

***Environmental Testing Frequently Asked Questions at
Acorn Woodland Elementary/EnCompass Academy/Acorn Woodland CDC Campus***

1. Why did OUSD test the soil vapor at the Woodland Elementary/EnCompass Academy/Acorn Woodland CDC (“Acorn/EnCompass”) Campus?

The Alameda County Department of Environmental Health (“DEH”), along with the Department of Toxic Substances Control (DTSC), oversees investigations and cleanup of hazardous materials releases to the environment. After Trichloroethylene (TCE) was found in groundwater under McClymonds High School in February 2020, DEH staff began to examine whether there were any sites overseen by DEH near OUSD school campuses. The Acorn/EnCompass Campus was identified as a result and DEH recommended soil vapor testing in July 2020.

2. When did OUSD test the soil vapor and when did OUSD get the results?

As soon as OUSD received the recommendation to test the soil vapor, OUSD enlisted the services of Professional Service Industries (PSI) to test the soil vapor. The testing plan was submitted to DEH on July 23 and was reviewed and approved by DEH on July 29. Testing commenced on August 5th and 6th. The raw results were provided to OUSD on the afternoon of Thursday, August 20.

3. What did OUSD do when they received the soil vapor test results?

OUSD received the raw results from the soil vapor tests on Thursday, August 20. On Friday (August 21), Monday (August 24), and Wednesday (August 26), OUSD met with DEH staff and/or DTSC staff to understand the implications of the raw results and to determine next steps. After the meeting on Wednesday (August 26), DTSC wrote to OUSD stating that it did not recommend closing the Acorn/EnCompass Campus or imposing access restrictions to buildings. However, DTSC did recommend conducting indoor air testing of all buildings. After receiving those recommendations, District Office staff met with Acorn/EnCompass site leaders on Wednesday (August 26) and Thursday (August 27) to inform them of the situation and to discuss how best to inform staff and the community. Communications (email and robocalls) went out Thursday (August 27) evening.

4. What is PCE and what are its potential health impacts?

Perchloroethylene (PCE) or tetrachloroethylene, as it’s also known, is a colorless liquid with a mild, chloroform-like odor. PCE is used in many industries. It’s used to dry clean fabrics, manufacture other chemicals, and degrease metal parts.

This Fact Sheet on PCE (<https://www.atsdr.cdc.gov/toxfaqs/tfacts18.pdf>) contains helpful information, including the following:

- “Studies in humans suggest that exposure to PCE might lead to a higher risk of getting bladder cancer, multiple myeloma, or non-Hodgkin’s lymphoma.”
- “It is not known whether children are more susceptible than adults to the effects of PCE.”

***Environmental Testing Frequently Asked Questions at
Acorn Woodland Elementary/EnCompass Academy/Acorn Woodland CDC Campus***

5. What is benzene and what are its potential health impacts?

Benzene is a colorless liquid with a sweet odor. It evaporates into the air very quickly and dissolves slightly in water. It is highly flammable and is formed from both natural processes and human activities. Benzene is widely used in the United States; it ranks in the top 20 chemicals for production volume. Some industries use benzene to make other chemicals which are used to make plastics, resins, and nylon and other synthetic fibers. Benzene is also used to make some types of rubbers, lubricants, dyes, detergents, drugs, and pesticides. Natural sources of benzene include emissions from volcanoes and forest fires. Benzene is also a natural part of crude oil, gasoline, and cigarette smoke.

This Fact Sheet on benzene (<https://www.atsdr.cdc.gov/toxfaqs/tfacts3.pdf>) contains helpful information, including the following:

- “Long-term exposure to high levels of benzene in the air can cause leukemia, particularly acute myelogenous leukemia, often referred to as AML. This is a cancer of the blood forming organs.”
- “Children can be affected by benzene exposure in the same ways as adults. It is not known if children are more susceptible to benzene poisoning than adults.”

6. What is TCE and what are its potential health impacts?

Trichloroethylene (TCE) is a colorless, volatile liquid. Liquid TCE evaporates quickly into the air. It is nonflammable and has a sweet odor. The two major uses of TCE are as a solvent to remove grease from metal parts and as a chemical that is used to make other chemicals, especially refrigerants.

This Fact Sheet on TCE (<https://www.atsdr.cdc.gov/toxfaqs/tfacts19.pdf>) contains helpful information, including the following:

- “There is strong evidence that TCE can cause kidney cancer in people and some evidence for trichloroethylene-induced liver cancer and malignant lymphoma.”
- “It is not known whether children are more susceptible than adults to the effects of TCE”

7. Should students or staff be seen by a doctor?

There is no known risk at this time. However, if a student or staff member does want to see a doctor, there are tests that can detect PCE, benzene, and TCE in people, although the tests need to be conducted within days after exposure as PCE, benzene, and TCE break down quickly in the body.

According to the above Fact Sheet on PCE: “PCE and its breakdown products (metabolites) can be measured in blood and urine. However, the detection of PCE or its metabolites cannot predict the kind of health effects that might develop from that exposure. Because PCE and its metabolites leave the body fairly rapidly, the tests need to be conducted within days after exposure.”

***Environmental Testing Frequently Asked Questions at
Acorn Woodland Elementary/EnCompass Academy/Acorn Woodland CDC Campus***

According to the above Fact Sheet on benzene: “Several tests can show if you have been exposed to benzene. There is a test for measuring benzene in the breath; this test must be done shortly after exposure. Benzene can also be measured in the blood; however, since benzene disappears rapidly from the blood, this test is only useful for recent exposures.”

According to the above Fact Sheet on TCE: “TCE and its breakdown products (metabolites) can be measured in blood and urine. However, the detection of TCE or its metabolites cannot predict the kind of health effects that might develop from that exposure. Because TCE and its metabolites leave the body fairly rapidly, the tests need to be conducted within days after exposure.”

8. PCE, benzene, and TCE were found in the soil vapor. Does this mean it is in the indoor air?

No. Just because PCE, benzene, and TCE were found in the soil vapor does NOT necessarily mean that it is in the indoor air. OUSD is conducting tests to determine whether PCE, benzene, and TCE are in the air inside the school buildings. The results of those tests are expected to be available by mid to late November. In the situation at McClymonds, TCE was detected in the groundwater (and subsequently in the soil vapor); testing at McClymonds found no trace of TCE in the air inside McClymonds except for just above a sump pump in the boiler room under the school.

9. Would staff, students, and families have been affected by PCE, benzene, or TCE from coming recently to the Acorn/EnCompass Campus to register and/or pick up packets or devices?

The chemicals in soil vapor are unlikely to pose a risk in outdoor air. It is too early to say if indoor air is impacted. To be affected by chemicals in indoor air someone would need to breath high concentrations for a long period of time. The screening levels are conservatively set in order to protect human health and the environment under the most extreme cases of contamination. In this case, preliminary data does not indicate levels high enough to affect human health, but more testing is being done.

10. What are the possible effects on children who have dug/played in the dirt on the Acorn/EnCompass Campus? Children sometimes even put the dirt in their mouths.

It is not known if PCE, benzene, or TCE are present in topsoil; soil vapor testing is generally taken at a depth of around five feet. Typically, PCE, benzene, and TCE do not remain in shallow soils and these three chemicals are unlikely to pose a risk to children playing in, digging, or even eating the dirt.

11. What are the possible effects on children and adults who have been on the Acorn/EnCompass Campus for many years?

It is too early to say if indoor air is impacted. The fact sheets referenced above describe the possible health effects from exposure to these chemicals.

***Environmental Testing Frequently Asked Questions at
Acorn Woodland Elementary/EnCompass Academy/Acorn Woodland CDC Campus***

12. Some staff, families, and students have reported smelling a burning plastic smell in the air at the Acorn/EnCompass Campus. Could this be connected to PCE, benzene, or TCE?

There are a number of chemicals associated with burning plastic; however, it is unlikely a burning smell is connected to PCE, benzene, or TCE in soil vapor as it is not expected that the concentrations of PCE, benzene, and TCE found in soil vapor to be great enough to be smelled in indoor or outdoor air.

13. How can PCE, benzene, and TCE be contained or mitigated in the soil vapor?

Depending on the concentration of PCE, benzene, and TCE in groundwater, soil vapor, soil, and indoor air, there are a number of cleanup and mitigation options. Common options include soil vapor extraction (using air pumps to suck chemicals out of the ground) and biodegradation (adding nutrients to encourage natural microbes to break down the chemicals).

14. If PCE, benzene, and TCE are in the indoor air, what happens then? Can the chemicals be mitigated?

Yes, if PCE, benzene, and TCE are detected in indoor air within a building on campus there are a number of options. Some of these options are:

- Increase ventilation by opening doors and windows.
- Seal cracks in the building's foundation, preventing further vapor intrusion.
- Work with a technician to adjust the heating and ventilation (HVAC) system to prevent vapors from entering or accumulating inside a building.
- Use air purifiers to reduce the amount of vapor-forming chemicals in the indoor air.
- Install ventilation systems under buildings to prevent vapor-forming chemicals from getting into the indoor air.

15. How high were the levels of PCE, benzene, and TCE? How did these levels vary across the Acorn/EnCompass Campus?

Here are the [preliminary results](#) from soil vapor for PCE, benzene, and TCE. While not all concentration levels were above the threshold that triggered indoor air testing, DTSC nonetheless recommended testing the indoor air for all buildings on campus.

16. What does the District know about any contamination from PCE, benzene, and TCE in the surrounding neighborhood?

The District only tested the soil vapor on the Acorn/EnCompass Campus. However, the District is aware that PCE, benzene, and TCE have been detected in the groundwater under R&A Trucking, which is immediately adjacent to the Acorn/EnCompass Campus. Additionally, ACTS Community Development (at the corner of Spencer Street and 77th Avenue) has confirmed benzene and TCE in the groundwater. There are also data indicating the presence of TCE and PCE in groundwater and soil vapor on other sites in the immediate vicinity of the Acorn/EnCompass Campus. Therefore, it appears likely that PCE, benzene, and TCE are in the groundwater and/or soil vapor in the neighborhood surrounding the Acorn/EnCompass

***Environmental Testing Frequently Asked Questions at
Acorn Woodland Elementary/EnCompass Academy/Acorn Woodland CDC Campus***

Campus. That being said, the District currently has no evidence that any of these contaminants are in the indoor air in the buildings on the Acorn/EnCompass Campus.

17. What is OUSD going to do to make sure that it is safe for students and students to be on the Acorn/EnCompass Campus?

The health and safety of students and staff is the District's top priority. There are no known risks at this time and DTSC did not recommend closing the Acorn/EnCompass Campus or imposing access restrictions to buildings. The results of indoor air testing should be known by mid to late November. It is not expected that regular use of the Acorn/EnCompass Campus will resume before that due to COVID-19.

18. When will indoor air testing start? How long will it last? When will we know the results?

The District anticipates starting indoor air testing around September 15 or 16, but it is possible that the timing will be delayed as unexpected issues may arise such as the availability of sampling equipment. Once the raw results are received, there will be an outside review by DEH and then a report will need to be finalized. The District anticipates that the final report will be made public by mid to late November.

19. Does OUSD know the source(s) of the PCE, benzene, and/or TCE?

The source or sources of the PCE, benzene, and TCE are not known at this time. OUSD is working with DEH and DTSC to try to determine the source or sources.

20. Does OUSD know how long PCE, benzene, and TCE has been in the soil vapor?

OUSD is not aware of any prior testing or data that would help determine how long PCE, benzene, or TCE has been in the soil vapor.

21. Is PCE, benzene, or TCE a threat to the drinking water on the Acorn/EnCompass Campus?

OUSD has reached out to East Bay Municipal Utility District (EBMUD), which responded with the following statement:

Oakland Unified School District reports that recent environmental testing on the EnCompass Academy - Acorn Woodland Elementary campus found two chemicals, PCE and benzene, in the soil vapor. These chemicals pose NO threat to drinking water on the campus nor in the surrounding community.

EBMUD does not use groundwater as a source of drinking water. All of EBMUD's water comes from surface water supply like lakes and most is delivered to the East Bay from the Mokelumne River and Pardee Reservoir in the Sierra foothills. None of EBMUD's water comes from groundwater. In addition, EBMUD's pressurized water distribution system prevents contaminants in soil, including PCE, benzene, and other pollutants, from entering the drinking water. EBMUD continuously tests the drinking water and these

**Environmental Testing Frequently Asked Questions at
Acorn Woodland Elementary/EnCompass Academy/Acorn Woodland CDC Campus**

compounds are not detectable. To learn more about EBMUD's water quality, please visit ebmud.com/waterquality."

22. How many other schools in OUSD have contaminants in the groundwater, soil, or air?

The only OUSD schools with known contaminants in the groundwater, soil, or air are McClymonds High School and the Acorn/EnCompass Campus. OUSD is working with DEH and DTSC--and is exploring contracting with a dedicated expert--to review available data to determine whether groundwater or soil vapor testing are other sites, if any, is advisable.

23. What has been done or is being done to inform families who live in the neighborhood?

This is a question for the City. The District has reached out to the City to make sure that they are aware of the soil vapor test results on the Acorn/EnCompass Campus.

24. Has there been/will there be additional testing in the neighborhood (off campus)?

This is a question for the City. The District has reached out to the City to make sure that they are aware of the soil vapor test results on the Acorn/EnCompass Campus.

25. What entities are involved in conducting and reviewing the environmental testing on the Acorn/EnCompass Campus?

- California Department of Toxic Substances Control (DTSC) - Governmental Agency
- Alameda County Department of Environmental Health (DEH) - Governmental Agency
- Environmental Consultant (PSI) - Private Entity

26. Should the Acorn/EnCompass Campus community contact other entities/individuals?

- City of Oakland
Ed Reiskin, Assistant City Administrator, EReiskin@oaklandca.gov
Jamie Turbak, Library Director, JTurbak@oaklandlibrary.org
- County of Alameda
Nate Miley, Supervisor, District 3, bosdist4@acgov.org
You can also visit www.acgov.org/board/district4/contactus.htm and send a message to Asa Kamer
- Office of State Senator Nancy Skinner
Margaret Hanlon-Gradie, Deputy Chief of Staff, Margaret.Hanlon-Gradie@sen.ca.gov
- Office of State Assembly Member Rob Bonta
Marcella Cortez, District Director, marcella.cortez@asm.ca.gov