WSSRAP

UPDATE

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Distributed to residents of St. Charles County to report on the progress of the Weldon Spring Site Remedial Action Project

Foundation Removal Paves Way For Waste Disposal

Pictured above is the 7,800 pound wrecking ball used to break apart the WSSRAP building foundations.

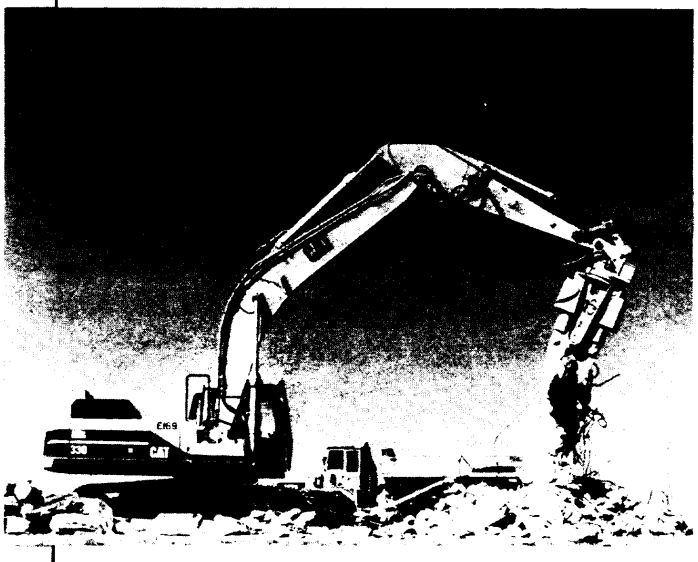
Over the next 14 months, the layout of the Weldon Spring Site Remedial Action Project (WSSRAP) will change as the Foundations and Contaminated Soil Removal work package is performed. The area being cleared will be the future site of the sludge treatment plant and a portion of the disposal facility.

The removal work is the beginning of the most significant changes to the site since building dismantlement was completed over one year ago. The scope includes removal of the Chemical Plant building foundations, site roads, contaminated soils, and underground utilities within a major portion of the WSSRAP. These materials will be stockpiled for future placement in the planned disposal facility.

Some existing clean soil is beneath the foundations that are within the footprint of the disposal facility. The clean soil will be removed if it does not meet the stringent characteristics necessary for the construction of the disposal facility foundation. All soils removed will be replaced with suitable soils that will have the required low permeability and structural stability needed for construction of the disposal facility.

The Foundations subcontract was awarded September 28, 1995 to Avisco, Inc. During the winter the subcontractor concentrated on breaking the foundations with a crane and a 7,800 pound wrecking ball. On March 22, 1996, the first concrete removal activity began.

The scheduled completion date for this project is August, 1997.



After the concrete foundations are broken apart, the material is loaded onto a truck and taken to a material staging area, where it waits final on-site disposal.

Chemical Wastes Shipped to Facility in Tennessee

On May 14, 1996 the last shipment of more than 20,000 gallons of incinerable organic and aqueous liquids stored at the Weldon Spring Chemical Plant Site left for the K-25 incinerator facility in Oak Ridge, Tennessee.

Shipment of these wastes began January 10, with over 4,000 gallons of tributal-phosphate (TBP) waste taken by a licensed waste hauler to the Oak Ridge facility.

Building 434, the only original Chemical Plant building left standing in the controlled area of the Weldon Spring Site, has long been a storage house for various chemicals and waste liquids found on-site through the course of the WSSRAP cleanup. These waste products have been characterized and segregated by product type and level of reactivity.

A total of six tankers traveled the distance between Weldon Spring and Oak Ridge, carrying the TBP and aqueous waste, mixed organics and waste oil.

Workers prepare the barrels of waste at the WSSRAP for transfer to the tanker transport.

Subsequent shipments of chemical waste destined for the K-25 Incinerator left the site on January 17, 24 and 30, carrying 12,915 gallons of waste oil, and organically contaminated aqueous wastes.

The remaining two shipments of waste to Oak Ridge resumed on May 8.

Foundation and Contaminated Soils Summary

The following statistics may help in gaining some perspective on the effort required to perform the work involved in the removal of the foundations and contaminated soils. (All figures are approximate.)

- *50,000 cubic yards of foundation concrete*
- *175,000 cubic yards of contaminated soil*
- *47,000 linear feet of underground utility pipe*
- *155,000 cubic yards of clean soil*
- *208,000 cubic yards of backfill soils to be placed--125,000 cubic yards will be obtained from a borrow source*
- *Over 3,000 samples will be taken following contaminated soil removal to confirm that the contaminants of concern have been removed to pre-established concentrations.*

POST QUARRY BULK

In October 1995, the WSSRAP declared the Weldon Spring Quarry cleanup project to be substantially complete. Below is a pictorial update of the Quarry work progress.

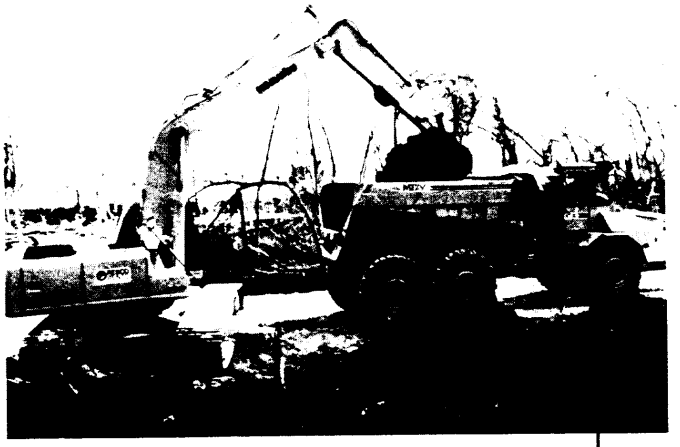
(Right) Subcontractor employees performing decontamination activities on an excavator, high lift and grappler. These pieces of equipment were used in the quarry to remove bulk waste. The workers are utilizing acid wash techniques developed at the WSSRAP in order to achieve strict DOE release criteria.

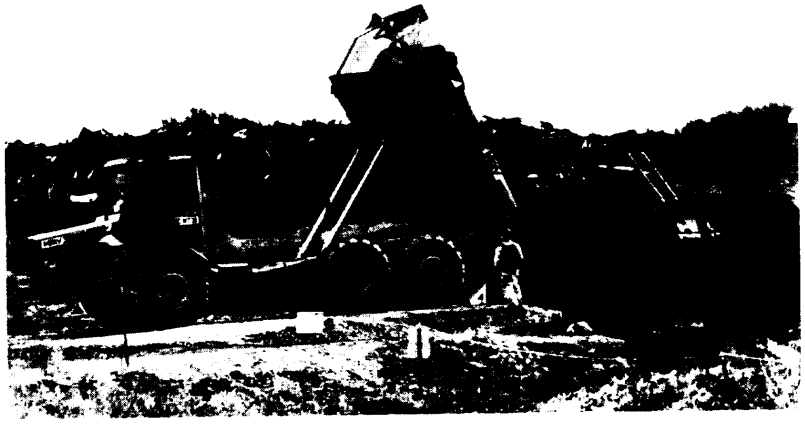
(Right) Subcontractor employee decontaminating the operator cab of an excavator used in the Bulk Waste removal project.

(Left) Subcontractor employees decontaminating a bucket from an excavator. The employees are using grinding techniques developed at the WSSRAP to achieve strict DOE release criteria.

WASTE REMOVAL

(Right) Contaminated soil from Vicinity Property #9 is loaded onto a tri-axle off-road haul truck. This property is located near the Quarry, adjacent to the Katy Trail on Missouri Department of Conservation property. This activity was completed in February 1996.





(Left) Contaminated soils from Vicinity Property #9 were transported approximately four miles to a storage area at the Chemical Plant Site. These soils will remain in storage until final placement in the planned on-site Disposal Facility.

(Right) Employees perform characterization drilling on the northeast slope of the Quarry. Several borings were taken at various angles to determine the level of radiological and chemical constituents in the soils. This information will be used in the Quarry Residuals Remedial Investigation Report currently being prepared for the Quarry Residuals Operable Unit.

Highway 94 Relocation Contract Awarded

Above is an air view of the Highway 94 relocation work that will support the construction of the Borrow Area Haul Road.

The Missouri Highway and Transportation Commission (MHTC) recently awarded Kolb Grading a contract to relocate a section of Highway 94, near the WSSRAP.

The realignment of Highway 94 supports the construction of a haul road from the Borrow Area, located on Department of Conservation property, to the site. The WSSRAP will be using clay from the Borrow Area in the construction of the on-site disposal cell facility. The realignment includes an underpass to take haul trucks under the highway to avoid interfering with public traffic.

A preconstruction meeting was held on April 2, and notice to proceed for the highway realignment was given on April 8.

The highway relocation work is scheduled to be complete by the end of August, with minimal impact to existing traffic on Highway 94. Hauling of soils to build this relocation will take place off-road to avoid highway safety issues in front of the high school. WSSRAP personnel will attend scheduled construction meetings to monitor progress.

When all of the relocation work is completed, the new route will provide improved alignment of Highway 94 and allow borrow haul traffic to cross beneath the highway safely without interfering with public traffic.

Waste Pit Debris Consolidation Begins

During operational days of the Weldon Spring Uranium Processing Plant (1955-1966) four Raffinate Pits were built to store wastes from uranium processing operations. These pits are mostly filled with waste sludges from uranium metal processing. This sludge consists of magnesium fluoride, washed slag from uranium processing and Thorium-232 solids. Other debris was later placed in these pits, including, overhead piping supports, miscellaneous waste materials and thousands of drums. All debris must be removed in order to treat the sludge.

Debris consolidation is imperative to the remediation of the raffinate pits. Raffinate Pit #4 contains the majority of the debris from the uranium processing plant operation, and approximately 20,000 cubic yards of sludge. The debris is currently being consolidated, and placed in the appropriate interim storage areas before final placement in the site's disposal cell facility. A portion of Pit #4 berm was removed to allow personnel and equipment to access the debris.

Debris consolidation began in April 1996, and is expected to take about six months to complete.

Treating the Waste At WSSRAP

Pictured right is a 3-D conceptual drawing of the proposed Chemical Stabilization/Solidification (CSS) Plant. This treatment facility will be constructed to treat contaminated sludges at the WSSRAP starting mid -1999. Raffinate pit sludges at the WSSRAP will be treated to provide a structurally stable waste form before it is placed in the on-site engineered disposal cell. In the CSS process, fly ash and portland cement will be mixed with contaminated sludges to proude a grout product. In the disposal cell, the grout product can be poured onto contamined debris and equipment in order to fill voids.

Southeast Drainage Study Reviewed

The Department of Energy is proposing to clean up select areas within a natural drainage leading from the Chemical Plant to the Missouri River. This drainage, known as the Southeast Drainage, formerly carried surface water runoff and process sewer discharge from the Weldon Spring Chemical Plant.

The DOE is proposing the use of off-highway, low impact equipment to perform select area removal. This method would balance the need to remediate this drainage, with the desire to protect the ecosystem within this active drainage area. Remediation proposed would include excavation with low ground pressure equipment, and haul with off-highway trucks to the Chemical Plant for storage and final disposal. This type of excavation and haulage equipment will reduce the road grading and construction necessary to a practical minimum, while still accessing all portions of the drainage where unacceptable levels of contamination exist.

Existing roadways and cleared areas will be utilized for access routes. These access routes include abandoned roadways, the Army property access road, cleared zones associated with utility installations, and a portion of the Katy trail. Two areas of highway 94 will be crossed, and traffic safety measures would be implemented per requirements of the Missouri Highway and Transportation Department.

Restoration will be accomplished by regrading the remaining sediments, and grading and revegetating any roads constructed for temporary haul. All restoration will be planned and accomplished with the coordination of the Missouri Dept. of Conservation, who owns the land in and around the drainage.

New Members For Citizens Commission

The Commision at work. *From left to right: Elaine Blodgett, Jon Getzinger, Glen Hachy, Daryl Anderson and John Urbanowicz*

The St. Charles County Citizens Commission has three new faces on the seven member board. The Commission, which acts as communications link between the Weldon Spring Site and St. Charles County residents, welcomed John Urbanowicz, Jon Getzinger and Daryl Anderson.

The three new members replaced retiring members, Teri Fricke, Karen Browne and Ken Gronewald.

The Commission meets on the third Thursday of each month at 7:00 P.M. downstairs in the old St. Charles County Courthouse on Third Street in St. Charles. The meetings are open to the public.

Check It Out! WSSRAP On the World Wide Web

Looking for more information on the WSSRAP? You can find it on the World Wide Web.

The WSSRAP Web Site takes the visitor through the history and progress of the WSSRAP, and offers a peek at the future.

The WSSRAP World Wide Web Site can be found at **http://www.em.doe.gov/wssrap.html,** and our e-mail address is **wssrap@inlink.com.**

WSSRAP Update

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