



## Middlesex North, New Jersey, Site

### FACT SHEET

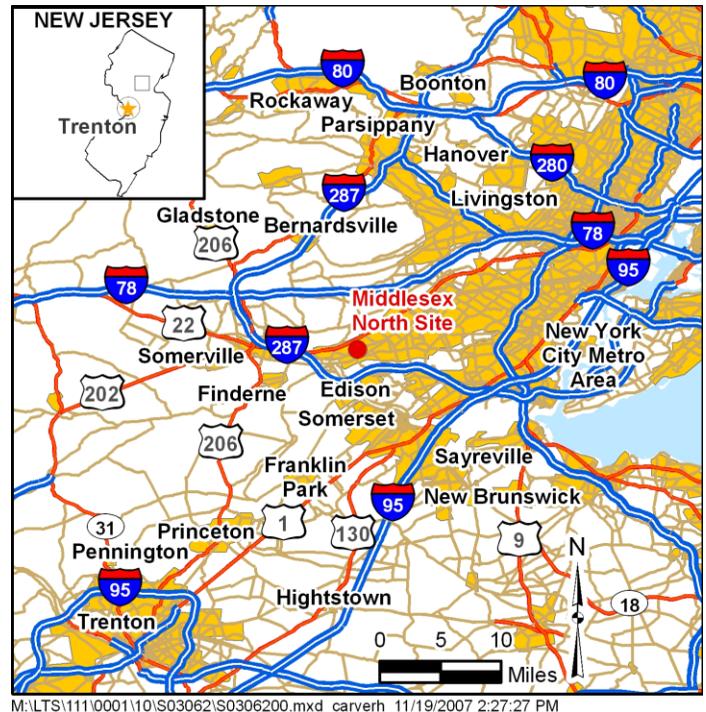
*This fact sheet provides information about the Middlesex North, New Jersey, Site.  
This site is managed by the U.S. Department of Energy Office of Legacy Management.*

### Site Description and History

The Middlesex North, New Jersey, Site (formerly the Middlesex Municipal Landfill Site) is located in Middlesex, New Jersey, approximately 22 miles west of downtown Manhattan (New York City); 16 miles southwest of Newark, New Jersey; and 30 miles northeast of Trenton, New Jersey. The site comprises the Middlesex Landfill, which received slightly contaminated soil from the Middlesex Sampling Plant (located one-half mile south-southeast of the landfill).

From 1943 to 1955, the Middlesex Sampling Plant, under the auspices of the Manhattan Engineer District, was used to crush, dry, screen, weigh, assay, store, package, and ship various types of uranium, thorium, and beryllium ores for the development of the atomic bomb. The sampling plant was used primarily for storage and for some sampling of thorium residues from 1955 to 1967, when the site was decontaminated, certified as meeting then-current radiological cleanup standards, and released for unrestricted use. The plant was transferred to the U.S. Marine Corps in 1969, and the facility was used as a reserve training center until 1979, when the U.S. Department of Energy (DOE) became its custodian. DOE used the plant as an interim storage for radioactively contaminated materials from nearby vicinity properties and areas adjacent to the site.

Much of the ore generated from the early sampling activities was stored in drums and containers on a poorly drained field on the Middlesex Sampling Plant grounds. Handling and transfer operations occasionally resulted in spillage of small amounts of ore, causing this area to become contaminated with small pieces of pitchblende (high-grade uranium ore) interspersed with muddy soil. In 1948, the Atomic Energy Commission (AEC) decided this storage area should be paved, and approximately 6,000 cubic yards of uranium-contaminated soil from grading activities was transported to and disposed of at the landfill, where it was dispersed over approximately 5 acres. After elevated radiation levels were detected at the landfill in 1960, the AEC removed approximately 650 cubic yards of contaminated material nearest the surface and replaced it with about 2 feet of clean dirt. This contami-



*Location of the Middlesex North, New Jersey, Site*

nated material was subsequently redeposited at an AEC-owned site in New Brunswick, New Jersey. In 1963, the Borough of Middlesex sold a 5-acre parcel of the landfill to the Middlesex Presbyterian Church, who then built a church there. A 1974 AEC radiological survey and a follow-up 1978 DOE survey (conducted by Oak Ridge National Laboratory) determined that contamination of the property was localized to a 3-acre area approximately 400 feet northeast of the church building. Radioactive contamination consisted primarily of radium-226, with lesser amounts of uranium-238. The 1978 survey and subsequent remedial action were performed as part of the Formerly Utilized Sites Remedial Action Program (FUSRAP).

Remedial action was performed at two parcels of the landfill: Parcel 1 located on 1190 Mountain Avenue (comprising approximately one-third of the site and owned by Middlesex Presbyterian Church) and Parcel 2 also located on Mountain Avenue (comprising approximately two-thirds of the site and owned by the Borough of Middlesex). The remedial action of the

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landfill was conducted in two phases, in 1984 and 1986, during which 15,000 and 16,000 cubic yards were removed, respectively, for a total of 31,000 cubic yards. The contaminated soil was transported to and temporarily stored at the sampling plant until a permanent disposal site could be selected. After both phases of excavation, backfilling was performed, turf was established, and demobilization and site cleanup were completed.

## Regulatory Setting

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 connected with the nuclear weapons program, DOE identified 46 sites that required cleanup, including the Middlesex North Site. Congress transferred responsibility for FUSRAP site characterization and remediation to the U.S. Army Corps of Engineers in 1997. DOE retains responsibility for long-term surveillance and maintenance of remediated FUSRAP sites.

The Middlesex North Site was remediated to criteria in *Guidelines for Residual Radioactive Material at Formerly Utilized Sites Remedial Action Program and Remote Surplus Facilities Management Program Sites*. A notice of cleanup certification for the site was published in the *Federal Register* on May 8, 1989.

In fiscal year 2004, DOE transferred responsibility for the Middlesex North Site from the DOE Office of Environmental Management to the DOE Office of Legacy Management.

## Current Site Conditions

Post-remedial action survey data indicate that the radiological condition of the Middlesex North Site is in compliance with applicable DOE standards and guidelines for cleanup of residual radioactive contamination. An independent verification survey conducted after the completion of remedial action detected no residual radioactivity at the site that exceeded current guidelines. Therefore, DOE released the site for unrestricted use.

## Legacy Management Activities

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

## Contacts

Documents related to the Middlesex North Site are available on the DOE Legacy Management website at [http://www.lm.doe.gov/middlesex\\_north/Sites.aspx](http://www.lm.doe.gov/middlesex_north/Sites.aspx).

For more information about DOE Legacy Management activities at the Middlesex North Site, contact

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