



F-Complex Removal Action at the Knolls Atomic Power Laboratory

FACT SHEET

Engineering Evaluation/Cost Analysis (EE/CA)

December 2022



The U.S. Department of Energy (DOE) Office of Environmental Management has developed alternatives for the potential removal of the F-Complex at the Knolls Atomic Power Laboratory in Niskayuna, New York.

Overview

The mission at Knolls Laboratory is to conduct research for the U.S. Navy on nuclear reactors that provide propulsion for aircraft carriers and submarines. Knolls Laboratory has been an important member of the Town of Niskayuna community since 1946.

The F-Complex is a group of interconnected buildings built between 1951 and 1970 to support several research reactor projects. During its active life, the F-Complex conducted research and testing, stored nuclear materials, and contained a machine shop, office space, and storage areas.

Three test reactor assemblies remain in F-Complex. All three are defueled and in a safe and stable condition awaiting disposition. The buildings have otherwise been emptied and are not currently occupied or in use. The defueled assemblies are part of the Flexible Plastic Reactor (FPR), Thermal Test Reactor (TTR), and Full Core Physics Experiment (FCPE).

Three alternatives for the F-Complex have been developed and are described on the following page. More detailed information is provided in the Engineering Evaluation/Cost Analysis (EE/CA) document, which is available in the F-Complex Information Repository at the Niskayuna Branch of the Schenectady County Public Library or the F-Complex project website at <https://www.energy.gov/em/EMCBC-NY/f-complex>.

Public Comment Period and Public Meeting

There is a 30-day comment period for the public to review proposed alternatives and provide feedback to DOE. The DOE is also hosting a public meeting to provide additional information on the F-Complex removal action alternatives summarized in this fact sheet and to offer an opportunity for attendees to comment on these alternatives.

How You Can Comment

We'd like to hear from you! Please comment in one of the following ways:

- At the **public meeting**
- **Mail** comments to:
Martin Krentz, Federal Project Director
2425 River Road
Niskayuna, NY 12309
Please postmark your comments by February 6, 2023
- **Email** comments to FComplexPublicComments@emcbc.doe.gov

Key Contact

Mr. Martin Krentz
Federal Project Director
U.S. Department of Energy
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Niskayuna, NY 12309
(518) 395-4580
martin.krentz@emcbc.doe.gov

Information Repository

Schenectady County Public Library
Niskayuna Branch
2400 Nott Street East
Niskayuna, NY 12309

Public Comment Period

January 6, 2023, through
February 6, 2023

Public Meeting

Thursday, January 19, 2023
6:00 – 8:00 p.m.

Niskayuna Town Hall
1 Niskayuna Circle
Niskayuna, NY 12309

What the EE/CA Proposes

The EE/CA analyzes alternatives for a potential non-time-critical removal action for the F-Complex, which includes buildings F1, F2, F3, F4, and F6 (Building F5 was removed in 1978). The EE/CA evaluates three different removal action alternatives, described in the following paragraphs.

Alternative 1: Continued Legacy Facilities Management (the “no action” alternative)



Under this alternative, Legacy Facilities Management (LFM), consisting of surveillance, monitoring, and maintenance of F-Complex, would continue. Scheduled repairs and upkeep would occur, along with inspections to assess and monitor building conditions. Under this alternative, these activities would continue indefinitely, and radioactive contamination and hazardous materials would remain. The cost of implementing this alternative is projected to be \$17.5 million over the next 30 years.

As the photograph shows, the no action alternative would not result in visual changes to the exterior of the F-Complex buildings.

Alternative 2: Cleanout of Defueled Assemblies



Alternative 2 would involve cleanout of the defueled test reactor assemblies by removing the tanks, equipment, and piping within the test reactor cells that could otherwise expose workers to radiation dose during subsequent LFM activities. Following equipment removal, the former test reactor cells would be decontaminated. This alternative would eliminate the highest sources of radioactivity, resulting in a reduced level of LFM activities; radioactive contamination and hazardous materials not associated with the defueled assemblies would remain. The cost of implementing this alternative is projected to be \$38.4 million over the next 30 years.

As the photograph shows, there would be limited visual changes to the exterior. Due to the size of the FCPE, the exterior wall and the roof of one of the buildings would need to be removed (depicted by blue shading) so that the defueled assembly could be removed. (Due to the angle of the photograph, the wall replacement is not able to be shown.) Upon removal, the wall would be replaced, and a new section of roof would be installed to protect the building interior from the elements.

Alternative 3: Demolition of F-Complex



Alternative 3 would involve removing the entire F-Complex (Buildings F1, F2, F3, F4, and F6), including the defueled test reactor assemblies located in them. This alternative would remove all radioactive and hazardous materials in the buildings, provide a site suitable for use by DOE in continuing its mission, and eliminate the need for further LFM activities. DOE would retain ownership of the area and would control land use consistent with its continuing research mission at the Knolls Laboratory. The cost of implementing this alternative is projected to be \$68.4 million.

Preferred Alternative

DOE recommends that Alternative 3 be selected as the preferred removal action. Removal would be a permanent and effective remedy that is readily implemented with demonstrated technologies and would make the building footprint available for future use by DOE in continuing its research mission at the Knolls Laboratory.