

# MISSOURI

## Kansas City Plant, Weldon Spring Site

### Background

Missouri is home to one former site, the Kansas City Plant, and one long-term stewardship (LTS) site, the Weldon Spring Site. The state also hosts the current U.S. Department of Energy (DOE)-National Nuclear Security Administration (NNSA) Kansas City National Security Campus.

The former Kansas City Plant occupied 136 acres of the 309-acre Bannister Federal Complex in Kansas City, Missouri. The Kansas City Plant's mission — to manufacture nonnuclear components for defense purposes — ended in August 2014, and the facility was relocated to the new Kansas City National Security Campus in south Kansas City.<sup>1</sup> U.S. Navy and DOE-

NNSA operations at the Bannister Federal Complex released hazardous materials, primarily chlorinated solvents and polychlorinated biphenyls, into the environment.<sup>2</sup> DOE-NNSA identified historic radioactive contamination and characterized and remediated it to an unrestricted release. DOE-NNSA developed a request for early transfer and, following the Governor's approval, transferred the entire Kansas City Plant and the portion of the Bannister Federal Complex west of the railroad tracks to Bannister Transformation & Development LLC on November 15, 2017.<sup>3</sup> Bannister Transformation & Development has now assumed the responsibility for completing corrective action and site remediation under the Resource Conservation and Recovery Act (RCRA), while DOE is responsible financially for the cost of site remediation and for long term stewardship, maintenance, and operations of remedial actions.

DOE's new Kansas City National Security Campus facility continues the mission of the Kansas City Plant, manufacturing non-nuclear components for defense purposes. The facility was designed to prevent accidental releases of contaminants to the environment. Many of the same materials that were used at the Kansas City Plant continue to be used at the new facility.

DOE's Office of Legacy Management (LM) currently manages the Weldon Spring Site as an LTS site. Located 30 miles west of St. Louis, the site served a variety of missions for the U.S. Army and DOE's parent agencies (the U.S. Atomic Energy Commission and others) from 1941 to 1984 that involved both explosive ordnance and nuclear materials. The DOE portion of the operations, listed on the National Priority List in 1987, was a plant that converted processed uranium ore concentrates to pure uranium trioxide and other products.



**FIGURE 1:** Kansas City National Security Campus. Photo courtesy of U.S. Department of Energy.

<sup>1</sup> U.S. Department of Energy, National Nuclear Security Administration. (2013, February). *Draft environmental assessment for the transfer of the Kansas City Plant, Kansas City, Missouri*. Retrieved from <https://www.energy.gov/sites/prod/files/EA-1947-DEA-2013.pdf>.

<sup>2</sup> Missouri Department of Natural Resources. (n.d.). Bannister Federal Complex. Retrieved from <https://dnr.mo.gov/env/hwp/fedfac/bfc.htm>.

<sup>3</sup> Missouri Department of Natural Resources. (n.d.). Bannister Federal Complex. Retrieved from <https://dnr.mo.gov/env/hwp/fedfac/bfc.htm>.

Two other sites in the St. Louis area of Missouri are currently being cleaned up by the U.S. Army Corp of Engineers under the Formerly Utilized Sites Remedial Action Program. Once these sites have been remediated, they will be transitioned back to DOE LM for long term stewardship.

## Major Accomplishments

DOE has worked with Missouri to achieve the following outcomes:

- At the Kansas City Plant, DOE carried out environmental restoration activities at 43 release sites or areas of concern that posed a potential threat to human health and the environment. Operational oversight was accomplished through an Agreement in Principle,<sup>4</sup> which allows for a day-to-day state presence at the site, enabling the state to serve as an independent party that can assist in answering the public's questions about the operation without causing security concerns. In 2014, the RCRA post-closure permit for the Kansas City Plant was expanded to include the entire Bannister Federal Complex, which the U.S. General Services Administration and DOE-NNSA jointly owned and managed prior to the transfer of the 235 acres west of the railroad tracks. DOE-NNSA, with state concurrence, transferred the entire Kansas City Plant to Bannister Transformation & Development LLC on November 15, 2017; and
- Cleanup at Weldon Spring began in 1984 and continued in phases until the completion in 2001 of a 45-acre disposal cell in an area formerly occupied by chemical plant production buildings. The disposal cell contains approximately 1.48 million cubic yards of contaminated materials.<sup>5</sup> Leachate from the disposal cell is collected, treated and discharged off-site. A native prairie has been established around the disposal cell that provides erosion control and educational opportunities through a viewing platform at the peak of the disposal cell. The site also offers public trails and a new interpretive center that preserves the site's history.

## Site-Specific Issues

At the Weldon Spring Site, a long-term surveillance plan details a groundwater monitoring program, a sitewide inspection process and institutional controls that must be maintained in perpetuity.<sup>6</sup> The presence of residual contamination requires institutional and engineering controls that must be inspected regularly and maintained. Now that the site has been in LTS for an extended period, the state has noted some ongoing concerns regarding assumptions made in early groundwater assessment documents compared with actual site conditions that DOE must address.

As demolition activities finish, environmental cleanup, management, and economic redevelopment continue at the former Kansas City Plant. State oversight and coordination with the developer and DOE-NNSA maintain progress and ensure regulatory compliance and overall success. Transferring LTS responsibilities to DOE's Office of Legacy Management is under consideration.

<sup>4</sup> U.S. Department of Energy. (2013, October). Record of categorical exclusion (CX) determination. Retrieved from [https://kcnsd.doe.gov/docs/default-source/cx-determinations/ne-pa-mdnr-ajp.pdf?sfvrsn=b628f49f\\_2](https://kcnsd.doe.gov/docs/default-source/cx-determinations/ne-pa-mdnr-ajp.pdf?sfvrsn=b628f49f_2).

<sup>5</sup> U.S. Department of Energy, Office of Legacy Management. (2011, September). *Weldon Spring site fourth five-year review* (Report No. LMS/WEL/S07406). Retrieved from [https://www.lm.doe.gov/Weldon/Fourth\\_Five-Year\\_Review.pdf](https://www.lm.doe.gov/Weldon/Fourth_Five-Year_Review.pdf).

<sup>6</sup> U.S. Department of Energy, Office of Legacy Management. (2011, September). *Weldon Spring site fourth five-year review* (Report No. LMS/WEL/S07406). Retrieved from [https://www.lm.doe.gov/Weldon/Fourth\\_Five-Year\\_Review.pdf](https://www.lm.doe.gov/Weldon/Fourth_Five-Year_Review.pdf).

## Relationship to Other Sites in the Complex

The Kansas City Plant previously provided all the nonnuclear components for the nuclear complex's weaponry. As a result, although the Kansas City Plant/Bannister Federal Complex site was transferred to a private entity through the early transfer process, NNSA will continue its mission at the Kansas City National Security Campus.

Weldon Spring was one of the first sites to be remediated and transferred to DOE LM. As more sites begin to transition from active DOE EM work to remediation to long term stewardship, Weldon Spring has served as a guide for how to consider and address the long-term issues at a site even before a remedy has been chosen. It has also showcased how including an on-site information source through an interpretive center helps educate current and future generations about what occurred at the site.