Former Superior Steel Site

Scott Township, PA

U.S. Army Corps of Engineers
Buffalo District

Building Strong ®

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Formerly Utilized Sites Remedial Action Program (FUSRAP)

FUSRAP was initiated in 1974 to identify, investigate, and, if necessary, clean up or control sites throughout the United States (U.S.) that were part of the Nation's early atomic weapons and energy programs during the 1940s, 1950s, and 1960s. Congress transferred management of FUSRAP from the U.S. Department of Energy to the U.S. Army Corps of Engineers in 1997. When implementing FUSRAP, the Corps follows the investigation and response framework of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan.

Site Description and History

The former Superior Steel Site is an industrial complex located at 500 Superior Street in Scott Township, Allegheny County, Pennsylvania, (latitude 40.398569, longitude -80.0096351) about 8 km (5 mi) southwest of downtown Pittsburgh. It is located in United States Environmental Protection Agency (USEPA) Region 3. The 25-acre site originally was occupied solely by the Superior Steel Company and now consists of several separately owned manufacturing, storage, and office buildings. The site is bounded on the north, west, and south by Chartiers Creek and on the east by Superior Street.

Superior Building 23 Complex

The site processed uranium metal in support of the Atomic Energy Commission (AEC) fuel-element development program from June 27, 1952, to contract termination on September 30, 1957. The uranium processing contract originated with the AEC New York Operations Office and later was administered by the AEC Oak Ridge Operations Office beginning on July 1, 1954. The contract was transferred to the AEC Savannah River Operations Office on October 15, 1954.

Upon contract termination, the AEC Savannah River Operations Office destroyed the official contract file in accordance with its records disposition schedule. The primary AEC operations performed at Superior Steel consisted of salt bathing, rolling, brushing, shaping, cutting, stamping, and coiling of uranium metal. Records indicate that natural and enriched uranium were processed at the site; recycled uranium from reprocessed spent nuclear fuel may also have been processed at the site.

The building that housed the hot mill rolling of uranium metal is identified as Building Complex Number 23 (Bldg. 23). The building was formerly owned by Superbolt, Inc., a manufacturer of mechanical stud and bolt tensioners. The current owner is Frankline Coventry.

Bldg. 23 consists of five interconnected steel-frame warehouses with metal roofs with corrugated steel siding. The floor construction varies from area to area and is a combination of poured concrete, brick, and bare earth. Recent radiological surveys conducted by the Oak Ridge Institute for Science and Education (ORISE) for the Nuclear Regulatory Commission (NRC) addressed and documented radiological contamination throughout the Bldg. 23 complex and in soils adjacent to the north and southwest ends of the facility exterior.

In addition to the work performed for the AEC, Superior Steel was licensed in 1956 to receive possession of and/or title to thorium metal for the purpose of forging, roll cogging, finish rolling, and cutting. This license allowed Superior Steel to receive source material (thorium metal) from another commercial licensee and process it into the desired shape. According to the NRC, the Superior Steel AEC license expired in 1958, and records indicate that there was neither a closeout survey nor inspection of the facility to support termination of this license. There is also potential for commercially-generated beryllium contamination resulting from historic Superior Steel operations. Although any residual radioactive thorium metal and/or beryllium contamination associated with commercial operations is not eligible for cleanup under FUSRAP, it must be considered for health and safety purposes during the Remedial Investigation.

Preliminary Assessment

The Corps of Engineers conducted a Preliminary Assessment in 2007 to determine whether an unpermitted release or threat of release of FUSRAP-related hazardous substances occurred at the site and could pose a threat to human health or the environment.

Based on a review of the available data and information, it was determined that there is evidence of a release or threat of a release of radioactive materials related to AEC-contracted work. Migration of AEC-related material has occurred from the Bldg. 23 complex to the surrounding surface and subsurface soils. Site surface water and groundwater have not been analyzed, however are potentially contaminated due to the presence of building and surface and subsurface soil contamination. In accordance with CERCLA, it was recommended that further investigation be undertaken within FUSRAP, beginning with a Remedial Investigation (RI) to determine the nature and extent of AEC-related contamination and the associated risks to human health and the environment.

Current Status

In September 2013, the Corps of Engineers awarded a contract to conduct an RI. The objective of the RI is to collect and evaluate site information of sufficient quality and quantity to delineate the nature and extent of AEC-related contamination, develop contaminant fate and transport and baseline risk assessments, and document the results in an RI Report. All associated tasks shall be conducted in compliance with the "*Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (USEPA, 1988).*"

Project Data Quality Objectives (DQOs) for field sampling activities were established to ensure compliance with applicable federal, state and local regulations for handling and assessing radiological and other AEC-related contaminants present at the site, and to evaluate potential remedial activities associated with the handling and/or removal of impacted material. The project goals/DQOs for the site are as follows:

- Determine the nature, extent, and concentration of AEC-related material currently present in all environmental media and building materials at the site and any impacted media which may be migrating off-site.
- Determine the likelihood and pathways of contaminant migration.
- Bound the extent and depth of AEC-related contamination.
- Define groundwater flow and contaminant (uranium) transport rates and directions.
- Estimate potential risks to human health and the environment associated with exposures to AEC-related contamination which may exist at the site.
- Obtain data to support technically defensible contaminated soil volume determination.
- Evaluate the characteristics of soil, sediment, and groundwater for waste disposal.

Field sampling is scheduled to occur during the summer of 2014. Field activities to be conducted include sampling and analysis of soil, sediment, surface water, groundwater, and building materials.