



**MISSOURI
DEPARTMENT OF
NATURAL RESOURCES**

First Quarter
January – March
2012

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

Oversight and Monitoring Cooperative Agreement
Quarterly Report



The USACE's contractor sampled Coldwater Creek surface water and sediment on March 14, 2012, at six locations between Banshee Rd. and Pershall Rd. Sampling is routinely performed to monitor current conditions and ensure there are no impacts to the creek from remediation activities. The Department split the samples with the contractor and had an independent analysis performed on them.

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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 the 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).



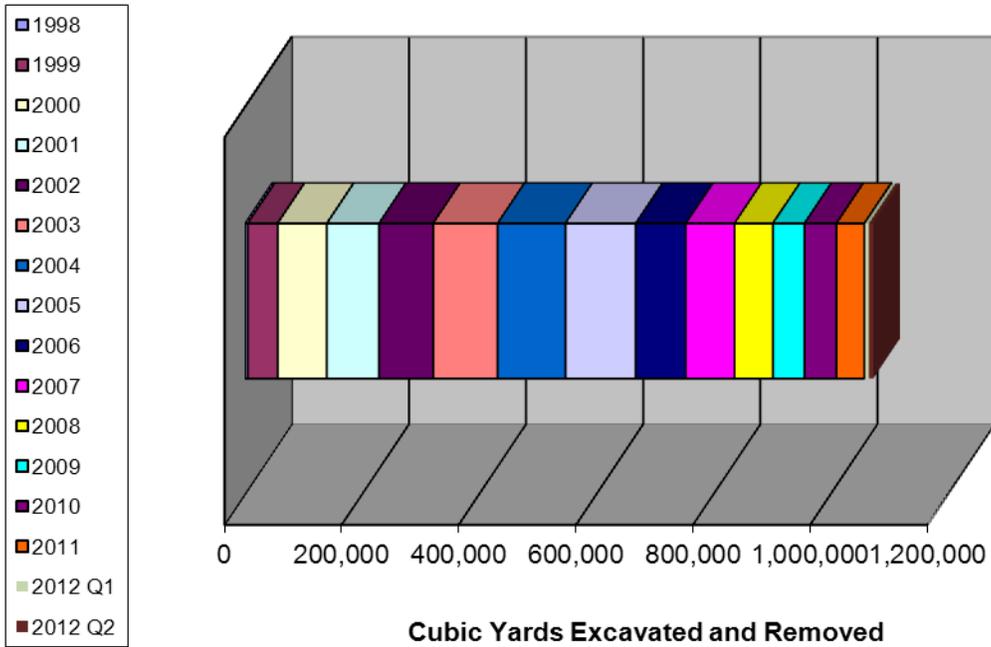
Excavation of soils at the SLDS Plant 7, 7W-700 Pad Area, in January.

* 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
(January 1 through March 31, 2011)**

MAJOR AREA	SPECIFIC SITE	WORK DESCRIPTION
NORTH COUNTY (NC)	SLAPS Vicinity Properties	Frost Right of Way Remedial Action continued during the quarter. Ballfields Phase 1 excavation work also continued during the quarter along Eva Rd. between Frost Ave. and McDonnell Blvd. The volume of soil removed from the vicinity properties this quarter was 1662 yd ³ .
	HISS/Futura and Latty Ave. Vicinity Properties	HISS final restoration and release was completed during the quarter. Sampling of Futura Buildings and structures was completed during the quarter; it was determined that the Futura buildings will need some interior remediation. The volume of soil removed from the HISS/Futura & Latty Ave. vicinity properties in this quarter was 747 yd ³ .
SLDS	Downtown Vicinity Properties and SLDS	Restoration at the Covidien Plant 7N/7S former hazardous waste storage area remained on hold during this quarter. The USACE will do a final backfill of the excavation after completion of the area. Interim backfill materials were used for the excavation in the meantime. 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; remediation of an area west of the levee near DT-12 (BNSF Railroad) was completed. High water levels hampered remediation efforts near the river again at the end of the quarter; work will not continue until river levels go down. The volume of soil removed from St. Louis Downtown Sites in this quarter was 5,019 yd ³ .
NON-SITE SPECIFIC		1 utility support operation was 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 7,428 yd ³ . (For reference, during Federal Fiscal Year 2011, which ended on September 30, 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.



A survey unit at the Ballfields Phase 1 has been excavated and is awaiting final status survey on March 28. The area shown is near the intersection of Eva Rd. and McDonnell Blvd. Eva Rd. has been closed to traffic during the work.

WORK PERFORMED BY DEPARTMENT PERSONNEL THIS QUARTER

DOCUMENT REVIEWS

The Missouri Department of Natural Resources' (Department) 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 has occurred or is pending.

1. ***Covidien Building 25 Radon Position Letter, St. Louis Downtown Site, dated March 11, 2011.***

The USACE provided the U.S. Environmental Protection Agency (EPA) and the Department with a letter stating its position that radon mitigation and sampling are not necessary for this building. This letter was an action item for the Second Five-Year Review Report. Department staff and the EPA reviewed the letter, but will defer commenting until after they have also reviewed the SLDS Inaccessible Soils Operable Unit Report and Baseline Risk Assessment, which is due out later in the year. Both agencies informed the USACE of this deferral during the previous quarter.

2. ***“Remedial Investigation and Baseline Risk Assessment Report for the Inaccessible Soil Operable Unit at the St. Louis Downtown Site,” Revision B, dated November 10, 2011.***

The Department and the Missouri Department of Health and Senior Services (DHSS) reviewed this draft document during the quarter. The Department suggested improvements for the document with respect to readability and technical correctness. We requested further information be added to the document on institutional controls, adequacy of sampling for metals with respect to the risk assessment evaluation, and ecological risk assessment. We asked the USACE to clarify that evaluation of ground water impacts at SLDS is on-going. The Department asked that several inconsistencies within the text be resolved, and also that deviations from work plans be clearly documented and evaluated for impacts to the risk assessment and its conclusions.

DHSS had concerns about the adequacy of evaluation of the non-radionuclide contamination within the risk assessment, derived concentration guideline (DCGL) development, residential risk for long-term stewardship purposes, verification of screening levels using a current conceptual site model, and use of non-default parameters in the risk assessment software without adequate explanation. They requested clarification on the protectiveness of the U-238 cleanup goal, and also requested resolutions to other areas of inconsistency within the risk assessment portion of the document. These comments are under consideration by the USACE.

3. **“Radiological Survey Plan for Futura Building Structures,” Revision B, dated November 22, 2011.**

The Department reviewed and commented regarding this document on January 17, 2012. We requested further explanation of interior sampling height limits, drop ceiling evaluation, and MDC value calculations. Our comments are under consideration by the USACE.

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** January 9, 27
 February 2, 6, 23
 March (no activity to observe)

- **SLAPS VPs** January 9, 27
 February 2, 6, 23
 March 6, 13, 14, 21, 23, 28

- **SLDS:** January 11, 13, 17
 February 1, 7
 March 6, 14, 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. During this quarter, we observed biannual sampling of surface water and sediment from Coldwater Creek on March 14. We obtained duplicates of all samples taken for an independent 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.



Another survey unit in the Ballfields area near the intersection of McDonnell Blvd. and Eva Rd. The USACE excavates the soil with the black silt fence barriers to prevent migration of any surface water runoff from potentially contaminated soil. The excavated soil is stockpiled and shipped at the St. Louis airport site (across McDonnell Blvd. from the work).

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 welcome. Ramona Huckstep, the Community Involvement Coordinator, can be contacted at (573) 522-1540 for assistance.

OVERSIGHT COMMITTEE

The FUSRAP oversight committee last met on August 19 at the USACE trailers located at 8945 Latty Ave. in Berkeley, MO. The next meeting of the committee will be at 7 PM on April 26 at the James J. Egan Civic Center (1 James J. Egan Drive, 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 with the Department 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 January 9, January 30, February 14, February 28, and an update was provided March 20.



Excavated materials from North Saint Louis County sites are shipped by covered railcar. Outbound railcars are thoroughly inspected before leaving the site and upon their return.

SITE ACTIVITIES THIS QUARTER

NORTH COUNTY

Remedial Actions

- HISS remediation was completed and the property was released. Restoration of the Futura site (including site drainage, but not the buildings) was completed during the quarter. The investigation outside and inside Futura buildings and structures was completed.
- Ballfields phase 1 excavation work continued during the quarter along Eva Rd. The road remains closed during this activity.
- Sampling for Ballfields phase 2 excavations was completed during the quarter.

ST. LOUIS DOWNTOWN SITE

Remedial Actions

- Plant 7N/7S HWSA FUSRAP work under the former hazardous waste storage area (HWSA) building was excavated in a previous quarter. The excavation has been backfilled, but it will remain unrestored until the 700 Pad work is complete.
- Plant 7W/700 Pad work continued during the quarter. The USACE chased contamination above remediation goals discovered during excavation into a basin area southwest.
- DT-2 (City Property) Area 3 work east and west of the levee continued into the quarter. Some work east of was suspended at the end of the quarter due to high river levels. Work will resume as soon as river levels go back down.

- Plant 2 (Covidien): The USACE began utility support at Plant 2 during a previous quarter. Covidien began building construction and some previously inaccessible contamination became accessible at that time.
- Plant 6 (Covidien): The USACE prepared building 101 in Covidien Plant 6 for demolition during the next quarter by cutting fire suppression lines and water lines within the building. The USACE also had a contractor do asbestos abatement in this building in March. The USACE continued to shipping railcars, sharing the loadout with Covidien, who is performing its own remediation of other plant areas nearby.

TASKS AND GOALS FOR NEXT QUARTER

NORTH COUNTY SITES

- Futura buildings and structures remediation will start in the next quarter.
- Remediation at the IA-9 Ballfields area phase 1 may be completed; Phase 2 remediation of the central Ballfields will start.
- The Department will continue the study Coldwater Creek deposition study in the next quarter.

ST. LOUIS DOWNTOWN SITE

- Plant 7N/7S HWSA backfill work at the former hazardous waste storage area (HWSA) building may be completed.
- Plant 7W/700 Pad remediation and restoration of soils under the concrete foundation pad may be completed during the quarter.
- DT-2 (City Property) area 3 work east of the levee will continue during the next quarter and may be completed; work west of the levee will also continue and may be completed.
- Plant 2 Utility supports for accessible contamination will continue as needed.
- Plant 6 demolition and remediation of building 101 will commence.

DOCUMENT REVIEWS

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

North St. Louis County

- North County Site Wide Remedial Design and Remedial Action Work Plan.
- Arsenic Report for IA-13.
- Post Remedial Action Report VP40a.
- Remedial Design/Remedial Action Work Description for Ballfields Phase 2.
- Work Description for Futura Buildings.
- VP16/EVA Loadout RD/RAWD.

St. Louis Downtown Site

- Plant 6 West Half Building 101 WASD.
- Plant 2 RAWD.
- PDIR Destrehan Street.

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 (also known as 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 2015, and this will be followed by 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 in advance so we can begin assessing their effectiveness prior to the transition.

The Department met with the U.S. Department of Energy on October 27 to discuss Long-Term Stewardship issues at the St. Louis sites.

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

- HAZWOPER 8 Hour Refresher Training January 20 (TB, DC)
- MARSSIM refresher and MARSAME training January 23-26 (TB, DC, PA)
- SLDS Bi-Weekly Status Meetings February 1 and March 14 (TB)
- MERRTT training March 1 (DC, TB, EG, PA)
- Meeting and North County Coldwater Creek Site Visit with Missouri Department of Health and Senior Service, USACE, and USEPA March 13 (TB, DC)
- Regulator Bi-weekly conference calls January 9, January 30, February 14, and February 28 (DC, TB, BD, PA)
- Federal Facilities Section Meetings on February 15 and March 29 (DC, EG, TB, PA)
- North County Status Meeting January 11, February 8, and March 14 (DC, PA)

WATER MANAGEMENT AT THE ST. LOUIS AIRPORT SITE

The St. Louis Airport Site (SLAPS) remediation is complete with the exception of a few areas that are currently inaccessible along with the railcar loadout and soil storage area. Surface water runoff from parts of the site is still under active management. Any water that may have been in contact with remediation materials is managed in one of several treatment systems. There are three listed outfalls at the SLAPS sight. Outfall 1, located at the Northwest corner of the SLAPS property: sampling terminated per the USACE letter dated May 6, 2008. Outfall 2, located at the southwest corner of the Ballfields, and drains into Coldwater Creek: sampling reduced to once a year per the letter from the Department dated February 19, 2002. Outfall 3, located in the middle of SLAPS north side, and drains North through the Ballfields to Coldwater Creek: sampling terminated per the Department's letter dated February 19, 2002.



McDonnell Blvd., looking from SLAPS toward the terminated Outfall 3.

Potentially contaminated water from excavations at the North County Vicinity Properties, or HISS/Futura vicinity, is also managed at the SLAPS. Potentially contaminated water is trucked or pumped through piping to two 210,000-gallon tanks for management, treatment, and testing. After testing shows that it is safe to do so, the water is permitted to be discharged to the Metropolitan Sewer District (MSD) through a hose that goes along McDonnell Blvd., west under the McDonnell Blvd. bridge over Coldwater Creek, and into the parking lot of GKN. MSD has a manhole in the GKN parking lot on the west side of Coldwater Creek, where the water is eventually discharged to the MSD system after analysis has shown that it meets the standards. Should the need arise, large volumes of water are managed in a similar way with a lined million-gallon settling basin, which the USACE has constructed on the site for this purpose.



The million-gallon basin and one of the (1 micron) filtration systems at SLAPS.



(Above) Discharge hose coming from the million-gallon basin. Treated water from the million-gallon basin and storage tanks is discharged to MSD's system through the manhole in the GKN parking lot (Below). Since no discharge was taking place on this particular day, the manhole was closed and the hose was capped.





Potentially contaminated stormwater from the loadout and storage piles at SLAPS is managed similarly in its own, separate lined basin. This water will also be treated, filtered, analyzed, and then discharged to MSD after it meets the USACE's MSD pre-treatment criteria.