Former Macon Naval Ordnance Plant, Unit 6

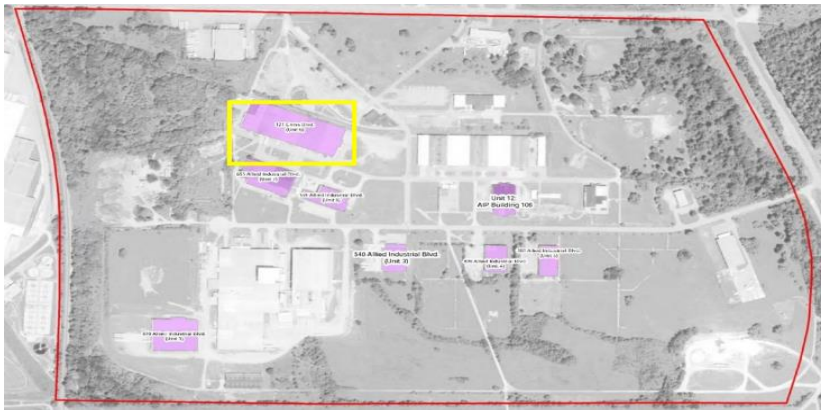
Macon, Bibb County, Georgia

The Georgia Department of Public Health (DPH) created this factsheet to summarize the results and recommendations of a Letter Health Consultation (LHC) for the former Macon Naval Ordnance Plant (MNOP) Unit 6 location. The purpose of the health consultation is to inform employees of SD Polymers, U.S. Environmental Protection Agency (EPA), and the potentially responsible party (PRP) of past health risks from exposure to trichloroethylene (TCE) vapors in indoor air.

A Letter Health Consultation (LHC) provides advice on specific public health issues related to human exposure to toxic chemicals found in the environment.

The Georgia Department of Public Health (DPH) typically receives requests to conduct a health consultation from residents, local health departments, and federal and state public health and environmental agencies.

The former MNOP's National Priorities Listing prompted DPH, under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), to develop an assessment to investigate potential health effects of employees breathing in TCE vapors in indoor air of Unit 6. Currently, SD Polymers, LLC. conducts manufacturing in the building and has occupied Unit 6 since 1994. The Unit 6 building has multiple warehouses, an extruder line worker area, an office, a quality control lab, and an employee breakroom.



Plant property at 600 Guy Paine Rd, Macon, GA 31206. Unit 6 [highlighted in yellow] is located at the northern side of the site with an address of 121 Ennis Blvd, Macon, GA 31206. Currently, SD Polymers is operating at Unit 6.

The main contaminant of concern in Unit 6 was TCE that employees were breathing in via vapor intrusion. There is strong evidence [1] that breathing in TCE over a long period of time can cause kidney cancer in people and some evidence for trichloroethylene (TCE)-induced liver cancer. A pregnant woman's exposure to TCE can increase the risk of having a baby born with a congenital heart defect [2].

DPH evaluated past exposure to TCE from breathing indoor air in Unit 6. Based on our assessment of available data, DPH concluded the following:

1. Some employees breathing in TCE in Unit 6 via vapor intrusion may have been harmed in the past. Past TCE exposure to laboratory employees would have placed pregnant women and women of childbearing age who become pregnant while employed there at a slight risk for fetal heart development problems in their children.

2. Some employees breathing in TCE in Unit 6 had a slightly elevated estimated cancer risk from long-term TCE exposure, assuming they have worked at SD Polymers for 20 years or more.

3. Based on sub-slab soil gas data, a low-level risk from vapor intrusion will exist until contamination in sub-slab soil and groundwater is sufficiently reduced or removed.

Vapor Intrusion (VI) occurs when there is a migration of vapor-forming chemicals from any subsurface source into overlying buildings.

To date, EPA/PRP has implemented several actions that were recommended by DPH in the letter health consultation. The following table summarizes the recommendations made by DPH and the current implementation status:

DPH Recommendations	Status	Comments
Inform employees of past elevated TCE concentrations in Unit 6, the potential health risks associated with TCE inhalation, and steps taken and planned to mitigate TCE exposure in Unit 6.	Recommendation Implemented	In March 2020, EPA issued a fact sheet that included steps taken and planned to mitigate TCE exposure in Unit 6 and posted this fact sheet at six locations in the Unit 6 building.
Implement permanent measures to mitigate vapor intrusion. In addition, ensure proper maintenance and effectiveness of the VI mitigation system.	Recommendation Implemented	Mitigation system installation was completed in December 2021 and the system has been operational since that date.
Perform seasonal indoor air sampling at Unit 6 after installation of mitigation system to determine if mitigation efforts are sufficient in decreasing vapor intrusion into Unit 6.	Implementation on-going	In March 2022, three indoor air samples were collected, and all showed that detected concentrations of TCE were below the ATSDR minimal risk level (MRL) [3]. DPH will review one year of seasonal indoor air sampling once seasonal sampling has been completed to gauge the effectiveness of the installed VI Mitigation System.
Implement indoor air filtration as necessary, ventilate Unit 6 and seal all cracks and openings on the floors (slab) in unit 6.	Recommendation Implemented	All cracks and openings on the floors (slab) in unit 6 were sealed in 2020. Indoor air purifying units were installed in March 2020.
Move laboratory and laboratory employees to another location with no vapor intrusion occurrences, unless the recently installed vapor mitigation system is proven to be effective in the laboratory's current location.	Recommendation Implemented	Current data indicates that the vapor mitigation system designed to prevent VI from occurring is effective in the laboratory's current location.

The LHC is available to the public at the Middle Georgia Regional Library or by contacting DPH's Chemical Hazards Program at (404) 657-6534. The LHC is also available online at: https://www.atsdr.cdc.gov/HAC/pha/Macon-Naval/Macon-Naval-Ordnance-Plant-LHC-508.pdf

For more information about public health consultations and other activities, please contact:

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References

[1] Agency for Toxic Substances and Disease Registry. 2019. Toxicological Profile for Trichloroethylene (Update). Atlanta, Georgia: U.S. Department of Health and Human Services; June 2019.

[2] Agency for Toxic Substances and Disease Registry. 2015. Who is most sensitive to TCE? – Developing Baby. December 29, 2015. https://www.atsdr.cdc.gov/tox-tool/trichloroethylene/05/tce_5a.html

[3] Agency for Toxic Substances and Disease Registry. 2021. Minimal Risk Levels (MRLs). March 2021. https://wwwn.cdc.gov/TSP/MRLS/mrlsListing.aspx