



**MISSOURI
DEPARTMENT OF
NATURAL RESOURCES**

Third Quarter
July - September
2012

**FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM
(FUSRAP)**

Oversight and Monitoring Cooperative Agreement
Quarterly Report



Plant 7W-700 pad remediation at SLDS is shown on July 26 during the final walkover of the area before the third party final status survey. The black silt fence barriers prevent surface water runoff from moving potentially contaminated soil into the area.

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MISSOURI DEPARTMENT OF NATURAL RESOURCES

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HISTORY OF THE FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM (FUSRAP) SITES

The St. Louis Downtown Site (SLDS) processed uranium for the nation's early atomic energy program. In 1946, the U.S. Department of Energy's (DOE) predecessor agencies began utilizing the St. Louis Airport Site (SLAPS) as a storage area for radioactive wastes and processed residues, the majority of which originated at the SLDS. Methods of storage at the SLAPS included both uncovered bulk storage piles and materials containerized in drums. In 1966 the materials at the SLAPS were sold by the Atomic Energy Commission (AEC) and were shipped to a facility at 9200 Latty Avenue*, where the majority of the material was dried and shipped to out-of-state processing facilities. 8,700 tons of radioactively contaminated barium sulfate processed waste were mixed with 39,000 tons of soil and disposed of at West Lake Landfill in 1973. (West Lake Landfill is being addressed separately from the FUSRAP.)

Processing, transportation, storage, and management practices during the above-stated period led to the contamination of the three major FUSRAP sites: SLDS, SLAPS, and the Hazelwood Interim Storage Site (HISS)*, with the latter two sites being placed on the National Priorities List (NPL) in 1989. In addition, approximately 78 contaminated vicinity properties have been identified as SLAPS Vicinity Properties (VP's). The total estimated volumes of contaminated soils, sediments, and debris were estimated to have been about 1.1 million cubic yards.

On October 13, 1997, the 1998 Energy & Water Appropriations Bill transferred the responsibility for FUSRAP from the DOE to the U. S. Army Corps of Engineers (USACE).



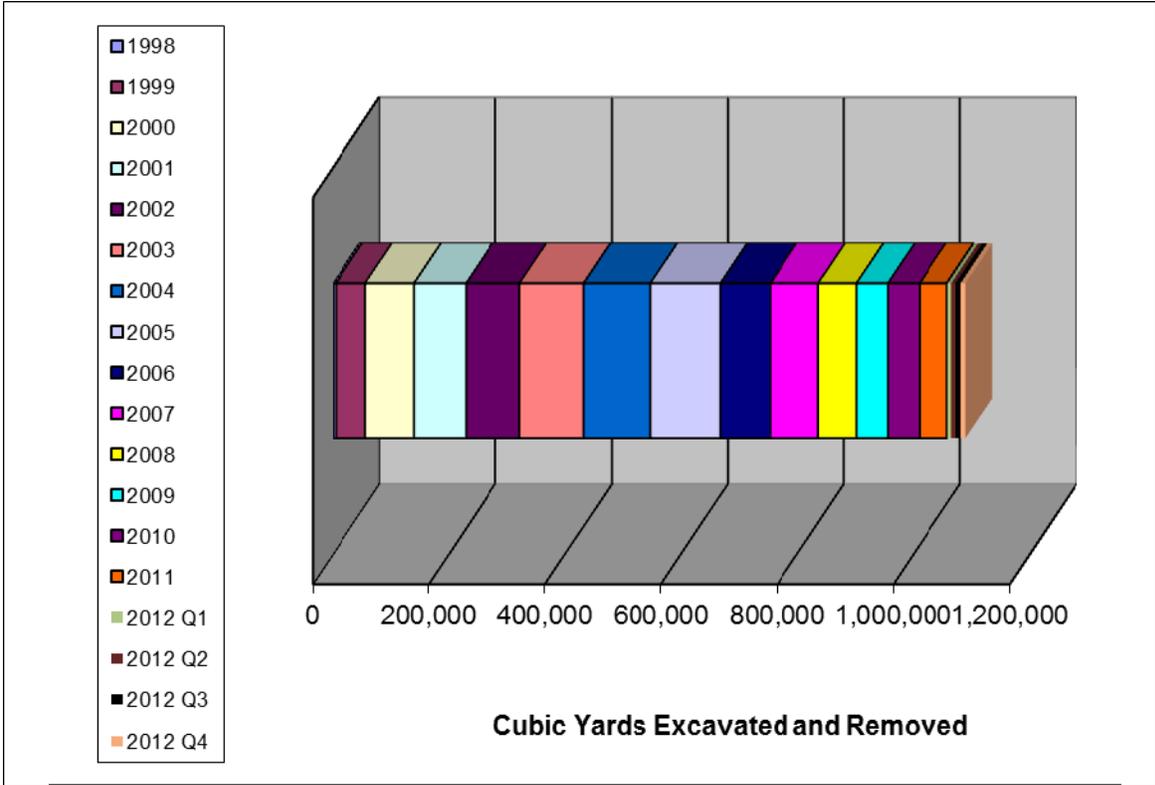
North County work proceeded with Ballfields phase 2 along McDonnell Blvd, August 30.

* The business and property at 9200 Latty Avenue are referred to as Futura in this and other reports. Although the company Futura no longer operates at the property, the property is listed on the NPL list under this nickname. The Hazelwood Interim Storage Site (HISS) is located just east of Futura. The two adjacent properties are referred to collectively as HISS/Futura.

STATUS OF WORK
WORK COMPLETED THIS QUARTER
(July 1 through September 30, 2012)

MAJOR AREA	SPECIFIC SITE	WORK DESCRIPTION
NORTH COUNTY (NC)	SLAPS Vicinity Properties	Ballfields Phase 1 excavation work was completed during the quarter along Eva Rd. between Frost Ave. and McDonnell Blvd; Ballfields Phase 2 work began during the quarter. VP-16 and Norfolk Southern/Eva Load-Out remediation began during the quarter. The volume of soil removed from the vicinity properties this quarter was 3,642 yd ³ .
	HISS/Futura and Latty Ave. Vicinity Properties	Additional sampling of potentially impacted Latty Avenue Vicinity Property rafters was completed during the quarter at VP-01(L). Sampling and preparation for remediation of Futura Building 2/3 interior remediation was completed and remediation of the building began during the quarter. No soil was removed from the HISS/Futura & Latty Ave. vicinity properties in this quarter.
SLDS	Downtown Vicinity Properties and SLDS	Remedial activities for the Plant 7W-700 Pad area continued during the quarter. Remedial activities at DT-2 (City Property) east of the levee also continued in the quarter and restoration work began. High water levels continue to hamper remediation efforts near the river. Building 101 demolition in Plant 6WH was completed during the quarter. Removal of the Building 101 foundation and preparations for excavation of soil began and are expected to be completed next quarter; excavation of soil in the area will begin next quarter. The volume of soil removed from St. Louis Downtown Sites in this quarter was about 4,744 yd ³ .
NON-SITE SPECIFIC		Five utility support operations were undertaken by the USACE during the quarter. The total volume of soil or debris removed this quarter for the entire St. Louis FUSRAP project was about 8,386 yd ³ . (For reference, during Federal Fiscal Year 2011 about 47,577 yd ³ of material was removed from all St. Louis FUSRAP project sites.)

Saint Louis FUSRAP Project Soil and Debris Removal 1998-Present



Years and quarters on this chart are based on the Federal Fiscal Year. For example, FFY 2012 is October 1, 2011 through September 30, 2012.



This picture shows the building 101 area foundation removal project at SLDS on August 8.

WORK PERFORMED BY DEPARTMENT PERSONNEL THIS QUARTER

DOCUMENT REVIEWS

The Missouri Department of Natural Resources' Federal Facilities Section (FFS) provides technical review on major decision documents, work plans, pre-design investigation reports, remedial designs, and post remedial action reports.

Comments are submitted to the USACE for response and become part of the public record. Listed below are both documents reviewed by the Department during this quarter and documents previously reviewed for which some resolution of comments occurred or is pending.

1. ***“Remedial Investigation and Baseline Risk Assessment Report for the Inaccessible Soil Operable Unit at the St. Louis Downtown Site,” Revision B, dated July 26, 2012***

The Department and Missouri Department of Health and Senior Services (DHSS) commented on a draft of this document in a previous quarter. Staff reviewed changes in this new draft and commented on it August 24, 2012. The Department requested additional information on whether additional sampling and associated risk assessment is still needs to be completed for purposes of continuing to the feasibility study. We requested more details in the remedial investigation work plan and for completion of radon monitoring and risk assessment. We questioned how pathways were chosen for the ecological risk assessment. We also made some requests for clarification of the text. The DHSS requested that technical comments on risk assessment modeling be addressed in the final document. Our joint comments were considered by the USACE.

3. ***“Remedial Investigation and Baseline Risk Assessment Report for the Inaccessible Soil Operable Unit at the St. Louis Downtown Site,” Revision 0, dated September 25, 2012***

The Department received this document on September 27, and we are currently considering the USACE's responses to our comments on the draft document.

4. ***“Pre-Design Investigation Summary Report and Final Status Evaluation for the Accessible Soils within the St. Louis Downtown Site Vicinity Property DT-34,” Revision B, dated July 31, 2012***

The Department commented on this document on September 5, 2012. We requested several clarifications and expansions regarding the text of the report. We also asked for clarification regarding biased sample locations chosen in light of gamma walkover surveys and the correction of an apparent omission. The USACE considered our comments.

5. ***“Pre-Design Investigation Summary Report and Final Status Evaluation for the Accessible Soils within the St. Louis Downtown Site Vicinity Property DT-34,” Revision 0, dated September 21, 2012***

The Department received this final document.

6. ***“Post-Remedial Action Report and Final Status Survey Evaluation for Accessible Soils within the St. Louis Downtown Site Vicinity Property Gunther Salt (DT-4),” Revision B, dated July 23, 2012***

The Department reviewed this draft document; comments were submitted August 20, 2012. The Department requested that the USACE clarify the text and provide additional supporting documentation regarding any indication of releases and potential groundwater impacts. We requested that potential map legend and figure inaccuracies be corrected. We also asked for corrections of apparent typographical mistakes to be reviewed. We asked for certified survey map location figures to be added, and we pointed out that updated population density figures for St. Louis City rather than St. Louis County should be used in analysis. The USACE considered our comments.

7. ***“Post-Remedial Action Report and Final Status Survey Evaluation for Accessible Soils within the St. Louis Downtown Site Vicinity Property Gunther Salt (DT-4),” Revision 0, dated September 14, 2012***

The Department received this finalized document during the quarter.

8. ***“Futura Vicinity Property Building 2/3 Decontamination Plan Addendum 2 of the Vicinity Properties Futura, HISS, and 40A East – Tract 3 Remedial Design/Remedial Action Work Description” Revision B, dated August 2, 2012***

The Department reviewed this draft document. We responded that there were no comments on the decontamination plans on August 31, 2012.

9. ***“Futura Vicinity Property Building 2/3 Decontamination Plan Addendum 2 of the Vicinity Properties Futura, HISS, and 40A East – Tract 3 Remedial Design/Remedial Action Work Description” Revision 0, dated September 11, 2012***

The Department received this finalized document on September 12, 2012.

10. ***“Post-Remedial Action Report and Final Status Survey Evaluation for the Latty Avenue Vicinity Properties 03(L), 04(L), 05(L) and 06(L),” Revision B, dated August 8, 2012***

The Department and DHSS reviewed this draft document; comments were submitted on September 10, 2012. The Department commented that we were unable to duplicate some of the calculations provided using the data sets included, and requested clarification and recalculation. We also asked for expanded information in regarding the finding that there were no public and environmental impacts during remediation. The DHSS made technical comments regarding structural surface activity remediation goals, survey unit boundaries, activity fractions for soils, and RESRAD modeling. Our joint comments were considered by the USACE.

11. ***“Post-Remedial Action Report and Final Status Survey Evaluation for the Latty Avenue Vicinity Properties 03(L), 04(L), 05(L) and 06(L),” Revision 0, dated September 27, 2012***

The Department received this finalized document during the quarter.

12. “Post-Remedial Action Report and Final Status Survey Evaluation for the Latty Avenue Vicinity Properties 02(L),” Revision B, dated August 23, 2012

The Department and DHSS reviewed this draft document; comments were submitted on September 24, 2012. The Department requested corrected contact information for this document. We also asked for expanded information in regarding the finding that there were no public and environmental impacts during remediation; we also asked for expansion of the background radiological sampling information provided and for text clarifications. The DHSS made technical comments regarding the non-cancer assessment and RESRAD modeling. Our joint comments were considered by the USACE.

12. “Pre-Design Investigation Work Plan Coldwater Creek: Northwest of Investigation Area-09 and Investigation Area-10,” Revision B, dated August 30, 2012

The Department reviewed this draft document; comments were submitted on September 27, 2012. The Department requested clarifications of text and the sample location figure and legend provided. We requested notification to split samples with the contractor at some locations in and around the creek. The USACE considered our comments.

SITE OBSERVATIONS

Field personnel conduct site visits to observe and document the status of remedial actions, environmental monitoring, contaminant migration prevention, and pre-design investigations. USACE personnel are immediately notified of findings, and reports are filed for public record.*

The following site visits were conducted on these dates during this quarter:

- **HISS/Futura:** July 3, 24
August 15, 22, 30
September 7, 12, 18, 24
- **SLAPS VPs:** July 3, 24
August 15, 22, 27, 30
September 7, 12, 18, 24
- **SLDS:** July 3, 11, 26
August 1, 8, 15, 30
September 12, 27

**All departmental comments and site visit reports are available upon request.*

SAMPLING

Samples are obtained by Department personnel and shipped to a contract laboratory for analysis. The purposes of sample collection include confirmation of results from remedial actions, storm water controls/treatment, and investigating locations of potential concern. Split samples are planned to be collected during the USACE’s next quarterly monitoring well sampling and at the bi-annual Coldwater Creek water and sediment sampling event.



Northwest of IA-9 and IA-10, Coldwater Creek areas between McDonnell Blvd and the end of Byassee Rd. will be sampled in the near future. Shaw personnel are observed testing out a new sampling device above the banks on July 24, 2012. This sampling device is driven into the ground, thus obtaining a soil or sediment sample into a removable plastic tube for analysis.



Coldwater Creek Sampling

The Department will be completing an additional study in conjunction with our Division of Geology and Land Survey during the calendar year. Design of this study had begun during the previous quarter, and phases of the work were defined. Samples of likely deposition area sediment and surface water will be taken from Coldwater Creek between Dunn Road and New Halls Ferry Road. These samples will be analyzed for radioactive constituents of concern, and the results will be made available to the public.

COMMUNITY RELATIONS

Department personnel are available for questions, requests for information, or as a means of submitting comments and concerns. It is our goal to encourage community involvement and ensure the concerns of the citizens of Missouri are addressed. Special requests regarding field oversight, research, and presentations are welcomed. Ramona Huckstep, the Community Involvement Coordinator, can be contacted at (573) 522-1540, for assistance.

OVERSIGHT COMMITTEE

The FUSRAP oversight committee last met on April 26 at the James J. Egan Civic Center located at 1 James J. Egan Drive, Florissant, MO. The USACE's project manager, Sharon Cotner, gave an update presentation on the current remediation work; the USACE also presented maps showing historic sampling of Coldwater Creek and fielded questions on their future work plans. Jonathan Garoutte of DHSS gave a presentation on radiation health effects; he also answered questions about the DHSS's future plans for reviewing historic Coldwater Creek health effects. Retired St. Louis Community College professor Bruce Stinchcomb gave a very informative talk on the geologic history of Coldwater Creek.

The next meeting of the committee will be 7 PM on November 8; the committee will again meet at the James J. Egan Civic Center (1 James J. Egan Drive, lower level conference room, Florissant, MO 63033). *If you wish to be added to the notification list for these meetings, please contact either Tony Jones, USACE at 314-260-3932, or Daniel Carey, MDNR at 314-877-3047.*

REGULATORS COORDINATION MEETINGS

Every few weeks, personnel from the EPA, the USACE, and the Department meet in person and by conference call to discuss site status, document schedules, landowner assistance projects, and other similar issues. These coordination meetings are beneficial, as they keep the parties informed of site status, allow for discussion of cleanup issues, and provide coordination of agency activities as they relate to cleanup of the sites. These meetings were held on July 3 and 24, August 7 and 21, and September 18.



The continuing City Property Area 8 excavation was observed on September 27 at the St. Louis Downtown Site. The view is looking northeast towards the Mississippi River.

SITE ACTIVITIES THIS QUARTER

NORTH COUNTY

Remedial Actions

- Work decontaminating Futura Building 2/3 interior began.
- The USACE did more sampling of the rafters of Latty Avenue VP 1(L) buildings. The results are being studied to determine the extent to which these structures will require additional interior remediation.
- Ballfields phase 2 excavation work continued during the quarter; the USACE proceeded along Eva Rd. from south to north and then along McDonnell Blvd. from east to west; then along the swale and other areas North of McDonnell Blvd. VP16/Eva Load-out excavation began during the quarter. Preparations for sampling Coldwater Creek northwest of IA-9 and IA-10 began.

ST. LOUIS DOWNTOWN SITE

Remedial Actions

- At Plant 7N/7S HWSA, FUSRAP work under the former hazardous waste storage area (HWSA) building was completed in a previous quarter. The excavation has been

backfilled to interim grade, but the area will remain partially restored until ownership of the contamination at the 7W basin area has been determined.

- Plant 7W/700 Pad work continued during the quarter, including backfill of the south and east side of the 7W basin area. Final restoration of the area is dependent on the outcome of USACE's Plant 7W position paper. Covidien and the USACE will meet to resolve differences of opinion regarding ownership of contamination and come to an agreement.
- DT-2 (City Property) Excavation east of the levee in Area 7 was suspended due to high river levels until August. The USACE began remediation of Area 8 and removed the sewer outfalls during the quarter, but additional sampling will be needed to delineate the extent of contamination in this area.
- At Plant 6 (Covidien), the USACE finished demolishing building 101 in Covidien Plant 6 during the quarter and started preparing the area for soil removal. Preparations included segregating and removing the building slab, waste materials, and building materials.
- At Kiesel Property, the USACE's contractor took PDI samples in September.
- PSC Metals (DT-8) required additional samples to support the Post-Remedial Action Report; they were obtained during the quarter.

TASKS AND GOALS FOR NEXT QUARTER

NORTH COUNTY

- Futura Building 2/3 interior remediation will continue.
- Latty Avenue Vicinity Property rafters may be remediated at VP1L.
- Remediation at the IA-9 Ballfields area phase 2 will continue and may be completed; sampling of Coldwater Creek northwest of IA-9 and IA-10 will begin.
- Remediation of Eva Load-Out facility and VP16 just east of Eva near its intersection with McDonnell Blvd. will continue and may be completed.
- The Department will continue the Coldwater Creek deposition study in the next quarters.

ST. LOUIS DOWNTOWN SITE

- Plant 7W/700 Pad remediation and restoration of soils under the concrete foundation pad may continue and be completed during the quarter.
- DT-2 (City Property) remediation at areas 7 and 8 may continue.
- Plant 2 Utility supports for accessible contamination will continue as needed.
- Plant 6/building 101 area soil excavation may commence.

DOCUMENT REVIEWS

Review of the following documents and data are potentially anticipated during the next quarter:

NORTH COUNTY

- North County Site Wide Remedial Design and Remedial Action Work Plan.
- Arsenic Report for IA-13.
- VP40A Post Remedial Action Report.
- HISS Post Remedial Action Report.
- VP1(L) Right-Of-Way Pre-Design Investigation Report.
- VP 9C and 10C Pre-Design Investigation Work Plan.
- VP 1, 2, 7, 13, 14, 15, IA-11 Pre-Design Investigation Work Plan.

- Community Involvement Plan for all St. Louis Sites.

ST. LOUIS DOWNTOWN SITE

- Inaccessible Soils Operable Unit Feasibility Study.
- Mississippi River Characterization Report, Rev. 0.
- Plant 6WH Building 101 Work Action Site Description, Rev. 0.
- Building 101 and Destrehan Street Explanation of Significant Difference (ESD).



VP 1 (L) additional rafter sampling was observed on August 30, 2012, in North County.
(This vacant property is located north across Latty Avenue from HISS/Futura).

SITE OBSERVATIONS AND SAMPLING

Our on-going role in providing site observations and sampling investigations will continue as per previous quarters.

DEPARTMENT PROJECTS

Staff will continue to work on committees affiliated with long-term stewardship (LTS), Groundwater, and the 5-year review.

Long-Term Stewardship Committee

Long-term stewardship applies to sites and properties where long-term management of contaminated environmental media is necessary to protect human health and the environment over time. This generally includes the establishment and maintenance of physical and legal controls, implementation entities, authorities, accountability mechanisms, information and data management systems, and other resources.

The need for long-term stewardship will exist for areas of inaccessible contamination at both the North St. Louis County and Downtown Properties located under roads, railroads, buildings, and other similar structures deemed by the current owners to be vital or in-use. It also exists for portions of the downtown site for which Remediation Goals are deemed suitable for industrial uses.

Completion of the project is expected by 2016, which may include a two-year transitional period to transfer responsibility from the USACE to the U.S. Department of Energy. The goal of the committee is to begin developing much of the LTS mechanisms as soon as possible. We want these mechanisms to be identified and in place prior to the transition so we can begin assessing their effectiveness prior to the transition.

FINANCIAL REPORTING

The Department's Hazardous Waste Program submits a financial report separate from this document. The report includes costs incurred during the reporting period with request for reimbursement forms.

TRAINING, CONFERENCES, MEETINGS ATTENDED

- Hazardous Waste Program All Staff Meetings July 30, October 10.
- SLDS Bi-Weekly Status Meetings July 11, August 1, and September 12 (TB).
- Regulator Bi-weekly conference calls July 3 and 24, August 7 and 21, and September 18 (DC, TB, BD, PA).
- Radiation Badge Replacement with Instadose Meeting July 10 (DC, TB, EG, PA).
- North County Status Meeting on July 11 (DC).
- Preparatory Meeting for Futura VP Building 2/3 Decontamination August 7 (DC).
- Federal Facilities Section Meetings on August 9 (DC, EG, TB, PA).
- Preparatory Meeting for VP16 Norfolk Southern Eva Load-Out August 29 (DC).
- Preparatory Meeting for Latty Avenue PDI Sampling on August 29 (DC).
- Preparatory Meeting for Kiesel Property Sampling on September 12 (TB).