US Army Corps of Engineers
Buffalo District

NFSS TIMELINE

From 1941 to 1974: Before FUSRAP Was Initiated

1941: Attack on Pearl Harbor (then U.S. Government officially enters WWII).

USACE acquired 7,500 acres of land in northwest NY state from 149 landowners and initiated construction activities on a plant to produce trinitrotoluene (TNT) at a site designated as the Lake Ontario Ordnance Works (LOOW).

1942: U.S Army opened TNT plant at LOOW and commenced production with four process lines capable of producing 240,000 pounds of TNT per day.

USACE-Manhattan Engineer District (MED) assumed responsibility for the construction aspects of the WWII atomic energy program, which became know as the Manhattan Project.

1943: 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).

Custody and control of LOOW transferred to MED.

1944: Chief of Engineers requested to authorize the MED to store low-level radioactive residues (L-30, L-50, R-10, and F-32) at LOOW that were generated through the processing of uranium ore.

1947: MED was superseded by the Atomic Energy Commission (established by the Atomic Energy Act of 1946). The AEC was responsible for all aspects of the development and regulation of nuclear technology.

Surface water found on NFSS

Building 401 (former steam plant for TNT manufacturing and Boron-10 isotope separation plant)

Abandoned tank saddles used during TNT production, located in the Former Acidification Area (currently EU 4)

Tree clearing prior to the gamma walkover survey conducted in 2001

1949: High activity low-level K-65 residues from Mallinckrodt Chemical Works (St. Louis, MO) railed to LOOW from refining Belgium Congo uranium pitchblende ores owned by African Metals Corporation (Afrimet).

1950: Animal carcasses from radiation safety tests conducted at the University of Rochester (U of R) (Rochester, NY) and wastes from Knolls Atomic Power Lab (KAPL) comprised of spent fuel rods, reactor waste, and combustible material were transferred to LOOW

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 50s in the developing nuclear industry for use as a shielding material in nuclear reactors.

1971: Responsibility of the Niagara Falls Storage Site (NFSS) was transferred from AEC to the Department of Energy (DOE).

1972: Off-site remediation of vicinity properties and clean up of Central Drainage Ditch.

1974: AEC was dissolved and the responsibility for the site was transferred to the Energy Research and Development Administration (ERDA).

Formerly Utilized Sites Remedial Action Program (FUSRAP) was initiated to identify, decontaminate and control sites that became contaminated as a result of the Nation's former Atomic Energy Program.

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US Army Corps of Engineers
Buffalo District

NFSS TIMELINE

From 1975 to Today: After FUSRAP Was Initiated

1977: ERDA was abolished when the responsibility for the site was transferred back to the DOE.

1981: Environmental Surveillance Program initiated.

1982: Construction and filling of the Interim Waste Containment Structure (IWCS) began in 1982. Radiological surveys of Vicinity Properties (VPs) were conducted and excavated soils were consolidated in the IWCS.

1986: The cap over the residues and waste was closed.

1987: Buried drums of radioactive material removed from vicinity properties.

1988: Several places of residual radioactivity at NFSS and isolated areas of radioactivity identified from verification surveys were excavated and placed in temporary storage at NFSS.

1990: A limited chemical characterization conducted at NFSS to identify non-radioactive contaminants.

1991: Soil from onsite remediation and drums from VPs were consolidated into the IWCS.

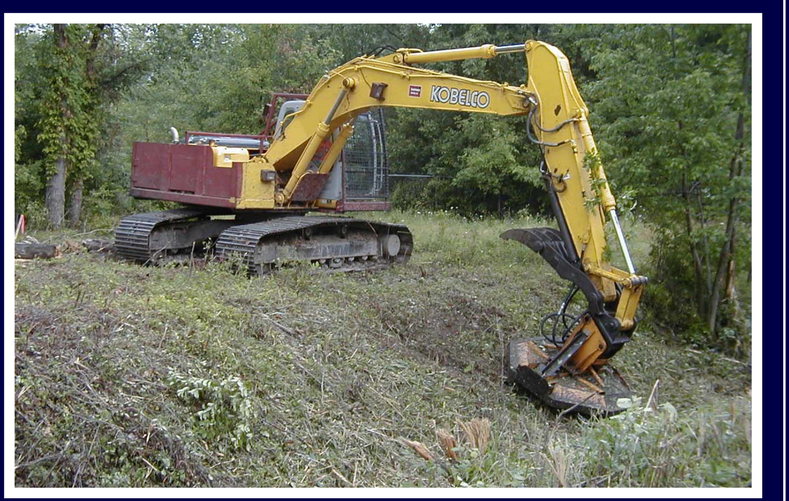
1997: Responsibility of NFSS transferred from DOE to USACE.

1999: Prepared Field Sampling Plan to initiate Remedial Investigation activities and initiated Phase I Remedial Investigation sampling.

2000: Decontaminated, demolished, and safely disposed of Building 403 (former laboratory and office building)

Initiated Phase II RI sampling.

Environmental surveillance sampling activities



Clearing of Vegetation in the Central Ditch with the "Brontosaurus" Prior to the Gamma Walkover Survey in July 2001

Remedial Investigation Subsurface Soil Sampling Activities

Gamma Walkover Survey, Performed in 2001

2000: Conducted extensive background radiological sampling of soils to develop representative background screening levels to use for comparing site data.

2001: USACE conducted site-wide gamma walkover and geophysical surveys at NFSS.

USACE conducted background gamma walkover survey at Lewiston-Porter School District.

Conducted geophysical survey on VP G to investigate the former U of R burial area.

Initiated Phase III RI sampling.

2002: Conducted exploratory trenching activities on VP G to investigate the former U of R burial area.

Conducted exploratory trenching activities at NFSS.

2003: Building 401 was remediated for asbestos contamination

Conducted extensive background radiological sampling of groundwater to develop representative background screening levels to use for comparing site data.

Completed Phase III RI Sampling.

2004: USACE initiated the Feasibility Study and conducted a Transportation Assessment.

2006: Radiological sampling of former LOOW underground utility lines

2007: USACE issued the Remedial Investigation Report (identifying the nature and extent of contamination and risk to human health and the environment)

USACE requested a Department of Homeland Security assessment of NFSS

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