

March 29, 2023

Jhana Enders
Federal On Scene Coordinator (FOSC)
U.S. Environmental Protection Agency – Region 6
1201 Elm Street (SEDEC)
Dallas, TX 75270
214-789-9654 (Cell)

RE: Request for Health Consultation (Carlisle Village Cleaners Site, Albuquerque, NM)

Dear Ms. Enders,

Per your request, the New Mexico Department of Health (NMDOH) APPLETREE Program in the Environmental Health Epidemiology Bureau of the Epidemiology and Response Division has reviewed the commercial removal management level (RML) of 530 $\mu\text{g}/\text{m}^3$ of Tetrachloroethylene (PCE) in indoor air. The findings and recommendations are summarized below.

The APPLETREE program, stands for ATSDR's Partnership to Promote Local Efforts to Reduce Environmental Exposure, is a cooperative agreement between ATSDR and NMDOH designed to give states the resources to build their capacity to assess and respond to site-specific issues involving human exposure to hazardous substances in the environment.

If you have any questions, please contact me at (505) 795-2505 or Srikanth.Paladugu@doh.nm.gov.

Sincerely,



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Background and Statement of Issues

The area of concern is a strip mall with five buildings. The strip mall, at one time or another, housed two former dry cleaners, one gas station and one automotive shop. The buildings are all occupied with businesses, operating at various hours during the day, usually within an 8-hour workday. There are no residents or full-time occupants in any of the buildings. One of the buildings houses a child counseling facility. The New Mexico Environment Department (NMED) and EPA have verified through sub-slab sampling there is PCE contamination under the strip mall. EPA received the Beacon Passive Soil Gas (PSC) sample results to better define the area of contamination. The indoor air sampling conducted on February 28, 2023, showed PCE levels from 220 $\mu\text{g}/\text{m}^3$ to 2380 $\mu\text{g}/\text{m}^3$. The EPA calculated a commercial removal management level (RML) of 530 $\mu\text{g}/\text{m}^3$. EPA uses RMLs to determine short-term removal actions intended to stabilize a site that poses a threat to human health. The OSC for the site would like to ensure EPA and NMDOH agree on the PCE air concentration used to ensure the owners and tenants of the buildings are at a safe and protective level.

The purpose of this letter health consultation is to determine if the RML EPA is proposing (530 $\mu\text{g}/\text{m}^3$) is protective of public health.

Discussion

NIOSH has classified PCE as an occupational carcinogen and the National Toxicology Program has designated PCE as reasonably anticipated to be a carcinogen (NIOSH 2013, ATSDR 2019). The American Conference of Governmental Industrial Hygienists (ACGIH) has recommended a threshold limit value (TLV) of 169,580 $\mu\text{g}/\text{m}^3$ for an 8-hour workday (ACGIH 2012)

The RML value of 530 $\mu\text{g}/\text{m}^3$ when adjusted for occupational exposures for a 8.5 hour work day 5 days a week will be 134 $\mu\text{g}/\text{m}^3$

$$530 \mu\text{g}/\text{m}^3 * (8.5/24) * (5/7) = 134 \mu\text{g}/\text{m}^3$$

This value (134 $\mu\text{g}/\text{m}^3$) is well below the occupational guidelines and is well below the time-weighted average effect level of 11,530 $\mu\text{g}/\text{m}^3$ used to derive ATSDR's minimal risk level.

Using ATSDR's Public Health Assessment Site Tool (PHAST) shows that the estimated cancer risk for workers exposed for 5 years to 530 $\mu\text{g}/\text{m}^3$ barely exceeds one in a million and is not a health concern.

Conclusions

Based on the data provided by US Environmental Protection Agency (USEPA) and NMED, NMDOH concludes that the proposed RML value of 530 $\mu\text{g}/\text{m}^3$ for PCE in the area sampled is not expected to harm people's health in an occupational exposure setting. If further information comes to light, NMDOH reserves the right to make further recommendations.

References

ACGIH. 2012. Tetrachloroethylene. Threshold limit values for chemical substances and physical agents and biological exposure indices. Cincinnati, OH: American Conference of Governmental Industrial Hygienists, 55, 110.

ATSDR. 2019. Toxicological profile for tetrachloroethylene. Atlanta, GA: Agency for Toxic Substances and Disease Registry, U.S. Department of Health and Human Services. June.

NIOSH. 2013. Tetrachloroethylene. NIOSH pocket guide to chemical hazards. Atlanta, GA: National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention. <http://www.cdc.gov/niosh/npg/>. April 24, 2013.

OSHA. 2013b. Toxic and hazardous substances. Occupational safety and health standards. Occupational Safety and Health Administration. Code of Federal Regulations 29 CFR 1910.1000, Table Z-2. <http://www.osha.gov/law-regs.html>. April 24, 2013.