

# **Welsbach/General Gas Mantle Sites (Camden Radiation)**

## **Various Locations Camden and Gloucester Cities Camden County**

**BLOCK:** Various **LOT:** Various

**Office of Community Relations (OCR): (609) 984-3081 | (800) 253-5647**

### **SITE DESCRIPTION/RESOLUTION OF ENVIRONMENTAL CONCERNS:**

The Welsbach/General Gas Mantle Superfund site is comprised of two former incandescent gas mantle manufacturing plants and numerous residential properties in Camden and Gloucester cities that were contaminated with radioactive wastes from the plants. Welsbach Company of Gloucester City and General Gas Mantle Company of Camden City manufactured incandescent gas mantles for home and street lighting between the 1890s and 1941. Both plants extracted thorium from ore for use as a coating material on the mesh covers of the gas lamps. The radioactive waste materials, or tailings, that remained after the extraction process were disposed of as fill near and/or under residential and commercial properties as well as on open lands. Various industries and commercial businesses have occupied the former Welsbach and the General Gas Mantle properties since the two companies ceased operations. Between 1991 and 1994, NJDEP conducted radiological surveys at more than 1,100 properties in Gloucester City and Camden City to evaluate the extent of radioactive contamination. The surveys revealed that 81 properties -45 in Gloucester City and 36 in Camden City - had elevated radiation levels. NJDEP implemented Interim Remedial Measures (IRM) at 33 of these properties that exhibited radiation levels above NJDEP's interim exposure criteria to protect the health of the occupants until permanent cleanup measures could be implemented. The IRMs included placing shielding materials, such as concrete and lead sheeting, over contaminated soil, installing radon/thoron ventilation systems in buildings and establishing access restrictions. Radiation levels at 48 of the properties did not exceed NJDEP's interim exposure criteria, therefore no immediate measures were taken at these properties. In 1991, NJDEP purchased a private residence in Gloucester City and permanently relocated its owner due to elevated radiation inside the home, and relocated Ste-Lar Textiles, Inc. from the former General Gas Mantle Company site to protect the health of the employees. NJDEP removed the contents of the Ste-Lar Textiles building in 1992 to minimize potential risk to area residents should a fire occur at the facility. In 1996, USEPA added the Welsbach/General Gas Mantle sites to the National Priorities List of Superfund sites (NPL) and began a Remedial Investigation and Feasibility Study (RI/FS) at the former gas mantle plants and approximately 150 "Vicinity" properties in Gloucester City and Camden City to confirm NJDEP's findings from the radiological surveys and select permanent remedies. In 1998, while the RI/FS was underway, USEPA removed approximately 200 cubic yards of radiologically-contaminated soil from a public park in Gloucester City and replaced it with clean fill as an interim measure. The RI/FS revealed that significant quantities of radiologically contaminated soil were present at both the former Welsbach and General Gas Mantle plants and that there were elevated levels of radiation inside the former General Gas Mantle building. USEPA also concluded based on the comparison of USEPA's and NJDEP's data on the "Vicinity" properties that the soil at 54 of these properties was contaminated with radiological elements above cleanup levels. In addition, USEPA identified approximately 600 "Suspect" properties that were either adjacent to the known contaminated properties or had radiation exposure rates above background levels and therefore required additional investigation.

In 1999, after completing the RI/FS, USEPA issued a Record of Decision (ROD) with NJDEP concurrence that required excavation and off-site disposal of radiologically-contaminated soil from both the former Welsbach and General Gas Mantle sites, demolition and off-site disposal of the General Gas Mantle building, and excavation and off-site disposal of radiologically contaminated soil from the 54 Vicinity properties. USEPA demolished the General Gas Mantle building in 2000 and is conducting Remedial Designs for the soil cleanup actions at the plant sites and the Vicinity properties. During the Remedial Design phase, USEPA is investigating the 600 "Suspect" properties to determine the extent of the

radiological contamination and is designing cleanup plans for those properties as necessary. USEPA began removing contaminated soil from some of these residential and commercial properties in 2002. In addition to the above investigative work, Holt Hauling and Warehousing, Inc., owner of the only remaining building on the former Welsbach property, entered into an Administrative Order on Consent with USEPA in 1997 that obligated it to perform a RI/FS to determine the extent of the radiological contamination at the property. Holt Hauling and Warehousing completed the RI/FS at its building (also known as the Armstrong building) in 2000. USEPA will use the findings of the RI/FS to select a final remedy for the Armstrong building, which will be outlined in a second ROD for the site.