

# Welsbach & General Gas Mantle Contamination

## New Jersey

EPA ID#: NJD986620995

### EPA REGION 2

Congressional District(s): 01

Camden

City of Camden, Gloucester City

#### NPL LISTING HISTORY

Proposed Date: 10/2/1995

Final Date: 6/17/1996

## Site Description

The Welsbach and General Gas Mantle Contamination site is comprised of two former incandescent gas mantle manufacturing sites and numerous residential properties in the cities of Camden and Gloucester City, New Jersey. The Welsbach Company and the General Gas Mantle Company were involved in the production of gas mantles from the late 1890s to 1941. The companies utilized thorium, a radionuclide that emits gamma radiation during radioactive decay, as a constituent in their manufacturing process. In addition, four nearby residential areas exhibit elevated levels of gamma radiation.

Site Responsibility: The site is being addressed through federal and state actions.

## Threat and Contaminants

Soil contains thorium and other radioactive materials. As a result of the radioactive decay of these materials, elevated levels of gamma radiation and radon gas are present. Residents who are directly exposed to radiation, or inadvertently ingest radioactive particles from the site may suffer adverse health effects.

## Cleanup Approach

The site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on the entire site.

### Response Action Status

Immediate Actions: In the early 1990s, the New Jersey Department of Environmental Protection (NJDEP) investigated over 1,100 properties in Camden and Gloucester City, New Jersey, for radiological contamination. As a protective measure, NJDEP installed gamma radiation shielding on about 30 properties and radon ventilation systems on three properties. NJDEP also purchased one contaminated residential property and relocated one commercial business. In December 1998, EPA excavated approximately 200 cubic yards of radiologically contaminated soil from a public park area in Gloucester City and replaced it with clean fill. In September 2001, EPA performed another removal action in Gloucester City. EPA removed approximately 160 cubic yards of radiologically contaminated soils from three residential properties and installed a radon mitigation system on another property.

Entire Site: In August 1996, EPA initiated a remedial investigation and feasibility study (RI/FS) to determine the nature and extent of contamination throughout the site, and the risks posed by the site. In September 1997, EPA started field investigations at a number of residential and industrial properties. EPA completed the field investigations in August 1998, and finalized the RI/FS in January 1999. In February 1999, EPA released for public comment its proposed plan for cleaning up the radiologically contaminated properties. EPA held public meetings in Camden and Gloucester City in February 1999 to discuss the results of the RI/FS, and its proposed remedy. In July 1999, EPA signed the Record of Decision (ROD). The ROD estimated that about 60 properties in Camden and Gloucester have radiation levels above the cleanup standards. The selected remedy includes excavation and off-site disposal of radiologically contaminated soil and waste materials on both residential and industrial properties in Camden and Gloucester City, and demolition and off-site disposal of the General Gas Mantle Building (GGM) in Camden. The ROD also called for EPA to investigate over 600 properties in Camden and Gloucester City to confirm NJDEP's data and to make sure no contamination is overlooked.

In April 2001, EPA started the surface water, sediment, and wetland investigation called for in the 1999 ROD. In March 2002, EPA completed a screening level ecological risk assessment. In January 2005, EPA used sediment data to evaluate the baseline human health risk from radionuclides and chemicals of potential concern. EPA found that no

radiological contamination in the surface water, sediment, and wetland areas in the Welsbach Site study area posed an unacceptable risk to human health or the environment. Therefore, in September 2005, EPA signed a ROD indicating that no remedial action is warranted for the surface water, sediment, and wetland areas in the Welsbach site study areas.

In August 1999, EPA initiated the remedial design activities for the selected remedy. EPA completed the design of the demolition of the General Gas Mantle Building in June 2000. Demolition of the building began in December 2000 and was completed in February 2001. In May 2000, EPA started the design field investigations of the residential properties and Swim Club in Gloucester City. The first phase of the design was completed in September 2001. In April 2002, EPA began the cleanup of residential properties along Essex Street in Gloucester City. Cleanup of the Gloucester City Swim Club property began in November 2002. EPA removed about 47,000 cubic yards (70,000 tons) of radiological waste from the Essex Street residential and Swim Club properties. In May 2004, EPA started the radiological cleanup along Arlington Street in Camden, near the former General Gas Mantle Building. In August 2004, EPA completed the first stage of the cleanup of the Essex Street/Swim Club and Arlington Street properties. In October 2004, EPA started the cleanup of a Gloucester City property that is the future location of a new middle-grade school. In July 2005, EPA completed this remedial action, and removed over 19,000 cubic yards (29,500 tons) of radiological waste. In September 2005, EPA started final phase of the cleanup at the Gloucester City Swim Club property and an adjacent area. EPA completed this work in September 2006, and removed over 31,000 cubic yards (47,000 tons) of radiological waste. Also in September 2006, EPA started its cleanup activities along Highland Blvd. and Klemm Avenue in Gloucester City. EPA plans to complete this work in spring 2008. In February 2008, EPA started cleanup activities along Temple Avenue and Newton Creek in Gloucester City. EPA expects to complete this cleanup in spring 2009.

#### Enforcement Progress

In September 1997, EPA entered into an Administrative Order on Consent (AOC) with Holt Hauling and Warehousing, Inc. (Holt). Under the terms of the AOC, Holt agreed to perform an RI/FS on a radiologically contaminated building (the Armstrong Building) on its property. The Armstrong Building is the last building remaining from Welsbach's operations. In January 2000, Holt completed the RI/FS. EPA anticipates that it will select a cleanup remedy for the Armstrong Building based on the results of that RI/FS.

## Cleanup Progress

EPA and the State have reduced the short-term risks at the Site from gamma radiation by installing shielding on some of the site properties, removing surface contamination from three residential properties and a public park, and demolishing the former General Gas Mantle building in Camden. EPA has completed the cleanup of the Gloucester City Swim Club and the surrounding residential properties, and a large open area in Gloucester City that was to be the location of a new middle school. EPA has also completed its cleanup on about 100 residential properties in Camden and Gloucester City by removing the radiological contamination from these properties.

## Site Repositories

EPA Record Center 290 Broadway, 18th Floor New York, NY 10007-1866 (212) 637-4308

City of Camden Main Library 418 Federal Street Camden, New Jersey 08103 (856)757-7650

The Hynes Center 1855 South 4th Street Camden, New Jersey 08104 (856) 966-1212

Gloucester City Public Library Monmouth and Hudson Streets Gloucester City, New Jersey 08030 (856) 456-4181