to evaluate analytical results for uranium in sediment.

Localized thorium contamination is known to exist in Coldwater Creek and its tributaries. Consistent with historical results, the maximum thorium-230 concentration exceeded the DOE guidelines for surface soil. The measured concentration of all isotopes during the second quarter were well within historical range. Fluctuations do occur from one sampling period to another, which is consistent with the localized nature of the contamination.

Waste Management Samples

Twenty-four samples were collected at the St. Louis Downtown Site and analyzed for radiological parameters in support of waste management. The samples were representative of the decontamination waste generated from Building K, Building 116, and the 700 series buildings and were analyzed to ensure the material was within the waste profile parameters for disposal at Envirocare, Inc. The maximum concentrations were:

<u>Analyte</u>	<u>Solid (pCi/g)</u>
Radium-226	459.3
Thorium-230	1322
Uranium-238	113

In addition 5 samples were collected from radiologically contaminated soil excavated from a floor trench in the K1E Building at the St. Louis Downtown Site. As a part of waste characterization for disposal, these soils were analyzed for total and TCLP mercury. The maximum mercury concentrations detected were 116,000 mg/kg total mercury and 196 mg/L TCLP mercury. The combination of radioactive and mercury concentrations in the trench soils result in the classification of the material as a RCRA mixed waste. This material is currently stored in four 55 gallon drums in Bldg 116 while an appropriate disposal facility is located.

Also in support of waste management, one sample was collected from a drum of soil on the Futura property (the property adjacent to HISS) and analyzed for radiological and chemical parameters. Review of the results of the chemical analyses indicate no presence of RCRA material. The maximum radionuclide concentrations of waste, to be disposed of at Envirocare Inc., were:

<u>Analyte</u>	<u>Solid (pCi/g)</u>
Gross alpha	284
Gross beta	73.8
Radium-226	3.78
Thorium-230	186
Uranium-238	5.2

Characterization Samples

Collected from the west end of SLAPS for the purposes of defining the areas of excavation, 195 soil samples were analyzed for radiological parameters and 10 soil samples were analyzed for chemical parameters. In addition, nine (9) off-site soil samples were collected and analyzed for radiological parameters to provide background information. Final data for these samples is not available but will be summarized in the report for next quarter.

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Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for the St. Louis Site, Missouri



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