

Knolls Atomic Power Laboratory F-Complex Inactive Facilities

Public Meeting

January 19, 2023

Martin Krentz, Federal Project Director

Department of Energy

Environmental Management Consolidated Business Center

New York Project Support Office





A Vital and Important Mission

Environmental Management (EM) Mission: To complete the safe cleanup of the environmental legacy brought about from decades of nuclear weapons development and government-sponsored nuclear energy research. EM's first priority is to ensure the safety and health of the public and EM's workforce while continuing to protect the environment.

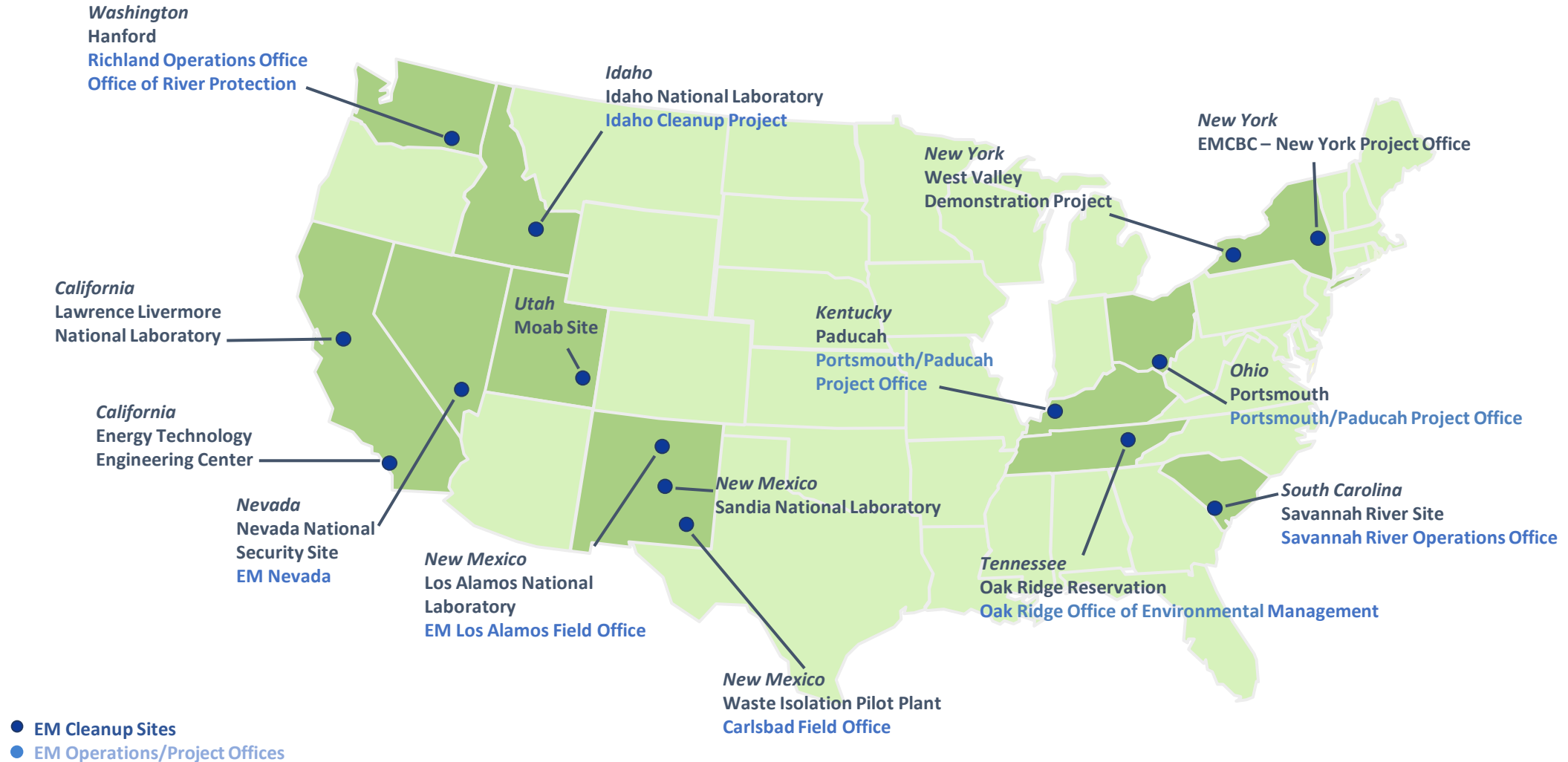


Mission Elements

- 1 Tank Waste
- 2 Special Nuclear Material and Spent Nuclear Fuel
- 3 Transuranic and Solid Waste
- 4 Soil and Groundwater Remediation
- 5 Facility Deactivation and Decommissioning



Environmental Management Complex Map





Knolls Laboratory Overview



- The Knolls Laboratory is a DOE Naval Reactors site whose principal function is research and development in the design and operation of naval nuclear propulsion plants for use in submarines and aircraft carriers.
- 170 acres on the south bank of the Mohawk River in the Town of Niskayuna, Schenectady County, NY.



Legacy Facilities

- Naval Reactors is in a partnership with DOE-EM to address legacy facilities and to conduct remediation of environmental liabilities.
- DOE-EM is beginning a process to address the F-Complex facilities, which have reached the end of their useful life.
 - In accordance with DOE-EM practice, the “Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) Non-Time Critical Removal Action (NTCRA)” process will be followed.
 - The Knolls Laboratory is not a Superfund Site and is not on the National Priorities List.



How does the CERCLA Process for F-Complex Work?

- DOE is following the CERCLA process to assist Agency decision-making.
- DOE will evaluate options for the F-Complex and provide the public an opportunity for input prior to a final decision.
- A Historical Site Assessment and an Engineering Evaluation/Cost Analysis (EE/CA) have been prepared to describe F-Complex and present alternatives.



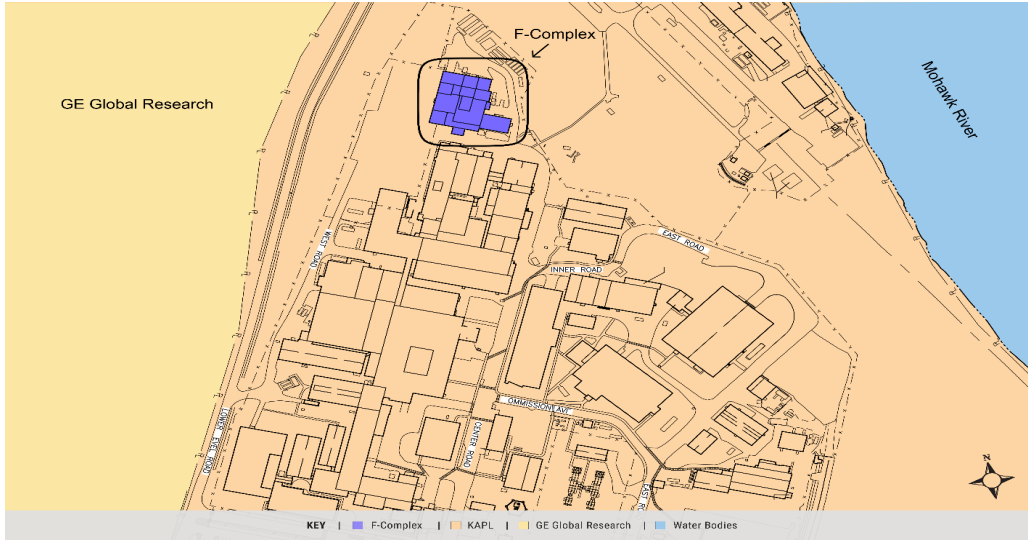


Community Involvement Activities

DOE has...	DOE is...	DOE will...
<ul style="list-style-type: none">• Briefed the project to USEPA, NYSDEC, and NYSDOH,• Met with the Niskayuna Town Supervisor and staff members• Established the Administrative Record (AR) file and opened the Information Repository (IR)• Launched the project website with document links and other information• Announced the project through various media and posted Public Meeting announcements in the community	<ul style="list-style-type: none">• Holding the Public Meeting today, and has a 30-day public comment period on the EE/CA (from January 6th through February 6th)	<ul style="list-style-type: none">• Respond to public comments on the project• Keep the public informed as the project progresses through periodic updates on the webpage or other means



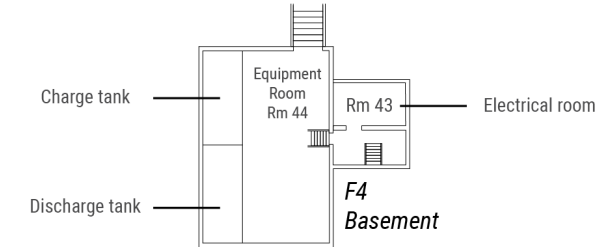
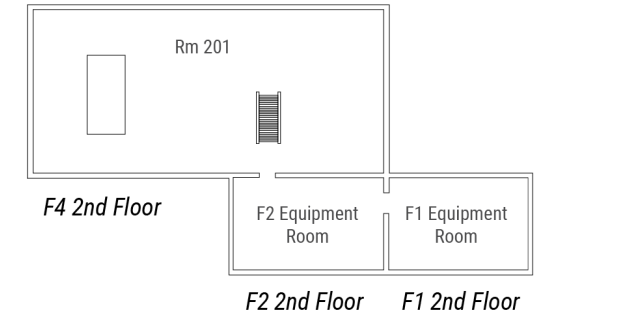
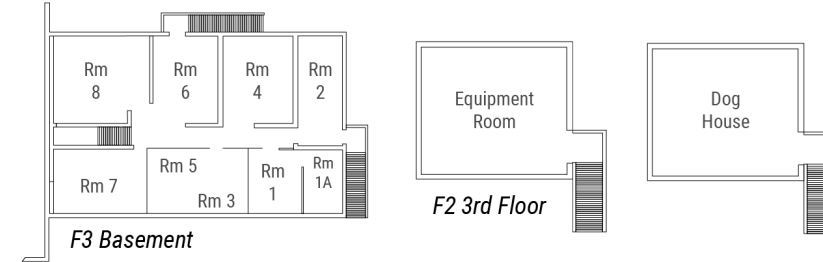
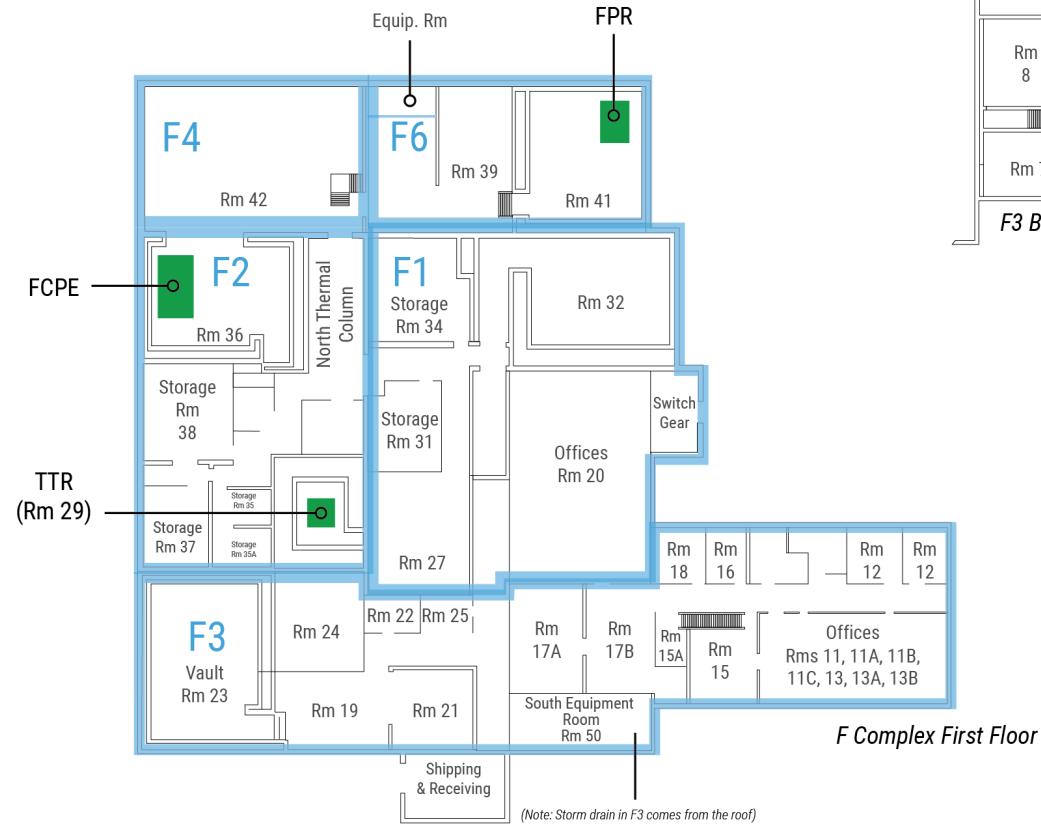
F-Complex Background



- Consists of interconnected group of buildings: F1, F2, F3, F4, and F6.
- Built between 1951 and 1970.
- During its active life, the F-Complex supported several research reactors and storage of nuclear materials.



F-Complex Background *(continued)*



KRPT03_003

KEY | ■ Reactors



F-Complex Overview of Current Conditions

- The buildings are unoccupied and are largely empty.
- The buildings contain asbestos, lead, mercury and PCB containing materials typical of older construction.
- Beryllium is present on inaccessible surfaces in a portion of the F1 and F2 buildings.
- The research reactor assemblies are defueled and in a safe condition. No nuclear materials are stored.
- Residual radioactivity is largely associated with the defueled assemblies and is not accessible.



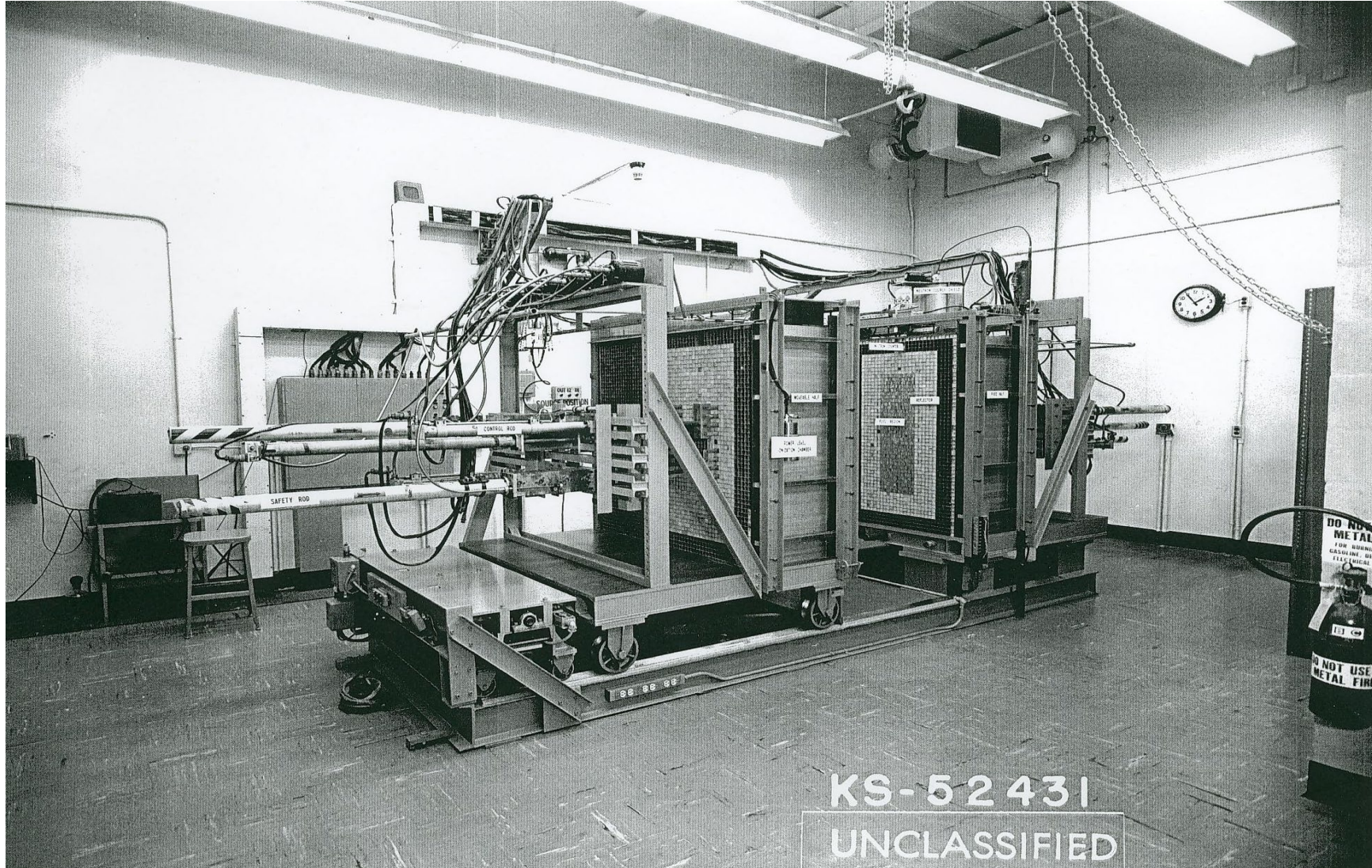


A ground-level exterior view of the facilities





Flexible Plastic Reactor – circa 1955



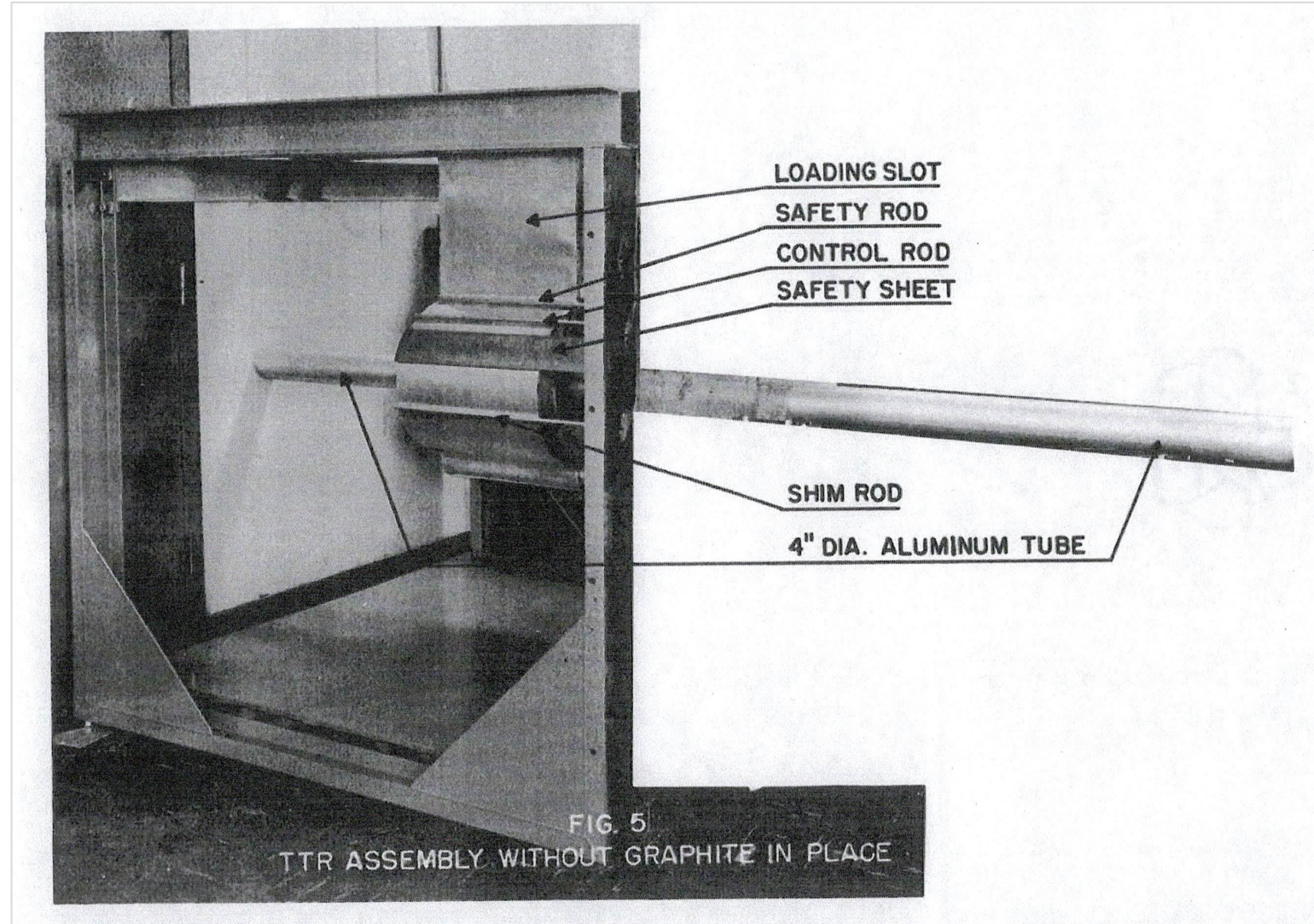


Flexible Plastic Reactor today (in enclosure)





Thermal Test Reactor – circa 1963



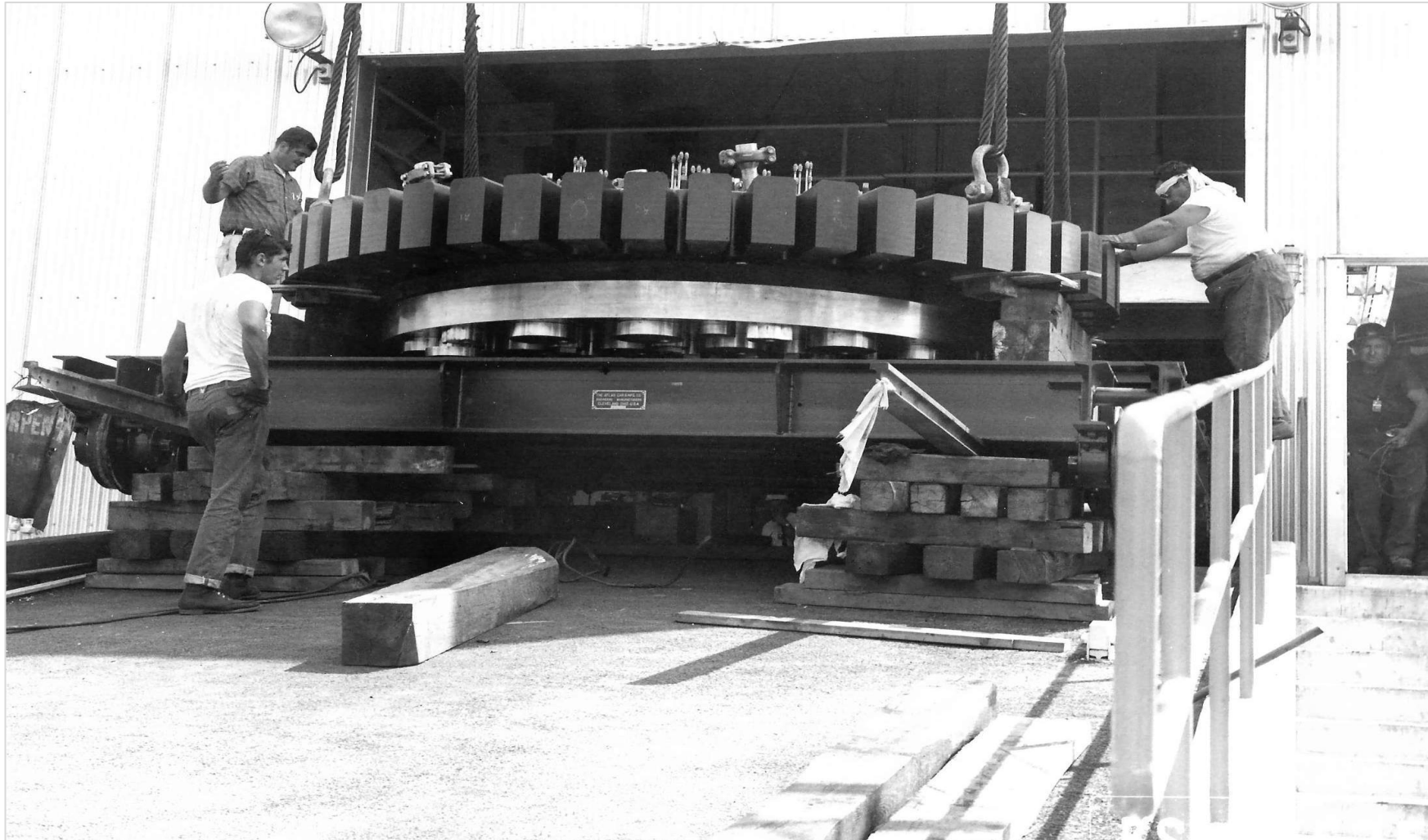


Thermal Test Reactor today (in enclosure)





Full Core Physics Experiment Installation – circa 1969





Current View of a Portion of the Full Core Physics Experiment



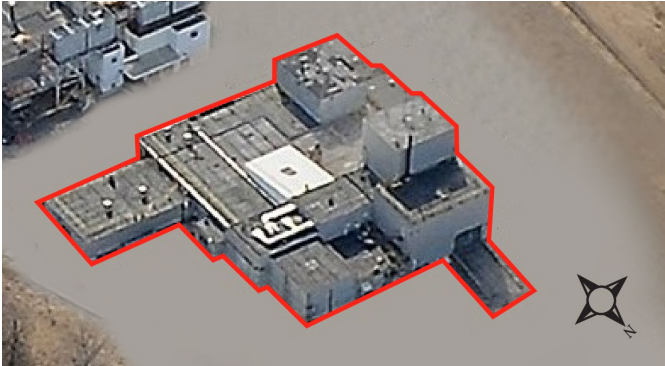


EE/CA – Purpose and Contents

- An Engineering Evaluation/Cost Analysis (EE/CA) is prepared for a relatively non-complex environmental problem.
- An EE/CA:
 - Is a public document,
 - explains the basis for the decision to employ a removal action,
 - uses environmental information such as sampling, monitoring, and survey data that provides details on the nature and extent of contamination and develops and describes alternatives to address these conditions,
 - evaluates and compares the effectiveness, implementability, and cost of the alternatives, and
 - identifies and recommends a preferred alternative.

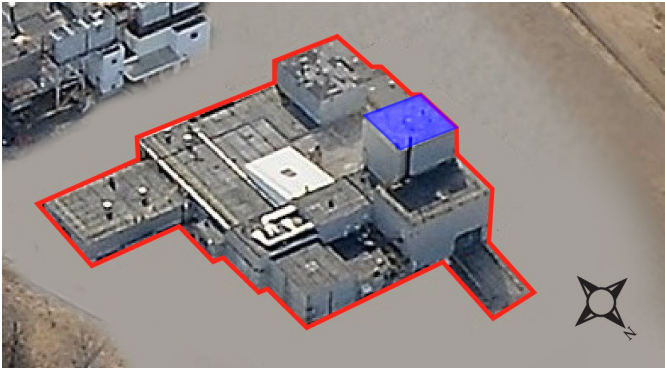


F-Complex Alternatives



Alternative 1

Continued Legacy Facility Management (the “no action” alternative) – buildings and defueled assemblies remain in their current state i.e., “maintenance”.



Alternative 2

Cleanout of Defueled Assemblies – removal of tanks, equipment, piping, decontamination, removal of defueled assemblies and transport off-site for disposal; “maintenance” continues.



Alternative 3

Demolition of F-Complex – removal of tanks, equipment, piping, decontamination, removal of defueled assemblies, removal of F-Complex, and transport off-site for disposal.



CERCLA EE/CA for F-Complex

- Three alternatives are being evaluated to address the F-Complex.
- These alternatives are evaluated in the EE/CA, which is out for public review.
- Following evaluation and your input, DOE will issue an “Action Memorandum” with the final decision.



Alternative 3 – Demolition of F-Complex is DOE's Preferred Alternative

- DOE's preferred alternative is based on the detailed comparative analysis in the EE/CA.
- Although Alternative 3 would cost more and take longer than the other alternatives, it is an effective and permanent remedy to eliminate the environmental legacies in F-Complex.
 - No residual risk will remain
 - It is readily implemented with demonstrated technologies
 - Would not require post-construction or long-term legacy facility management
 - Would make the building footprint available for the continued mission of the Knolls Laboratory



Working Schedule

- DOE Issued the EE/CA on January 5, 2023
- Public Comment Period – January 6 to February 6, 2023
- DOE Releases Record of Today's Public Meeting – March/April 2023
- DOE Issues Action Memorandum – May/June 2023
- DOE Issues Request for Proposal for Selected Alternative – TBD
- DOE Awards Contract – TBD
- Selected Alternative Executed – TBD



Questions or Suggestions?

Point of Contact:

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Information

- Public comment period
 - January 6, 2023 to February 6, 2023
- Email address for comments:
 - FComplexPublicComments@emcbc.doe.gov
- F-Complex website:
 - energy.gov/em/EMCBC-NY/f-complex
- Contact information for Marty Krentz
 - (518) 395-4580
 - Martin.Krentz@emcbc.doe.gov