Tonawanda Landfill Vicinity Property
Annual Environmental Monitoring Fact Sheet

Tonawanda, NY

U.S. Army Corps of Engineers
Buffalo District

Building Strong ®

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Formerly Utilized Sites Remedial Action Program (FUSRAP)

FUSRAP was initiated in 1974 to identify, investigate, and clean up or control sites throughout the United States that were contaminated as the result of activities related to the Nation's early atomic energy and weapons program in the 1940s, 1950s and 1960s. When implementing FUSRAP, the U.S. Army Corps of Engineers follows the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The Tonawanda Landfill Vicinity Property was designated into FUSRAP in 1992.

Site Description

The Tonawanda Landfill Vicinity Property consists of two parcels owned by the Town of Tonawanda: the Town of Tonawanda Landfill (Landfill Operable Unit [OU]) and the North Youngmann Commerce Center (formerly known as the Mudflats). The Tonawanda Landfill Vicinity Property covers approximately 170 acres in the Town of Tonawanda, Erie County, New York. The vicinity property is bordered by a residential area within the City of Tonawanda, a railroad line, Interstate 290 and East Park Drive. A National Grid utility corridor separates the Landfill OU and the North Youngmann Commerce Center.

Site History

Waste disposal at the landfill by the Town of Tonawanda began during the 1930s and continued through 1989. Records indicate that the landfill was principally used for the disposal of construction and demolition material, yard waste, incinerator ash, and municipal waste.

As the result of a radiological survey performed in 1991 by the Department of Energy, a portion of the Town of Tonawanda Landfill and Mudflats were designated together into FUSRAP as a vicinity property of the Linde FUSRAP Site. The Corps of Engineers completed a Remedial Investigation of the Tonawanda Landfill Vicinity Property in 2005, and signed a Record of Decision for the Mudflats OU in 2008, stating no action was required for the Mudflats OU because risks from FUSRAP-related material were within the acceptable limits established in the NCP. Additional sampling of the Landfill OU conducted by the Corps of Engineers in 2009 through 2011 led to the completion of an updated Baseline Risk Assessment for the Landfill OU in 2011, which concluded that while current risks from FUSRAP-related material were within the acceptable limits established in the NCP, risks to site users could potentially increase above acceptable limits in the future if the current landfill surface was not maintained and allowed to erode over time.

Scope

The Corps of Engineers has previously conducted investigative groundwater sampling of up to 17 permanent monitoring wells and 14 temporary well points, along with 16 surface water and sediment sample locations. This previous sampling indicated that FUSRAP-related constituents buried in a small area of the Landfill OU are migrating to water-based pathways, including groundwater and surface water on the landfill.

The overarching objective of the environmental monitoring to be conducted at the Tonawanda Landfill OU is to ensure the protection of human health and the environment from FUSRAP-related constituents of concern in the Landfill OU; uranium, radium and thorium. While the 2011 Updated Baseline Risk Assessment for the Landfill OU concluded that FUSRAP-related constituents in the groundwater and surface water did not pose an unacceptable human health or ecological risk, this environmental monitoring is intended to monitor those constituents in site water pathways to ensure an unacceptable risk doesn't develop.

Groundwater flow will be monitored annually by collecting static water level measurements from all accessible groundwater wells prior to initiating sampling. Contaminant migration monitoring samples will be collected at a total of 7 groundwater locations and 11 surface water and collocated sediment locations to help identify potential groundwater and surface water contaminant migration associated with various source areas located on the site. Trend monitoring samples will be collected at a total of 11 groundwater locations and 3 surface water and collocated sediment locations, where previous sampling has indicated the presence of elevated levels of FUSRAP-related constituents. All groundwater and surface water samples will be analyzed for uranium, radium, thorium, and general water quality parameters. Sediment samples will be analyzed for uranium, radium and thorium.

Table 1 presents a summary of the proposed monitoring for the Tonawanda Landfill OU and describes sample collection frequency and the monitoring rationale for each monitoring well or sample point included in the program. Figure 1 shows the location of the groundwater and surface water/sediment sampling points. Groundwater monitoring locations that start with "TWP" are temporary well points installed and sampled as part of the Corps of Engineers Phase 2 Remedial Investigation sampling conducted in 2010. Groundwater locations that start with "BM" or "L" are permanent monitoring wells installed by the Town of Tonawanda as part of their landfill maintenance and closure activities. Surface water and sediment locations will be collected from the drainage ditch that runs parallel to the northwestern boundary of the landfill and eventually discharges to Two Mile Creek.

More Information

For more information about the Tonawanda Landfill annual environmental monitoring, please visit the Buffalo District Web page listed below.

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Table 1: Tonawanda Landfill Vicinity Property Environmental Monitoring Program

Location ID	Type	Rationale	Sampling Frequency
BM-4	Groundwater[1]	Trend monitoring	Annual
BM-15	Groundwater[1]	Trend monitoring	Annual
BM-16	Groundwater[1]	Trend monitoring	Annual
BM-17	Groundwater[1]	Trend monitoring	Annual
BM-18	Groundwater[1]	Trend monitoring	Annual
BM-19	Groundwater[1]	Trend monitoring	Annual
L-1	Groundwater[1]	Trend monitoring	Annual
L-2	Groundwater[1]	Trend monitoring	Annual
L-3	Groundwater[1]	Trend monitoring	Annual
TWP-1	Groundwater[1]	Migration monitoring	Annual
TWP-4	Groundwater[1]	Migration monitoring	Annual
TWP-5	Groundwater[1]	Migration monitoring	Annual
TWP-6	Groundwater[1]	Trend monitoring	Annual
TWP-7	Groundwater[1]	Trend monitoring	Annual
TWP-8	Groundwater[1]	Migration monitoring	Annual
TWP-9	Groundwater[1]	Migration monitoring	Annual
TWP-11	Groundwater[1]	Migration monitoring	Annual
TWP-13	Groundwater[1]	Migration monitoring	Annual
SW-01	Surface Water[2], Sediment	Trend monitoring	Annual
SW-02	Surface Water[2], Sediment	Trend monitoring	Annual
SW-05	Surface Water[2], Sediment	Trend monitoring	Annual
SW-06	Surface Water[2], Sediment	Migration monitoring	Annual
SW-07	Surface Water[2], Sediment	Migration monitoring	Annual
SW-08	Surface Water[2], Sediment	Migration monitoring	Annual
SW-09	Surface Water[2], Sediment	Migration monitoring	Annual
SW-10	Surface Water[2], Sediment	Migration monitoring	Annual
SW-11	Surface Water[2], Sediment	Migration monitoring	Annual
SW-12	Surface Water[2], Sediment	Migration monitoring	Annual
SW-13	Surface Water[2], Sediment	Migration monitoring	Annual
SW-14	Surface Water[2], Sediment	Migration monitoring	Annual
SW-15	Surface Water[2], Sediment	Migration monitoring	Annual
SW-16	Surface Water[2], Sediment	Migration monitoring	Annual

1. Unfiltered and filtered samples will be collected and analyzed.
2. Surface water samples will be unfiltered. However, if the unfiltered surface water sample is overly turbid, a filtered sample will be collected as well.