Western New York Nuclear Service Center

History

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NYSERDA’s West Valley Site Management Program
Western New York Nuclear Service Center

- 3,330 acres in northern Cattaraugus County
- 15 acres in southern Erie County
The West Valley facility owes its existence to the federal government programs of the 1950s that were created to develop peaceful uses for nuclear energy.

President Eisenhower’s “Atoms for Peace” speech to the United Nations in 1953

The Atomic Energy Act of 1954 put the nation’s nuclear program into the hands of a civilian agency, the U.S. Atomic Energy Commission (AEC), rather than the U.S. military.
Atoms for Peace Program:

- Intended to prevent the spread of atomic weapons by the controlled sharing of non-weapons nuclear technologies so other countries wouldn’t find it necessary to develop their own full-scale nuclear programs;

- Authorized the federal government to enter into agreements for cooperation with other nations on the peaceful uses of nuclear energy;

- Allowed ownership of nuclear facilities and materials by private industry;

- A major component of the Atoms for Peace program was the development of a civilian nuclear power industry in the United States.
Along with the civilian nuclear power program came the need for a civilian nuclear fuel reprocessing program.

In 1956, AEC announced that it would:

• Make classified technology on spent fuel reprocessing available to private industry;
• Invite proposals by private industry to design, construct, and operate spent fuel reprocessing plants; and
• Provide a baseload of spent fuel from federal government reactors.
Development of a Civilian Reprocessing Capability

New York State became interested in the AEC privatization program as a way to promote industrial development within the State.

- New York State established an Office of Atomic Development in 1957.
- 3,300 acres were acquired by the New York State near the hamlet of West Valley in 1961 for a reprocessing facility.
Western New York Nuclear Service Center is Created

The decision to locate the reprocessing plant in Western New York was hailed as positive economic news for the local community and the region.
Agreements Reached with Nuclear Fuel Services (NFS) to Build and Operate a Reprocessing Facility

Nuclear Fuel Services Given Option For Atomic Plant

NFS is established by the Davison Chemical Company (which would be bought out by W.R. Grace and Company), and the American Machine and Foundry Co. to pursue the reprocessing venture at West Valley.
Reprocessing Operations Begin in 1966

- NFS was licensed as the operator of the facility, and the New York State Atomic Research and Development Authority (a predecessor agency of NYSERDA) was licensed as the owner.
- The construction cost was about $33 million.
- AEC set the fee structure for reprocessing—NFS could not charge more than 15 percent above the AEC-published charges based on a conceptual AEC reprocessing plant.
- In 1966, construction was completed and NFS was granted a provisional operating license.
Nuclear Fuel Services (NFS) Operations at West Valley

This was a first-of-its-kind facility:

- Worker radiation doses were higher than expected;
- Releases of radiation to the environment were higher than expected;
- Profits were lower than expected;
- Equipment breakdowns were common.
NFS Ends Reprocessing Operations in 1972

• NFS halted reprocessing in 1972 to make process improvements.
• NFS expected the modifications to cost $15 million.
• AEC issued new requirements related to waste management, earthquake and tornado protection.
• NFS estimated that the retrofit would cost $600 million and would require a new licensing process.
• In 1976, NFS informed New York State that it would not resume reprocessing and would turn the facility over to the State.
• 600,000 gallons of liquid high-level waste; three million ft³ of radioactive waste; and highly contaminated facilities were present at the site.
• Seventy-five percent of the spent fuel came from the federal government. Sixty percent is from the Hanford, Washington facility.
• New York State refused to accept the facility and wastes from NFS.
Uncertainty Leads to West Valley Demonstration Project Act

• U.S. Congress held hearings, directed the Government Accountability Office to investigate, and directed the Department of Energy to study options for the future of the Center.

• Congress passed the West Valley Demonstration Project Act in 1980.

• Economic factors, technological difficulties and an evolving regulatory framework led to the failure of the facility.

• Federal government involvement in the facility’s creation led to federal government involvement in the cleanup.