



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 9  
75 Hawthorne Street  
San Francisco, California 94105

OCT 25 2018

Jeffrey Murl  
Presidential Management Fellow  
Office of Legacy Management  
U.S. Department of Energy  
11035 Dover Street, Suite 600  
Westminster, Colorado 80021

Subject: **EPA Concurrence With 2016 Five-Year Review Report Addendum,  
Laboratory for Energy-Related Health Research Federal Facility, University  
of California, Davis, July 2018**

Dear Mr. Murl:

The U.S. Environmental Protection Agency, Region 9, has reviewed the Addendum to Laboratory for Energy-Related Health Research (LEHR) Federal Facility, University of California at Davis, Five-Year Review Report, dated September 15, 2016 and concurs with its findings.

The Department of Energy (DOE) was unable to make a protectiveness determination in the 2016 Five-Year Review Report without further data collection and evaluation of soil gas data within the DOE Areas to assess the potential for vapor intrusion.

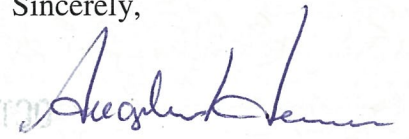
In 2017, DOE collected 43 passive soil gas samples from varying depths to assess soil gas concentrations trends with varying depth. Exceedances of screening levels in the passive sampling results were few (3 out of the 43) and locations immediately adjacent to the exceedances had either no detectable or trace levels of the compound exceeded. Based on the results of the passive sampling and historical soil sampling results, DOE installed soil gas wells. Samples were collected from these wells in 2017 and 2018. Using the active soil gas data to evaluate human-health risk from vapor intrusion, the calculated risk for both a theoretical residence and indoor worker are within or below EPA's risk range.

Based on completion of the DOE vapor intrusion evaluation conducted since the Five-Year Review Report, EPA agrees that the remedy is protective. EPA's Protectiveness Statement is:

The remedy at the DOE Areas of LEHR is protective of human health and the environment. Land-use restrictions are in place to prevent exposure to contaminated soil. There is no exposure to groundwater.

Please contact me at [Herrera.angeles@epa.gov](mailto:Herrera.angeles@epa.gov) or the EPA Project Manager at [Hadlock.holly@epa.gov](mailto:Hadlock.holly@epa.gov) if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Angeles Herrera". The signature is written in a cursive style with a large initial "A".

Angeles Herrera  
Assistant Direct, Superfund Division  
Federal Facilities and Site Cleanup Branch

Cc: John Bystra, DTSC

**Addendum to  
Laboratory for Energy-Related  
Health Research Federal Facility,  
University of California at Davis,  
Five-Year Review Report,  
dated September 15, 2016**

**July 2018**



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**ENERGY**

Legacy  
Management

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UNITED STATES DEPARTMENT OF ENERGY  
Office of Legacy Management  
1000 Independence Avenue, SW  
Washington, DC 20585

**Addendum to Laboratory for Energy-Related Health Research Federal Facility, University of California at Davis, Five-Year Review Report, dated September 15, 2016**

A Five-Year Review addendum is generally completed for remedies where the protectiveness determination is deferred until further information is obtained. This addendum provides documentation of progress since the September 15, 2016, Five-Year Review report and revises the protectiveness statement to indicate that the subject remedy is protective of human health and the environment, as discussed below.

The First Five-Year Review report for the Laboratory for Energy-Related Health Research (LEHR) Federal Facility, which is part of the LEHR/Old Campus Landfill Superfund site at the University of California, Davis and is also referred to as the U.S. Department of Energy (DOE) Areas of LEHR, was signed by Scott Surovchak, LEHR site manager, DOE Office of Legacy Management, on September 15, 2016. The protectiveness statement in the Five-Year Review report was as follows:

Immediate threats at the site have been addressed, and the remedy is protective of human health and the environment in terms of direct soil exposure, potential groundwater impact from soil contaminants, and ecological risk. On the basis of the preliminary vapor-intrusion evaluation conducted for this Five-Year Review, a protectiveness determination for this exposure pathway cannot be made without further data evaluation and possible collection and evaluation of soil-gas data from certain locations within the DOE Areas. It is expected that this vapor-intrusion evaluation will be completed by September 30, 2017, at which time a protectiveness determination will be made via an addendum to this Five-Year Review, anticipated to be completed by February 28, 2018.

In a September 30, 2016, letter from Angeles Herrera, assistant director of the Region 9 Federal Facilities and Site Cleanup Branch, to Scott Surovchak, DOE LEHR site manager, the U.S. Environmental Protection Agency (EPA) indicated that “a protectiveness determination cannot be made until additional data [*sic*] is collect to fully evaluate [the vapor-intrusion] pathway.”

This addendum addresses the Protectiveness Statement for the DOE Areas of LEHR, as updated to incorporate the results of the vapor-intrusion evaluation. Completion of the vapor-intrusion evaluation and, therefore, of this addendum was delayed several months past the anticipated dates provided in the Five-Year Review report, primarily because of the need to refine sampling and analytic procedures and conduct resampling to obtain accurate quantification of certain vapor-forming chemicals at two locations (see attachment).

### **Progress Since the Five-Year Review Completion Date**

In response to the findings of the Five-Year Review, DOE undertook the following actions:

- Development of a work plan for collecting and evaluating soil-gas data to inform the protectiveness determination for the vapor-intrusion (VI) pathway.
- Implementation of the VI work plan and preparation of the *Vapor Intrusion Evaluation Report for the Former Laboratory for Energy-Related Health Research Federal Facility, University of California, Davis* (VI Evaluation Report), which is included as an attachment to this addendum. As presented in the VI Evaluation Report, the data collected for this evaluation were adequate to conclude that vapor-forming chemicals in the DOE Areas of LEHR do not present an unacceptable risk under current or potential future land-use scenarios. Therefore, the remedy for the DOE Areas at LEHR is protective in terms of the vapor intrusion exposure pathway. The EPA and California EPA agencies (Department of Toxic Substances Control and Central Valley Regional Water Quality Control Board) concurred with this protectiveness determination.

### **Issues and Recommendations**

No new issues or recommendations have been identified since the completion of the Five-Year Review.

### **Protectiveness Statement**

Based on new information and/or actions taken since the Five-Year Review completion date, the protectiveness statement for the DOE Areas of LEHR is revised as follows:

The remedy at the DOE Areas of LEHR is protective of human health and the environment.

### **Next Five-Year Review**

The next five-year review will be completed on September 15, 2021, five years after the signature of the last five-year review report.

  
\_\_\_\_\_  
Jeffrey Murl  
LEHR Site Manager  
DOE Office of Legacy Management

Date 07/26/2018

Attachment:

*Vapor Intrusion Evaluation Report for the Former Laboratory for Energy-Related Health Research Federal Facility, University of California, Davis* (DOE 2018)