UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION IX
75 Hawthorne Street • San Francisco, CA 94105

March 2015

Rainbow Montessori Child Development Center
Sunnyvale, California

Dear Parents and Community Members:

We are sending this letter to update you with the results of the trichloroethene (TCE) indoor air testing that was conducted by the U.S. Environmental Protection Agency (EPA) at your school this past January and February, associated with the long-term groundwater cleanup at the "Triple Site."

EPA is working diligently to ensure the community is being protected from any chemicals related to the Triple Site. In this past sampling round, some results showed evidence of chemicals in indoor air, indicating that the phenomenon called vapor intrusion is likely occurring. We're continuing to investigate to better understand the problem and make sure that no cleaning products or other chemicals being stored indoors are interfering with our sampling.

The good news is that the majority of samples showed very low concentrations which do not pose a health risk, and we acted quickly to respond to one sample that was elevated – promptly lowering the levels by fixing the ventilation system.

EPA and the Rainbow Montessori staff would also like to invite parents to an informational meeting to learn more about the air testing and meet the EPA staff who are directly involved in the project. This meeting will be held on Tuesday, April 14th at 6:15 p.m. in the Building L Auditorium at the Rainbow Montessori campus.

Rainbow Montessori Sampling Results

As expected, the majority of the locations sampled at Rainbow Montessori showed low concentrations of TCE which do not pose a health risk. Only one room, the Building L auditorium, has occasionally shown concentrations that are unexpectedly high. We discovered a ventilation issue and worked to address it to promptly lower levels in the short term. In the long term, our work will continue to ensure that a permanent, reliable solution is maintained. We are also investigating further to determine whether some of the TCE detected in indoor air is coming from an indoor source (such as a cleaning chemical or consumer product).

In the small auditorium in Building L, one seven-day sample showed an elevated level of TCE (16 micrograms per cubic meter or µg/m^3). However, shorter duration samples taken in the same room (1-hour, 8-hour, and 12-hour), all showed acceptable TCE concentrations. Because the results of the seven-day sample were so unlike the other samples taken in the same room, a second round of samples was collected and analyzed. These second round samples all showed acceptable concentrations, similar to the shorter duration samples in the first round. Nevertheless, EPA conducted a third round of sampling in the auditorium to be safe. The third sampling event (seven-day) showed slightly elevated levels of TCE (2.4 to 2.8 µg/m^3).

Samples were also taken in the crawlspace below Building L, as well as in all of the other buildings. The crawlspace sample from Building L was the only other sample showing a heightened concentration above EPA's acceptable range – measuring 6.2 µg/m^3. Though the crawlspace is not easily accessible, the elevated results indicate that vapors are present, and **to be fully protective a mitigation system is being designed for this building** – a "crawlspace venting system."

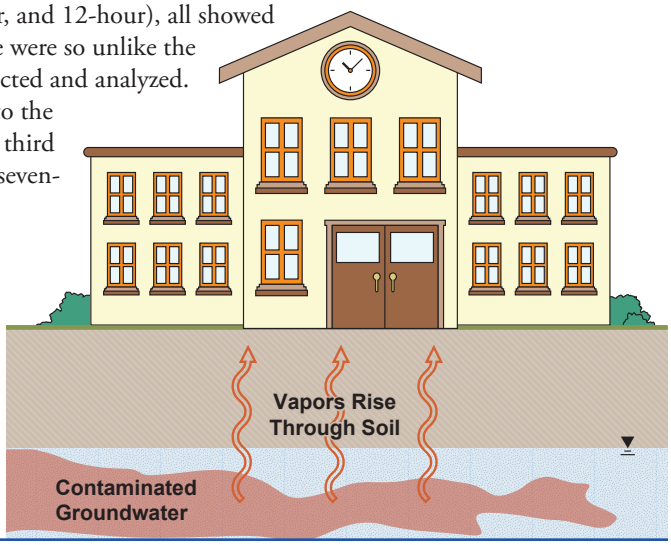

Figure: Vapor intrusion into a building

Two other samples showed levels that were acceptable in terms of health risks, although towards the upper end of EPA's safe range – a classroom sample in Building H (1.5 µg/m^3) and a crawlspace sample beneath Building V (1.9 µg/m^3). Additional samples will be taken in these locations and others to better understand the potential for these levels to vary over time, and whether mitigation systems in these buildings would be appropriate to further reduce risk.

Ventilation Issue

Due to the one elevated sample in the auditorium, we immediately initiated a series of response actions. We discovered that a malfunctioning actuator in the rooftop ventilation system was stuck in the "closed" position, so no fresh air was being brought into the building by the ventilation system. Repairs to the system were made and follow-up sampling confirmed that TCE levels were promptly lowered to 0.2 µg/m^3, which is the same as typical levels of TCE in outdoor air. **EPA believes that there was not a significant exposure to students or teachers because the auditorium was used infrequently and when it was used, for only short periods of time.** These shorter periods would be better represented by the shorter duration samples, all of which met EPA's requirements for protecting children's health.

Background on EPA Investigation

As you may know, EPA has been investigating the potential for vapor intrusion – a process where vapors from groundwater contamination may migrate into the indoor air – at schools and residences in the Duane/San Miguel Avenue neighborhood. Indoor air sampling has been conducted every year for the past 10 years at Rainbow Montessori to confirm that levels meet EPA's requirements for protecting children's health.

However, because we have learned more about how vapor intrusion can vary over time, EPA recently lowered its screening levels for TCE in indoor air to make them more protective. In addition, EPA has developed a more comprehensive testing approach. EPA took more air samples at Rainbow Montessori, The King's Academy, Children's Creative Learning Center and San Miguel Elementary School this past winter, as well as at 54 households in the neighborhood, to make sure that the new, lower levels for TCE are not being exceeded. The first round of sampling was conducted during the winter months, when we expect the concentrations of TCE in indoor air to be at their highest.

EPA considers the safe range of concentrations of TCE to be below 2.0 µg/m^3 for "residential use," which assumes a 24-hour-per-day/7-day-per-week exposure. These levels are very conservative for school occupancy, where exposures times are much less.

TCE and Vapor Intrusion

The main chemical of concern in this area of Sunnyvale is TCE. TCE can move as a vapor from groundwater up through soil under certain conditions. If vapors move under a building, it is possible for them to pass through cracks and other openings in the foundation and enter the indoor air. If this happens, and if the levels are high enough and prolonged enough, it might create a health risk.

Note: Your drinking water is not affected by this contamination. Drinking water in this area of Sunnyvale comes from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains and meets all state and federal drinking water standards.

Next Steps

In the next few weeks EPA will coordinate ventilation inspections with a Heating, Ventilation and Air Conditioning (HVAC) Specialist to ensure that each system is functioning correctly and bringing fresh outdoor air into each classroom. **We are confident that supplying outdoor air to the classrooms will maintain the air quality for the children and teachers.** More sampling events at schools and homes are planned to better understand the vapor intrusion and help us decide whether additional monitoring and mitigation systems are needed as precautionary measures to further reduce risk.

Please do not hesitate to contact me at (415) 972-3050 or by e-mail to *morash.melanie@epa.gov* if you have any questions. You may also contact EPA's Community Involvement Coordinator, Alejandro Diaz, at (415) 972-3242 or by e-mail to *diaz.alejandro@epa.gov*. EPA also has a website for the project: **www.epa.gov/region9/triplesite** which has additional information.

Sincerely,

Melanie Morash

Melanie Morash, Project Manager