



Home > Facility Locator > Sites Undergoing Decommissioning > Complex Materials

Battelle Columbus Laboratories

1.0 Site Identification

Location: Columbus, OH
License No.: SNM-00007
Docket No.: 070-00008
License Status: Decon
Project Manager: George M. McCann

2.0 Site Status Summary

Battelle's base license authorized two sites, the King Avenue site, which was located in Columbus, Ohio, and the West Jefferson Nuclear Sciences site, which was located in West Jefferson, Ohio. In 1977, following decommissioning of the Battelle Research Reactor, which was located at the West Jefferson site, the portion of the license authorizing special nuclear material fuels research at the West Jefferson site was converted from operation to possession only. In December 1993, the NRC issued a letter approving Battelle's Decommissioning Plan, which authorized decommissioning activities at the Columbus, Ohio site. Decommissioning oversight for the Columbus site was transferred to the State of Ohio, when the State became a NRC Agreement State in 1999. The NRC retained jurisdiction over the West Jefferson Site due to total possession of special nuclear materials being in excess of 10 CFR Part 150 limits. The entire West Jefferson site comprises a 1,183-acre tract. The Nuclear Sciences Area occupies an 11-acre fenced enclosure in the northern portion of the West Jefferson site. The site consisted of four major buildings JN-1 (former hot cell facility), JN-2 (former sub-critical assembly and plutonium storage), JN-3 (former research reactor), and JN-4, JN-6 (former site guardhouse), and several smaller structures on a bluff overlooking Darby Creek and Battelle Lake. Buildings JN-1, JN-2 and JN-3 and their support structures were the focus of the final phase of the licensee's decommissioning project. Outside of the fenced area, several active and abandoned filter beds, and part of the site sanitary sewer systems were also included in the project. Radioactive source term of concern included high level transuranics and other special nuclear material. Decommissioning evaluations also included groundwater pathways.

Background and History: Battelle's base license authorized two sites, the King Avenue site, which was located in Columbus, Ohio, and the West Jefferson Nuclear Sciences site, which was located in West Jefferson, Ohio. In 1977, following decommissioning of the Battelle Research Reactor, which was located at the West Jefferson site, the portion of the license authorizing special nuclear material fuels research at the West Jefferson site was converted from operation to possession only. However, the licensee continued to perform research with byproduct material at its Columbus, Ohio site. In December 1993, the NRC issued a letter approving Battelle's Decommissioning Plan, which authorized decommissioning activities at the Columbus King Avenue and the North Nuclear Sciences Sites. Decommissioning oversight for the King Avenue site was transferred to the State of Ohio, when the State became a NRC Agreement State in 1999. The entire West Jefferson site comprises a 1,183-acre tract. The Nuclear Sciences Area occupies a 11-acre fenced enclosure in the northern portion of the West Jefferson site. The site consisted of four major buildings JN-1 (former hot cell facility), JN-2

(former sub-critical assembly and plutonium storage), JN-3 (former research reactor), and JN-4, JN-6 (former site guardhouse), and several smaller structures on a bluff overlooking Darby Creek and Battelle Lake. Buildings JN-1, JN-2 and JN-3 and their support structures were the focus of the final phase of the licensee's decommissioning project. Outside of the fenced area, several active and abandoned filter beds, and part of the site sanitary sewer systems were also included in the project.

3.0 Major Technical or Regulatory Issues

As of February 2006, the contractor completed all building demolition, subsurface foundation excavation and remediation, and back-filling operations at the former North Nuclear Sciences Site. The DOE contractor completed final status surveys during March 2006. The Oak Ridge Institute for Science and Education (ORISE), under contract to DOE, also completed site verification surveys. On August 3, 2006, the licensee filed a license amendment for the termination of its license. The license termination included all final status surveys, a site-wide dose assessment, completed Form 314, with a disposal inventory summary attached. Region III staff have completed review of the licensee's termination request and final status surveys and have preliminarily determined the request to be adequate. The site-wide dose assessment performed by the licensee has determined that the total TEDE for the site, with very conservative assumptions, would be less than 20 mrem per year (9.6 mrem/y max and 1 mrem/y average). The licensee identified a few groundwater monitoring wells, which exceeded the EPA's MCLs for strontium 90, and gross and beta levels. A March 23, 2007 (ML0700801260) level 2 consultation letter was sent to the USEPA. The USEPA responded by letter dated June 21, 2007, (ML0718602130), and indicated that EPA is concerned that in making its groundwater use determination for the Battelle site, NRC has not considered EPA's guidance document "EPA Guidelines for Ground-Water Classifications" nor consulted with Ohio EPA. In EPA's view, NRC should use EPA's guidance document to determine if the groundwater at Battelle is a Class III aquifer and, therefore, not a potential source of drinking water. Further, in EPA's view, NRC should consult with Ohio EPA on NRC's groundwater use determinations since this is the state agency generally responsible for groundwater protection in Ohio. The NRC met with OEPA several times between June and November 2007. In a January 22, 2008, letter to OEPA the NRC advised the OEPA that they believe the consultation has been satisfied. On February 20, 2008, a Public Meeting was held at the Madison County Engineers Office to inform the State and local governments and citizens about the NRC's intent to terminate the Battelle SNM 7 license.

4.0 Estimated Date For Closure

03/31/2008

Page Last Reviewed/Updated Thursday, March 31, 2011

©2000- 2011 NRC