Department of Toxic Substances Control

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Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

March 2, 2016

Mr. Larry Agran

Irvine, California 92612

Dear Mr. Agran:

I write this letter on behalf of Secretary Rodriquez, who asked me to respond to your inquiry concerning the adequacy of clean up activities at the Portola High School in Irvine, California. I would like to inform you that the Department of Toxic Substances Control (DTSC) has conducted a review of site documents and has determined that further subsurface sampling should be conducted at the site. This additional sampling will assess the site for the potential presence of contaminants that could pose a threat to the health of individuals who attend classes or work at the school, or people who might otherwise use the school's property.

The basis for this review is predicated on three factors: the prior use of this site by the military; the occurrence of contamination at a storm drain located at the northern corner of the property; and past sampling that found low levels of volatile organic compounds in certain areas of the property. Please allow me to briefly describe each of these factors, and then to describe the path forward to conduct further subsurface sampling.

Past investigations indicate that the property was undeveloped prior to school construction and that the site was historically leased by the military to farmers. The subsurface investigation was conducted with this conceptual understanding of the site in mind. However, a review of aerial photographs suggests a non-farming use of the site, with a network or roads and what may be buildings or tanks in 1946, 1968 and 1977. The use of these roads is unknown, and thus there is the possibility of past releases of contamination. Further investigation is warranted to determine whether this road network is associated with military operations rather than agricultural use.

Contamination was encountered during the installation of a storm drain at the northern corner of the school property that was not anticipated based on the conceptual understanding of the site. The origin of this contamination is unknown and cannot be attributable to known past operations at the property. Further investigation of this contamination is warranted to determine whether this contamination is an isolated occurrence or whether it is indicative of a more extensive site-wide issue.

Soil gas sampling during the Supplemental Site Investigation found low levels of volatile organic compounds, specifically tetrachloroethene (PCE), trichloroethene (TCE), benzene, toluene, ethylbenzene, and xylenes (BTEX). The origin of the PCE and TCE is unknown and cannot be attributable to known past operations at the property, as indicated in the Preliminary Environmental Assessment. The origin of the BTEX may be attributable to the former pipeline at the property. Therefore, further investigation is warranted to determine the source of these contaminants.

I am directing the Irvine School District to submit a work plan for additional subsurface sampling. The proposed sampling activities should be discussed with DTSC, the public and other interested stakeholders, prior to the formal submittal of the work plan to the Department.

At a minimum, the work plan, and subsequent final report, will include the following elements:

1. Sampling Depths. Contamination at the storm drain was encountered at 16 to 20 feet at depth. Soil and soil gas sampling of the school property should be focused at this depth.

2. Soil Gas Sampling. All soil gas samples should be collected pursuant to DTSC's 2015 Active Soil Gas Investigations Advisory. Leak check compounds and shut-in testing should be used to demonstrate that no sampling system leaks have occurred during sample collection. Temporary soil gas probes should be installed and sampled at least twice to evaluate potential temporal variability of soil gas contaminants.

3. Soil Sampling. All soil samples for VOC analysis should be collected using USEPA Method 5035 pursuant to DTSC's 2004 Method 5035 Guidance Document.

4. Final Characterization Report. The final report should provide a comprehensive summary of all subsurface data collected at Portola High School. The data should be interpreted pursuant to the revised conceptual understanding of the site. Sources of contamination, if encountered, should be identified and described. Data should be presented in both table and map formats for easy access by the general public. The final report should provide risk estimates for exposure to subsurface contaminants to both students and faculty. The report should be signed and stamped by a professional civil engineer or professional geologist.

Best regards,

Barbara A. Lee
Director

DRAMATIC BREAKTHROUGH FOR PORTOLA H. S. SITE

This letter from the DTSC to Larry Agran with orders to the IUSD to perform further testing for contaminants at the Portola High School site is a definitive response to his August 31, 2015 letter to Governor Brown, though a lot has happened in between! [See the chronology on page 3.]

Below is some background and the implications of the directives in that letter.

Harvey H. Liss, P.E., Ph.D.

This is finally the recognition from the State agency (DTSC) that the mounting evidence of contamination on the school site since its initial approval in 2014 warrants new testing, and that the contaminants could pose a health threat to the school's occupants.

When the project was submitted to the DTSC for their approval by the IUSD's environmental consultant, the historical use of the site was characterized as only a farm—the so-called "conceptual understanding." Hence, it only had to be tested for agricultural chemicals. The discovery of naphthalene and other Volatile Organic Compounds (VOCs) in a storm-drain excavation along Irvine Blvd., as well as soil-gas sampling around the southern perimeter of the school site that had to be performed on a narrow strip of land later acquired to match a new road alignment turned up a plethora of VOCs, all unexpected to be found on a farm. Those chemicals were more in tune with military use. Further indications of military use were given by a series of aerial photos taken, beginning in 1946.

When contaminants are found on the perimeter of a site, it makes sense to expect that those same contaminants would be found in the interior of the site.

There were a pair of fuel pipelines that ran across the site, serving the airbase when it was in operation. The fuel lines were pressure-tested before they were removed to determine if they leaked, and they did pass that test. However, since they could have had a leak repaired, the soil underneath the pipelines had to be tested at depth for VOCs. They were, and no contaminants were found. However, this does not prove that the surrounding area was not contaminated since no one would have dumped toxic waste over the fuel lines that surely had signage.

The intent here is clear that the work plan for further testing of the interior of the school site to be developed by the IUSD is that "the public and other interested stakeholders" be involved in its preparation.

It is important to note that the DTSC is requiring a risk analysis to determine the risk of exposure from contaminants based on the work plan and the laboratory results of the soil-gas testing.

IN CONCLUSION

These orders to the IUSD to perform further testing are a major victory. However, ensuring that the IUSD fulfills its responsibility for the safety of the students, faculty and staff who will be occupying the school for many years to come, will require the continued active involvement of Irvine residents. The 100 residents who attended the ground-breaking March 22nd Special Board meeting and Public Hearing were instrumental in the unanimous support of the Board to add more soil-gas test wells as the meeting progressed.

In a late March 28th email received from Annie Brown, IUSD's Public Information Officer, she wrote: "The draft workplan is being updated to reflect additional locations and tests beyond the 10 originally submitted."