

ATSDR Red Hill Public Health Assessment Activities

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CDC and ATSDR's Response to the Red Hill Bulk Fuel Storage
Facility Release Event

Webinar for National Academies Committee on Clinical Follow-Up
and Care for Those Affected by the Red Hill JP-5 Releases

ATSDR's Site Team



Ben Gerhardstein

Region 9 Representative
Environmental Health
Scientist



Irene Lee

Region 8 Representative
Environmental Health
Scientist



Jamie Rayman

Region 9 Director



John Marr

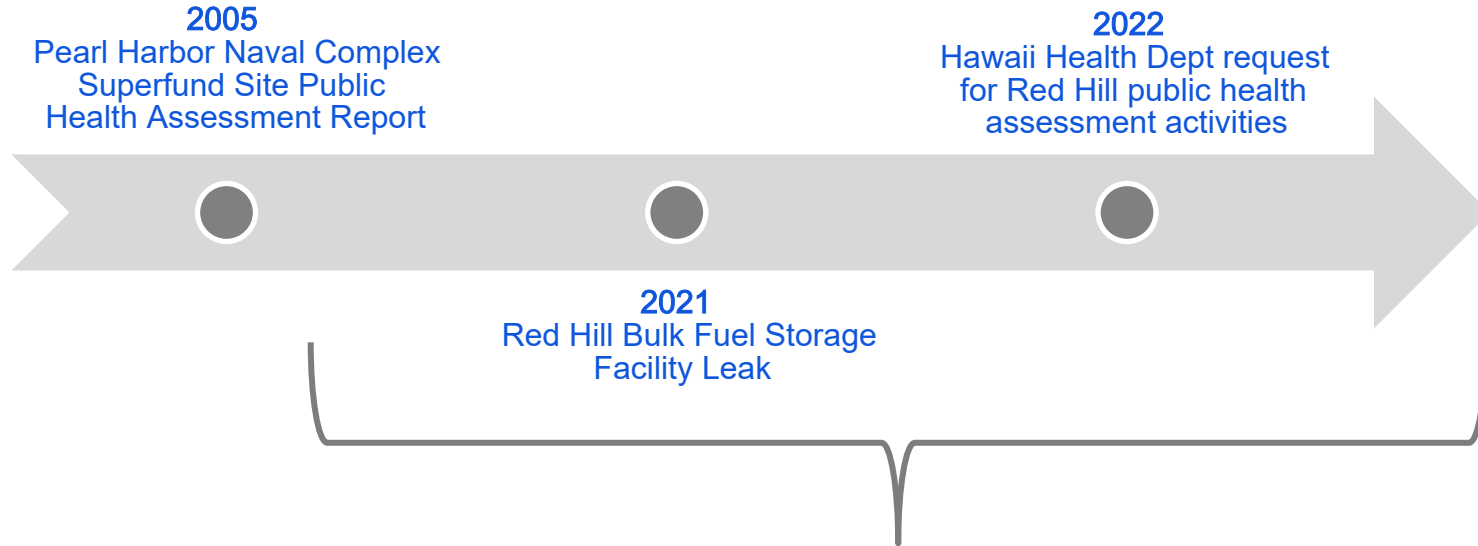
Environmental Health
Scientist



Venus Malloy

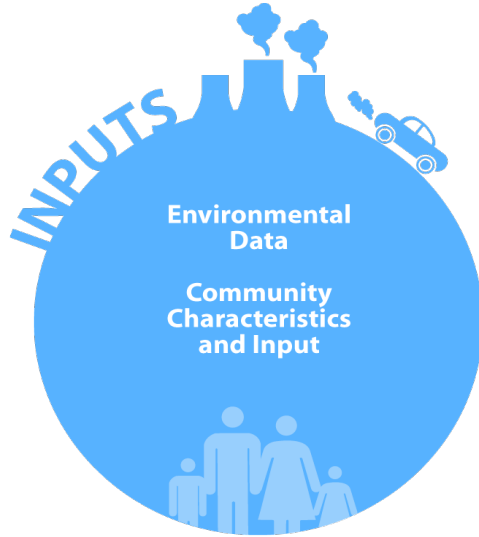
Behavioral Scientist

ATSDR Public Health Assessment Activities at and Near Red Hill

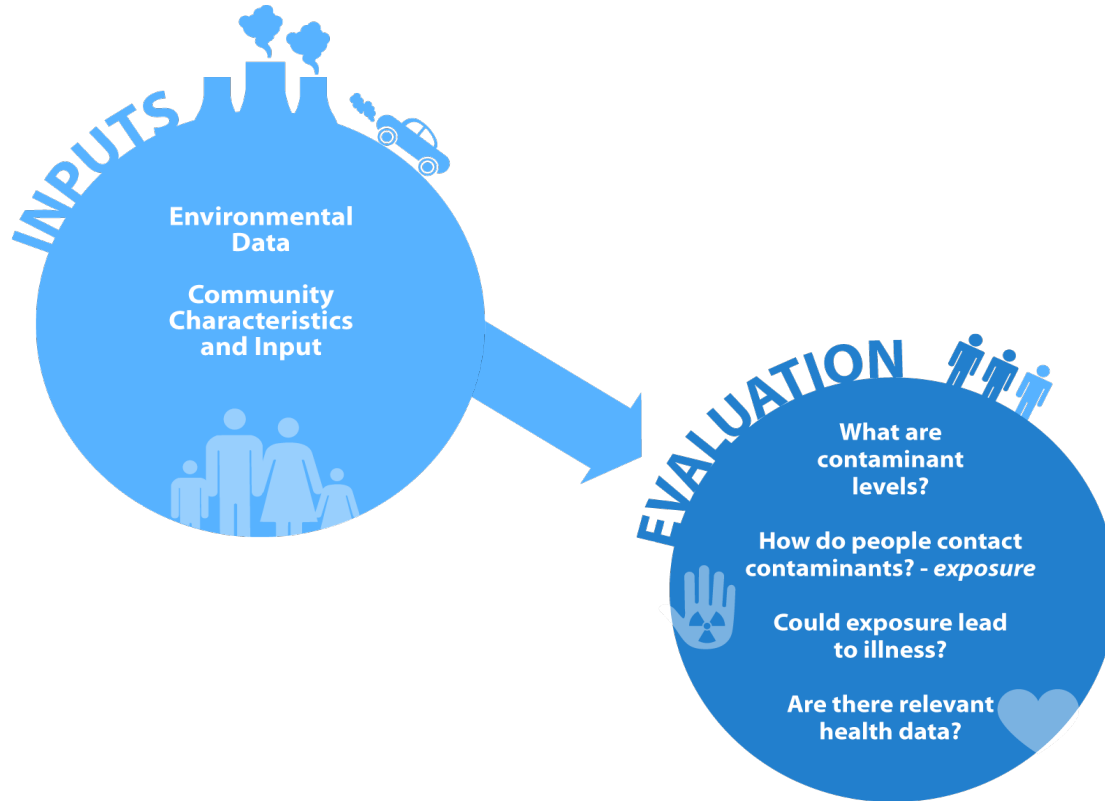


Overview of ATSDR's Public Health Assessment Process

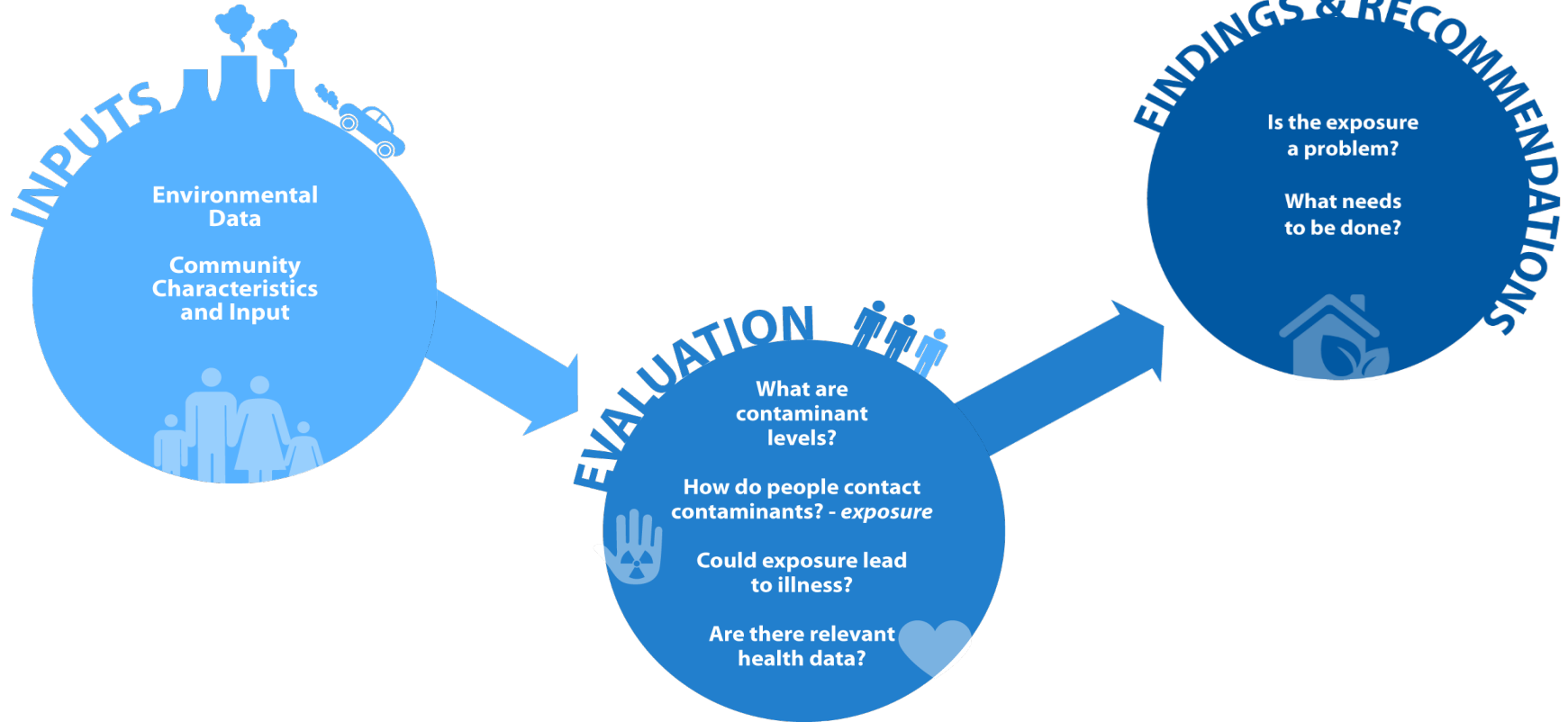
Public Health Assessment Process



Public Health Assessment Process



Public Health Assessment Process



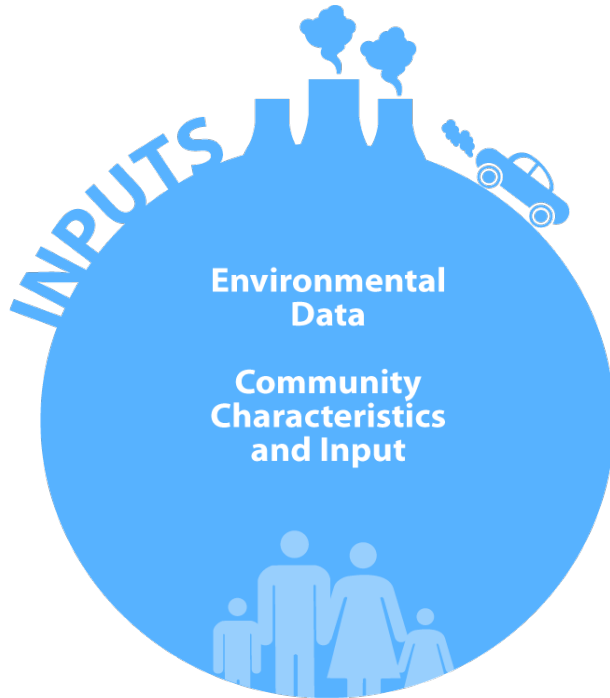
Red Hill Public Health Assessment Activities

Public Health Assessment Activities at Red Hill

- Evaluate existing environmental and health data on chemical releases from the Red Hill facility since 2005
- Current focus on drinking water exposures



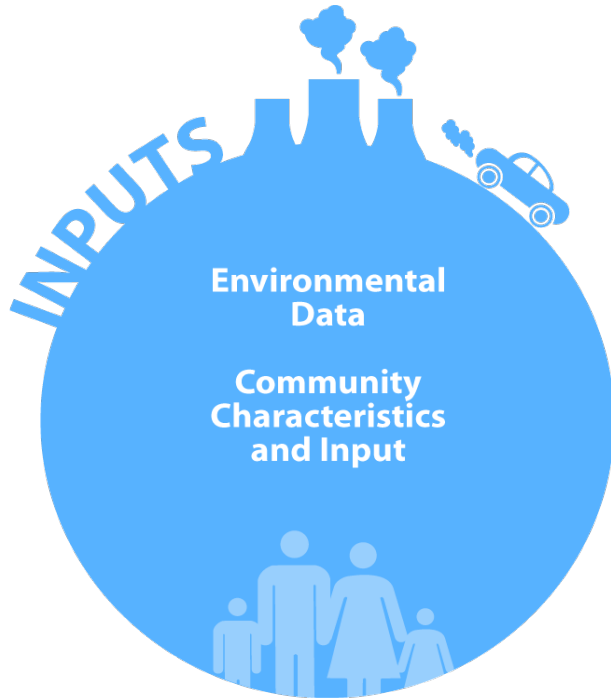
Inputs – Community Concerns



Community Concerns:

- JP-5 exposures from November 2021 release
 - Short- and long-term health effects
 - Children's exposures and health risks
- Potential exposures prior to November 2021
- Current drinking water quality
- Challenging medical care experiences
- Increased stress and toll on mental health

Inputs - Drinking Water



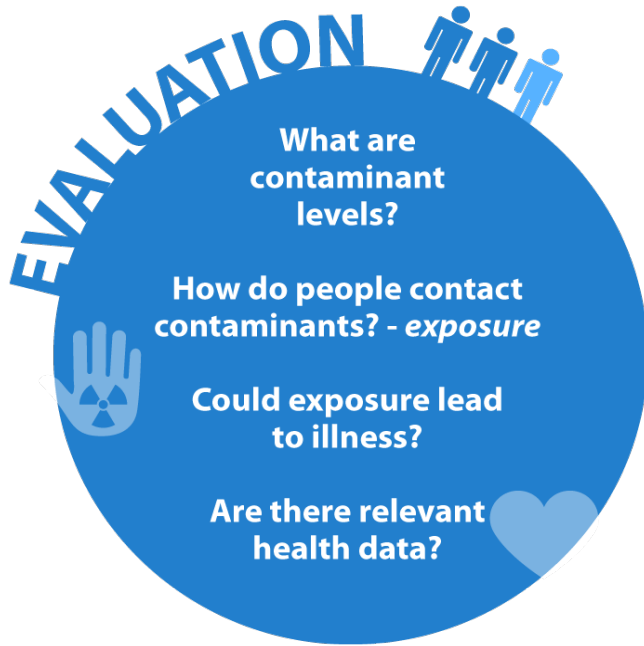
**Joint Base Pearl Harbor-Hickam (JBPHH)
drinking water system sampling data
collected by**

- Department of Defense (DOD)/Navy
- Hawaii Department of Health (DOH)
- Environmental Protection Agency (EPA)

Inputs – JBPHH Drinking Water System Sampling Data

Agency	Years	Description
DOD/Navy	2005–2022	Safe Drinking Water Act monitoring
	2021–2022	Emergency response & flushing period samples
	2022–2024	Long-term & extended monitoring programs
Hawaii DOH	2021–2022	Emergency response & flushing period samples
US EPA	2005–2023	Unregulated Contaminant Monitoring Rule data
	2024	Split sampling with the Navy during extended monitoring program

Evaluation of Drinking Water



Navy's JBPHH Water System

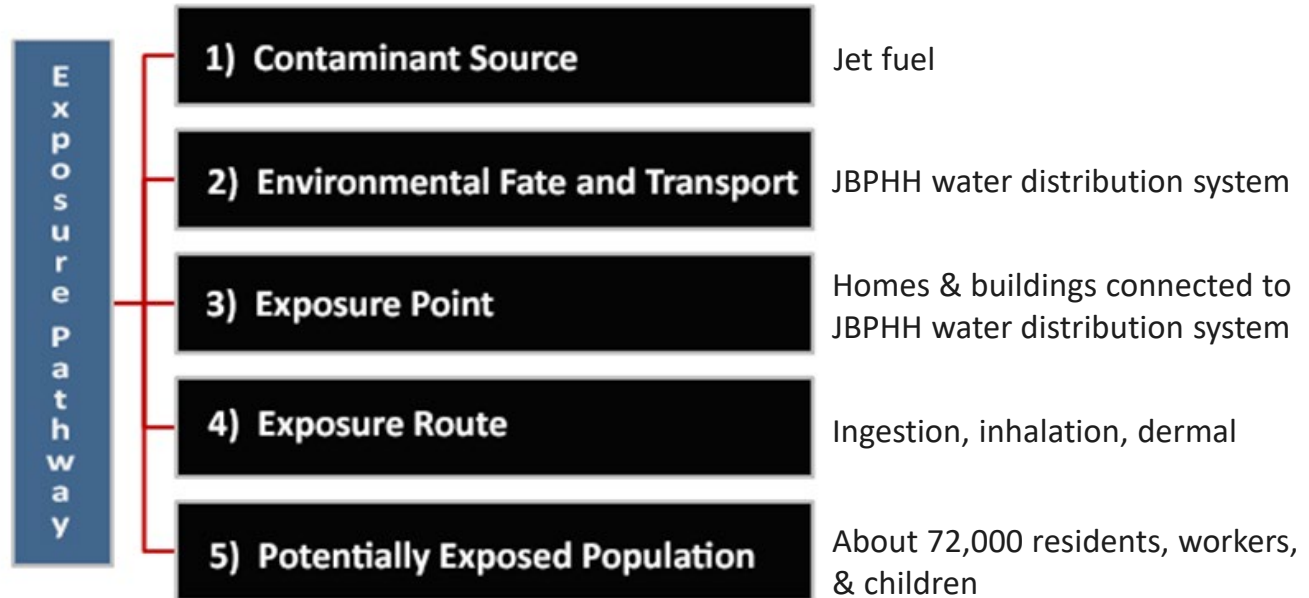
- Served by groundwater from three shafts
- Serves military base, and includes a civilian housing area
- Disinfected and fluoridated prior to distribution

Army's Aliamanu Military Reservation Water System

- Contiguous with JBPHH water system
- Began carbon filter treatment in 2022

Evaluation of Drinking Water – Exposure Pathways

Contaminants released into the environment do not always result in harm



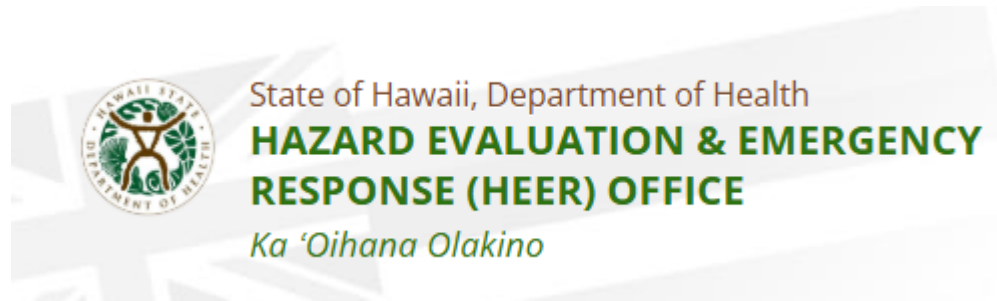
Evaluation of Drinking Water



Example Contaminants of Concern:

- Total Petroleum Hydrocarbons (TPH)
- Lead
- Per- and polyfluoroalkyl substances (PFAS)

Evaluation of Drinking Water – Total Petroleum Hydrocarbons (TPH) Screening



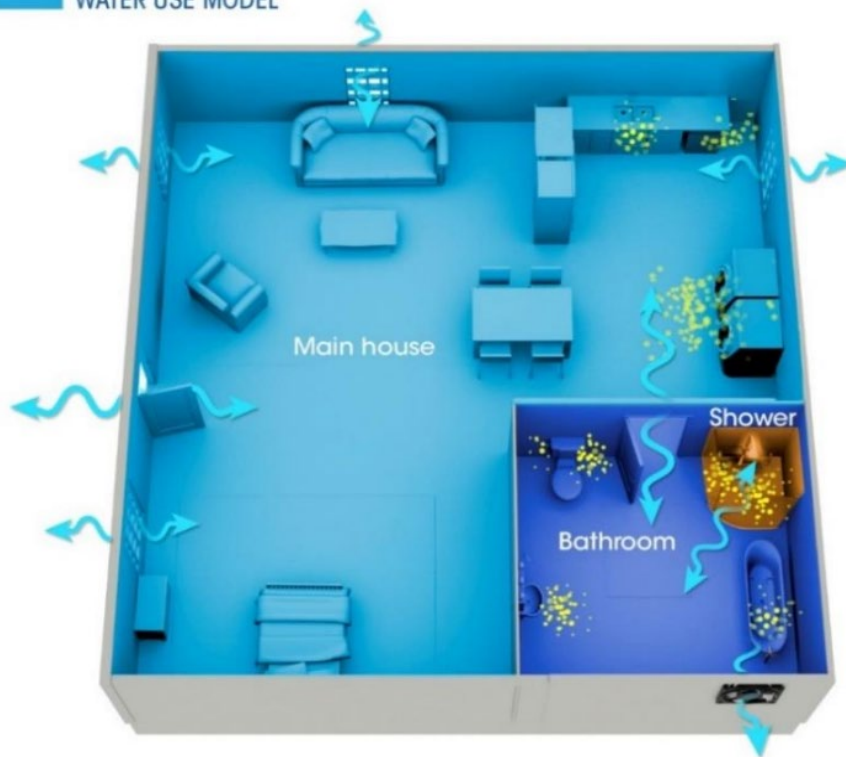
- ATSDR does not have JP-5 or TPH ingestion screening levels
- Hawaii DOH Environmental Action Levels (EALs)
 - Gasoline Range + Diesel Range + Motor Oil Range = Total Petroleum Hydrocarbons
 - For recent JP-5 release, compare TPH to 91 ppb EAL for diesel range/middle distillates
 - Concentrations < 200 ppb should be verified as petroleum through lab analysis

Evaluation of Drinking Water – Exposure Doses



- **Exposed populations**
 - Residents
 - Workers
 - Adults, children
- **Activities**
 - Drinking, cooking, showering, washing
- **Exposure duration**
 - Civilian vs. military

Evaluation of Drinking Water – Dermal and Inhalation Exposure Doses



Survey and Health Data

ATSDR will pair assessment of environmental data with summaries of relevant health outcome and self-reported health survey data

- DOD medical records
- ACE surveys



Data and Information Gaps

- Limited drinking water sampling data for petroleum hydrocarbons before and immediately after 2021 fuel release
 - No data when exposures were highest
- Challenges assessing whether low-level TPH detections are related to JP-5
- No water sampling for JP-5 additives
- No documentation about Navy's initial flushing of JBPHH system in Nov/Dec 2021
- Health effects of JP-5 ingestion not well studied

Next steps



- Finish compiling drinking water data
- Finish screening data
- Conduct health evaluation
- Determine conclusions and recommendations
- Complete report

Stay informed: Websites and Email Update List

Red Hill Public Health Assessment Activities

- <https://www.atsdr.cdc.gov/red-hill/factsheet/index.html>

Red Hill Assessment of Chemical Exposures (ACE) Investigations

- <https://www.atsdr.cdc.gov/red-hill/investigations/index.html>

To receive email updates

- Contact Jamie Rayman (JRayman@cdc.gov)

Questions?

For more information, contact ATSDR

1-800-CDC-INFO (232-4636)

TTY: 1-888-232-6348 [cdc.gov](https://www.cdc.gov) [atsdr.cdc.gov](https://www.atsdr.cdc.gov)

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