



Niagara Falls Storage Site

US Army Corps
of Engineers®

Buffalo District

Timeline 1941-1974

1941 - Attack on Pearl Harbor (U.S. government officially enters World War II).

1942 - Under the jurisdiction of the U.S. Army, the Manhattan Engineer District (MED) was established as the lead agency in the development of nuclear energy and given responsibility for the construction aspects of the World War II atomic energy program, which became known as the Manhattan Project.

U.S. government acquires 7,500 acres in the Towns of Lewiston and Porter, New York, and constructs a trinitrotoluene (TNT) production facility, called the Lake Ontario Ordnance Works (LOOW) which was capable of producing 240,000 pounds of TNT per day utilizing four process lines.

1943 - U.S. War Department stopped production at LOOW due to an oversupply of TNT (an estimated 41,656,000 pounds of TNT had been produced during the nine-month period of production).

1944 - Chief of Engineers, MED, requested authorization to store low-level radioactive residues (L-30, L-50, R-10, and F-32) and other materials on a portion of the LOOW. These residues and wastes were to be stored on 1,500 acres of the LOOW which when transferred to MED was termed the Lake Ontario Storage Area (LOSA). Due to the shortage of manpower and metal containers during the war, it was believed that bulk storage would be more efficient than barrel storage.

MED used the site as an interim storage location for various wastes, including radioactive residues that resulted from the processing of uranium ore during the development of the atomic bomb. Wastes stored ranged from building and office materials to process sludge.

1944 - 1946 - L-30 residues are transferred from Linde Ceramics and placed in Building 411; L-50 residues are placed in Buildings 413 and 414. R-10 residues stored on open ground north of Building 411. In 1946, the Tonawanda refinery was decommissioned and contaminated portions of the plant were disposed of at the LOSA.

1946 - The Manhattan Engineer District was deactivated and its responsibilities were transferred to the newly established Atomic Energy Commission (AEC), under the Atomic Energy Act of 1946 to control the future of the atomic weapons mission including responsibility for all aspects of the development and regulation of nuclear technology.

1948 - The Department of Defense decommissioned the LOOW and the AEC acquired approximately 1,511 acres of the original 7,500 LOOW which included the original residue storage areas (LOSA).

1949 - K-65 residues from refining Belgium Congo uranium pitchblende ores owned by African Metals Corporation (Afrimet) at the Mallinckrodt Chemical Works (St. Louis, Missouri) were railed to the LOSA and temporarily stored in drums along roadways/railways, in igloos north of Balmer Road, and inside buildings on the site.

1950 - Animal carcasses from radiation safety tests conducted at the University of Rochester (Rochester, New York) and wastes from Knolls Atomic Power Lab (KAPL) comprised of spent fuel rods, reactor waste, and combustible material were transferred to the LOSA.

During this time the LOSA was also utilized as a staging point for uranium metal billets being processed at local steel mills.

1952 - 1953 - K-65 residues were transferred from drums to Building 434 which was a 165-foot tall reinforced concrete silo that was originally constructed at LOOW for water storage. The remainder of the K-65 residues from the St. Louis operations and that processed in the later years at the Feed Materials Production Center, Fernald, Ohio, was stored in two cylindrical concrete tanks at the Fernald Site.

1954 - Building 401 (former steam plant for TNT manufacturing) was used as a boron-10 isotope separation plant (the non-radioactive boron-10 isotope became of interest in the early 1950s in the developing nuclear industry for use as a shielding material in nuclear reactors). The plant was placed on standby in 1958 and restarted in 1964 (when boron supplies were low) and again put on standby in 1974.

The AEC adopted a policy to cease use of the site for the storage of any additional contaminated material. A major cleanup of the entire site, including the consolidation and removal of surface debris was completed (1954-1955).

1955 - The AEC declared 1,298 acres excess and was disposed through the General Services Administration leaving 213 acres on the AEC site.

1958 - At the termination of the ore procurement contracts 25-year lease agreements were negotiated with Afrimet for the continued storage of residues. The original procurement contracts stipulated that the residues could be abandoned by Afrimet when the contracts terminated in 1958 but Afrimet wished to retain the radium-rich residues stored at the AEC storage site in Lewiston, New York, and the Feed Materials Production Center in Fernald, Ohio. The residue storage lease agreements negotiated in 1958 did not permit abandonment by Afrimet when the contracts expired in 1983.

1964 - 1965 - R-10 residue storage pile was covered with soil and seeded to provide a grass-covered sod layer.

1970 - 1972 - Radiation surveys performed on the LOSA and its vicinity properties indicated that radioactivity exceeded the AEC guidelines. Off-site radiological surveys and decontamination was performed on vicinity properties as well as the Central Drainage Ditch (using a dose-based criteria) and the material removed from off-site properties was brought onto the LOSA and placed in the area of the R-10 pile, known as the spoil pile.

1974 - Formerly Utilized Sites Remedial Action Program (FUSRAP) was initiated by the AEC to identify, investigate, and, if necessary clean up or control sites that became contaminated as a result of the Nation's former Atomic Energy Program.

The AEC was dissolved in the Energy Reorganization Act of 1974 and its functions were split between two organizations, the Nuclear Regulatory Commission and the Energy Research and Development Administration (predecessor agency to the Department of Energy).