



EPA Proposes Cleanup Plan For Underground Water

Keystone Corridor Ground Water Contamination Site
Indianapolis, Indiana May 2020

You are invited

EPA invites you to comment on the proposed cleanup plan for Operable Unit 1 of the Keystone Corridor Ground Water Contamination site. The Agency will only select a final cleanup plan after reviewing comments received during the public comment period,¹ which runs from June 1 to June 30, 2020.

There are several ways to offer comments:

- Online at www.epa.gov/superfund/keystone-corridor-groundwater.
- Fill out and mail the enclosed comment form by the deadline.
- Email comments to EPA Community Involvement Coordinator Heriberto León at leon.heriberto@epa.gov.
- Call 312-886-6662 and leave a voice mail message.

Read the proposed plan and view a presentation about the proposed plan

More details are available on our website:

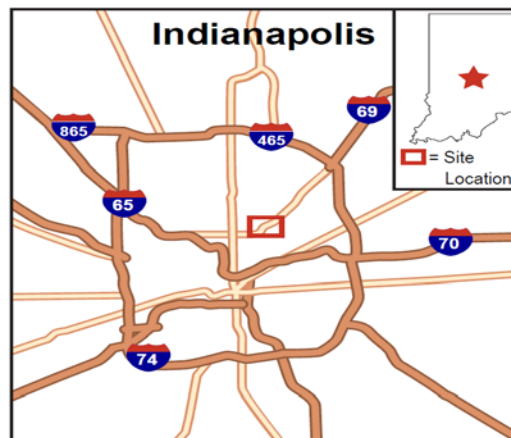
www.epa.gov/superfund/keystone-corridor-groundwater.

See Page 5 for contact information on EPA team members.

The U.S. Environmental Protection Agency (EPA), working with the Indiana Department of Environmental Management (IDEM), is proposing a cleanup plan to address the primary source area of pollution in the underground water, called “groundwater” in environmental terms. The target area is known as Operable Unit 1, or OU1. The location serves as the main source of groundwater contamination and resulting soil vapor contamination at the Keystone Corridor Ground Water Contamination Superfund site (*see map below and on Page 3*).

EPA will accept comments on the proposed cleanup plan from June 1 through June 30, 2020 (*see box, left*). This fact sheet provides a summary of the proposed cleanup plan for OU1. EPA’s final decision on the remedy for OU1 will be announced in local newspapers and presented in a document called a Record of Decision, or ROD. The ROD will include a responsiveness summary that summarizes EPA’s responses to public comments on the proposed plan. Based on new information and public comments, EPA may modify its preferred cleanup plan or select a different option. It is important for the public to review and comment on all the alternatives presented in this proposed plan.

The primary chemicals of concern at the site are trichloroethene, or TCE, and tetrachloroethene, or PCE. TCE was a commonly used industrial solvent and PCE is frequently used in dry cleaning. Both chemicals dissolve easily in water but can stay in groundwater for a long time. TCE and PCE can also evaporate, and those vapors can work their way from the groundwater into soil and up to the surface, and then possibly into indoor air of nearby homes and businesses. This is known as vapor intrusion. EPA is seeking public comment on the proposed cleanup, which consists of treating the primary source area by applying heat or steam underground to vaporize and then capture and treat the contaminants.



Map showing site location.

¹Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, known as the Superfund law) requires publication of a notice and a proposed plan for the site remediation. The proposed plan must also be made available to the public for comment. This fact sheet summarizes information from the remedial investigation and documents in the administrative record for the Keystone Corridor Ground Water Contamination site. They are available for review on EPA’s website: www.epa.gov/superfund/keystone-corridor-groundwater.

Site background

The site consists of a contaminated groundwater plume underlying both active and inactive industrial, commercial, and residential properties. The center of the site is designated as the intersection of Keystone Avenue and East Fall Creek Parkway North Drive. The approximate boundaries of the site are 45th Street on the north, Eastern Avenue on the east, 38th Street on the south, and Norwaldo Avenue on the west. The municipal Fall Creek Station well field, plus multiple, independent potential sources of groundwater contamination, some of which are mixed together, are located within the site.

Site-related contaminants within the plume include pollutants that evaporate into the air, called volatile organic compounds, or VOCs, including TCE, PCE, and other chemicals. Vapor intrusion can occur when contaminants evaporate from contaminated groundwater, move upward through the subsurface, and enter residences and other buildings at concentrations that constitute a threat to human health.

Site investigations

This section focuses on information relevant to the primary source area addressed by OU1, located at the former Tuchman Cleaners property at 4401 N. Keystone Ave.

IDEM began investigating soil and groundwater contamination along Keystone Avenue in 1989 when elevated levels of VOCs were detected in two soil borings on the former Tuchman Cleaners property. The Tuchman Cleaners facility operated from 1952 through 2008 and used PCE, generated PCE waste, and had several PCE releases on the property.

Due to elevated levels of contaminants found on the property, a pump and treat system to remove vapors from soil and groundwater was installed in 1990. In 2003, a system was installed to remove PCE from beneath the property.

In July 2008, National Drycleaners Inc. the parent company of Tuchman Cleaners, declared Chapter 11 bankruptcy, and all cleanup efforts at the Tuchman property stopped.

In October 2009, IDEM performed a site investigation for the Keystone Corridor site, which included sampling at the former Tuchman Cleaners property. Elevated levels of PCE were found in the groundwater and soil samples at the former cleaners.

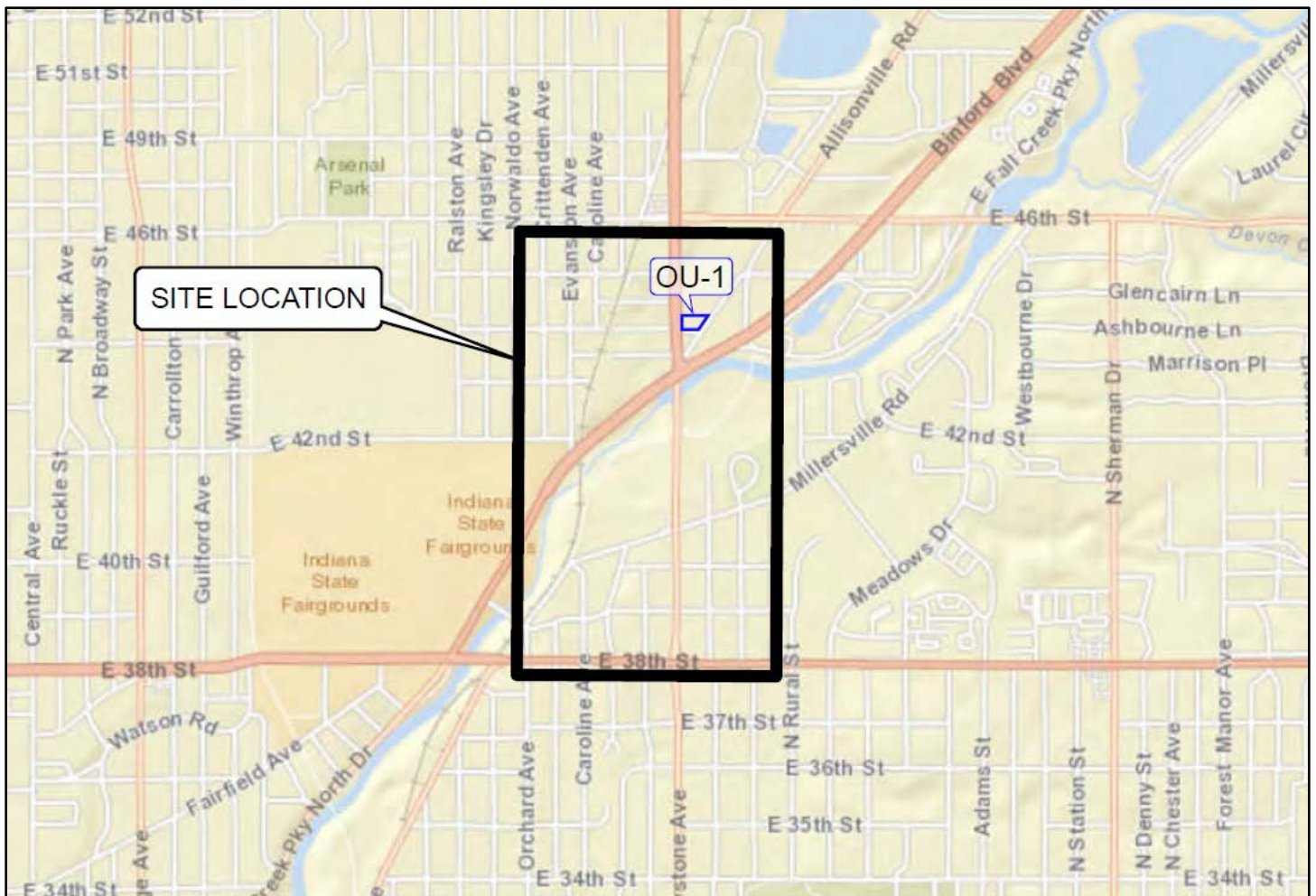
In November 2011, IDEM conducted an expanded site inspection across the Keystone Corridor and found elevated levels of PCE and TCE in soil and groundwater samples. As a result of these investigations, IDEM requested EPA's assistance with a removal action at Tuchman Cleaners. From September 2012 to December 2014, EPA conducted the cleanup. EPA excavated more than 2,550 tons of contaminated soil and two underground storage tanks from the property.

EPA also sampled soil vapor in the neighborhood to the east and conducted testing at more than 40 residential properties to determine if vapor intrusion was occurring. As a result, during the removal action EPA installed vapor mitigation systems at 22 residential properties where vapor intrusion was occurring. EPA also recognized that chlorinated VOCs would continue to threaten the Fall Creek Station municipal well field and that a long-term response action was needed. In 2013, EPA added the site to the National Priorities List, or NPL, in response to the municipal well field being impacted by contaminated groundwater from the site.

For more information

You may review site-related documents and the administrative record, which contains detailed information that will be used in the selection of the cleanup plan, on EPA's website:

www.epa.gov/superfund/keystone-corridor-groundwater



Map showing the Keystone Corridor Ground Water Contamination site location and the approximate location of OU-1.

What are TCE and PCE?

Trichloroethene, or TCE, is a colorless liquid that is used as a solvent for cleaning metal parts. Tetrachloroethene, or PCE, is a manufactured chemical used for dry cleaning and metal degreasing.

Exposure to very high levels of TCE or PCE can cause dizziness, headaches, sleepiness, imbalance, confusion, nausea, unconsciousness, and even death. EPA and the International Agency for Research on Cancer classify TCE as a human carcinogen.

For more information on TCE and PCE, visit the federal Agency for Toxic Substances & Disease Registry's websites:

www.atsdr.cdc.gov/toxfags/tf.asp?id=172&tid=30 and
www.atsdr.cdc.gov/toxfags/tf.asp?id=264&tid=48.

Summary of site risks

EPA conducted a human health risk assessment to determine the potential risks to human health and the environment from exposure to site-related contaminants. The EPA evaluated risks from contaminants in air, soil vapor, surface water, soil, and groundwater. Potential risks were evaluated to site visitors, residents, recreational users, industrial/commercial workers, and construction workers.

Based on the results of the risk assessment, EPA has identified the contamination at the former Tuchman Cleaners property as having the greatest overall impact to the risks identified at the site. The primary contaminants at the former cleaners are PCE and TCE. The risk assessment indicates contaminant concentrations in groundwater and indoor air at the property pose risks that exceed EPA's acceptable risk range. The EPA notes soil at the Tuchman property does not pose risks to humans via direct contact.

Summary of cleanup alternatives

The EPA established that source material is still present underneath the former Tuchman Cleaners property. To remove that source material, EPA studied several alternatives. The Agency developed these alternatives using combinations of different technologies and evaluated each option in detail against the selection criteria established by federal law (*see box, right*).

Alternative 1 – No-Further Action. EPA is required to evaluate a “no action” alternative when considering potential remedial actions for a site. The No Action response is typically identified and carried through the evaluation process as a point of comparison for other actions. Under Alternative 1, EPA would take no action at OU1 to address the risks associated with the primary source area located at the Tuchman property. Cost: \$0

Alternative 2 – In-Place Thermal Treatment (EPA's Preferred Alternative). This alternative consists of applying energy (such as heat or steam) into the subsurface to volatilize, capture, and treat contaminants. Cost: \$3.1 million to \$3.7 million

Alternative 3 – In-Place Chemical Treatment using Injection. This alternative consists of injecting compounds into the contaminated area to make the contaminants less hazardous or toxic. Cost: \$2.2 million

Alternative 4 – In-Place Chemical Treatment using Soil Mixing. This alternative involves the same elements as Alternative 3 but uses soil mixing instead of injection to introduce compounds into the contaminated area. Also, the top 5 feet of soil would be excavated and disposed of off-site prior to treatment. Cost: \$2.5 million

EPA's preferred alternative to clean up the contaminated groundwater and indoor air is Alternative 2, in-place thermal treatment. This alternative best satisfies the evaluation criteria (*see box, next page*), including reliability of technology, ability to reduce toxicity, mobility, or volume of contamination, and its cost effectiveness.

Explanation of Evaluation Criteria

- 1. Overall protection of human health and the environment.** Examines whether an option protects both human health and the environment. This standard can be met by reducing or removing pollution or by reducing exposure to it.
- 2. Compliance with applicable or relevant and appropriate requirements.** Ensures options comply with federal and state laws.
- 3. Long-term effectiveness and permanence.** Evaluates how well an option will work over the long term, including how safely remaining contamination can be managed.
- 4. Reduction of toxicity, mobility or volume through treatment.** Determines how well the option reduces the toxicity, movement and amount of pollution.
- 5. Short-term effectiveness.** Compares how quickly an option can help the situation and how much risk exists while the option is under construction.
- 6. Implementability.** Evaluates how feasible the option is and whether materials and services are available in the area.
- 7. Cost.** Includes not only buildings, equipment, materials and labor but also the cost of maintaining the option for the life of the cleanup.
- 8. State acceptance.** Determines whether the state environmental agency accepts the option. EPA evaluates this criterion after receiving public comments.
- 9. Community acceptance.** Considers the opinions of the public about the proposed cleanup plan. EPA evaluates this criterion after a public hearing and comment period.

Chart comparing cleanup alternatives of the nine Superfund cleanup selection criteria

Evaluation Criteria	Alternative 1	Alternative 2*	Alternative 3	Alternative 4
Overall Protection of Human Health and the Environment	○	Pass	Pass	Pass
Compliance with Potential Applicable or Relevant and Appropriate Requirements	○	Pass	Pass	Pass
Long-Term Effectiveness and Permanence	○	●	⊙	⊙
Reduction of Toxicity, Mobility, or Volume Through Treatment	○	⊙	⊙	⊙
Short-Term Effectiveness	○	⊙	⊙	○
Implementability	NA	⊙	⊙	⊙
Total Estimated Cost	\$0	\$3.2 - \$3.7 million	\$2.2 million	\$2.5 million
State Acceptance	Indiana supports Alternative 2 as the preferred alternative.			
Community Acceptance	Will be evaluated after the public comment period.			

*U.S. EPA's recommended alternative

Key for meeting criteria: ○ Poor ⊙ Acceptable ● Good NA = not applicable Pass = Meets criterion

Next steps

Before making a final decision, EPA will review comments received during the public comment period. Based on the comments, EPA, working with IDEM, may modify its recommended alternative, so your opinion is important. EPA encourages you to review and comment on this proposed cleanup plan. More detailed information on the cleanup options that were evaluated, including a presentation about the proposed plan, is available on EPA's website.

EPA will respond to the comments in a document called a Responsiveness Summary. This will be part of another document called the ROD that describes the final OU1 cleanup plan. The Agency will announce the selected cleanup plan in a local newspaper, place a copy in the information repositories and post the plan on the web.

Contact EPA

If you have questions about the Keystone Corridor site, contact:

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EPA Community Involvement Coordinator
312-886-6163
Leon.heriberto@epa.gov

Leslie Blake

EPA Remedial Project Manager
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Or visit www.epa.gov/superfund/keystone-corridor-groundwater.

EPA is interested in your comments on the proposed cleanup plan for OU1 of the Keystone Corridor Ground Water Contamination site. You may use the space below to write your comments, then detach this page, fold, stamp and mail. Comments must be postmarked by June 30, 2020. If you have any questions, please contact Heriberto León directly at 312-886-6163, or toll free at 800-621-8431, Ext. 66163, weekdays 9:30 a.m. – 5:30 p.m. Comments may also be emailed to leon.heriberto@epa.gov, submitted online at www.epa.gov/superfund/keystone-corridor-groundwater, or you can call 312-886-6662 and leave a voice mail message. Deadline for submittal of comments is June 30, 2020.

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City _____ State _____ ZIP _____

**Keystone Corridor Ground Water Contamination Site-OU1
Public Comment Sheet**

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EPA Proposes Cleanup Plan, Seeks Public Comments

**Public comment period:
June 1 to June 30, 2020**

Full details are available on EPA's website: www.epa.gov/superfund/keystone-corridor-groundwater

**KEYSTONE CORRIDOR GROUND WATER CONTAMINATION SITE:
EPA proposes cleanup plan for OU1**

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