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Buffalo District



# DERP-FUDS Fact Sheet

## Former Lake Ontario Ordnance Works Niagara County, New York

### Waste Water Treatment Plant (WWTP)

September 2002

This fact sheet was compiled to present information about the Waste Water Treatment Plant (WWTP) at the former Lake Ontario Ordnance Works (LOOW) located in Niagara County, New York.

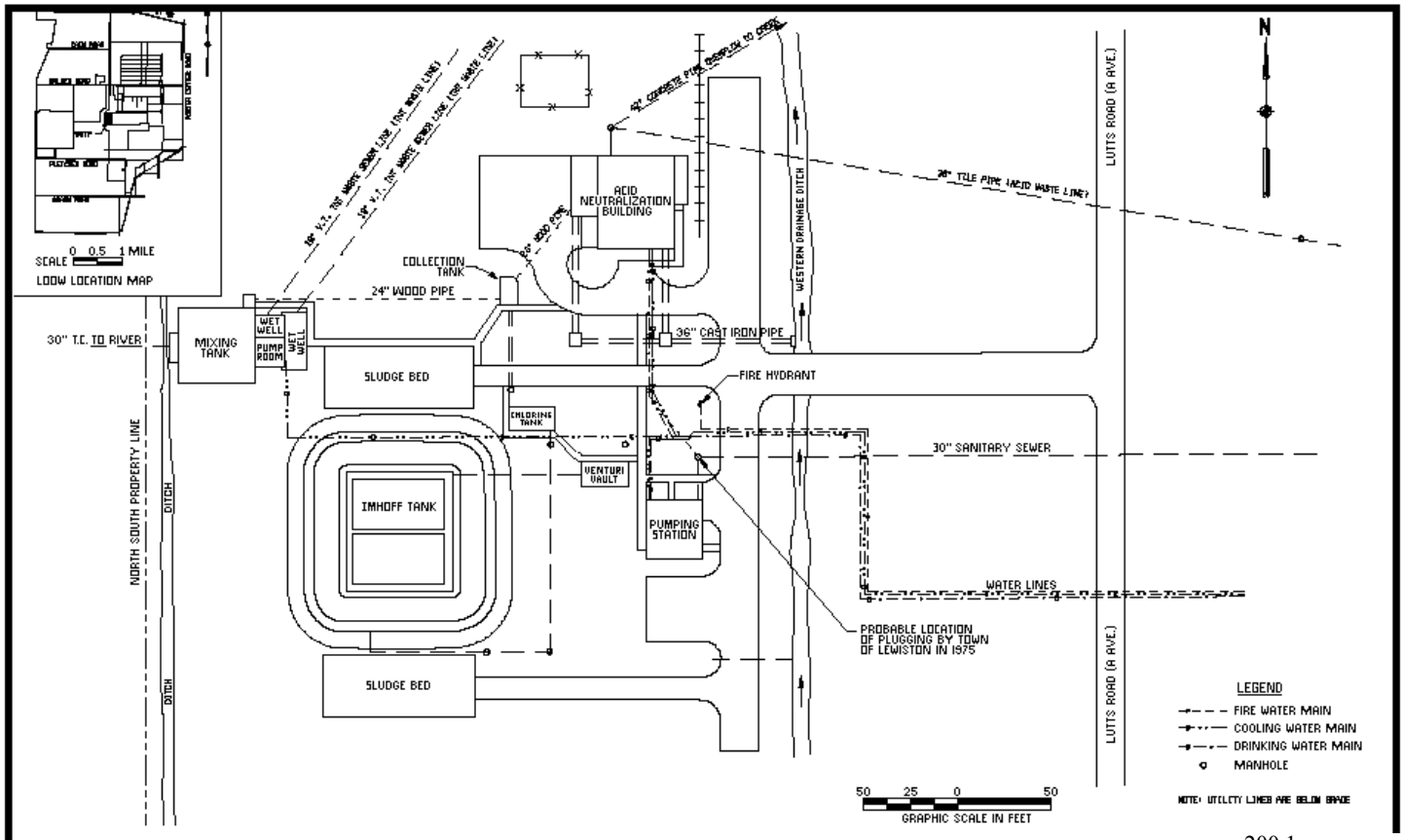
### What is the Lake Ontario Ordnance Works (LOOW)?

The former LOOW is a 7,500-acre Formerly Used Defense Site (FUDS) located in the towns of Lewiston and Porter, New York. The former LOOW was built for the purpose of manufacturing trinitrotoluene (TNT) during World War II. The TNT production, production support, and storage areas were constructed on approximately 2,500 acres. The remaining 5,000 acres, located to the west of the production area, were left undeveloped and acted primarily as a buffer zone. Since the 1940s, the government and private landowners have used the 2,500-acre former TNT production and storage area for various activities, including: borane fuel plants (Air Force Plant [AFP]-68), a Navy Interim Pilot Production Plan (IPPP), jet engine testing facilities (AFP-38), a Nike missile facility, chemical and radioactive waste storage facilities (Niagara Falls Storage Site [NFSS]), municipal and hazardous waste landfills, and the testing of

experimental communications equipment. As Department of Defense (DoD) operations decreased, the property was sold. Environmental investigations have confirmed Department of Defense-related contamination in several areas. Current owners of the site include local and federal government, individual private residents, and private corporations.

The Manhattan Engineer District and its successor, the Atomic Energy Commission (AEC), used portions of the former LOOW for storage of radioactive wastes from approximately 1946 to 1974. These wastes were primarily residues from uranium processing operations. A 191-acre portion of the site is currently owned by Department of Energy and radioactive waste is stored there. This facility is known as the Niagara Falls Storage Site (NFSS).

Figure 1 – Former Waste Water Treatment Plant (WWTP)



## **Where is the Waste Water Treatment Plant?**

The WWTP is located approximately one half mile south of Balmer Road. The WWTP is approximately 22 acres in size. The property is currently owned by the Town of Lewiston. It is surrounded by Chemical Waste Management (CWM) property to the north and east, NFSS property to the south, and a Niagara Mohawk power easement to the west (See Figure 1 Inset).

The WWTP property was designated as Vicinity Property "X" by the Department of Energy (DOE). This designation is used when discussing the investigations and cleanup in this area by DOE.

## **What was it used for by DoD?**

The WWTP handled sanitary waste and production waste from acid sewers and TNT washing facilities. The WWTP contained a pumping station, Imhoff tank, two sludge beds, a Venturi vault, a chlorination tank, an acid neutralization building, a collection tank and a final mixing tank. The plant was transferred to the Atomic Energy Commission (AEC) in 1946 and was subsequently sold to the Town of Lewiston in 1974 (See Figure 1).

## **What is it used for now?**

The plant is currently unused and has been idle since the 1970s.

## **What investigations have DOD/DOE conducted in this area? What were the results of these investigations?**

### **Preliminary Contamination Assessment Report (PCA), Acres International Corp., 1992**

In 1992, the DOD (USACE) conducted a preliminary assessment of the site. This investigation included the collection of sewage (aqueous), sludge, and surface soil samples from several areas of the former WWTP, and at three locations along the western drainage ditch located east of the acid neutralization building. Samples were analyzed for chemical contamination. Some of the sludge, sewage, and soil samples were also submitted for explosives analysis.

The WWTP samples showed results that were consistent with other areas of the site which had low concentrations of polyaromatic hydrocarbons (PAHs) and phthalates. Metals concentrations were similar to background. Some of the sludge samples showed elevated levels of volatile organic compounds (VOCs), PAHs, polychlorinated biphenyls (PCBs), metals, and explosives. Asbestos was also found in this area.

The sample results from this investigation were compared to published health and environmental risk data to determine whether these chemicals had to potential to adversely impact human health and/or the environment. No unacceptable risk was found.

## **Department of Energy Investigations**

The DOE (USACE) conducted a radiological survey of Vicinity Property "X" (WWTP) in August 1983. The objective of this survey was to provide a comprehensive assessment of the radiological conditions and associated potential health effects, if any, on property "X". There were several small areas of contamination that were cleaned up by the DOE. This property was certified as free of radiological waste by the DOE in a report published in 1992. This certification precludes the WWTP from further consideration under the FUSRAP program.

### **Phase I Remedial Investigation (RI), EA Engineering, Science, and Technology, 1998**

The DOD (USACE) conducted a Phase I RI in 1998. This investigation included the collection of soil and groundwater samples from the WWTP area. Although several samples showed slight elevations of VOC and metals, this area was determined to be ineligible for further investigation for chemical contamination due to potential site impacts from non-DOD activities.

### **Interim Remedial Action (IRA), 1999-2001**

In 1999, the DOD (USACE) began an IRA to address immediate hazards in the TNT waste line on site. During this IRA, all sections of the waste line were addressed by excavation or cleaning. The WWTP property was included in this remedial action. During this project, the TNT waste lines near the WWTP were power washed and the mixing tank was demolished.

## **What hazards currently exist on site?**

This site contains several open pits that present a falling and/or drowning hazard. There is also friable asbestos on site. There may also be explosive wastes on site.



**Photo 1** shows the Acid Neutralization Building that includes falling/drowning hazards, physical hazards due to structural instability, a possible explosive hazard, and friable asbestos.



**Photo 2** shows the Imhoff tank, which is a falling/drowning and possible explosive waste hazard.



**Photo 3** shows the chlorine tank, which is a falling/drowning and possible explosive waste hazard.

## What is the USACE doing to address the problem?

The USACE held a technical project planning meeting (TPP) in March 2002 to discuss issues at the LOOW site. The TPP included a discussion of the WWTP. The USACE invited technical experts working on the site (Government and Contractors), NYSDEC, and site land owners to attend the meeting. The team determined that the WWTP is not eligible for a Building Demolition/Debris Removal (BD/DR) project through the DERP-FUDS program.

However, the explosives experts believed that there may be TNT present in the WWTP pipes and sumps. A review of existing site investigation data concluded that the TNT sampling done to date was not sufficient to characterize the WWTP site. Subsequent investigation has revealed that there may be TNT in the Acid Waste lines and sanitary sewer lines and in all buildings associated with the WWTP. The USACE recommended sampling in the soils, sludges, and a surface walkover by an explosive expert. This work is currently scheduled to be completed in March 2003.

The USACE conducted a briefing for the WWTP with Town of Lewiston officials and NYSDOH personnel in May 2002. The purpose of the briefing was to update Town officials on the status of the site.

The remedial investigation of the former LOOW is ongoing and the USACE will continue to provide full disclosure of information as it becomes available and of future actions at this site.

## Where can I get more information?

The USACE Buffalo District has established an administrative record for this site. This record contains reports of past investigations and other pertinent site data. As new information becomes available, it will be added to the record. This record is available for viewing by the public at the following sites:

**Lewiston Public Library • 305 South Eighth Street • Lewiston, New York**  
**Youngstown Free Library • 240 Lockport Street • Youngstown, New York**  
**U.S. Army Corps of Engineers (USACE) • 1776 Niagara Street • Buffalo, New York**

To get more information about LOOW or other DERP-FUDS issues, or to be added to the program's mailing list, contact:

**U.S. Army Corps of Engineers, Buffalo District**  
**Public Affairs Office**  
**1776 Niagara Street**  
**Buffalo, NY 14207**  
**(716) 879-4124**

You may also call the district toll-free telephone number: **1-800-833-6390** or e-mail at **derpfuds@usace.army.mil**  
The USACE Buffalo District Web page is: **<http://www.lrb.usace.army.mil/derpfuds/loow>**