US Army Corps of Engineers®
Buffalo District

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FACT SHEET
NFSS Environmental Surveillance Data Release

Title/Name: Niagara Falls Storage Site (NFSS)

Location: The site is located approximately 10 miles north of the City of Niagara Falls within the Towns of Lewiston and Porter in Niagara County, New York

Project Description: The NFSS is a 191-acre federal property containing a 10-acre interim waste containment structure (IWCS). The IWCS holds radioactive residues and wastes brought to the site by the Manhattan Engineering District (MED) and the Atomic Energy Commission (AEC) during the 1940s and 1950s. During the 1980's, the U.S. Department of Energy consolidated these radioactive materials into the IWCS. The IWCS is covered with a clay cap designed to inhibit the release of radon gas and restrict the infiltration of rainwater.

The US Army Corps of Engineers (USACE) is the lead federal agency addressing environmental issues at the site under the authority of the Formerly Utilized Sites Remedial Action Program (FUSRAP). In addition to the environmental investigations at the site, the USACE operates and maintains the site and conducts an environmental surveillance program to sample air, water, and streambed sediment to ensure that onsite wastes do not pose a threat to human health and the environment.

Purpose: The purpose of this fact sheet is to introduce the electronic submission of environmental data which is regularly collected as part of the NFSS environmental surveillance program. The Buffalo District is posting this data to the Niagara Falls Storage Site webpage available at:

http://www.lrb.usace.army.mil/fusrap/nfss/index.htm

The data include both quarterly monitoring data and the Corps annual analyses of the data – the *FUSRAP Niagara Falls Storage Site Environmental Surveillance Technical Memorandum*, which analyzes the quarterly results. Posting this data in electronic format improves public access and use of the data.

History: The environmental surveillance program was initiated by the US Department of Energy in 1981 following a plan developed for the site based on known environmental conditions. In 1997, USDOE's responsibilities for the NFSS were transferred by Congress to the USACE. The USACE has since continued the surveillance program and monitoring activities established by USDOE for the purpose of maintaining consistency in data presentation and facilitating historical comparisons.

Scope: The objective of the environmental surveillance program is to demonstrate the continued containment of wastes and residues buried within the IWCS and to ensure that onsite contamination does not pose a threat to human health and the environment. Media monitored at the NFSS include: surface water, sediment, groundwater, for chemical and radiological parameters and air for radonand external gamma radiation dose. The attached map of the NFSS shows the location of monitoring points within and around the IWCS, and along site drainage ditches.

The environmental surveillance program consists of quarterly monitoring events (i.e. 1st Quarter = Winter (January-March), 2nd Quarter = Spring (April-June), 3rd Quarter = Summer (July-September), 4th Quarter = Fall (October-December)). Data is reviewed for quality prior to release. Parameters monitored at the NFSS, include:

- Radiological Air/Ambient Monitoring

  - Radon gas and gamma radiation using passive detectors
  - Detectors are located around the IWCS and the perimeter of the site
  - Detectors are exchanged twice per year, typically in January and July

- Radon Flux Monitoring

  - Release of Radon-222 emissions from the IWCS protective cap
  - Annual event during the 3rd Quarter in the July-August time frame

- Monitoring of Surface Water, Sediment, and Groundwater

  - Sampling of surface water and sediment from site drainage ditches and, groundwater from wells monitoring the upper and lower water-bearing zones beneath the site
  - Samples are analyzed for water quality, chemical, and radiological constituents (isotropic uranium, thorium and radium)
  - Annual monitoring event conducted during the 2nd quarter

- Groundwater Level Measurements

  - Quarterly measurement of water levels in 91 groundwater monitoring wells that are screened in the upper and lower water-bearing zones.

Data collected during the quarterly monitoring events is compiled and analyzed annually by the USACE to assess long-term data trends and variances. The resulting *FUSRAP Niagara Falls Storage Site Environmental Surveillance Technical Memorandum,* is published in the October – December timeframe following the year of data collection (i.e. The technical memorandum analyzing data collected during the 2007 calendar year will be published in the fourth quarter of the 2008 calendar year).

Surveillance Program Reassessment: With completion of the *Niagara Falls Remedial Investigation Report, December 2007*, the environmental sampling program will be reassessed to reflect the findings of this report. Changes associated with this assessment will be reported in the *2008 FUSRAP Niagara Falls Storage Site Environmental Surveillance Technical Memorandum.* By further defining the nature and extent of site-related constituents at the NFSS, the goals and objectives of the surveillance program will be enhanced to better ensure safety to human health and the environment.

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NFSS QUARTERLY MONITORING EVENT AND DATA RELEASE SCHEDULE

Monitoring Event / Task Description	Data Collection	Data Release
Winter Groundwater Levels	1st Qtr	1st Qtr
Summer & Fall External Gamma Radiation and Radon Gas Results (Previous Year)	3rd & 4th Qtr	
Spring Groundwater Levels	2nd Qtr	2nd Qtr
Winter & Spring External Gamma Radiation and Radon Gas Results	1st & 2nd Qtr	3rd Qtr
Summer Groundwater Levels	3rd Qtr	
Spring Groundwater, Surface Water and Sediment Analytical Results	2nd Qtr	4th Qtr
Summer Radon Flux Results	3rd Qtr	
Fall Groundwater Levels	4th Qtr	
Annual Environmental Surveillance Technical Memorandum (Previous Years' Data)	1st to 4th Qtr	4th Qtr