US Army Corps of Engineers®
St. Louis District

St. Louis Sites Fact Sheet

ENVIRONMENTAL MONITORING PROGRAM

"Gateway to Excellence"

Cleanup activities at the St. Louis Sites are part of a nationwide U.S. Army Corps of Engineers (USACE) environmental program known as the Formerly Utilized Sites Remedial Action Program (FUSRAP). FUSRAP in St. Louis includes the North County Sites and the St. Louis Downtown Sites. These sites contain soils contaminated with radium, thorium, and uranium as a result of activities associated with the Manhattan Engineer District/Atomic Energy Commission (MED/AEC) during the nation's 1940s and 1950s atomic program.

USACE uses scientific knowledge and skilled investigators to identify places at and near these sites that may need cleanup. The work requires deliberate sample site selection and then precise laboratory analysis in order to prioritize cleanup actions.

To learn more about FUSRAP, contact the FUSRAP Project Office at 314-260-3905 or, via email, at STLFUSRAP@usace.army.mil.

USACE is responsible for the Environmental Monitoring Program (EMP) for the St. Louis Sites, including St. Louis Downtown Sites (SLDS) and North County (NC) Sites. The EMP includes year-round monitoring of various media including surface water and sediment in and along Coldwater Creek, groundwater, stormwater, excavation water, and laboratory discharge water. FUSRAP scientists follow plans, guidelines, and regulations to collect samples to monitor site conditions.

The EMP follows the Environmental Monitoring Implementation Plan for each calendar year (EMICY). Separate EMICY documents are annually developed for SLDS and NC Sites. The objectives change every year based on the status of removal actions, changes in monitoring well networks, regulatory concerns, and prior year contaminant trends. EMICY documents identify sampling locations, frequencies, parameters, and criteria for evaluation of the resultant data. The activities outlined in the EMICYs demonstrate compliance with regulations and the requirements of state or local permits.

To conduct the monitoring described in the EMICYs, USACE samples various media at the SLDS and NC Sites and documents the findings in the annual Environmental Monitoring and Data Analysis Reports (EMDARs). The EMDARs provide the laboratory analytical results received during the previous year. The EMDARs include data and evaluation of indoor and outdoor air, stormwater, excavation-water, laboratory discharge, groundwater, and Coldwater Creek sediment and surface-water monitoring. The EMDARs demonstrate compliance with the respective ROD goals, requirements, and permitted guidelines. The public can read the current EMICYs and EMDARs from 2010 onward at www.mvs.usace.army.mil/Missions/FUSRAP/

COLDWATER CREEK SURFACE WATER AND SEDIMENT MONITORING AND SAMPLING

As part of the EMP, during the spring and fall of every year, USACE environmental scientists collect surface water and sediment samples from eight stations along Coldwater Creek.

Surface water collected in Coldwater Creek shows that pollution prevention methods used during remediation activities are working to prevent degradation of the creek.

Data collected from these stations show that remediation work is not negatively impacting surface water quality and that pollution prevention methods are working. The sampling stations are located along Coldwater Creek from McDonnell Boulevard near the airport to near Lindbergh Avenue (U.S. Highway 67). As remediation continues, the USACE will evaluate new sampling stations from U.S. Highway 67 to the Missouri River. The data from this sampling are reported in the annual EMDAR for the NC Sites.

GROUNDWATER MONITORING AND SAMPLING

USACE environmental scientists maintain and monitor a network of 27 groundwater monitoring wells at the NC Sites and 13 groundwater monitoring wells at SLDS. They sample groundwater four times a year. Before sampling, the scientists inspect and measure water levels in all wells. Water quality parameters, such as pH and turbidity, are collected prior to sampling each well. Representative water samples are then collected from the wells identified for sampling and the water samples are carefully packaged and shipped to analytical laboratories for analysis of contaminants of concern. All of the data obtained from each quarterly event are reported in the annual EMDARs.

Groundwater monitoring wells are valuable for testing water quality and detecting contaminants of concern.

STORMWATER AND EXCAVATION WATER MONITORING AND SAMPLING

Stormwater and excavation water monitoring is an integral component of the EMP. Excavation activities and stormwater resulting from removal actions at St. Louis Sites could result in discharges that are covered under various state and local discharge requirements. The purpose of this monitoring is to meet state and local requirements for discharges to various outfalls. The results of stormwater and excavation water monitoring are reported in the annual EMDARs.

AIR QUALITY MONITORING AND SAMPLING

The FUSRAP air quality sampling program is designed to provide surveillance of public exposure routes, verify compliance with air quality regulations and quantify the potential release of radioactive materials to the atmosphere. Air quality is monitored near remedial action areas at the SLDS and the NC Sites. In addition, USACE air quality scientists collect air samples from an established background air quality monitoring station. Background samples are collected to obtain baseline air quality comparison data.

USACE scientists monitor air quality to show that remediation is not negatively impacting the environment.

Air quality monitoring is also conducted near any contaminated soil load out area to monitor potential airborne radiation in areas that represent the maximum potential public radiation exposure. USACE scientists also monitor air quality for particulates and both outdoor and indoor (at some locations) air for radon. Particulate air samples are collected using calibrated air pumps. Indoor air quality is monitored for radon at two locations at SLDS and at 10 locations at the North County Sites. All of the data and results are documented in the annual EMDAR and National Emission Standards for Hazardous Air Pollutants reports (included in the EMDAR as an appendix).

WHAT THIS MEANS TO YOU

By following the EMP, USACE ensures that work is conducted in compliance with applicable public protection standards and regulations. The resulting data are then used to verify and document that the public and environment are not adversely affected by FUSRAP actions. All of the EMP data and results are annually reported in the EMDARs, which can be reviewed at: www.mvs.usace.army.mil/Missions/Centers-of-Expertise/Formerly-Utilized-Sites-Remedial-Action-Program.