

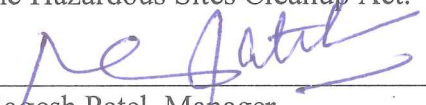
RESPONSE JUSTIFICATION DOCUMENT
Easton Road PFC HSCA Site
Doylestown Borough and Plumstead, Buckingham and Doylestown Townships
Bucks County

Prompt Interim Response Site

Region 1


DEP APPROVAL

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



Ragesh Patel, Manager
Hazardous Sites Cleanup Program

5/31/2016
Date



Stephan Sinding, Program Manager
Environmental Cleanup and Brownfields

5/31/16
Date

SUMMARY OF FACTS

The Site is an area of potential groundwater contamination encompassing approximately a one mile radius around a supply well of the Doylestown Township Municipal Authority (DTMA) known as the "Cross Keys Well". The Site is located near the intersection of routes 611 and 313 in Bucks County, falling within portions of Doylestown Borough, Plumstead Township, Buckingham Township, and Doylestown Township. The Cross Keys well is not currently operational, but has had detections of perfluorooctanoic acid (PFOA) which exceed the newly established Health Advisory Level (HAL) set by the United States Environmental Protection Agency (USEPA).

PFOA falls under the broader class of chemicals known as perfluorinated compounds (PFCs). It has been used historically as an additive to a wide variety of industrial and commercial products including firefighting foam, textiles and paper packaging materials. Additionally, PFOA can be generated as a breakdown product of other PFCs which have been used as surfactants for numerous products to aid in resisting heat, water, grease and chemicals. PFCs are very persistent in the environment and are known bioaccumulants. Scientific studies on laboratory animals have shown various toxic effects from PFC exposure such as liver and/or kidney damage, cancer, and birth defects. Currently, there is only limited information on effects to human health, but evidence suggests exposure to PFOA may cause increased cholesterol levels, liver damage, thyroid disorders, and/or certain types of cancer. Among the most sensitive populations are pregnant and lactating women who can pass the chemicals to developing fetuses and nursing infants. Another PFC associated with very similar industrial uses is perfluorooctane sulfonate (PFOS). As with PFOA, limited human health studies of the effects of PFOS suggest possible health risks including elevated cholesterol and thyroid disorders, as well as decreased fertility and/or suppression of the immune system.

PFCs are known as "emerging contaminants" which currently do not have established maximum contaminant levels under the Safe Drinking Water Act. USEPA previously set a provisional health advisory level (PHAL) for PFOA in 2009 based on the information it had at that time, but has recently replaced the provisional level with a new lifetime health advisory level (HAL). The new HAL of 0.07 parts per billion (ppb) encompasses both PFOA and PFOS, and was made effective on May 19, 2016. When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS should be compared with the new HAL. PFOA monitoring results from the Cross Keys Supply Well in 2014 met the PHAL at the time, but exceed the newly established and lower HAL. This prompted DTMA to immediately take the well off-line and out of service.

It is not known at this time how wide-spread the PFC groundwater contamination is in the Site area. DTMA has removed a source of the contaminant in the public water system by shutting down one supply well, but there are other wells in the area, including private supplies, that have not been sampled for PFCs.

RESPONSIBLE PERSONS

There are no known "person"(s), as defined by Section 103 of HSCA, identified at this time as being "responsible persons", pursuant to Section 701 of HSCA.

FINDINGS AND AUTHORITY TO ACT

DEP considers perfluorooctanoic acid, and the broader class of perfluorinated compounds, to be contaminants as defined in Section 103 of HSCA:

Contaminant: An element, substance, compound, or mixture which is defined as a pollutant or contaminant pursuant to the Federal Superfund Act.

The Federal Superfund Act (CERCLA) defines a pollutant in 42 U.S. Code § 9601 as:

The term "pollutant or contaminant" shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring; except that the term "pollutant or contaminant" shall not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of paragraph (14) and shall not include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas).

Due to the presence of perfluorooctanoic acid in the groundwater at the Site, the Department has determined that further investigation is appropriate to determine the extent and degree of PFC contamination. Based on those findings, further response actions may also be necessary to provide alternative potable water to abate potential human health risks.

REFERENCES

1. Hazardous Site Cleanup Act, Act of October 18, 1988, P.L. 756, No. 108, 35 P.S. §6020.101-6020.1305
2. Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. §9601)
3. Provisional Health Advisories for Perfluorooctanoic acid (PFOA) and Perfluorooctane Sulfonate (PFOS). EPA. January 8, 2009

4. Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA). EPA, Doc. No. 822-R-16-0065. May 2016.
5. Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS). EPA, Doc. No. 822-R-16-004. May 2016.

Attachment 1: Map of Site Area

