

EAST PALESTINE TRAIN DERAILMENT AND CONTROLLED BURN ENVIRONMENTAL DATA REVIEW

COMMUNITY WEBINAR
DECEMBER 2023



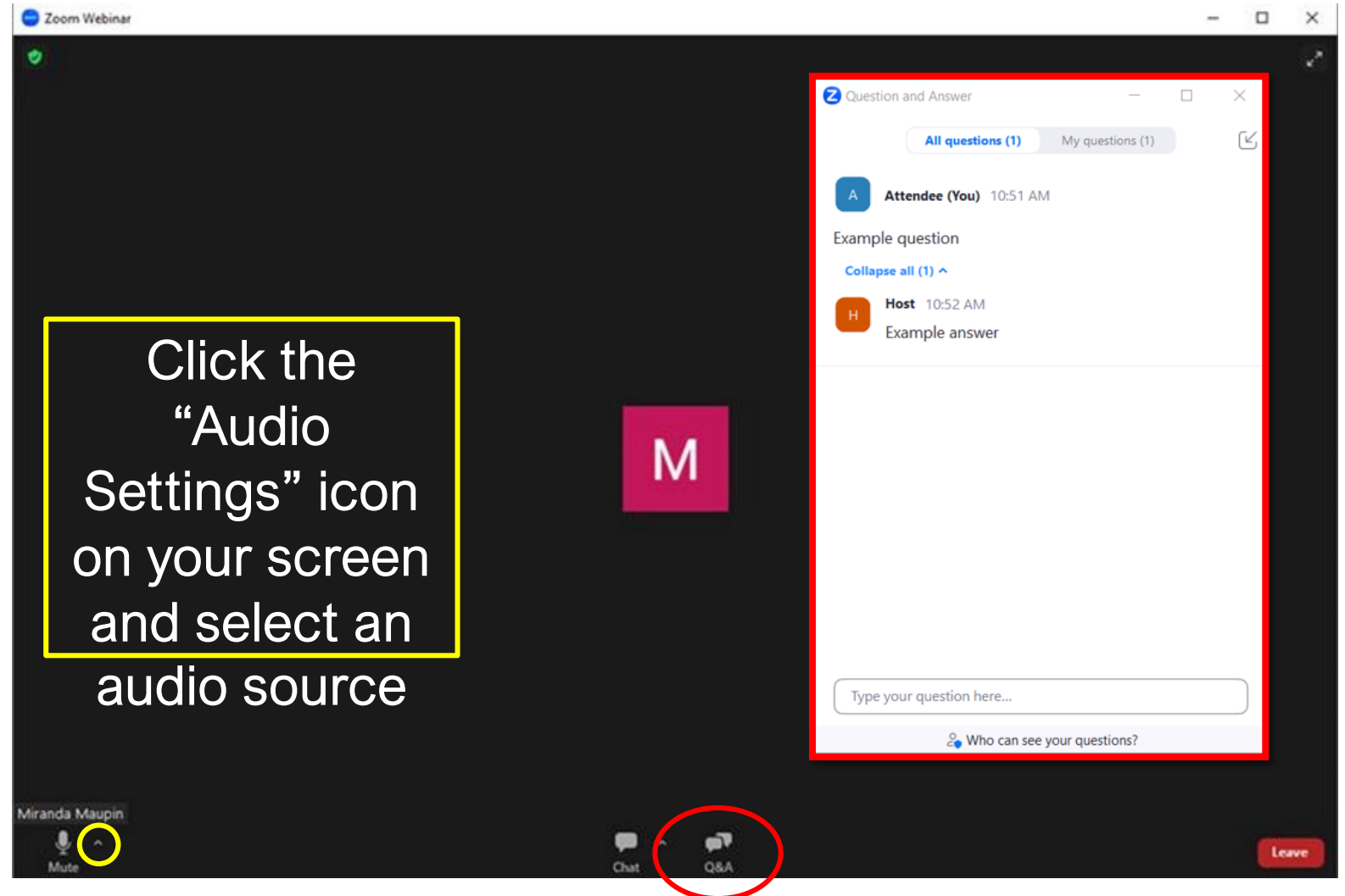
AGENDA

- Welcome
- Background
- Role of TASC Support
- Report Overview (TASC East Palestine Train Derailment and Controlled Burn Environmental Data Review)
- Report Results by Environmental Material
- Conclusions, Recommendations and Next Steps
- Questions and Discussion

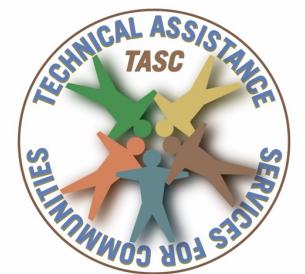
This presentation is provided by the U.S. Environmental Protection Agency's (U.S. EPA's) Technical Assistance Services for Communities (TASC) program; its contents do not necessarily reflect the policies, actions or positions of U.S. EPA

ZOOM WEBINAR FUNCTIONS

- Please use the Q&A window to ask questions
- If you have audio issues, try clicking the Audio Settings icon to choose a different audio source



BACKGROUND



WHAT HAPPENED?



On February 3, 2023, a Norfolk Southern freight train derailed in East Palestine, Ohio



Twenty of the affected rail cars contained hazardous materials, including vinyl chloride, ethylene glycol, ethylhexyl acrylate, butyl acrylate and isobutylene



U.S. EPA staff arrived hours after the derailment and started monitoring the air for volatile organic compounds (VOCs)



U.S. EPA contractors installed booms and underflow dams to try and restrict the flow of contaminated water and collect floating material to mitigate any possible impacts to the nearby Sulphur Run and Leslie Run streams



Vinyl chloride in the derailed rail cars was considered unstable due to a drop in temperature discovered on Sunday night, February 5, 2023



According to Norfolk Southern, the pressure relief valves had stopped working on some of the cars, putting them at risk of exploding; Norfolk Southern made the decision to do a controlled release of the material into trenches dug in the ground where flares were lined up to ignite the chemical and burn it off



Prior to the controlled burn, the governors of Ohio and Pennsylvania ordered an immediate evacuation of a 1-mile-by-2-mile area covering the eastern part of East Palestine and the Darlington area of Pennsylvania in Beaver County

MONITORING AND SAMPLING BEGAN IMMEDIATELY

- The derailed train caused a cascade of activity
- Emergency response workers were first on the scene, followed by officials and workers associated with a variety of federal and state agencies and representatives
- Emergency response workers focused on addressing immediate hazards posed by the derailment
- As part of the emergency response, federal and state agency responders also began extensive environmental monitoring (air, soil, surface water, sediment and biological [plants, fish])
- The town of East Palestine requested assistance from TASC

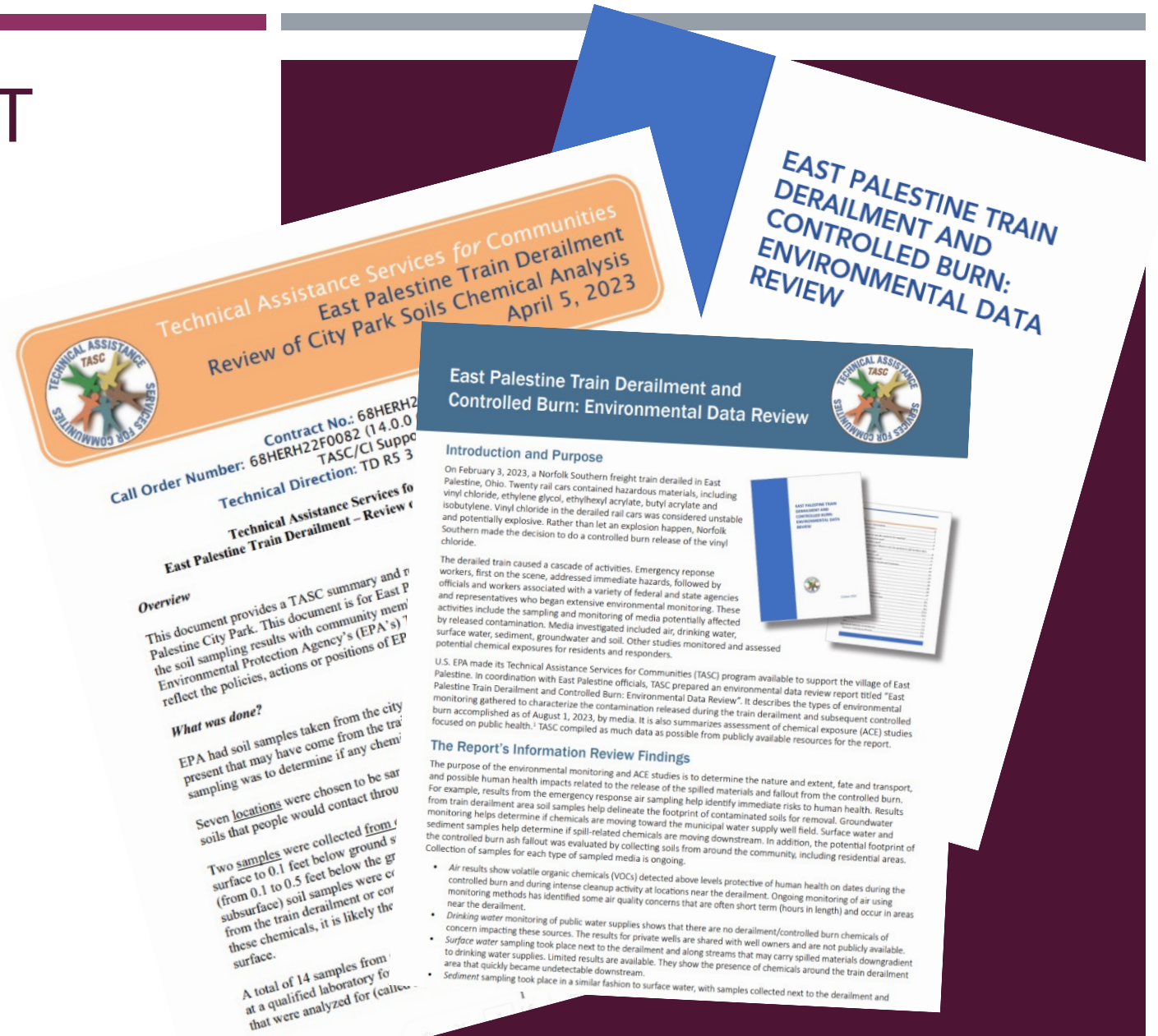


ROLE OF TASC SUPPORT



ROLE OF TASC SUPPORT

- East Palestine officials requested support through U.S. EPA's Technical Assistance Services for Communities (TASC) program
- East Palestine officials requested support in understanding the large amount of environmental data produced following spill/controlled burn
- TASC prepared and conducted an in-depth environmental data review
- TASC also reviewed City Park soils data collected



REPORT OVERVIEW



GOAL OF THE REPORT

- The goal of the report is to address key questions of concern identified by local officials:



What does the
information mean?



Are there
information gaps?



What are some key
questions to ask?



Are there other
information needs?

PUBLICLY AVAILABLE SOURCES OF ENVIRONMENTAL MONITORING AND SAMPLING WERE ACCESSED

- Resources were initially identified by town officials and U.S. EPA points of contact
- Internet-based resources available to the public were accessed and reviewed to determine the applicability and usability of available data

 United States
Environmental Protection
Agency

Environmental TopicsLaws & RegulationsReport a Violation

 On-Scene
Coordinator



East Palestine Train Derailment

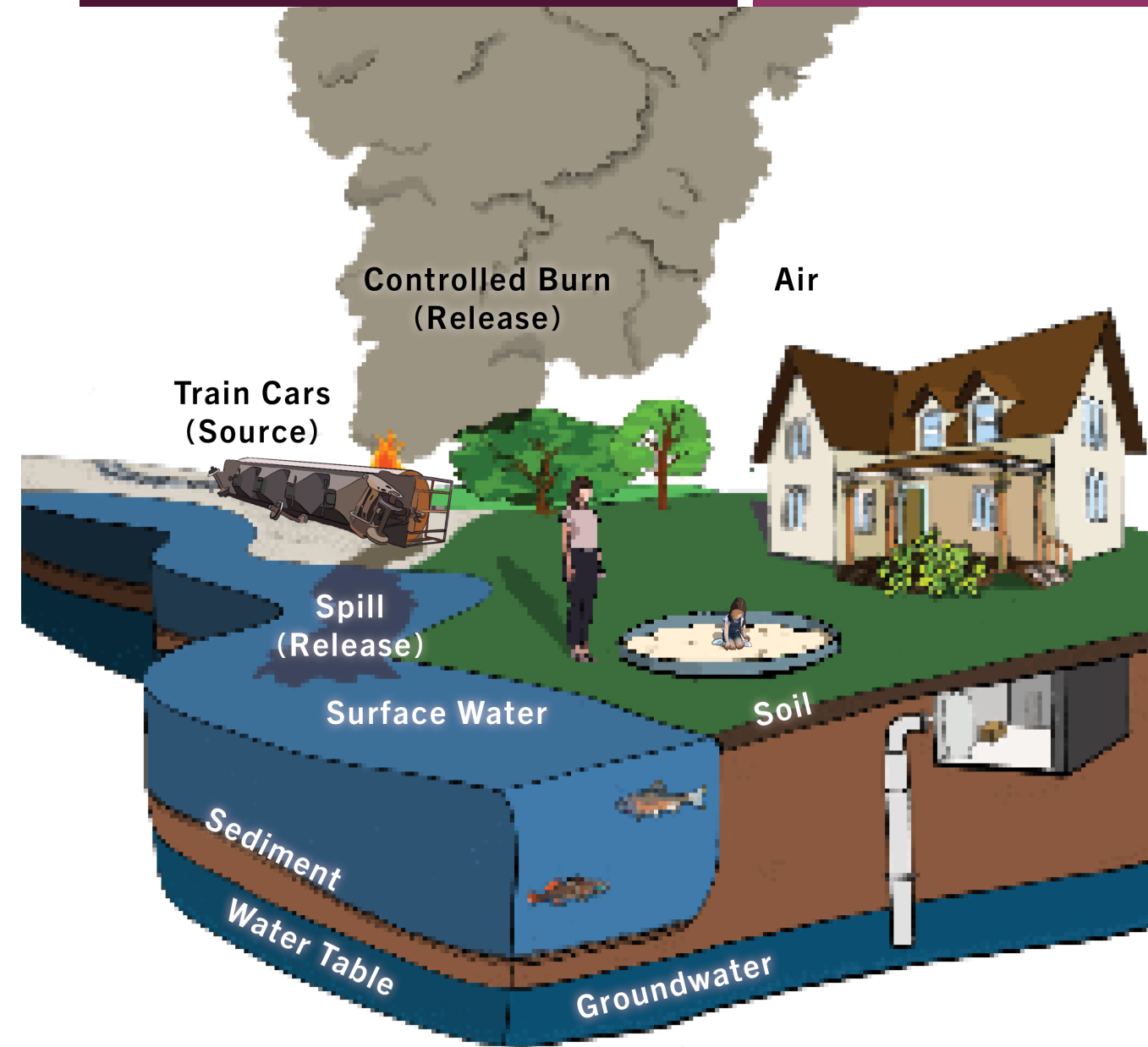


Site Contact:
Rachel Bassler
Public Information Officer
(R5_PIO@epa.gov)
Site Location:
East Palestine, OH 44413
response.epa.gov/EastPalestineTrainDerailment
NRC#: 1359227

https://response.epa.gov/site/site_profile.aspx?site_id=15933

AGENCIES WORKED TOGETHER, THEREFORE MANY RESOURCES ARE LINKED TOGETHER





How do we develop an understanding of an area with suspected contamination?

A Conceptual Site Model helps identify environmental monitoring data that maybe useful in understanding an area.

- Parts of the Environment of Interest:
 - Air
 - Groundwater/Drinking Water
 - Soil
 - Surface Water
 - Sediment
 - Biological (Crops and Fish)

SAMPLING CONDUCTED TO DATE BY ENVIRONMENTAL MATERIAL AND LEAD PARTY (THROUGH 8/1/23)

Environmental Material	Entity									
	U.S. EPA	Ohio DNR	Ohio EMA	Ohio EPA	PDEP	County	Ohio Dept. of Health	ORSAN-CO	COC ³	City of Louisville
Air	√				√	√ ¹				
Drinking Water			√	√	√	√ ²	√	√	√	√
Surface Water	√			√	√					
Sediment	√									
Groundwater				√	√					
Soil	√				√					
Biological ⁴		√		√	√					

Notes:

1 – Allegheny County

2 – Columbiana County

3 – City of Cincinnati

4- Ohio EMA summarizes crop studies completed by Ohio Department of Agriculture and Ohio State University.

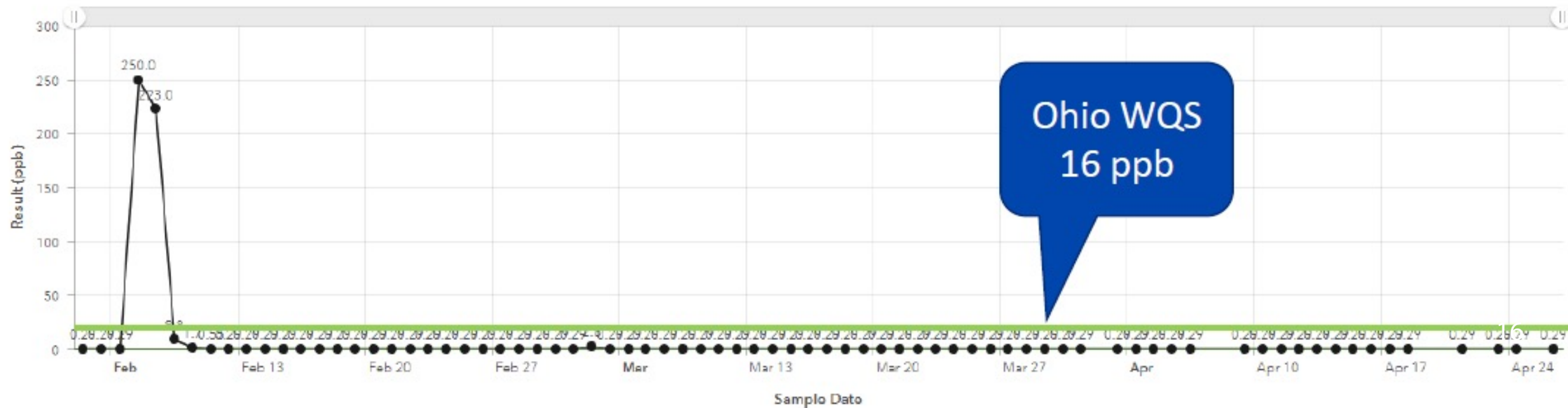
REPORT RESULTS BY ENVIRONMENTAL MATERIAL





W002 - Sulphur Run at West 1st St.

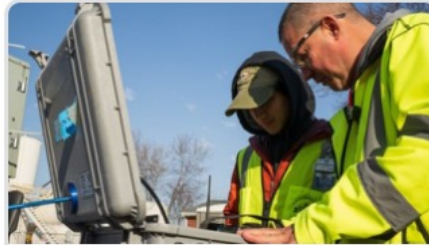
Vinyl Chloride



AIR

- Air sampling and monitoring has been ongoing since the derailment and controlled burn

Air Monitoring and Sampling Data



Air Monitoring

The goal of air monitoring is to quickly detect contaminants in the air.

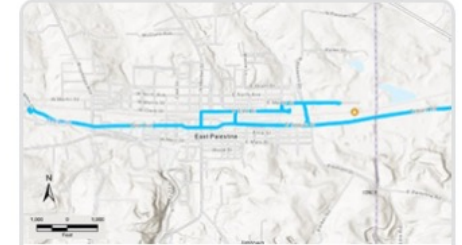
Explore Air Monitoring



Air Sampling

EPA is collecting outdoor air samples for potential contaminants of concern.

Explore the Dashboard



Air Monitoring Documents

- Stationary
- Roving
- TAGA

Explore Air Monitoring Documents

<https://www.epa.gov/east-palestine-oh-train-derailment/air-monitoring-and-sampling-data>

AIR

- Air is sampled and monitored using a variety of methods
- Results show volatile organic compounds (VOCs) detected above levels protective of human health on dates during the controlled burn and cleanup efforts; these samples are from locations near the derailment
- Monitoring of air using continuous and roaming methods identified some air quality concerns
- These potential impacts (poor air quality) are often short-term (hours in length) and occur in areas near the derailment



Air sampling locations in and around East Palestine

SCREENSHOT OF THE U.S. EPA AIR SAMPLING DASHBOARD WEBSITE

U.S. EPA East Palestine, Ohio Train Derailment Air Sampling Dashboard

[Show User Guide](#)

Filter By



Sample Method
[Show all methods](#)



Chemical Name
[Show all chemicals](#)



Location ID
[Show all locations](#)



Result > Reporting Limit
[Show all results](#)



Lab Validation Status
[Show all results](#)



Sample Date
[Show all dates](#)

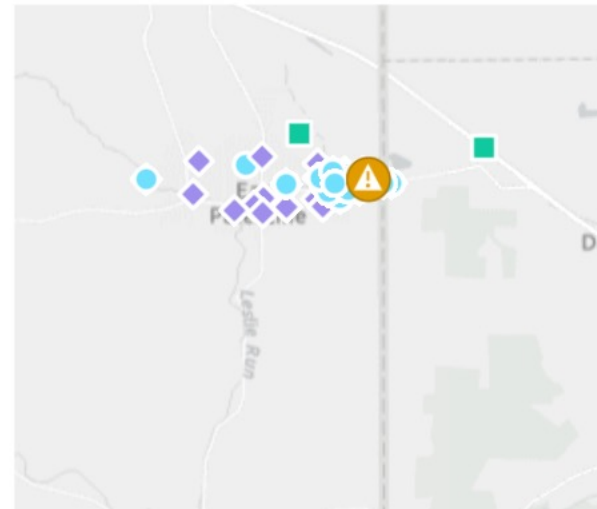
East Palestine
Derailment
Location



Air Sample
Locations

Sample Metho-

- Badge
- Bag
- Sorbent Tub
- Steel Canist



14.3k
Samples

153k
Lab Results

Samples

- EPD-A-01-022223
- EPD-A-01-022323
- EPD-A-01-022423
- EPD-A-01-022523
- EPD-A-01-022623
- EPD-A-01-022723
- EPD-A-02-022423
- EPD-DW-01-022823
- EPD-DW-01-030323
- EPD-DW-01-030423

Lab Results

1,1,1-Trichloroethane (71-55-6)
Sample ID: EPD-DW-A-110523
Location: DW-A
Sample Method: Steel Canister
Sample Date: 11/05/2023 12:54
Result: <0.029325337 PPB
Result Qualifier: U
Reporting Limit: 0.029 PPB
Validation Status: Preliminary

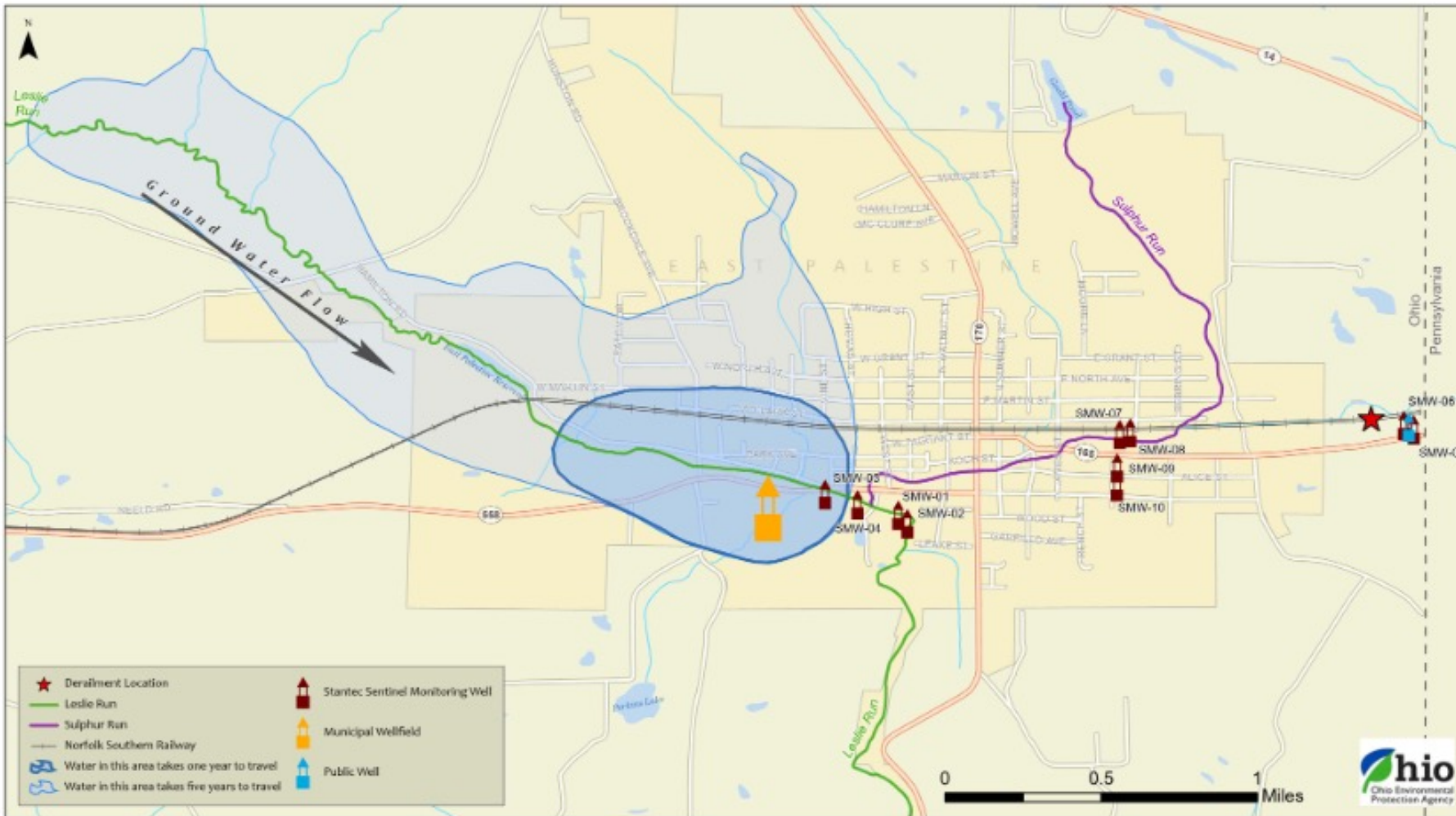


DRINKING WATER/GROUNDWATER

- Drinking water sources in East Palestine and other drinking water sources downstream of the derailment are being monitored
- Sampling is also done on private wells of East Palestine residents; the results for private wells are shared with well owners and are not publicly available
- Publicly available sampling data from public water supplies show that there are no derailment/controlled burn chemicals of concern impacting these sources



OHIO EPA MAP OF EAST PALESTINE GROUNDWATER FLOW AND MONITORING WELLS



SUMMARY OF DETECTIONS IN EAST PALESTINE DRINKING WATER WELLS (PRE-TREATMENT) WATER: EAST PALESTINE PUBLIC WATER SYSTEM DATA (OHIO EPA)

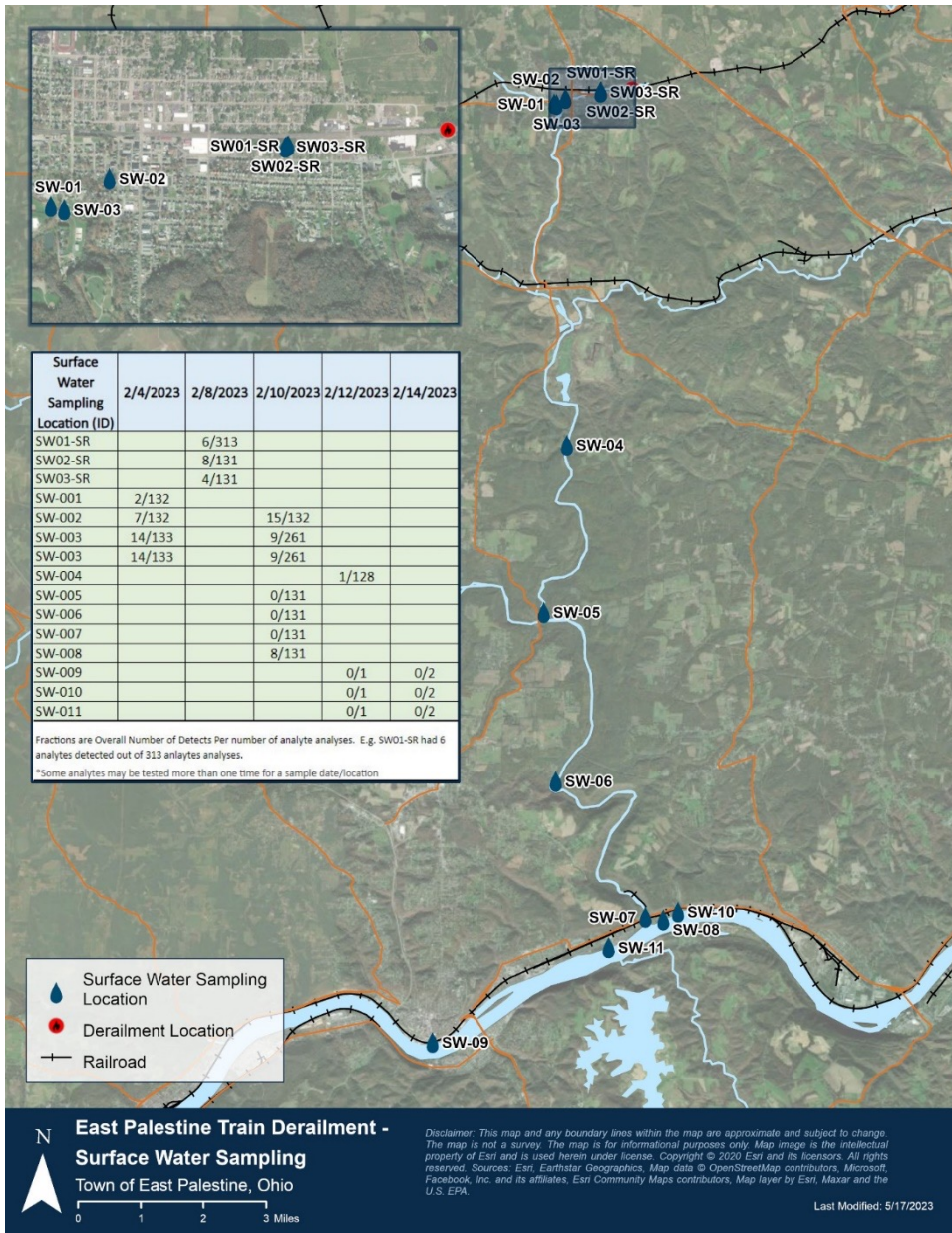
Sample Collection Date	Location	Chemical Name	NS Lab	Independent Lab (Summit)	Units	Comments
5/23/2023	Well water entering the plant (Well 3)	cis-1,3-dichloropropene	NS	0.779	PPB	Health standard for total 1,3-dichloropropene in drinking water is 0.47 ppb. Commonly used in farming to control nematodes. This is not associated with the train derailment.
5/23/2023	Well water entering the plant (Well 3)	cis-1,3-dichloropropene	NS	0.779	PPB	Health standard for total 1,3-dichloropropene in drinking water is 0.47 ppb. Commonly used in farming to control nematodes. This is not associated with the train derailment.
5/23/2023	Well water entering the plant (Well 3)	Tetrachloroethene	NS	0.54	PPB	Maximum allowed (MCL) of 5 ppb. Commonly used as a dry cleaning agent and metal degrading solvent. It is also used as a starting material for manufacturing other chemicals and is used in some consumer products.
5/23/2023	Well water entering the plant (Well 5)	cis-1,3-dichloropropene	NS	0.76	PPB	Health standard for total 1,3-dichloropropene in drinking water is 0.47 ppb. Commonly used in farming to control nematodes. This is not associated with the train derailment.
4/4/2023	Well water entering the plant (Well 1)	Di-n-butyl phthalate	<RL	0.36	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
4/4/2023	Well water entering the plant (Well 2)	Di-n-butyl phthalate	<RL	0.57	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
4/4/2023	Well water entering the plant (Well 5)	Di-n-butyl phthalate	<RL	0.49	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/28/2023	Well water entering the plant (Well 2)	Di-n-butyl phthalate	<RL	0.76	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/28/2023	Well water entering the plant (Well 5)	Di-n-butyl phthalate	<RL	0.33	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/21/2023	Well water entering the plant (Well 1)	Di-n-butyl phthalate	<RL	0.42	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/21/2023	Well water entering the plant (Well 2)	Di-n-butyl phthalate	<RL	0.56	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/21/2023	Well water entering the plant (Well 5)	Di-n-butyl phthalate	<RL	0.42	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/14/2023	Well water entering the plant (Well 1)	Di-n-butyl phthalate	<RL	0.23	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/14/2023	Well water entering the plant (Well 2)	Di-n-butyl phthalate	<RL	0.2	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/14/2023	Well water entering the plant (Well 5)	Di-n-butyl phthalate	<RL	0.46	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/7/2023	Well water entering the plant (Well 1)	Di-n-butyl phthalate	<RL	0.19	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/7/2023	Well water entering the plant (Well 2)	Di-n-butyl phthalate	<RL	0.34	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/7/2023	Well water entering the plant (Well 5)	Bis(2-ethylhexyl) phthalate	<RL	0.22	PPB	Maximum allowed (MCL) of 0 ppb in treated drinking water, it is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
3/7/2023	Well water entering the plant (Well 5)	Di-n-butyl phthalate	<RL	0.70	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
2/28/2023	Well water entering the plant (Well 1)	Di-n-butyl phthalate	<RL	0.60	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
2/28/2023	Well water entering the plant (Well 2)	Di-n-butyl phthalate	<RL	0.37	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
2/28/2023	Well water entering the plant (Well 4)	Bis(2-ethylhexyl) phthalate	<RL	0.23	PPB	Maximum allowed (MCL) of 0 ppb in treated drinking water, it is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.
2/28/2023	Well water entering the plant (Well 5)	Di-n-butyl phthalate	<RL	0.39	PPB	This is part of a group of chemicals used to make plastics more durable. This is not associated with the train derailment.



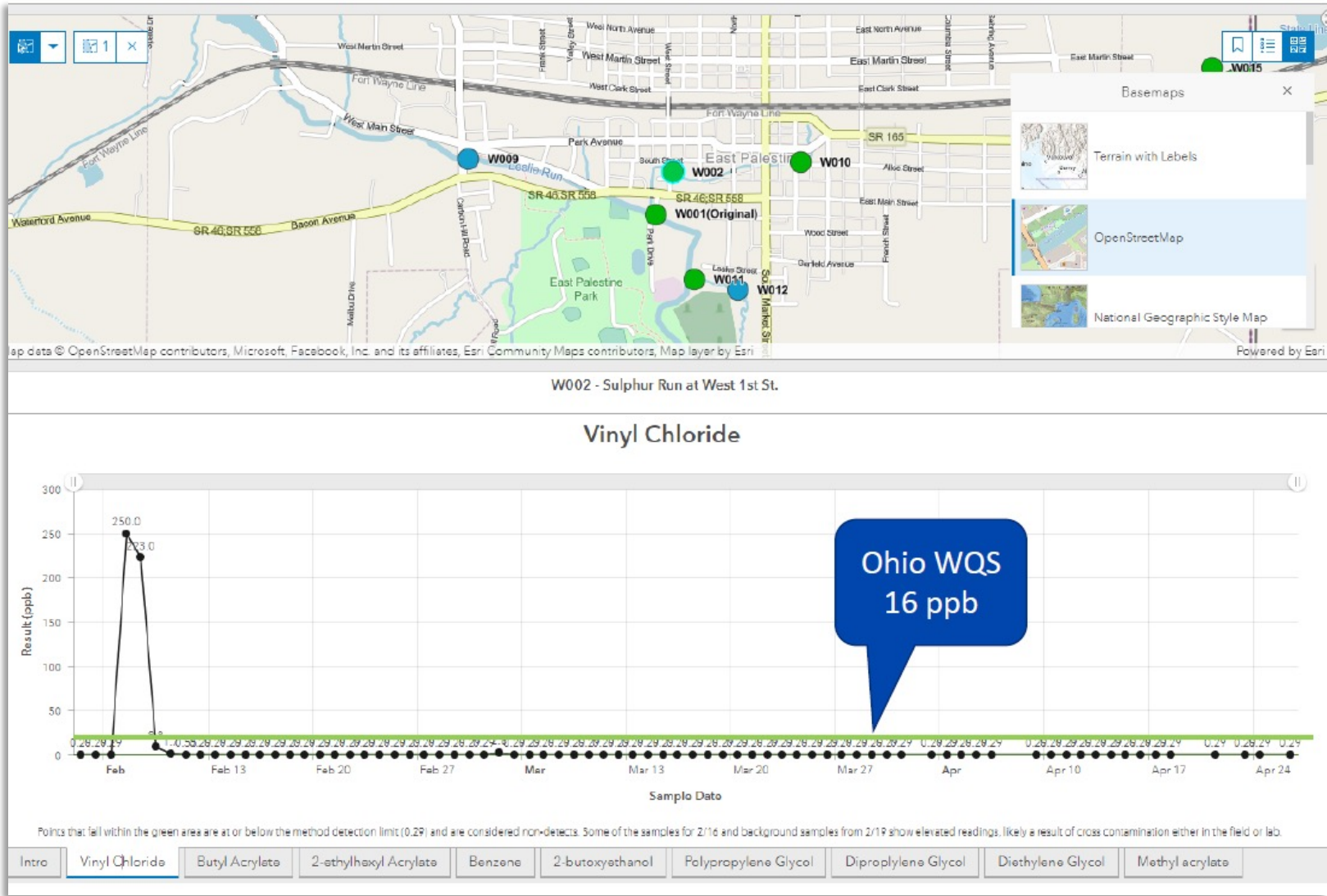
SURFACE WATER AND SEDIMENT

- Surface water was sampled next to the derailment area shortly after the train derailment (about five days)
- Sampling was also done along streams that may carry spilled materials downgradient to drinking water supplies; only a limited amount of data for surface water is publicly available
- Results of surface water samples collected show the presence of chemicals around the trail derailment area that quickly became undetectable downstream
- Additional sampling is being planned this year by U.S. EPA and others
- For instance, as of July 28, 2023, U.S. EPA stated that “sediment and water sampling started on Sulphur Run to develop a characterization of the creek. Stream cleaning is on hold while sediment and water sampling goes on.”

SURFACE WATER SAMPLING LOCATIONS AND RESULTS



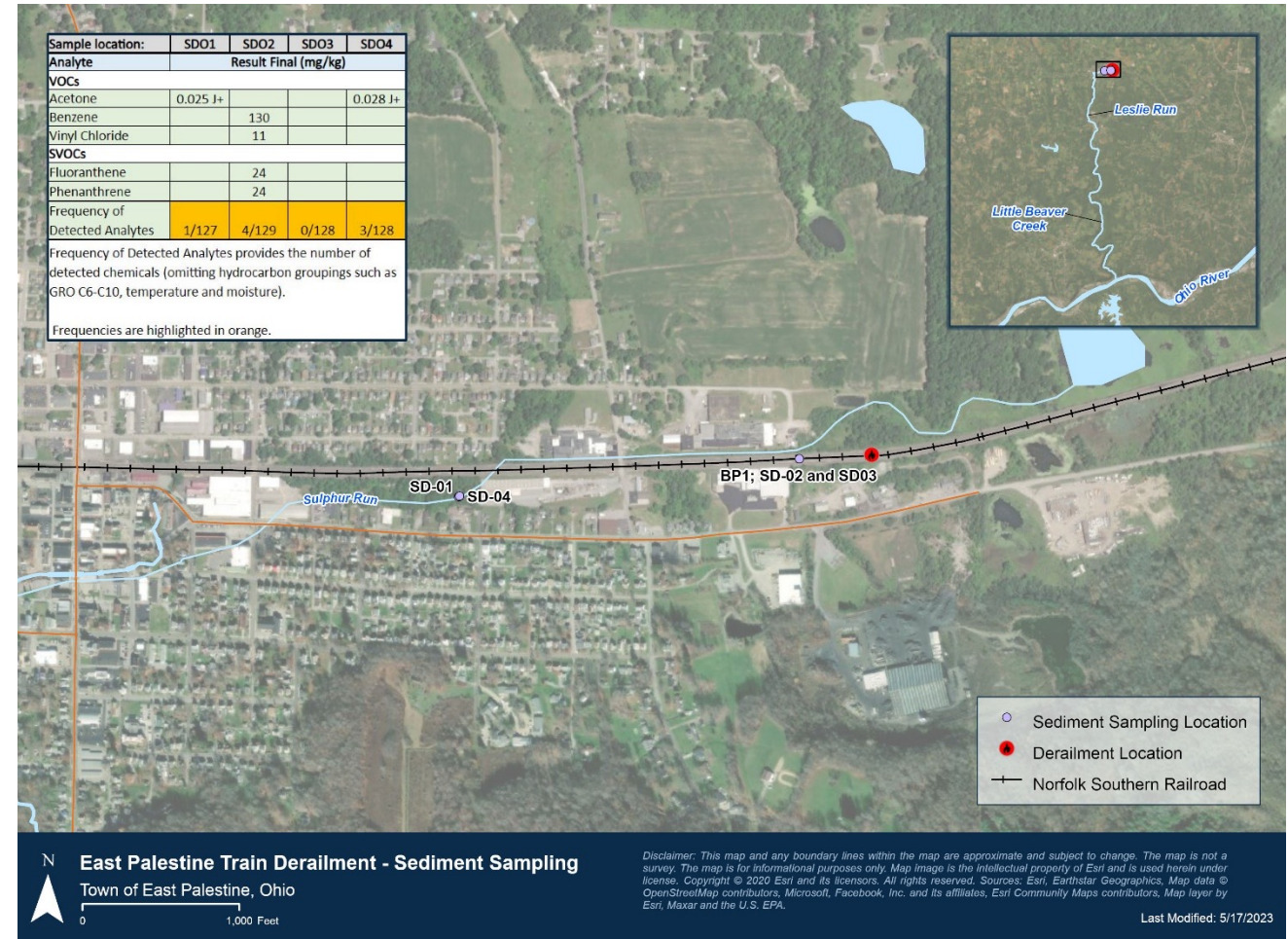
EAST PALESTINE SURFACE WATER SAMPLING



Ohio EPA's Interactive Map for East Palestine Displays Surface Water Sampling Locations and Results
<https://epa.ohio.gov/divisions-and-offices/surface-water/reports-data/ep-surface-water-results>

SEDIMENT

- U.S. EPA collected sediment samples on February 10, 2023, shortly after the derailment; only a limited amount of chemical analysis data for sediment are publicly available
- The data available likely reflect sediment conditions prior to cleanup actions undertaken soon after the derailment to address the contamination within and near the derailment area; therefore, these data are likely out of date and identify conditions that have changed
- Results show that most of the contamination was limited to the derailment area and had not moved downgradient at the time of sampling
- Additional substantial sampling is planned for later this year (by U.S. EPA and others)



Sediment sampling locations and results

OHIO EPA SURFACE WATER MONITORING PROGRAM



WHAT IS NEXT?

- Sediment cleaning in Leslie Run
- Water chemistry sampling will continue
- Ecological sampling will be done in 2023
- Sediment sampling will continue

QUESTIONS?

Bill Zawiski

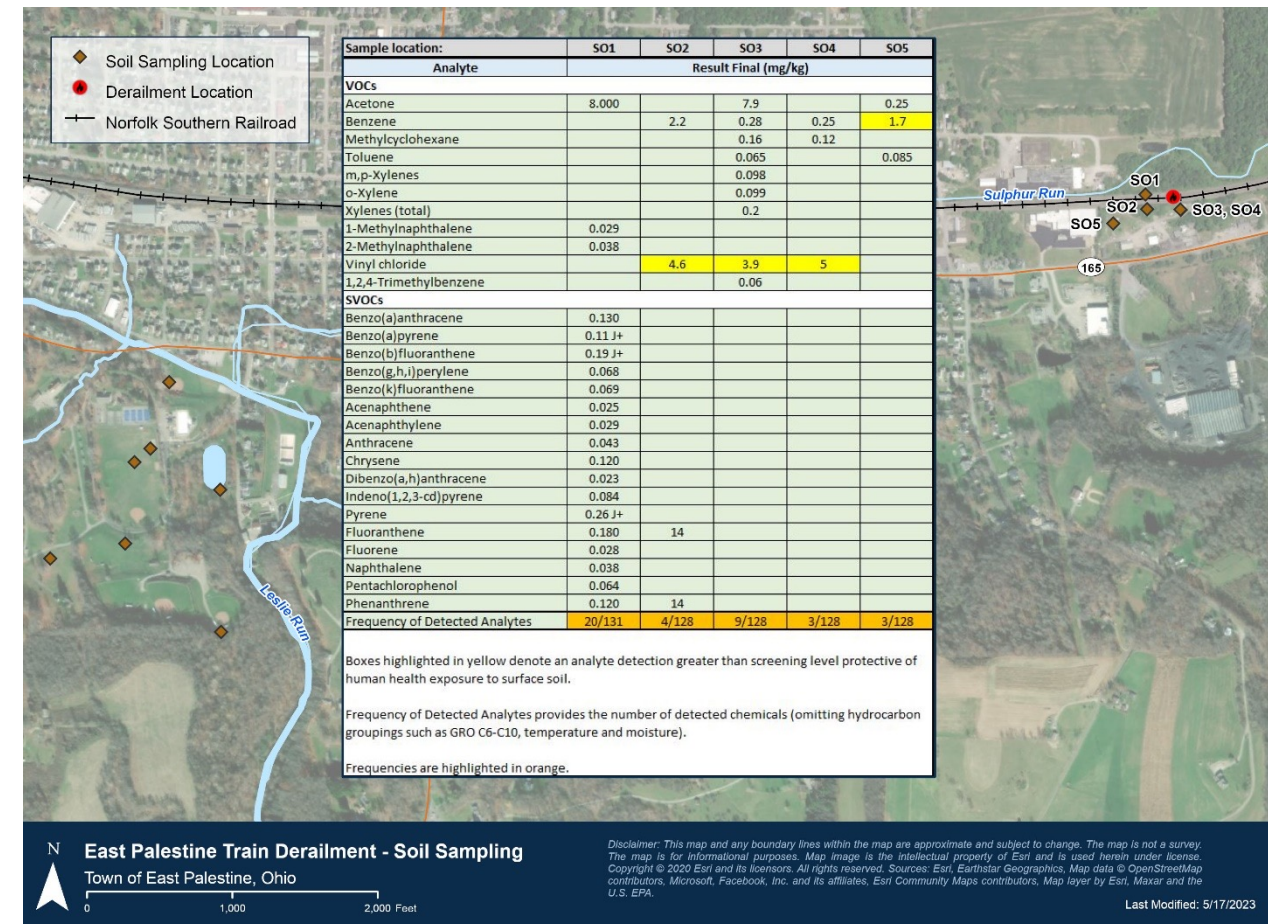
Water Quality Supervisor

bill.zawiski@epa.ohio.gov

330-963-1134

SOILS

- Soils were tested immediately after and close to the derailment
- Analytical results for these soils found polycyclic aromatic hydrocarbons (PAHs) at levels higher than levels considered protective of human health; however, the area where these samples were collected has been the focus of cleanup efforts – therefore, conditions have likely improved significantly



Soil sampling locations and results



SOILS

- Targeted sampling of soils at East Palestine City Park on March 9, 2023, for example, did not identify any contaminants at levels of concern
- There is a considerable amount of ongoing and planned soil sampling associated with residential surface soils and other community areas potentially impacted by the controlled burn; however, since the residential data will be kept in confidence, there is no information publicly available at this time
- These data may become available after the Phase I Soil Sampling plan is accepted; a partial dataset is available and posted on U.S. EPA's website

PHASE ONE SOILS DATA FROM U.S. EPA AND NORFOLK SOUTHERN

[East Palestine, Ohio Train Derailment](#)

CO

Phase One Residential, Commercial, and Agricultural Soil Sampling Results

On this Page:

- [Summary of Soil Sampling Results](#)
- [Results for Semivolatile Organics](#)
- [Results for Dioxin and Furans](#)
- [Data Qualifies and Terms Key](#)
- [Norfolk Southern Data](#)

Summary of Soil Sampling Results

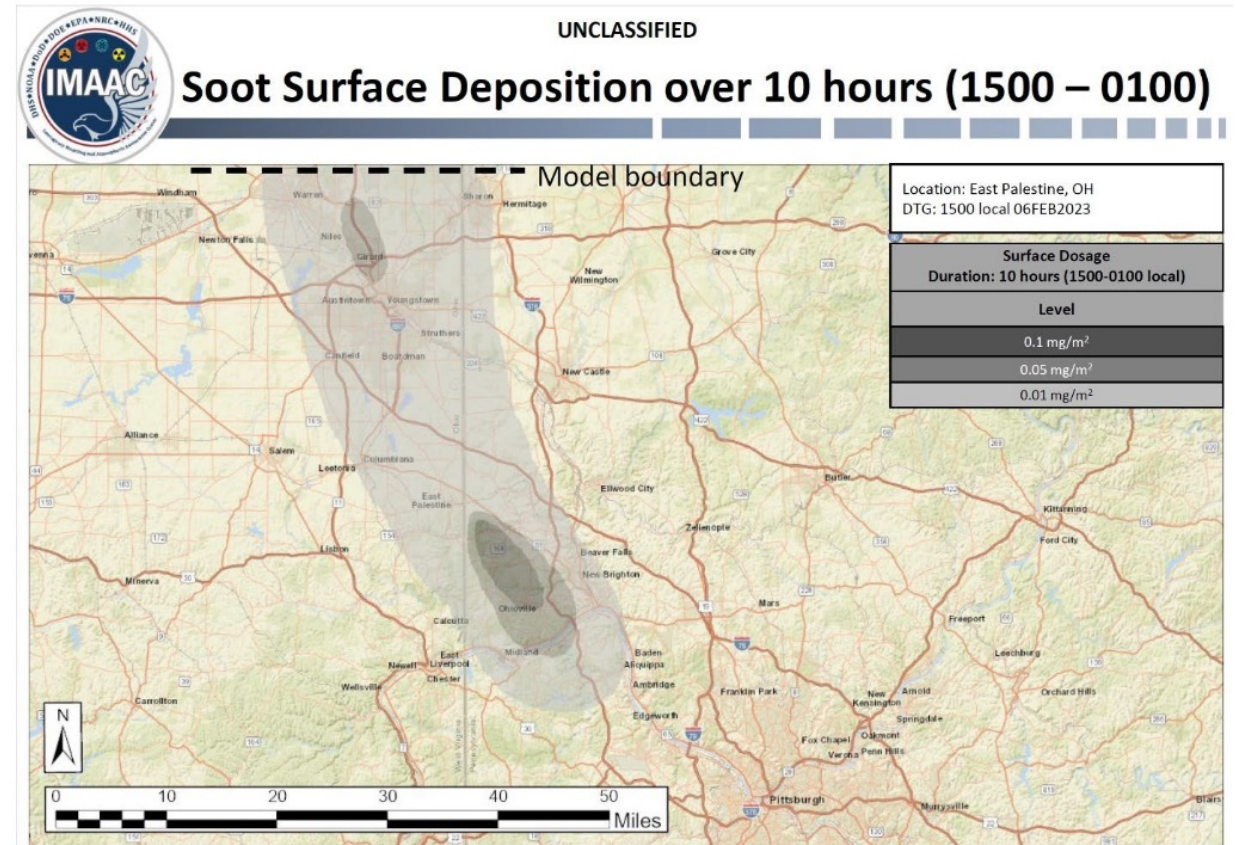
Results for Semivolatile Organics

(The units of measure for analytes in the table below are in mg/kg)

Sample Collection Date	3/9/2023				
Sampling Depth in Inches	0-1	1-6	0-1	1-6	0-1
Analyte (CAS No) ▼	Validated	Validated	Validated	Validated	Validated
Pyrene (129-00-0)	0.4 U	0.39 U	0.446 U	0.429 U	0.455 U
Phenol (108-95-2)	0.4 U	0.39 U	0.446 U	0.429 U	0.455 U
Pentachlorophenol (87-86-5)	0.812 U	0.791 U	0.905 U	0.871 U	0.924 U
Naphthalene (91-20-3)	0.4 U	0.39 U	0.446 U	0.429 U	0.197 J

SOOT-DEPOSITED SOIL

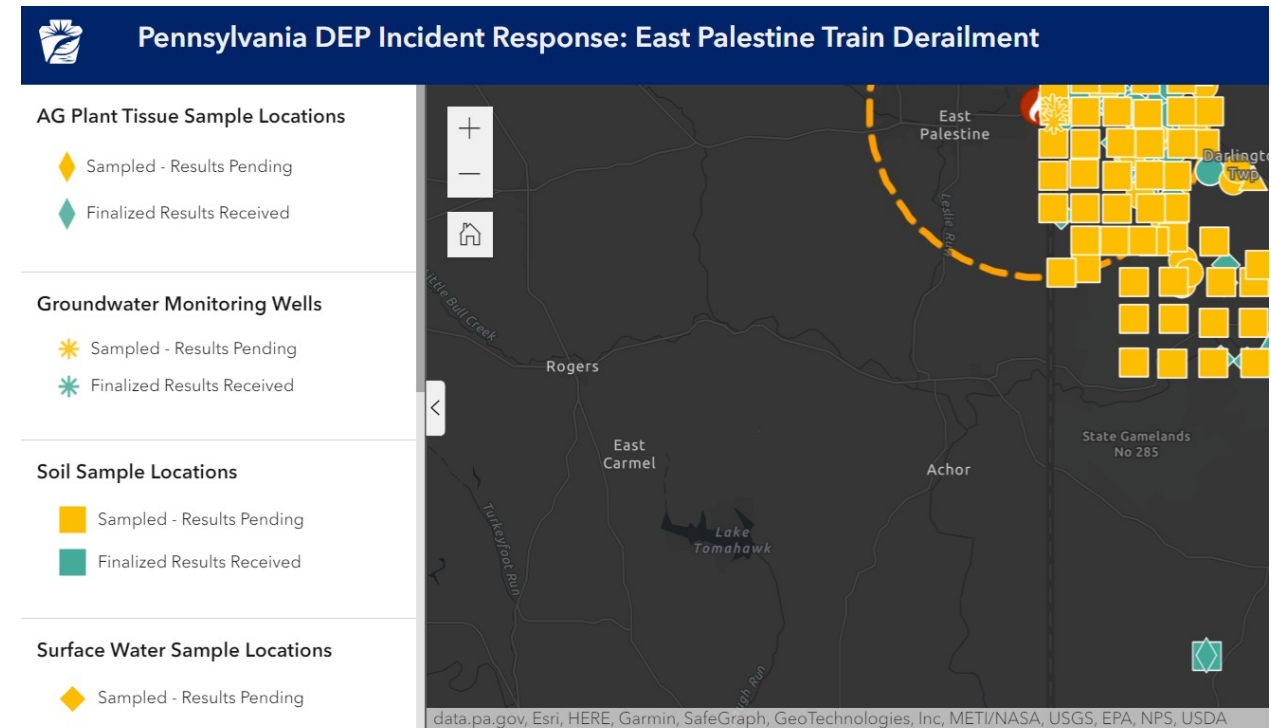
- To evaluate soils most likely impacted by smoke and soot from the burn operation, U.S. EPA requested an event reconstruction map that shows the smoke plume and resulting soot surface deposition in Ohio and Pennsylvania
- The map shows the highest estimated concentration of soot (0.1 mg/m^2) is downwind from the derailment site covering an area roughly 8 miles long by 2 miles wide in western Pennsylvania
- The results from this map helped inform U.S. EPA's Phase I Residential/Commercial/Agricultural Soil Sampling Plan
- Results of samples from within the soot plume indicate minimal impacts



East Palestine Train Derailment Soot Surface Deposition Map (IMAAC Retrospective Analysis provided on U.S. EPA's Event Reconstruction Plume Map)

BIOLOGICAL MATERIAL – CROPS

- The Pennsylvania Department of Agriculture collected samples of agricultural plant species; results indicate that plant tissue is an unlikely source of exposure to SVOCs – complete plant tissue test results are on PDEP's interactive website
- Ohio Emergency Management Agency (Ohio EMA) summarizes plant tissue results from the Ohio Department of Agriculture and The Ohio State University; the Ohio EMA website states that “crops are in good condition, according to Columbiana County reports, six months following the train derailment”



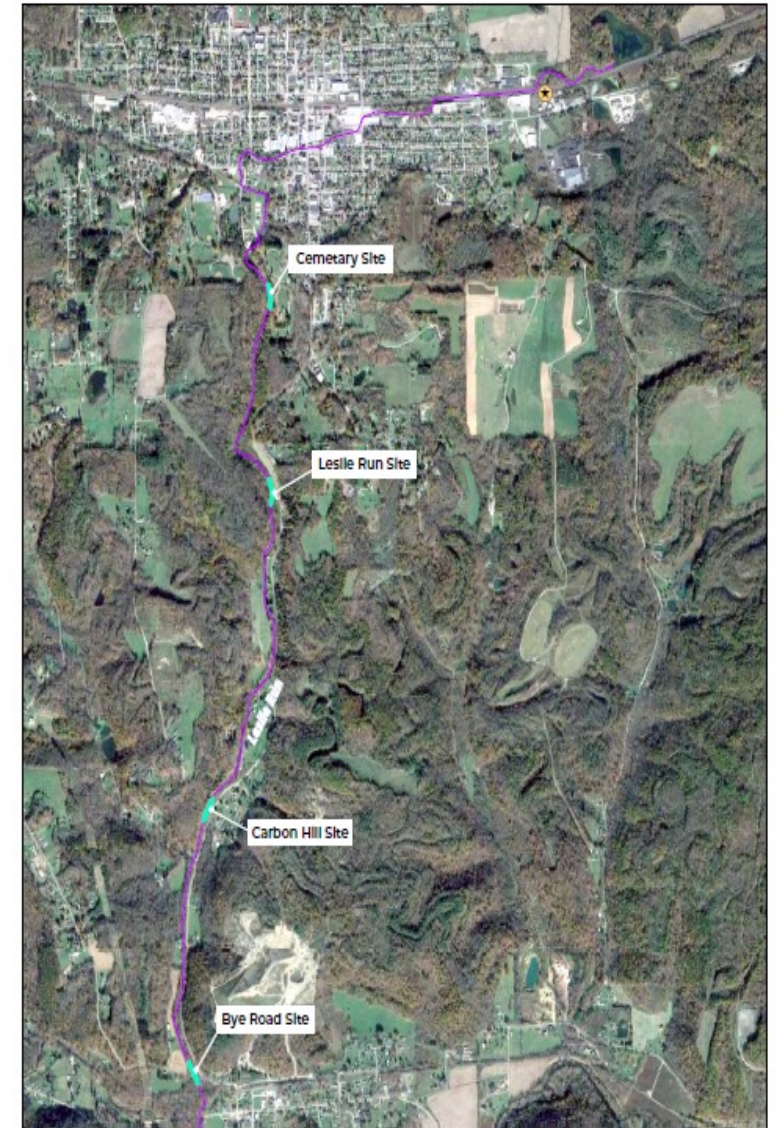
PDEP Interactive Map Resource for Analysis Results

<https://experience.arcgis.com/experience/685eede45e6d48e39f078583edccb69>

BIOLOGICAL MATERIAL – AQUATIC

- Ohio Department of Natural Resources mobilized immediately after the derailment to monitor aquatic life in Sulphur Run and Leslie Run
- Ohio EPA personnel routinely monitor the Little Beaver Creek watershed (which includes Sulphur Run, Leslie Run and streams downstream of these streams) to measure surface water quality and aquatic health (map provided in surface water discussion)

Aquatic Species Collection Sites

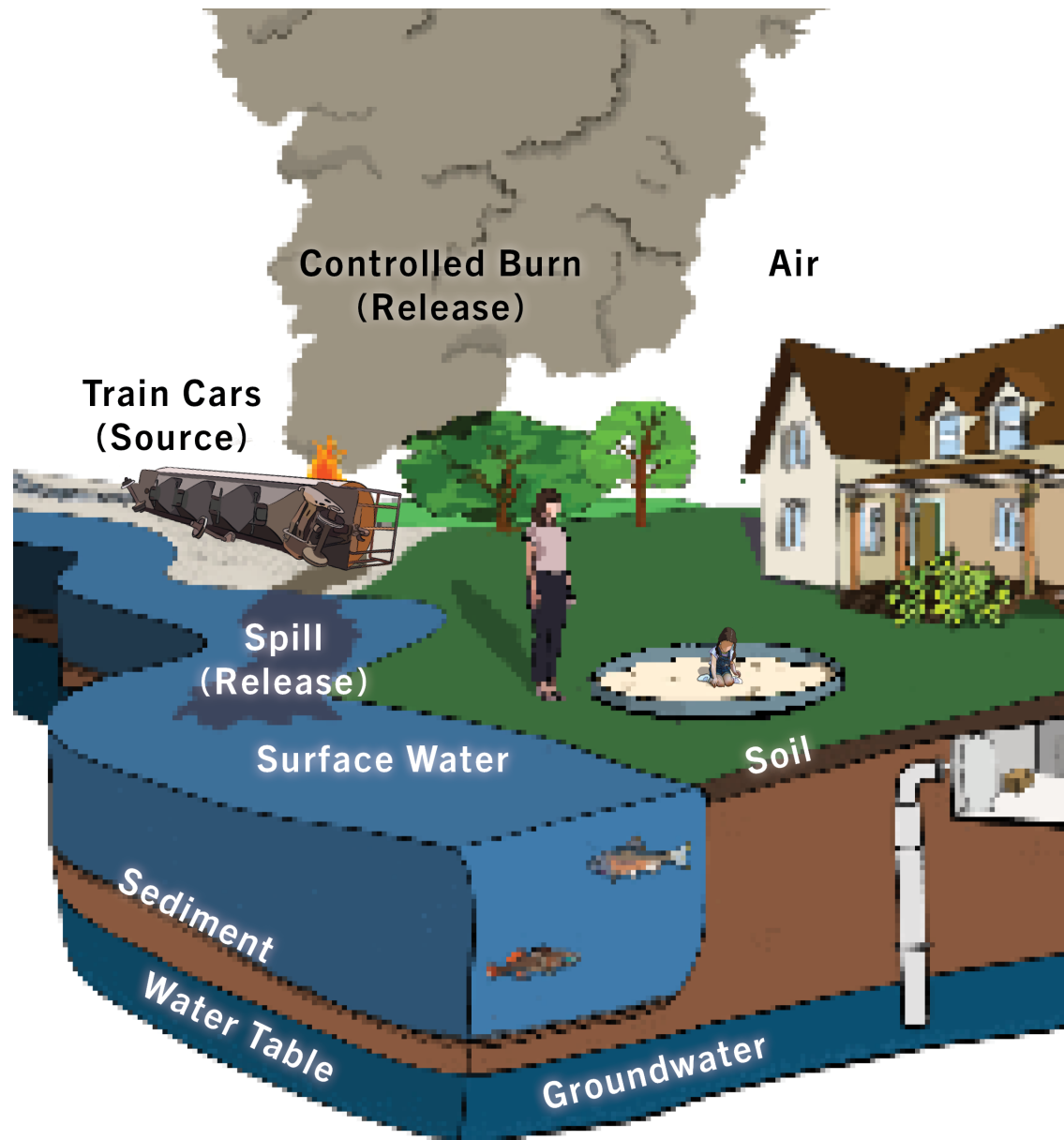


WHAT DOES THIS INFORMATION MEAN?

The **purpose of the environmental sampling and health studies** in response to the train derailment and controlled burn is to determine the nature and extent, fate and transport, and possible human health impacts related to the release of the spilled materials and fallout from the controlled burn

- ***For example***, the results of the emergency response *air sampling are used to identify immediate risks to human health*; results from train derailment area *soil samples are used to delineate the footprint of contaminated soils to be removed*
- Groundwater monitoring will determine if chemicals are moving toward the municipal water supply well field; surface water and sediment samples are being used to determine if spill-related chemicals are moving downstream
- The Assessment of Chemical Exposure (ACE) investigations completed by Ohio Department of Health and Pennsylvania Department of Health identify possible exposure impacts on residents and first responders
 - Results identified symptoms from exposure included headaches, irritation of the eye, anxiety, coughing, and at least one new or worsening symptom affecting mental health, which could include tiredness, difficulty sleeping, nervousness, agitation, feeling hopeless or unexplained fear





ARE THERE
INFORMATION
GAPS?

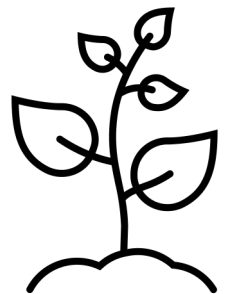
ANALYSIS OF ENVIRONMENTAL MATERIAL – ADDITIONAL CHEMICALS OF POTENTIAL INTEREST

- Dioxins, furans and PAHs are chemicals that could be released by the derailment or the controlled burn; analysis of these chemicals has not been consistent, with a focus on soils in the community and residential area – samples for these chemicals from surface water, sediment and groundwater could be considered
- Per- and polyfluoroalkyl substances (PFAS) are a group of chemicals used to make fluoropolymer coatings and products that resist heat; these chemicals are of concern because they can move through soils and contaminate drinking water sources and can build up (bioaccumulate) in fish and wildlife – TASC is not aware if PFAS chemicals may have been used as part of the controlled burn
- Cyanide is a possible degradation product from butyl acrylates; to date, there has been no known analysis for this chemical which is toxic and of potential concern to human health.
- Metals and nutrients have not been evaluated; the focus of sampling on organic chemicals (hydrocarbons) is appropriate given the type of source materials released into the environment (mostly VOCs and semi-volatile organic compounds [SVOCs]) – however, it is possible for low levels of inorganic elements (metals and nutrients) to occur in these source materials



ADDITIONAL INFORMATION OF POTENTIAL INTEREST TO THE COMMUNITY

- Unique pathways of community interest such as deposition of chemicals from the derailment or controlled burn into residential swimming pools and gardens should be evaluated by sampling swimming pool water and garden soil
- Remote-sensing tools such as infrared aerial photography taken before and after the derailment and controlled burn may be useful in interpreting the footprint of impacts on surrounding vegetation and ecological resources; remote-sensing tools, if available, may help document the presence or absence of impacts
- Biological monitoring can also measure impacts and recovery; remote-sensing tools (mentioned above) can be useful in understanding impacts on vegetation – in-field measurements such as plant cover, density and diversity are also useful



DOCUMENT RESOURCES

APPENDIX A – provides sources of information, by Agency

APPENDIX B – provides copies of table summaries of data

APPENDIX C – Provides copies of additional figures summarizing datasets

APPENDIX D – Provides summaries of assessment of chemical exposure (ACE) studies

Appendix A: References and Resources

Agency for Toxic Substances and Disease Registry, East Palestine Train Derailment. <https://www.atsdr.cdc.gov/sites/east-palestine-train-derailment/index.html>.

AirNow.gov - Home of the U.S. Air Quality Index. <https://www.airnow.gov>.

Allegheny County, Air Quality. <https://www.alleghenycounty.us/Health-Department/Programs/Air-Quality/Air-Quality.aspx>.

ARCADIS, 2023a. Main Line Interim Soil Removal Plan. February 3, 2023.

ARCADIS, 2023b. Phase I – Preliminary Residential/Commercial/Agricultural Soil Sampling Plan. East Palestine Train Derailment Site, East Palestine, Ohio. March 6, 2023.

California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10). <https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health>.

County of Allegheny, East Palestine Train Derailment Information. February 18, 2023. https://www.alleghenycounty.us/uploadedFiles/East_Palestine_Train_Derailment.pdf.

Center for Toxicology and Environmental Health, (CTEH). 2023. Air Sampling and Analysis Plan, Version 1.4. Taggart Road Incident, East Palestine, OH. Prepared on behalf of Norfolk Southern by CTEH, LLC. Revised February 22, 2023.

Columbiana County Health District, Data + Resources, East Palestine Drinking Water Sampling Results, 2023 (accessed April 17, 2023). <https://www.columbiana-health.org/resources>.

- Map: Preliminary Zones of Recommendation for the Sampling of Private Water Systems* Adjacent to the Norfolk Southern Train Derailment as of February 24, 2023**: Columbiana County, Ohio. <https://www.columbiana-health.org/wp-content/uploads/EastPalestineZone1And2.pdf>.
- Guide: "Help with interpreting Lab Reports". <https://www.columbiana-health.org/wp-content/uploads/CCHD-Water-sample-report-interp-42023.pdf>.
- Results for all samples taken (reports from 2/10/2023 through 3/28/2023 were available as of 4/17/2023). Data report for 2/10/2023: https://www.columbiana-health.org/wp-content/uploads/Rpt_23020837_Final_2-10_Redacted.pdf.

City of Cincinnati, 2023. Ohio River Test Results Show No Contaminants (Accessed 4/18/2023). February 24, 2023. <https://www.cincinnati-oh.gov/water/news/ohio-river-test-results-show-no-contaminants>.

CONCLUSIONS, RECOMMENDATIONS AND NEXT STEPS









CONCLUSIONS

- Results showed 'anticipated' outcomes for a release of volatile chemicals
- Elevated concentrations were short in duration and left minimal residue
- These chemicals tend to 'bind' to solids such as soils and sediment, therefore residues were typically found immediately at the spill site; which have led to the remedy of these materials through direct removal
- Controlled burn related chemicals were low in concentration and soil affected by soot shows low concentrations of detectable chemicals



SUMMARY – ENVIRONMENTAL DATA REVIEWED AND TASC LEVEL OF CONCERN

Affected Part of the Environment		TASC Level of Concern about Contamination based on Data Available
Air		Low
Drinking Water/Groundwater		Low
Surface Water		Low
Sediment		Low/TBD
Soil		Low/TBD
Biological		Low

NEXT STEPS

- Monitoring continues
- Routine updates are being provided by U.S. EPA and others
- Watershed-scale studies of water and sediment quality – in addition to biological measures are to be completed

RECOMMENDATIONS

- Stay informed and keep in touch with your community leaders, agency points of contact and other resources
- Consider ways to be involved



QUESTIONS AND DISCUSSION



THANK YOU!

FOR INFORMATION ABOUT THE TRAIN DERAILMENT AND RESPONSE AND
TO ACCESS THE TASC ENVIRONMENTAL DATA REVIEW REPORT,
GO TO EAST PALESTINE'S DERAILMENT INFORMATION HUB

[HTTP://EASTPALESTINE-OH.GOV/DERAILMENT-INFORMATION-HUB/](http://EASTPALESTINE-OH.GOV/DERAILMENT-INFORMATION-HUB/)

