



## Tonawanda North, New York, Site, Units 1 and 2

### FACT SHEET

*This fact sheet provides information about the Tonawanda North, New York, Site, Unit 1 and 2. These sites are managed by the U.S. Department of Energy Office of Legacy Management.*

### Site Description and History

The Tonawanda North, New York, Site, Units 1 and 2, formerly called the Ashland Oil #1 and #2 sites, are located in Tonawanda, New York, a suburb of Buffalo. The Tonawanda North sites comprise three areas: Unit 1 (Ashland Oil #1, which Includes Seaway Area D), Unit 2 (Ashland Oil #2 and Rattlesnake Creek), and Unit 3 (Seaway Area C). Only Units 1 and 2 have been closed and transferred to the U.S. Department of Energy (DOE) Office of Legacy Management for long-term surveillance and maintenance.

As part of the nation's early atomic energy program, the former Linde Air Products Division of Union Carbide Corporation processed uranium ores at its facility in Tonawanda. This work was conducted under contract to the Manhattan Engineer District (MED) from 1942 to 1946.

From 1944 to 1946, uranium-ore processing wastes were transported from Linde to a 10-acre area known then as the Haist property, now called Tonawanda North, Unit 1 (Ashland Oil #1 site). These materials consisted of about 8,000 tons of low-grade uranium ore tailings<sup>1</sup>. In 1960, the property was transferred to Ashland Oil for use in the company's oil refinery activities.

The Ashland Oil Company used a portion of what is now Tonawanda North, Unit 1 as a landfill for disposal of general plant refuse and industrial and chemical by-products. In 1974, the Ashland Oil Company constructed a drainage ditch and a bermed area for two petroleum product storage tanks on Tonawanda North, Unit 1. Soil removed during construction contained radioactive residues, and the Ashland Oil Company transported the contaminated materials to the Seaway Landfill and Ashland Oil #2 sites for disposal. In 1982, Ashland Oil closed the industrial landfill and covered it with clay and soil; the property became covered with grass and shrubs over time.

<sup>1</sup>Tailings are the sand-like rock residues remaining after uranium has been chemically extracted. Tailings typically contain residual uranium and radioactive uranium daughter products, including radium-226.



*Location of the Tonawanda, New York, Site, Units 1 and 2*

The primary radioactive materials at the Ashland Oil #1 and #2 sites were uranium-238, radium-226, thorium-230, and their decay products. Some chemical residues from MED activities were also present. DOE determined that the site was eligible for cleanup under the Formerly Utilized Sites Remedial Action program (FUSRAP) in 1984. A Record of Decision for the Ashland Oil #1, Seaway Area D, and Ashland Oil #2 sites was signed on April 20, 1998. Cleanup at the Ashland Oil #2 site was completed in 1999; more than 52,000 tons of material was excavated and shipped off site for disposal. Cleanup at the Ashland Oil #1 site was completed in 2003; 173,000 tons of material was excavated and shipped off site for disposal.

Results of sampling conducted by the U.S. Army Corps of Engineers (USACE) during cleanup of the Ashland Oil #2 site indicated that historical activities had contaminated portions of nearby Rattlesnake Creek, and additional cleanup would be necessary. An Explanation of Significant Differences was issued in 2004 to include Rattlesnake Creek in the Ashland



Areas remediated under FUSRAP (from USACE)

Record of Decision. Remediation of Rattlesnake Creek began in May 2005 and was completed in September 2005. More than 33,000 tons of material was excavated and shipped off site for disposal. The cleanup of Rattlesnake Creek completed the remediation of all areas included in the 1998 Record of Decision. USACE officially observed the completion of the work at the sites on September 14, 2006.

## Regulatory Setting

The U.S. Atomic Energy Commission (AEC), a predecessor agency to DOE, established FUSRAP in March 1974 to evaluate radioactive contamination at sites where work was performed to develop the nation's nuclear weapons and early atomic energy program. After reviewing records and radiometric surveys for more than 600 sites associated with the nuclear weapons program, DOE identified 46 sites that required cleanup, including the Ashland Oil #1 and #2 sites. Congress transferred responsibility for FUSRAP site characterization and remediation to USACE in 1997. DOE retains responsibility for long-term surveillance and maintenance of remediated FUSRAP sites.

USACE remediated the contaminated areas to the standards specified in the Record of Decision for the Ashland Oil #1 (Including Seaway Area D) and Ashland Oil #2 sites and the Explanation of Significant Differences for the Rattlesnake Creek portion of the Ashland sites for all pathways of exposure. No further response is needed to protect human health and the environment, and the sites are suitable for unrestricted

(urban residential) use. Responsibility for the sites was transferred to DOE in October 2008.

## Current Site Conditions

The projected future use of the sites is commercial or industrial operations. A Waterfront Region Master Plan was written in 1992 to address revitalization of the Town of Tonawanda waterfront area. The Master Plan defined a planning region, set goals and objectives, outlined a plan for future development, and recommended strategies for plan implementation in phases.

## Legacy Management Activities

No monitoring, maintenance, or site inspections are required for the Tonawanda North Sites. DOE Office of Legacy Management responsibilities consist of managing site records and responding to stakeholder inquiries.

## Contacts

Documents related to the Tonawanda North, NY, Site, Units 1 and 2 are available on the DOE Legacy Management website at <http://www.lm.doe.gov/tonawanda/Sites.aspx>.

For more information about DOE Legacy Management activities at the Tonawanda, NY, Site, Units 1 and 2, contact:

U.S. Department of Energy  
Office of Legacy Management  
2597 B<sup>3</sup>/<sub>4</sub> Road, Grand Junction, CO 81503  
(970) 248-6070 (monitored continuously), or  
(877) 695-5322 (toll-free)