

# NPL Site Narrative for Radium Chemical Co., Inc.

## RADIUM CHEMICAL CO., INC. New York City, New York

**Conditions at proposal (August 16, 1989):** The Radium Chemical Co., Inc. (RCC) Site consists of a one-story brick building at 60-06 27th Avenue in a densely populated residential and commercial area in Woodside, Queens Borough, New York City, New York. Established in Manhattan in 1913, RCC transferred operations to Woodside in the late 1950s. An unrelated firm occupies part of the building, sharing a common wall with RCC.

Initially, RCC produced luminous paint for watch dials and instruments. Later it manufactured radium-containing needles and other sealed devices (largely for cancer therapy) for lease or sale to hospitals and research laboratories. Over the past 20 years, safer techniques involving cobalt and cesium have been developed, significantly reducing the use of radium devices.

In 1983, the New York State Department of Labor suspended RCC's operating license because of various disposal and safety infractions, and in 1986, the company was denied permission to resume operations. In 1987, the State ordered RCC to remove the radium and decontaminate the building. The owner said he could not afford the cleanup and abandoned the operation, leaving a large number of sealed containers, some of which appeared to be leaking radium and radon gas. The radium-226 present was estimated to be 110 curies. Also on the site were hundreds of containers of laboratory chemicals, many reactive, corrosive, flammable, and potentially shock sensitive.

Elevated levels of radiation have been measured inside certain areas of the building. On February 10, 1989, the Agency for Toxic Substances and Disease Registry of the U.S. Department of Health and Human Services issued an advisory warning that the RCC site poses a significant threat to public health because of the possible release of radium-226. Under Section 300.425(c)(3) of the National Contingency Plan, the Federal regulation by which CERCLA is implemented, a site can be placed on the NPL if (1) a public health advisory has been issued recommending that people be removed from the site, (2) EPA determines that the site poses a significant threat to public health, and (3) EPA anticipates that it will be more cost effective to use its remedial authority (available only at NPL sites) than its emergency removal authority to respond.

The advisory discusses two concerns. One is that an intruder might enter the RCC site from the adjacent firm (as has happened in the past) and remove radioactive materials. The second concern is a serious accident. The U.S. Department of Energy's Lawrence Livermore Laboratory modelled scenarios involving a gasoline tanker accident on the Brooklyn-Queens Expressway, 15 feet east of the site. The estimated 27,000 people living within 1 mile of the site could be exposed to any radiation released.

In July 1988, at the request of the State, EPA undertook a limited removal action using CERCLA emergency funds. EPA provided 24-hour security and took measures to stabilize the site. In April 1989, EPA began removing the radioactive and hazardous materials to approved disposal facilities.

**Status (November 21, 1989):** EPA completed removing materials from the site in October 1989 and is determining how to decontaminate and dismantle the RCC site.

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. ATSDR ToxFAQs can be found on the Internet at [ATSDR - ToxFAQs](http://www.atsdr.cdc.gov/toxfaqs/index.asp) (<http://www.atsdr.cdc.gov/toxfaqs/index.asp>) or by telephone at 1-888-42-ATSDR or 1-888-422-8737.