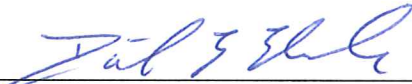



RESPONSE JUSTIFICATION DOCUMENT
KEYSTONE METALS REDUCTION SITE
BOROUGH OF CHESWICK
ALLEGHENY COUNTY
SOUTHWEST REGION

DEP APPROVAL

Based on the facts and findings outlined in this Response Justification Document, further investigation or response action is deemed appropriate, pursuant to Section 501(a) of the Hazardous Sites Cleanup Act.



David Eberle
Regional Manager
Environmental Cleanup Program

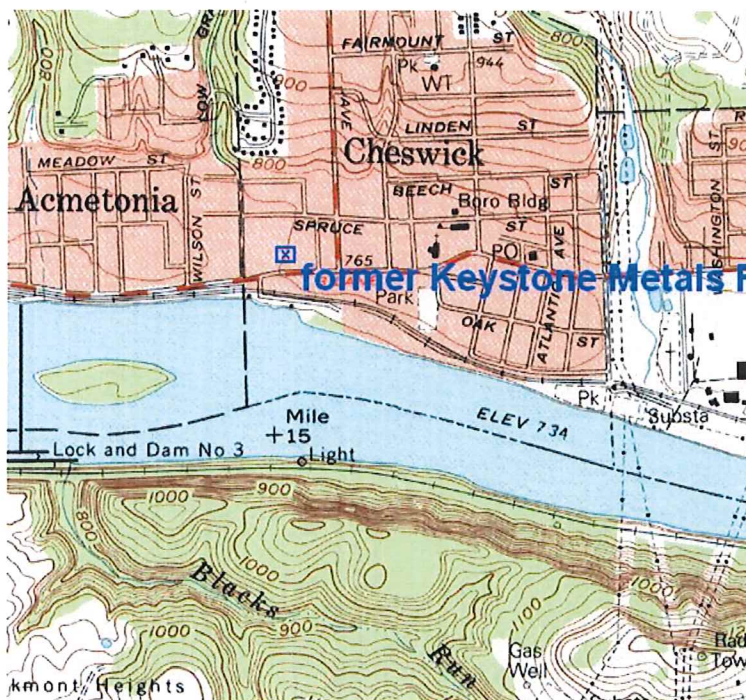


Date

SUMMARY OF FACTS

The Keystone Metals Reduction Site (“Site”) is located near the northeast corner of the intersection of Cheswick Ave and Freeport Road in Cheswick, Allegheny County. The Site encompasses approximately 3.5 acres and is located in an urban area with commercial, light industrial and residential properties nearby. Businesses now operating on the site include North American Fencing Corporation and Professional Mechanical Sales and Service, Inc.

The Site’s general topography is relatively flat with a depression near the eastern Site boundary. Remnants of a railroad spur that served the facility are visible at the site. The site is approximately 400 feet north of the Allegheny River. A well field serving Harmar Township Municipal Authority is located approximately 400 feet west of the Site. The Site is now used as business offices, light manufacturing, and storage.



Keystone Metals Reduction Co. (“Keystone”) was a Delaware corporation that purchased the Site in 1921 and operated a uranium processing facility on the property. Records indicate that Keystone utilized an extraction process on previously ‘milled’ uranium ore to produce radium. The facility reportedly produced about 2 grams of radium and ceased operations in the early 1920s. Radium production at this time required about two hundred fifty to five hundred tons of ore for every gram of radium produced.

In August 2010, staff from the Department’s Radiation Protection Program conducted a radiological scoping survey (“survey”) of the Site. During the survey, no byproducts from radium processing were observed on the property. It is not known how the tailings that

resulted from the radium processing were disposed. No records from the facility have been found. A common radium production practice at the time was to dump the tailings

During the survey, Department representatives detected two locations on the ground with elevated radiation levels. In one small area, surface soil radiation readings of 35 micro-roentgens per hour (uR/hr) were found. Along the foundation of the fabrication shop for North American Fencing, a larger surface soil area had readings up to 140uR/hr. Background radiation levels in the area were between 3 and 7 uR/hr.

A soil sample was collected from the location with the highest radiation measurement. Laboratory analysis of this sample showed elevated levels of radium-226 at 66.4 pCi/g; exceeding the EPA criteria for radium-226 in surface soil (5 pCi/g). It was reported that radiation readings increased as the surface was disturbed in order to collect the sample, possibly indicating that additional radioactive material was present below the surface.



Also during the August 2010 survey, the Department placed fourteen diffusion barrier charcoal canisters in occupied areas of buildings at the Site. The results of the tests ranged from 0.1 to 1.6 pCi/l, which is below the EPA suggested level of 4.0 pCi/l.

The current and potential threats to human health and welfare are the threats of direct contact to the contamination on the Site, vapor intrusion of radon into occupied buildings on and near the Site, and groundwater contamination from radioactive materials and by-products of radium processing.

The current and potential threat to the environment is the threat of direct contact with radioactive materials and by-products of radium processing. Contact may also include groundwater and/or surface water contamination as a result of leaching of contamination

from the Site. There may be a threat to any wildlife that may come into contact and/or ingest contaminated material.

In summary, based on sample results, background information, and site conditions, the Department has determined that there is a release or threat of a release of hazardous substances from the Keystone Metals Reduction Site.

POTENTIALLY RESPONSIBLE PERSONS

The following "person"(s), as defined by Section 103 of HSCA, have been identified at this time as being potentially responsible persons, pursuant to Section 701 of HSCA. Each potentially responsible person, identified below is entitled to legal notice under Section 501(a) of HSCA.

Keystone Metals Reduction Company aka, United States Metals Reduction Co. as owner/operator of the radium processing facility. (Defunct).

The Department is undertaking an investigation to identify additional potentially responsible persons, but conclusive evidence regarding other such parties has yet to be generated.

FINDINGS AND AUTHORITY TO ACT

The Department has determined that Radium 226 and other radioactive elements have been released at the Site. Radium 226 and other radioactive elements are hazardous substances as defined by the Hazardous Sites Cleanup Act. The concentration of radium 226 exceeds the Environmental Protection Agency criteria for surface soils. Based on these findings the Department has determined that further investigation or response is appropriate.

REFERENCES

Analytical report for soil sample collected 8/18/2010 by PA DEP Bureau of Radiation Protection during Scoping Survey of KMR Site.

Memo from Robert Maiers, Radiation Protection Program Manager, PADEP Bureau of Radiation to David Allard, Director of PADEP Bureau of Radiation Protection dated November 16, 2010 and titled "Scoping Survey of Former Keystone Metals Reduction Co."

Surface soil criteria for Radium 226 from 40 CFR Part 192

Various historical documents and articles referencing Keystone Metals Reduction Company and the extraction and recovery of radium from carnotite

Property deed dated July 28, 1921 for property purchased by Keystone Metals Reduction Company located in the Borough of Cheswick

Property deed dated April 1988 for property purchased by North American Fencing Corp. in the Borough of Cheswick

Information from Allegheny County's real estate website for various properties located in the Borough of Cheswick

Harmar Township public water supply sample analysis data for radiological parameters

Sanborn maps dated 1924 and 1930 of the Borough of Cheswick

Historical Air photos dated 1938, 1956, and 1967 showing an area of Cheswick

Historical topographic map dated 1910 of Cheswick and a more recent topographic map of Cheswick