UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

AUG 10 2017

CON 12-15
Doc #33405

Jeff Pross
214 Locust Street
Atlantic, Iowa 50022

RE: PCE Chestnut Street
CERCLIS ID. No. IAN000703467

Dear Mr. Pross:

Since July 2015, representatives of the U.S. Environmental Protection Agency have been collecting indoor air and sub-slab soil gas samples from the residence at 214 Locust Street. The samples were collected to evaluate whether vapors from the PCE Chestnut Street site in Atlantic, Iowa, have the potential to enter the property. The primary contaminant associated with the site is tetrachloroethene (PCE). The results from these sampling events are summarized in the table below.

Sample Results: 214 Locust Street			**PCE ($\mu g/m^3$)**
Residential Indoor Air Regional Action Level			**42**
Business Indoor Air Regional Action Level			**180**
Residential Sub-slab Soil Gas Screening Level			**1,400**
Business Sub-slab Soil Gas Screening Level			**6,000**
Sample Type	**Sample ID**	**Collection Date**	**PCE Result**
Sub-slab Soil Gas	Sub-slab	7/22/15	104.62
Indoor Air	6999-7	3/7/16	150
Sub-slab Soil Gas	Sub-slab	5/9/16	82.8
Vapor Mitigation System Installed – June 15, 2016			
Indoor Air	7003-15	9/7/16	360
Indoor Air	214 Locust	1/4/17	56.1
Indoor Air	214 Locust	1/25/17	64.84
Sub-slab Soil Gas	Sub-slab	1/25/17	57.91
Indoor Air	214 Locust	2/15/17	56.1
Modified Vapor Mitigation System – April 13, 2017			
Indoor Air – Basement	7300-1	5/9/17	148
Indoor Air – Main Level	7300-2	5/9/17	123
Indoor Air - Basement	IA-2	6/22/17	165.2
Indoor Air – Main Level	IA-1	6/22/17	21.35
Sub-slab Soil Gas	Sub-slab	6/22/17	109.12

Notes:

ID	**Identification**
$\mu g/m^3$	**Micrograms per cubic meter**
PCE	**Tetrachloroethene**

Based on the concentration of PCE detected in the indoor air in March 2016, which was above the action level established for residences, the EPA installed a vapor mitigation system in June 2016. Follow up sampling determined that PCE remained in the indoor air at levels above the action level. The vapor mitigation system was modified in April 2017 to increase its effectiveness. An evaluation of the system determined it was operating properly. Further investigation that involved the collection of additional samples has determined that a source of PCE is likely present inside the residence. PCE is a chemical that can be found in solvents, adhesives, and lubricants. Attached to this letter is a fact sheet for PCE. A document listing household products containing PCE is also included. Because the EPA can only address contamination associated with the PCE Chestnut Street site, no additional sampling or other activities are planned for 214 Locust Street.

This information is being provided to you in accordance with Section 104(e)(4)(B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

If there are any questions regarding the above, please contact On-Scene Coordinator (OSC) Jeff Pritchard at (913) 551-7772 or by email at pritchard.jeffrey@epa.gov.

Thank you for your cooperation in this matter.

Sincerely,

Jeff Pritchard
On-Scene Coordinator
Response and Removal South Section
Superfund Division

Enclosures

cc: Ms. Amie Davidson
Supervisor Solid Waste Division
Iowa Department of Natural Resources
Wallace State Office Building
Des Moines, Iowa 50319

Mr. Stuart Schmitz
Iowa Department of Public Health
Principal Investigator/Environmental Toxicologist
321 East 12th Street
Des Moines, Iowa 50319-007

Tetrachloroethylene - ToxFAQs™

CAS # 127-18-4

This fact sheet answers the most frequently asked health questions (FAQs) about tetrachloroethylene. For more information, call the CDC Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Tetrachloroethylene is a manufactured chemical used for dry cleaning and metal degreasing. Exposure to very high concentrations of tetrachloroethylene can cause dizziness headaches, sleepiness, incoordination confusion, nausea, unconsciousness, and even death. Tetrachloroethylene has been found in at least 945 of the 1,699 National Priorities List sites identified by U.S. Environmental Protection Agency (EPA).

What is tetrachloroethylene?

Tetrachloroethylene is a nonflammable colorless liquid. Other names for tetrachloroethylene include perchloroethylene, PCE, perc, tetrachloroethene, and perchlor. Most people can smell tetrachloroethylene when it is present in the air at a level of 1 part in 1 million parts of air (1 ppm) or more.

Tetrachloroethylene is used as a dry cleaning agent and metal degreasing solvent. It is also used as a starting material (building block) for making other chemicals and is used in some consumer products.

What happens to tetrachloroethylene when it enters the environment?

- Tetrachloroethylene can be released into air, water, and soil at places where it is produced or used.
- Tetrachloroethylene breaks down very slowly in the air and so it can be transported long distances in the air. Half of the amount in the air will degrade in approximately 100 days.
- Tetrachloroethylene evaporates quickly from water into air. It is generally slow to break down in water.
- Tetrachloroethylene may evaporate quickly from shallow soils or may filter through the soil and into the groundwater below. It is generally slow to break down in soil.

How might I be exposed to tetrachloroethylene?

- When you bring clothes from the dry cleaners, they will release small amounts of tetrachloroethylene into the air.
- When you drink water containing tetrachloroethylene, you are exposed to it. You might also be exposed to tetrachloroethylene that is released into the air during showering and bathing.
- People residing near contaminated sites or dry cleaning locations may be exposed to higher levels than the general population.
- People working in the dry cleaning industries or using metal degreasing products may be exposed to elevated levels of tetrachloroethylene.

How can tetrachloroethylene affect my health?

Breathing high levels of tetrachloroethylene for a brief period may cause dizziness or drowsiness, headache, and incoordination; higher levels may cause unconsciousness and even death.

Exposure for longer periods to low levels of tetrachloroethylene may cause changes in mood, memory, attention, reaction time, and vision.

Studies in animals exposed to tetrachloroethylene have shown liver and kidney effects, and changes in brain chemistry, but we do not know what these findings mean for humans.

How likely is tetrachloroethylene to cause cancer?

Studies in humans suggest that exposure to tetrachloroethylene might lead to a higher risk of getting bladder cancer, multiple myeloma, or non-Hodgkin's lymphoma, but the evidence is not very strong.

Tetrachloroethylene

CAS # 127-18-4

In animals, tetrachloroethylene has been shown to cause cancers of the liver, kidney, and blood system.

EPA considers tetrachloroethylene likely to be carcinogenic to humans by all routes of exposure. The International Agency for Research on Cancer (IARC) considers tetrachloroethylene probably carcinogenic to humans. The Department of Health and Human Services (DHHS) considers tetrachloroethylene to be reasonable anticipated to be a human carcinogen.

How can tetrachloroethylene affect children?

It is not known whether children are more susceptible than adults to the effects of tetrachloroethylene.

A few studies in humans have suggested that exposure to tetrachloroethylene increased the numbers of babies with birth defects, but these studies were not large enough to clearly answer the question. Studies in animals exposed by inhalation or stomach tube have not shown clear evidence of specific birth defects.

How can families reduce the risks of exposure to tetrachloroethylene?

- Tetrachloroethylene has been found in low levels in some food. You can minimize the risk of your family's exposure by peeling and thoroughly washing fruits and vegetables before cooking.
- Use bottled water if you have concerns about the presence of tetrachloroethylene in your tap water. You may also contact local drinking water authorities and follow their advice.
- Prevent children from playing in dirt or eating dirt if you live near a waste site that has tetrachloroethylene.
- Tetrachloroethylene is widely used as a scouring solvent that removes oils from fabrics, as a carrier solvent, as a fabric finish or water repellant, and as a metal degreaser/cleaner. Follow instructions on product labels to minimize exposure to tetrachloroethylene.

Is there a medical test to show whether I've been exposed to tetrachloroethylene?

Tetrachloroethylene and its breakdown products (metabolites) can be measured in blood and urine. However, the detection of tetrachloroethylene or its metabolites cannot predict the kind of health effects that might develop from that exposure. Because tetrachloroethylene and its metabolites leave the body fairly rapidly, the tests need to be conducted within days after exposure.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set an 8-hour time weighted average permissible exposure limit of 100 ppm, an acceptable ceiling exposure limit of 200 ppm, and a maximum peak of 300 ppm (not to be exceeded for more than 5 minutes of any 3-hour period).

The National Institute for Occupational Safety and Health (NIOSH) recommends that workplace exposure to tetrachloroethylene be minimized due to concerns about its carcinogenicity.

References

This ToxFAQs™ information is taken from the 2014 Toxicological Profile for Tetrachloroethylene (Draft for Public Comment) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services in Atlanta, GA

Where can I get more information?

For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Human Health Sciences, 1600 Clifton Road NE, Mailstop F-57, Atlanta, GA 30329-4027.

Phone: 1-800-232-4636, FAX: 770-488-4178.

ToxFAQs™ Internet address via WWW is http://www.atsdr.cdc.gov/toxfaqs/index.asp.

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

Chemical Information

Chemical Name: **Tetrachloroethylene**

CAS Registry Number: 000127-18-4

Synonyms: 1,1,2,2-Tetrachloroethene; 1,1,2,2-Tetrachloroethylene; Ankilostin; Antisol 1; Carbon bichloride; Carbon dichloride; Czterochloroetylen; Didakene; Dilatin PT; Ethene, tetrachloro-; Ethylene tetrachloride; Ethylene, tetrachloro-; Perawin; Perc; Perchloorethyleen, per; Perchlor; Perchloraethylen, per; Perchlorethylene; Perclene; Perclene D; Percloroetilene; Percosolv; Percosolve; PERK; Perklone; Persec; Tetlen; Tetracap; Tetrachlooretheen; Tetrachloraethen; Tetrachloroethene; Tetraguer; Tetraleno; Tetralex; Tetravec; Tetroguer; Tetropil

Information from other National Library of Medicine databases

Health Studies: Human Health Effects from Hazardous Substances Data Bank (HSDB)

Toxicity Information: Search TOXNET

Chemical Information: Search ChemIDplus

Biomedical References: Search PubMed

Products that contain this ingredient

Brand	Category	Form	Percent
Aleenes Platinum Bond Patio & Garden Adhesive	Arts & Crafts	liquid	70
ARAMCO Art and Crafts Goop, FP Goop-Old Product	Arts & Crafts	liquid	
E6000 Shoe Dazzle Shoe Art Glue	Arts & Crafts	tube	60.0-100.0
Aleenes Platinum Bond 7800 Adhesive	Arts & Crafts	liquid	70
Aleenes Platinum Bond Super Fabric Textile Adhesive	Arts & Crafts	liquid	70
E6000 Jewelry & Bead Glue	Arts & Crafts	tube	60.0-100.0
Lectra Motive Auto Care-Old Product	Auto Products	aerosol	70-100
Trouble Free Rust Buster	Auto Products	aerosol	
Gumout Professional Non Flammable Brake Parts Cleaner	Auto Products	aerosol	50-90
Champion Carburetor Cleaner	Auto Products	aerosol	15.0 - 20.0
Champion Sprayon Degreasing Solvent	Auto Products	aerosol	20 - 25
ProFree Anti Seize Lubricant	Auto Products	aerosol	45 - 50
ProsALL Prosolv	Auto Products	aerosol	20-25
Brakleen Brake Parts Cleaner-01/26/1999-Old Product	Auto Products	liquid	>90
Lectra Motive Auto Care-03/28/2002-Old Product	Auto Products	aerosol	>90
Brakleen Brake Parts Cleaner-Bulk-Old Product	Auto Products	liquid	>90
Pyroil Brake Parts Cleaner-07/18/2012	Auto Products	aerosol	90.0-100.0
Brakleen Brake Parts Cleaner-Old Product	Auto Products	liquid	65-94
Liquid Wrench Supr Lubricant with Teflon-Old Product	Auto Products	aerosol	65-80
Champion Sprayon Brake Parts Cleaner	Auto Products	aerosol	<1
ProsALL Propen Non flammable Penetrating Oil	Auto Products	aerosol	60 - 65