

The St. Louis Sites

Formerly Utilized Sites Remedial Action Program • Fall 1999

(314) 524-4083

www.mvs.usace.army.mil



Workers, dressed in the appropriate level of personal protective clothing and respiratory equipment, collected samples from the Radium Pits to verify contaminant information.

North County

Feasibility Study Being Developed

The USACE is currently developing the North County Feasibility Study/Proposed Plan (FS/PP), which will describe remedial alternatives to address contamination on the sites. The North County FS/PP will address contamination at the Latty Avenue/Hazelwood Interim Storage Site (HISS), the St. Louis Airport Site (SLAPS), the SLAPS Vicinity Properties (VPs) and Coldwater Creek.

By working with the Missouri Department of Natural Resources and the U. S. Environmental Protection Agency, the USACE hopes to resolve outstanding issues prior to releasing the document to the public for review. The agencies are working together to determine which federal and state regulations apply to these sites and to resolve issues regarding potential contaminants of concern.

In the coming months, the FS/PP will be presented to the public for review and comment. After the review period is over, the final remedial alternative will be selected and identified in the Record of Decision.

One more way to keep in touch:

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phone (314) 877-3250

St. Louis Airport Site (SLAPS)

Radium Pits Tested

In September, the USACE dug test pits in an area of the St. Louis Airport Site (SLAPS), commonly referred to as the Radium Pits, which are located in the curve of the site next to McDonnell Boulevard. The test pits were dug to better characterize the extent of contamination and to develop a geological profile for this portion of the site.

The Atomic Energy Commission/Manhattan Engineer District (AEC/MED) previously used the Radium Pits to store residues from manufacturing operations at the St. Louis Downtown Site (SLDS).

By investigating the Radium Pits, the USACE gathered valuable radiological and geotechnical data for developing plans, which accurately address the Radium Pit's conditions. While significantly less radium than expected was found, the results of this activity showed that higher levels of thorium exist in this location.

The USACE was concerned that radon, which is a byproduct produced by the decay of radium, would be a problem given the original data that calculations were based on. However, since the actual radium levels were low, radon levels were not an issue.

The USACE, in conjunction with state and federal agencies, is currently developing the Plans and Specifications for this removal action. It is anticipated work will begin this spring in the Radium Pits. An estimated 26,000-28,000 cubic yards of contaminated soils are scheduled for removal. ■

Upcoming Events

Information Releases:

Winter Newsletter – February 2000

Upcoming Meetings:

St. Louis Oversight Committee Meeting at the FUSRAP Project Office at 11:30 a.m. on December 10, January 14, and February 11.



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The workers shown here are in the process of surveying an area to determine if further excavation is required. Once surveys confirm the contamination has been removed, the Corps can direct its contractors to begin backfilling the excavated area with clean material.

East End Excavation Continues

Site stabilization work is continuing at the East End of SLAPS in the wedge between McDonnell Boulevard and Banshee Road. Confirmation surveys have verified that the contamination has been removed from the eastern most survey unit. Under the USACE's direction, contractors have begun backfilling the cleaned areas.

Removal work on SLAPS will progress in a continuous path of excavation from east to west across the site. This progression will stabilize the site and prevent storm-water run-off from re-contaminating cleaned areas as work moves from higher to lower elevations. To date, the contractor has excavated 16,500 cubic yards of contamination from the East End.

What's Next?

Once the confirmation surveys and the backfill of the remainder of the East End are completed, the SLAPS Construction Support Area will be moved to the East End and thus allow excavation activities to continue across the site. ■

Hazelwood Interim Storage Site (HISS)

Lab Relocation Nearly Completed

The USACE has procured a new site lab to replace the current facility. Production requirements and the HISS Railspur construction this spring brought attention to potential production problems with analyzing samples at the lab's original location.

The analysis of radiological samples requires a stable environment. Once heavy equipment begins removing the nearby piles, the lab's original location at the end of a railspur will no longer suffice.

The relocated facility will better support the number of samples that need to be analyzed. As the USACE removes more contaminated material from the St. Louis sites, the increased capability will enable the lab to process these samples without impacting the schedule of work on the rest of the project. The new lab should be fully operational by mid-December 1999.

Pile Removal Design Continues

In September, the USACE completed technical negotiations regarding the removal of the HISS Eastern Pile and the Spoil Piles from the railspur construction with a selected small, woman-owned business. Together these piles contain approximately 12,000 cubic yards of material. The Corps will remove these piles to minimize disruption to business operations and facilitate the current owner's use of the property.

The contractor has submitted the project plans to the USACE for approval. These plans describe how the contractor will implement the design plans during the actual pile removal. Once the plans are approved, the contractor will mobilize its personnel and equipment on-site, receive site-specific training to ensure personnel are familiar with the site, and begin removing the piles using the new railspur.

What's Next?

Once these preparatory activities have been completed, the piles will be removed under the approved 1998 HISS Engineering Evaluation /Cost Analysis (EE/CA). Until a Record of Decision (ROD) describing the final cleanup method is approved, no subsurface contamination at HISS can be removed. ■

Keeping in Touch

Mailing Lists - To receive newsletters and other printed communications, sign up for our mailing list anytime.

Phone: (314) 524-4083
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Public Speaking - If your group, school, or association would like to hear from one of our experts, give us a call. We can speak on a variety of fields, including engineering, the environment, and geology.

Homepage - To reach our site, set your browser to www.mvs.usace.army.mil and click on the FUSRAP icon.

If you have any suggestions, questions, or comments, contact our office anytime.



Excavation in Plant 2's main remediation area will continue once unexploded ordnance plans, which address the presence of the Civil War Ordnance, are approved.

St. Louis Downtown Site (SLDS)

Plant 2 Progress on Hold

Remediation work in Plant 2 stopped when unexploded Civil War ordnance was found during site excavation in late August.

Historians suspect the ordnance originated from a prior land owner (Buck's Stove & Range Company), which manufactured cast iron stoves. After the Civil War, many weapons were decommissioned and sold as scrap iron. Authorities speculate that Buck's Stove & Range Company, which was using the iron from the rounds for manufacturing stoves, discovered the live rounds and buried the rounds rather than disarming them.

Years later, in 1935, Mallinckrodt purchased and demolished the foundry. They discovered and disposed of hundreds of cannonballs left over from the Civil War, unaware of the buried rounds. By 1941 Mallinckrodt erected buildings on that same site to support Manhattan Engineer District / Atomic Energy Commission (MED/AEC) activities during World War II. Now more than sixty years after the demolition of the foundry, the buried rounds have been discovered.

While the USACE will not continue remediation in the main area of excavation until an Unexploded Ordnance (UXO) plan is approved, four small adjacent areas of elevated radiological activity are being remediated. These four areas total approximately 120 cubic yards.



This twelve pound cannon ball made of iron was one of the pieces of ordnance found during the Plant 2 remediation. Originally, the hole in the cannon ball would have been plugged. The ball was filled with black powder.

UXO Plan Under Review

Ordnance experts are working with physicists to finalize a plan that addresses the possibility of encountering more ordnance in the radiologically contaminated soils of the main excavation area in Plant 2. The plan will enable the USACE to backfill the open excavation.

Magnetometers, which can detect buried metal objects four feet below the surface of the soil, will be used to verify the work area is clear of all metal objects. If the magnetometer detects a metal object beneath the surface, a team of UXO specialists will dig up the object by hand. If it is identified as ordnance, it will be turned over to the St. Louis Bomb Squad for disposal. Once the work area is cleared using the magnetometer, an excavator will remove the top 10- to 15-inches of soil for disposal.

This process would be repeated for each layer of soil until the remaining 5,000 cubic yards of contamination in Plant 2 has been removed as described in the SLDS Record of Decision. The USACE hopes that the remedial work in Plant 2 can be completed by February assuming inclement weather does not further hamper remediation efforts.

Plant 1 Remediation Starting

Concurrent with the Plant 2 work, contractors are focusing their efforts on Plant 1. Remediation activities in Plant 1 will begin with the removal of the asphalt and concrete, which presently cover the contaminated soils around the footprint of the demolished Building K.

To prepare the site, crews will survey and stake the excavation area so that it may be fenced off to prevent inadvertent access. Electric, water and sewer lines will be routed away from the area. Due to an elevation difference between the Building K pad and the street, a temporary ramp will be constructed to assist the trucks in transporting material from Plant 1 to the loading facility.

Pre-design characterization data indicate Plant 1 contains approximately 1,500 cubic yards of contaminated material in the main excavation area. Another 500 cubic yards divided between an additional eight areas of elevated radiological activity in Plant 1 will also be remediated.

What's Next?

Once the UXO plan is finalized, remedial work in the main excavation area of Plant 2 will resume while regular construction crews remediate Plant 1. ■

Why Don't You Just Start Digging?

Q: If you know the contamination is there, why don't you just start digging it up and hauling it away? Once all of the contamination is removed, the problem is resolved and everyone goes home. Why do you keep writing documents?

A: *Although an environmental cleanup project seems very simple, numerous activities must take place before contaminants can be removed. No one wants to go into a contaminated area without knowing what pollutants are there. Unless you know what contaminants are present, it is difficult to protect yourself against its health risks.*

In 1980, Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). FUSRAP is conducted according to the processes described in CERCLA.

*The first step in the CERCLA process is to conduct a **Preliminary Assessment (PA)**. Historical background information is collected to determine the likely locations of hazardous materials and to determine the initial extent of site contamination. Next, a **Site Inspection (SI)** is performed to verify historical information through limited soil and water sampling. If substantial amounts of contamination are confirmed present on the site, further study and analysis are needed. The **Remedial Investigation (RI)** further identifies the types of contaminants present at or near the site, the degree and extent of contamination, and potential risks to the public health and environment. Information gathered during the RI will assist in developing cleanup alternatives, which will be identified in the **Feasibility Study (FS)**. Once the remedial alternatives are identified, the **Proposed Plan (PP)** is written. The PP compares the alternatives presented in the FS and identifies a recommended cleanup remedy for a site. When the draft FS/PP is completed, the documents are presented to the public for review and a 30-day public comment period begins. While the public can submit comments at any time during this review period, a public meeting is also held to provide an opportunity to discuss the alternatives. After the 30-day comment period has ended, a specific long-term remedial action or cleanup technology is selected.*

*The selected cleanup alternative is identified in the **Record of Decision (ROD)**, which is the final document in the CERCLA process. The ROD will substantiate the need for a remedial action, describe the proposed action and justify the removal action selected. Public comments, the Corps' replies, and any new information are detailed in a section of the ROD known as the Responsiveness Summary.*

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