



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

December 23, 2015

Barbara Lee
Director
California Department of Toxic Substances Control
1001 I Street, P.O. Box 806
Sacramento, CA 95812

Dear Director Lee,

In 2012, residents of the Autumnwood development in Wildomar, CA reported that they believed that toxic substances in the soil had contributed to the death of an Autumnwood resident and a variety of serious medical problems experienced by other residents. That report prompted a series of investigations by independent consultants and several State agencies that included testing of indoor air, soil gas, soil, tap water, and groundwater at locations in the Autumnwood development. About 150 environmental samples were collected and analyzed in 2012 and 2013.

In late 2014, CalEPA, the Center for Community Action and Environmental Justice, and several Autumnwood residents requested that U.S. EPA (EPA) review the investigations. In response, EPA has met with representatives of the affected residents, visited the Autumnwood community, reviewed technical reports generated by representatives of the residents and by several State agencies, and completed an in-depth review of some of the environmental data generated by Department of Toxic Substances Control (DTSC) as part of their 2013 investigation.

Our evaluation generally supports the findings of the DTSC, the CalEPA Office of Environmental Health Hazard Assessment (OEHHA), and other State agencies. A number of chemical contaminants were found in indoor air and soil gas at concentrations above EPA and/or State screening levels. Two of the chemicals, formaldehyde and acrolein, could help explain some of the health effects reported by residents, particularly respiratory tract and eye irritation. Both chemicals can act as irritants after short-term exposure and were detected in indoor air samples collected in 2012 or 2013 at concentrations above screening levels for acute health effects. OEHHA and the California Department of Public Health (CDPH) reached similar conclusions. We note that the indoor air concentrations (and corresponding health risks) may have been higher when the homes were first occupied, and may increase in homes that have been unoccupied and not ventilated for some time.

The measured concentrations of most of the other chemicals found in indoor air and soil gas are too low to explain the medical problems reported by Autumnwood residents. Most of the chemicals that exceeded screening levels pose a potential cancer risk from long-term (years to decades of) exposure. However, as discussed further in our more detailed response (enclosed), the measured concentrations are generally within EPA's protective exposure range.

Many of the chemicals detected in indoor air and soil gas are constituents of gasoline or other petroleum fuels. We suspect that these chemicals originate, at least in part, from contaminated fill or other outdoor sources and that some of the non-petroleum compounds may be due to off-gassing from furniture, building materials, or plastics commonly found in homes.

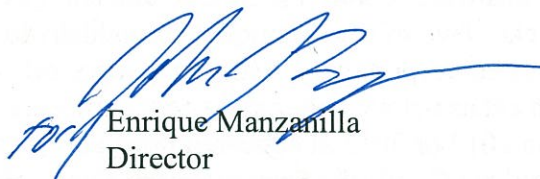
In response to community concerns about data quality, EPA obtained and reviewed "raw" laboratory data generated by DTSC in 2013 to identify any chemicals that were present in the samples but not previously reported. Such chemicals may appear as unidentified peaks in laboratory chromatograms. We identified chemicals that were not previously reported in many of the samples. Most are constituents of gasoline or other petroleum compounds, consistent with the findings of DTSC's 2013 investigation that low concentrations of fuel-related hydrocarbons and chlorinated compounds were present in a diffuse pattern throughout the development. Although they were not identified in the DTSC study, the presence of previously unreported chemicals does not, in our opinion, contradict or change the findings of DTSC's 2013 investigation or the findings of other State agencies. Our more detailed response explains the scope and results of EPA's evaluation.

Although we did not observe moisture problems during our February site visit, we agree with CDPH that the presence of moisture, dampness, and/or mold may also have contributed to the residents' reported health effects. We support recommendations that steps be taken to reduce moisture levels in any homes where moisture remains a problem or reoccurs and that any indoor sources of formaldehyde and other volatile chemicals detected in indoor air be removed or mitigated.

EPA staff and management worked cooperatively on this evaluation with our colleagues from the Agency for Toxic Substances and Disease Registry (ATSDR).

Some of the Autumnwood residents have expressed the hope that we would more definitively identify the cause of their ongoing health challenges. We were unable to do so but hope that our evaluation will be of value to your agency and the affected Autumnwood residents.

Sincerely,


Enrique Manzanilla
Director
Superfund Division

cc: Penny Newman, Executive Director, Center for Community Action and Environmental Justice

Captain Robert Knowles, Regional Director, ATSDR

Grant Cope, Deputy Secretary for Environmental Policy, CalEPA

Enclosure