



## Department of Energy

Oak Ridge Operations Office  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-8723  
October 29, 1996

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 JULY - SEPTEMBER 1996 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 July through September 1996:

- There were no Federal Facility Agreement (FFA) milestones scheduled during this period; however, all other FFA required activities were completed as necessary. In addition, the EPA, DOE, and Missouri Department of Natural Resources (MDNR) project managers had several meetings and bi-weekly telecons to address technical, cost, and schedule issues related to the St. Louis Site.
- Demolition activities at the St. Louis Downtown Site (SLDS) 50 Series buildings were successfully completed on September 24. During the early stages of demolition, the interior load-bearing wall between Building 50 and 51 was observed to be deteriorating. FUSRAP representatives determined that the condition of the wall posed a safety hazard to personnel who would be working inside the building and to the adjacent Mallinckrodt facilities. The original plan called for demolishing the building using manual techniques. However, FUSRAP representatives determined that the original plan had to be modified to provide for an expedited demolition. Mechanical demolition equipment was used to demolish the buildings and ensured the safety of the workers and the protection of the adjacent Mallinckrodt facilities.

All the resultant debris from demolition activities has been removed from the demolition area and transported to staging areas on Lots 7S and 7E. The 50 series floor surface area has been leveled to grade, sealed with a asphaltic tack coat, and covered with 4-inches of aggregate base material. These activities were performed to prepare for the Plant 2 subgrade boundary delineation activities scheduled for early November. The roofing material and steel from the demolition are being shipped to an offsite disposal facility. Brick and similar rubble from the demolition are being staged at Lot 7E prior to being crushed. The crushed brick will be used as backfill during remediation of the 50 Series subgrade in the summer of 1997. Crushing activities are expected to begin at the end of October.

- In support of the construction of the North Riverfront Bike Trail by the City of St. Louis, the removal of soils with elevated radionuclide concentrations east of the levee and adjacent to the SLDS have been completed. All contaminated soils with concentrations of radionuclides above the risk-based supplemental guideline of 50 pCi/g have been removed and the excavations restored with cleaned backfill material. This level of cleanup has been determined to be protective of individuals using the bike path area and represents a "brown fields" cleanup approach to a portion of SLDS.
- A majority of the waste slated for offsite disposal from the two SLDS cleanup activities has been loaded in gondola cars and shipped. To reduce disposal costs, FUSRAP is consolidating the contaminated soil excavated from the nearby North Riverfront Bike Trail with the debris from the demolition of the SLDS 50 Series buildings. To date, workers have loaded approximately 1,600 cubic yards of waste materials into 22 gondola cars for shipment offsite. Approximately 300 cubic yards of waste materials remain to be shipped. The remaining wastes from these activities are expected to be shipped from the Lot 7S staging site by early November.
- Cleanup of contaminated soils located mostly along road frontages at several St. Louis Airport (SLAPS) vicinity properties continued. During the quarter, design excavations were completed on an additional four commercial properties along Frost and Hazelwood Avenues. The Independent Verification Contractor (IVC) has verified that these four properties have been remediated to DOE guidelines and can be released without radiological restrictions. Approximately 4000 cubic yards from these excavations have been staged and shipped this quarter from the Eva Road Staging Area.
- During the quarter, contamination mitigation measures were implemented at SLAPS for erosion control. These limited measures were designed to mitigate erosion and reduce silting into Coldwater Creek from the area outside the fence along the north side of SLAPS.
- The St. Louis Site Remediation Task Force held regular monthly meetings on July 16, August 20, and September 17. The Task Force also held special meetings on July 23 and September 24. A public meeting to solicit comments on the draft final report was held on September 18.

The Task Force focused on developing and refining its final report and recommendations to DOE and established a Remediations Options Working Group. The working group recommended that the Riverfront Trail, West Lake Landfill, St. Louis Downtown Site, and the lower portion of Coldwater Creek be cleaned to recreational or industrial use standards and that the remaining components of the site be cleaned to unrestricted use standards. The Task Force decided that all of Coldwater Creek should be cleaned to unrestricted use standards, although special care should be taken to preserve natural habitats in the lower portion of the creek. The group accepted the rest of the working group's recommendations.

At its July 23 meeting, the Task Force approved a resolution ranking remediation of the St. Louis Airport Site as the group's highest priority and asked that most of the St. Louis Site -- with the exception of the Riverfront Trail, the St. Louis Downtown Site and West Lake Landfill -- be cleaned to unrestricted use standards. This resolution, along with the resolution approved in June which requested an acceleration in funding for the St. Louis Site, became the core recommendations of the Task Force's final report.

The Task Force further refined the draft report at its August 20 and September 17 meetings. The Task Force presented its draft recommendations to stakeholders at a public meeting on September 18. Publicity activities conducted on behalf of the Task Force included mailing more than 1,000 post card notices about the public meeting to interested parties and offered public comment. All but two speakers supported the Task Force's recommendations.

At the September 24 meeting, the Task Force chair and vice chair transmitted the final report to Al Alm, Assistant Secretary Of Environmental Management. The Task Force also amended its charter to reflect its decision not to dissolve upon submission of its recommendations to DOE. Rather, the group will remain intact until such time as 1) it has received and reviewed DOE's formal response to the Task Force recommendations and 2) it has determined the Task Force's appropriate future role(s).

During the first quarter of fiscal year 1997, the Task Force has not scheduled any meetings.

Ongoing community relations activities for the quarter included:

- Administrative and logistic support for the Task Force
  - Outreach to the Grace Hill Neighborhood Association with presentations on the St. Louis Site
  - Media relations with local radio stations (KMOX, KWMU), newspapers (Post-Dispatch, North County Journal), news services (Bureau of National Affairs) and television (Channel 11).
  - 118 community interactions (primarily phone calls) for the quarter
- Limited discussions continued between DOE and MDNR officials in an effort to resolve the notice of violation (NOV) issued by the state regarding stormwater discharge monitoring at SLAPS. Both DOE and the City of St. Louis continue to maintain that they are not legally obligated to obtain a stormwater permit.
  - The Stone Container Corporation, tenant on property 2L adjacent to the Hazelwood Interim Storage Site (HISS), began the expansion and paving of its parking lot at their facility. This work involves excavating between 12" and 24" of soil from the southwest quadrant of the property. The majority of this soil is contaminated above the accepted radiological cleanup guidelines. Therefore, Stone Container plans to place these soils (about 4000 cubic yards) into a covered, engineered pile at the rear of the property. Work on the parking lot expansion is expected to be completed by the end of November.

Mr. Wall

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During this quarterly period, environmental sampling conducted by FUSRAP 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 enclosed. As always, all raw data and analyses are available for EPA review and inspection to the extent that you request.

During the first quarter of fiscal year 1997, there are no scheduled FFA milestones. In the interim, DOE will continue to work with EPA and MDNR to implement appropriate interim removal actions and to facilitate the process of selecting the final cleanup remedy.

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

Sincerely,



David G. Adler, Site Manager  
Former Sites Restoration Division

Enclosure

cc: R. Geller (MDNR)

## Summary of Third Quarter 1996 Sampling and Analysis

The following is a summary of environmental data collected for FUSRAP sites in St. Louis, Missouri, during the third quarter. Samples were collected and analyzed in support of environmental surveillance and characterization of the sites. During the third quarter, a total of 139 samples were collected and analyzed for various radiological and non-radiological analyses. Twenty-eight radon detectors, 103 radon flux measurements, and 42 TETLDs were also collected and analyzed. In addition, 42 direct and transferable surface contamination readings were taken on the floor and walls in Building 116. Analytical results for these analyses have been compiled and validated and preliminary evaluation of the data indicate results generally consistent with past characterization and environmental surveillance findings at the sites.

### Radon

Thirteen radon detectors were collected from HISS, ten from SLDS, and five from SLAPS in support of routine environmental surveillance activities. The maximum concentration of radon detected at the boundary was 0.40 pCi/L at HISS and 0.8 pCi/L at SLAPS. The maximum concentration of radon detected at SLDS was 1.0 pCi/L. Radon concentrations at all three sites were well below the DOE radon guideline of 3.0 pCi/L for occupied or habitable structures.

In the third quarter of 1996, radon flux measurements were taken at HISS using large-area activated-charcoal canisters placed at 7.6-m (25-ft) intervals across the surface of each pile A and B for a 24-hour exposure period. Measurement of radon flux provides an indication of the rate at which radon is emitted from a surface. The highest results of these radon flux measurements are 0.22 pCi/m<sup>2</sup>/sec for pile A and 14.5 pCi/m<sup>2</sup>/sec for pile B. The radon flux measurements were well below the radon flux standard of 20 pCi/m<sup>2</sup>/s.

### External Gamma Radiation

A total of forty-two tissue equivalent thermoluminescent dosimeters (TETLD) were collected from HISS, SLAPS, and SLDS to determine the external gamma radiation exposure rates in support of routine environmental surveillance activities. The maximum net exposure rates detected at HISS and SLAPS were 130 and 2572 mR/yr above background, respectively. The net exposure rates detected at SLDS were indistinguishable from background.

### Stormwater Surveillance

Four stormwater samples were collected at HISS and analyzed to comply with the requirements delineated in the NPDES permit number MO-0111252. The concentration of settleable solids was less than 0.50 mL/L/hr, well below the 1.0 mL/L/hr permit requirement. The analytical results for the two stormwater samples collected in September are not available for this report and will be included in the report for fourth quarter.

In addition, the results for one stormwater sample that was collected at SLAPS during the second quarter were not available for the second quarter report. The maximum concentrations of radioactive analytes were 2297.81 pCi/L of gross alpha, 496.98 pCi/L of gross beta, 2024.3 pCi/L of total uranium, 0.46 pCi/L of thorium-230, 0.04 pCi/L of thorium-232, 0.9 pCi/L of radium-226, and 0.65 pCi/L of radium-228.

#### **Characterization Samples - SLDS**

Three characterization samples were collected from SLDS Lot 7E and analyzed for radioactive and chemical parameters. The maximum concentrations were 4.7 pCi/g for uranium-238, 4.7 pCi/g for radium-226, 1.2 pCi/g for thorium-230, and 1.1 pCi/g for thorium-232. Review of the results of the chemical analyses indicate no presence of RCRA material.

Two samples, including concrete/brick and steel, were collected from the building 50 series at SLDS in support of waste management activities. Review of the results of these chemical analyses indicate no presence of RCRA material.

#### **Characterization Samples - North County**

Twenty-eight characterization/informational samples were collected from North County properties and the sediment traps at the Eva Avenue soil staging area and analyzed for radioactive parameters. The maximum concentration of thorium-230 was 14 pCi/g.

#### **Post-Remedial Action Samples- SLDS**

Twenty-three post-remedial action soil samples were collected from the St. Louis North Riverfront Trail area and analyzed for radioactive parameters. The maximum concentrations were 9.6 pCi/g for uranium-238, 15.4 pCi/g for radium-226, 45.9 pCi/g for thorium-230, and 4.6 pCi/g for thorium-232.

All results were below the maximum site-specific risk-based criteria of 50 pCi/g for any one radionuclide.

#### **Post-Remedial Action Samples- North County**

Seventy-nine post-remedial action composite samples were collected and analyzed from Vicinity Properties 32, 36, and 37. The maximum concentration was 14 pCi/g for thorium-230. All results were below the criteria for subsurface soil, greater than 6 inches deep.

#### **SLDS Building 116**

At SLDS, 42 direct and transferable surface contamination readings were taken on the floor and walls in Building 116. The survey was conducted as part of a routine surveillance of Building 116. The survey is used to determine if contamination is changing in the building as a result of stored materials or other activities.

The following table contains a summary of the data obtained from this activity.

| Survey Type             | Number of Readings | Maximum (dpm/100 cm <sup>2</sup> ) | Average (dpm/100 cm <sup>2</sup> ) |
|-------------------------|--------------------|------------------------------------|------------------------------------|
| Transferable Alpha      | 42                 | 13                                 | 3                                  |
| Transferable Beta-Gamma | 42                 | 64                                 | 40                                 |
| Direct Alpha            | 42                 | 879                                | 76                                 |
| Direct Beta-Gamma       | 42                 | 13653                              | 2166                               |

The DOE Surface Residual Contamination Guidelines:

5000 dpm/100 cm<sup>2</sup> for Average Direct Readings

15000 dpm/100 cm<sup>2</sup> for Maximum Direct Readings

1000 dpm/100 cm<sup>2</sup> for Transferable Readings

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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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