

= Lake Ontario Ordnance Works =

The former Lake Ontario Ordnance Works ( LOOW ) was a 7 @, @ 500 @-@ acre ( 3 @, @ 000 ha ) military installation located in Niagara County , New York , United States , approximately 12 @. @ 5 mi ( 20 @. @ 1 km ) north of Niagara Falls .

The property was purchased by the War Department during World War II as a location for the production of TNT . Most of the LOOW property was sold after the war .

The United States Department of Energy currently owns 191 acres ( 77 ha ) of the original LOOW property , on which the Niagara Falls Storage Site ( NFSS ) is located . The NFSS is used for the storage of radioactive materials produced during the development of America 's first atom bombs .

Approximately 93 percent of the original LOOW site ? currently occupied by homes , a school , a campground , the Basilica of the National Shrine of Our Lady of Fatima , farms , local and federal government operations , and a toxic waste facility ? meets the criteria of a Formerly Used Defense Site , and one portion of the property is listed as a Superfund cleanup site .

= = History = =

The War Department purchased 7 @, @ 500 @-@ acre ( 3 @, @ 000 ha ) of farmland east of Youngstown , New York , in 1941 as a location to manufacture TNT . The location was selected because of its proximity to chemical manufacturing plants , to Fort Niagara , to the New York Central Railroad , and to water and electrical power .

The LOOW headquarters were at first located in a vegetable canning factory at the site .

The 149 private landowners living there ? mostly farmers and orchard growers ? were given 30 days to move out , and most of their 125 farmhouses and 538 barns were torn down or burned . Some homes located on the periphery of the LOOW boundary were kept .

Construction of the TNT plant began in January 1941 , and employed over 7 @, @ 500 workers . The production and storage areas occupied approximately 2 @, @ 500 acres ( 1 @, @ 000 ha ) near the center of property , and the remaining 5 @, @ 000 acres ( 2 @, @ 000 ha ) was undeveloped and used as a " buffer zone " . A hospital , dormitories , fire department , power plant , USO hall , water supply system , and waste treatment facility were located at the LOOW , and TNT was manufactured for about 9 months , until the plant was decommissioned in 1943 .

Uranium used to produce the first atom bombs from 1942 to 1948 was processed by Linde Air Products in nearby Tonawanda , and in 1944 , the Manhattan Engineer District began using the LOOW site for the storage and transshipment of radioactive residues and wastes created through the processing of uranium ore at Linde .

The War Assets Administration had by 1948 sold or transferred 6 @, @ 000 acres ( 2 @, @ 400 ha ) of the original property , and the remaining 1 @, @ 500 acres ( 610 ha ) were given to the newly formed Atomic Energy Commission .

More than 1 @, @ 300 acres ( 530 ha ) were sold or transferred between 1955 ? 75 , although the area on which the Niagara Falls Storage Site is located remained in the possession of the U.S. government .

= = Buildings and operations = =

= = = Building 401 = = =

Beginning in 1943 , Building 401 was used as the powerhouse for the production of TNT , though operations lasted less than a year . Building 401 was renovated , and from 1953 ? 59 and 1965 ? 71 , it was used as a Boron @-@ 10 isotope separation plant . The interior of Building 401 was gutted in 1971 , and its hardware and instrumentation were disposed of . Building 401 was demolished in 2010 .

### === Concrete silo ===

A 166 ft ( 51 m ) concrete silo was erected within the east boundary of the LOOW , immediately next to Porter Center Road , which was publicly accessible . A fence with signs warning of " radioactive material " ran next to the road . In 1952 , drums containing 3 @, @ 869 short tons ( 3 @, @ 510 @, @ 000 kg ) of highly @-@ radioactive K @-@ 65 residues were loaded into the silo . The concrete silo was dismantled sometime after 1979 .

### === Interim waste containment structure ===

Construction of the interim waste containment structure was completed in 1991 , and is located entirely within the Niagara Falls Storage Site . The 10 @-@ acre ( 4 @. @ 0 ha ) mound is used for the storage of radioactive waste and residues , and the grass @-@ covered " interim cap " is designed to retard both rainwater infiltration and radon emission .

All of the contaminated and radioactive materials stored at the former LOOW site ? including thorium , uranium , and the world ? s largest concentration of radium @-@ 226 ? were placed into the structure .

### === Rochester Burial Site ===

In 1951 , laboratory waste and animals that had been injected with plutonium during experiments at the University of Rochester were shipped to the LOOW site for burial .

### === US Army operations ===

The United States Army was given an 860 @-@ acre ( 350 ha ) parcel of land from the original LOOW property , located on the northeast boundary . Beginning in 1957 it housed 36 Nike surface @-@ to @-@ air missiles intended to protect the nearby Niagara Hydroelectric Power Project . The property is currently licensed to the New York Army National Guard , and is used as a weekend training site .

### === US Air Force operations ===

A 98 @-@ acre ( 40 ha ) parcel of land from the original LOOW property was given to the United States Air Force , on which they located an experimental rocket fuel plant called the Youngstown Test Annex Site .

### === Private waste treatment facilities ===

Hooker Chemical and Plastics Corporation ( now Occidental Petroleum ) purchased a large portion of the original LOOW property from a private landowner in 1975 to use as a dump site .

Waste Management , Inc currently owns and operates a 713 @-@ acre ( 289 ha ) treatment , storage , disposal , and recovery facility near the center of the former LOOW property . It is the only hazardous waste landfill remaining in the Northeastern United States , and was the location where the anthrax @-@ contaminated desk of news @-@ anchor Tom Brokaw was disposed of in 2001 .

Modern Disposal Services operates a landfill on the former LOOW property .

### === Other uses ===

Approximately 380 private residences and a mobile home park are located within the footprint of the former LOOW site . A school , several small farms , a 13 @-@ acre ( 5 @. @ 3 ha ) campground , and the Basilica of the National Shrine of Our Lady of Fatima , which attracts thousands of visitors annually , are also located on the former LOOW site .

= = Safety concerns = =

In 1981 , the New York State Assembly Task Force on Toxic Substances wrote that the LOOW was " born in the crisis of war " , and that :

Federal mismanagement at the site was manifested by sloppy and deficient record @-@ keeping procedures , inadequate mapping of buried wastes , and technological primitivism with regard to waste storage and removal . Moreover , it is clear that the site should never have been chosen for the storage of radioactive materials in the first place .

The report added that radioactive waste had been stored " in rusting barrels stacked along the roadside " .

Author Ginger Strand wrote about the LOOW in her 2008 book *Inventing Niagara* : " the Army Corps engineers , currently charged with the cleanup , readily admit they don 't know everything that went on there " .

An extensive study conducted by the United States Army Corps of Engineers concluded in 2014 that there was " no evidence of potential source areas or releases of contamination to groundwater , surface water , or soil associated with any of the ground disturbances evaluated " at the former LOOW site .

Currently , approximately 7 @,@ 000 @-@ acre ( 2 @,@ 800 ha ) or 93 percent of the original LOOW site meets the criteria of a Formerly Used Defense Site , making it eligible for environmental restoration funds available from the U.S Army . One portion of the property containing contaminated groundwater is listed as a Superfund cleanup site .