



FUSRAP

Chicago South, Illinois, Site

This fact sheet provides information about the Chicago South, Illinois, Site. This site is managed by the U.S. Department of Energy Office of Legacy Management under the Formerly Utilized Sites Remedial Action Program.

Site Description and History

The Chicago South, Illinois, Site is located near Ellis Avenue and 58th Street on the campus of the University of Chicago, approximately 7 miles south of the downtown business district. This 171-acre site comprises the Ryerson Physical Laboratory, Kent Chemical Laboratory, the George Herbert Jones Chemical Laboratory, and Eckart Hall. Other buildings associated with this site—the New Chemistry Laboratory and Annex, west stands of Stagg Field, and Ricketts Laboratory—have been torn down.

In 1941, The National Defense Research Committee contracted the University of Chicago to construct a uranium and graphite pile (a small mass of uranium rods embedded in a larger mass of graphite for the purpose of producing a controlled atomic fission reaction) to investigate the probability of producing plutonium to be used for developing an atomic bomb. Enrico Fermi oversaw construction of the first pile that was large enough to sustain a chain reaction on campus the following year beneath the west stands of Stagg Field. That same year, all work on the development was transferred to the Metallurgical Laboratory, where it continued until 1946 when the U.S. Atomic Energy Commission (AEC) was created. Work under the AEC contract continued through 1952. During the early 1950s, after transfer of nuclear activities to Argonne National Laboratory's new site in DePage County, the Chicago South site was decontaminated using state-of-the-art techniques for that time.

Because a records search in the 1970s did not turn up documentation of any radiological surveys or decontamination, in 1976–1977 AEC directed Argonne National Laboratory to conduct surveys to determine whether any contamination remained above then-current guidelines. Although only minimal uranium contamination was found,



Location of the Chicago South, Illinois, Site

some remediation was deemed necessary to meet these guidelines. In 1977, as part of a facilities renovation program, the University of Chicago decontaminated Kent Chemical Laboratory at 23 locations in 14 rooms or areas, including the removal of contaminated sewers and some soil beneath the building. Decontamination of Jones Chemical Laboratory at 46 locations in 17 rooms or areas, Ryerson Physical Laboratory at 40 locations in 26 rooms or areas, and Eckart Hall at 13 locations in 9 rooms or areas occurred in 1984 under the Formerly Utilized Sites Remedial Action Program

(FUSRAP). Cleanup included removing and replacing ductwork and cabinets; removing concrete, bricks, tile, wood, insulation, and soil; scabbling concrete; and applying solvents to metals. Some piping and a significant amount of floor and wall material (which was visibly contaminated from deposits of yellow uranium salts) were removed from the fourth floor attic of Jones Chemical Laboratory. A total of 600 cubic feet of radioactively contaminated solid waste from all four facilities and three 55-gallon drums of liquid waste were removed, packaged in bins, and shipped to approved waste sites for disposal. Remediation of the Chicago South site was completed in 1987.

Regulatory Setting

AEC, a predecessor agency to the U.S. Department of Energy (DOE), established FUSRAP in March 1974 to evaluate radioactive contamination at sites where work was performed to develop the nation's nuclear weapons and early atomic energy program. After reviewing records and radiological surveys for more than 600 sites connected with the nuclear weapons program, DOE identified 46 sites that required cleanup, including the Chicago South site. Congress transferred responsibility for FUSRAP site characterization and remediation to the U.S. Army Corps of Engineers in 1997. DOE retains long-term surveillance and maintenance responsibilities for remediated FUSRAP sites.

The Chicago South site was remediated to criteria in *Guidelines for Residual Radioactive Material at Formerly Utilized Sites Remedial Action Program and Remote Surplus Facilities Management Program Sites*. A notice of cleanup certification for the site was reportedly published in the *Federal Register*.

In fiscal year 2004, DOE transferred responsibility for the Chicago South site from the DOE Office of Environmental Management to the DOE Office of Legacy Management (LM).

Current Site Conditions

Post-remedial-action survey data indicate that the radiological condition of the Chicago South site is in compliance with applicable DOE standards and guidelines for cleanup of residual radioactive contamination. An independent verification survey conducted after the completion of remedial action detected no residual radioactivity at the site that exceeded current guidelines. Therefore, DOE released the site for unrestricted use. The site has been restored to a condition acceptable to the university.

Legacy Management Activities

No monitoring, maintenance, or site inspections are required for the Chicago South site. LM's responsibilities consist of managing site records and responding to stakeholder inquiries.

Contacts

In case of an emergency at the site, contact 911.

Documents related to FUSRAP activities at the Chicago South site are available on the LM website at http://www.lm.doe.gov/chicago_south/Sites.aspx.

For more information about LM's activities at the Chicago South site, contact:

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