

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
East Palestine Train Derailment - Removal Polrep
Initial Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: POLREP #1
Initial
East Palestine Train Derailment

East Palestine, OH
Latitude: 40.8360395 Longitude: -80.5222838

To: Jim Augustyn, U.S. EPA
Carolyn Bohlen, U.S. EPA
Sam Borries, U.S. EPA
Jaime Brown, U.S. EPA
Phillippa Cannon, U.S. EPA
Jason El-Zein, U.S. EPA
Myles Bartos, USEPA
Steve Ridenour, U.S. EPA
Motria Caudill, ATSDR
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Jodi Billman-Kotsko, Ohio EPA
Jim Mehl, Ohio EPA
Anne Gregg, ODH
Gene Phillips, ODH
Ed Gortner, Ohio EPA
Mike Eberle, Ohio EPA
Valincia Darby, U.S. DOI
John Nelson, U.S. DOI
Amber Bellamy, U.S. FWS
Deborah Millsap, US FWS

From: OSC Josh Peters

Date: 2/5/2023

Reporting Period: 2055 Hours 2/3/2023 to 0600 Hours 2/5/2023

1. Introduction

1.1 Background

Site Number:	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority: CERCLA	Response Type: Emergency
Response Lead: EPA	Incident Category: Removal Action
NPL Status: Non NPL	Operable Unit:
Mobilization Date: 2/3/2023	Start Date: 2/3/2023
Demob Date:	Completion Date:
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification:
FPN#:	Reimbursable Account #:

1.1.1 Incident Category

Emergency Response - Transport Related

1.1.2 Site Description

1.1.2.1 Location

A cargo train was derailed in East Palestine, Columbiana County, Ohio (near 40.835648, -80.531591) at approximately 20:55 on February 3, 2023. Approximately 50 cars were impacted by the derailment with some or all impacted by a fire within the derailment.

1.1.2.2 Description of Threat

A commercial train carrying hazardous substances was derailed and a segment of rail cars were ignited due to an unknown source. Multiple cars containing hazardous substances including vinyl chloride, ethylene glycol, isobutylene, and butyl acrylates were affected by the derailment and subsequent fire.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Not applicable

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

A train derailment occurred at approximately 2055 EST on February 3, 2023 in East Palestine, OH. Norfolk Southern reported the incident at 2253 EST to the NRC. At that time, it was reported that it was unknown as to how many of the 150 cars had derailed, but 20 of the cars were listed as carrying hazardous substances. The incident occurred in the town of East Palestine. Surrounding buildings may have been impacted by the fire, however no active fires have been reported outside of the train. No injuries have been reported. Evacuation of the surrounding area was put in place.

At this time, it is not known which of the approximately 50 derailed cars were damaged and or breached. Unimpacted cars were uncoupled and removed from the area.

The 20 Hazardous Materials cars include – 17 loaded cards and 3 listed as Empty/Residue. The Haz Cars consist of the following: Vinyl Chloride, Stabilized (5), Sulfuric Acid (5), Ethylene Glycol (1), Butyl Acrylates, Stabilized (2), Combustible Liquids NOS (1), Combustible Liquid, Ethylene Glycol (1), Isobutylene (1), Ethyl-Hexayl Acrylate(1), Empty Residue – last contained LPG (1), Empty Residue – last contained Benzene(2).

This fire is still active.

2.1.2 Response Actions to Date

Response Actions for 2/4/2023

From 0230 to 430 EST, EPA OSCs arrived on scene to assess the incident and coordinate mobilization of assets to the site. IMAAC plume modeling was requested and used to place air monitoring instruments in the area surrounding the train fire.

At approximate 1030 EST EPA completed deployment of air monitoring instruments in twelve (12) locations surrounding the train fire. In addition one (1) air sample was collected in downtown East Palestine for analysis at a contract laboratory.

At approximately 1130 EST contaminated run off was discovered on Sulphur Run and Leslie Run. The PRP installed boom and underflow dams at the direction of the Ohio EPA. At this time it was determined that full recovery operations was not viable and that aeration techniques would be used to mitigate the effects in the waterway. Impacted aquatic life was observed and Ohio DNR and the DOI were notified. Downstream water users were notified.

At approximately 1300 EST it was reported that the fire had lessened in intensity and was reduced to three pockets within the derailed car segments.

All Air monitoring readings through 1300 EST were non-detect.

At 1900 EST it was reported that two of the cars increased reaction with the fire for approximately 45 minutes and then calmed back down. There are no plans to further investigate the burning cars until daylight hours. the fire continues to shrink in size.

All Air monitoring readings through 1900 EST were non-detect.

Approximately 1.55 miles of Sulphur Run and Leslie Run have visible impacted material. Multiple containment points were installed and are collecting material.

Response Activities Starting 2/5/2023

At 0030 EST recovery operations (vacuum truck, sorbent pads) are ongoing. Aeration pumps began operating at two locations at 0130 hours EST along Sulphur Run and the confluence with Leslie Run. The East Palestine Water Treatment Plant confirmed there were no adverse affects to the WTP at this time.

At approximately 0500 an aeration pump was installed at a third location along Sulphur Creek for a total of four (4) pumps.

All perimeter air monitoring readings hours were non-detect. Air monitoring by Norfolk Southern's contractor detected elevated levels of VOCs within one area of the evacuation zone. Additional readings were observed with non detect levels of VOCs.

US EPA and Norfolk Southern contractors have collected surface water samples for analysis. Results are not expected until at least 2/7/2023.

As of 0600 EST all community air monitoring readings were non-detect.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The cause of train derailment is still under investigation. No determinations regarding enforcement from EPA or State have been made at this time.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

- Continue ambient air monitoring
- Collect water surface samples as needed
- Assess wreckage when safe to do so
- Conduct oversight of Norfolk Southern response actions
- Mobilize additional resources, as needed, to complete the above activities

2.2.1.1 Planned Response Activities

See above

2.2.1.2 Next Steps

Continue ongoing emergency response activities

2.2.2 Issues

2.3 Logistics Section

EPA OSCs and START have been deployed from R5 and R3 with air monitoring instruments, air sampling equipment, and water sampling equipment. A mobile command post was mobilized to the site on 2/4/2023.

2.4 Finance Section

2.4.1 Narrative

N/A

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

City of East Palestine (Office of the Mayor and Fire Department), Columbiana County EMA, US EPA, Ohio EPA, Pennsylvania Department of Environmental Protection, Norfolk Southern.

3.2 Cooperating Agencies

- Various Mutual Aid Fire Departments
- Beaver County HAZMAT
- Columbiana County HAZMAT
- Mahoning County HAZMAT
- Columbiana County Sheriff
- Ohio State Police

4. Personnel On Site

- 6 - USEPA OSC
- 15 - START TetraTech and Mannik Smith

5. Definition of Terms

- CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
- HAZMAT - Hazardous Materials
- OSC - On-Scene Coordinator
- ppb - parts per billion
- ppm - parts per million
- START - Superfund Technical Assessment Response Team
- UC - Unified Command
- US EPA - United States Environmental Protection Agency

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
East Palestine Train Derailment - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: POLREP #2
Progress
East Palestine Train Derailment

East Palestine, OH
Latitude: 40.8360395 Longitude: -80.5222838

To: Jim Augustyn, U.S. EPA
Carolyn Bohlen, U.S. EPA
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Mike Eberle, Ohio EPA
Valincia Darby, U.S. DOI
John Nelson, U.S. DOI
Amber Bellamy, U.S. FWS
Deborah Millsap, US FWS

From: OSC Josh Peters
Date: 2/6/2023
Reporting Period: 2/5/2023 0600 - 2/6/2023 0645

1. Introduction

1.1 Background

Site Number:	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority: CERCLA	Response Type: Emergency
Response Lead: EPA	Incident Category: Removal Action
NPL Status: Non NPL	Operable Unit:
Mobilization Date: 2/3/2023	Start Date: 2/3/2023
Demob Date:	Completion Date:
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification:
FPN#:	Reimbursable Account #:

1.1.1 Incident Category

Emergency Response - Transport Related

1.1.2 Site Description

1.1.2.1 Location

A cargo train was derailed in East Palestine, Columbiana County, Ohio (80.5215884°W, 40.8360864°N) at approximately 2055 EST on February 3, 2023. Approximately 50 cars were impacted by the derailment with some or all impacted by a fire within the derailment.

1.1.2.2 Description of Threat

A commercial train carrying hazardous substances was derailed and a segment of rail cars were ignited due to an unknown source. Multiple cars containing hazardous substances including vinyl chloride, ethylene glycol, isobutylene, and butyl acrylates were affected by the derailment and subsequent fire.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Not applicable

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

A train derailment occurred at approximately 2055 EST on February 3, 2023 in East Palestine, OH. Norfolk Southern reported the incident at 2253 EST to the NRC. At that time, it was reported that it was unknown as to how many of the 150 cars had derailed, but 20 of the cars were listed as carrying hazardous substances. The incident occurred in the town of East Palestine. Surrounding buildings may have been impacted by the fire; however, no active fires have been reported outside of the train. There have been no related injuries reported in regards to a release from the derailment. Evacuation of the surrounding area was put in place.

At this time, it is not known which of the approximately 50 derailed cars were damaged and or breached. Unimpacted cars were uncoupled and removed from the area.

The 20 Hazardous Materials cars include – 17 loaded cards and 3 listed as Empty/Residue. The Haz Cars consist of the following: Vinyl Chloride, Stabilized (5), Sulfuric Acid (5), Ethylene Glycol (1), Butyl Acrylates, Stabilized (2), Combustible Liquids NOS (1), Combustible Liquid, Ethylene Glycol (1), Isobutylene (1), Ethylhexyl Acrylate(1), Empty Residue – last contained LPG (1), Empty Residue – last contained Benzene(2).

This fire is still active.

Refer to PolRep #1 for previous updates.

2.1.2 Response Actions to Date

Response Actions for 2/5/2023

The fire continued to burn although it lessened in intensity and is expected to continue burning for several days (per East Palestine Fire Department). Visible black smoke continued traveling northeast for approximately ½ mile as the fire cooled. IMAAC plume modeling continued to be provided by DTRA at six (6)-hour intervals and was utilized to determine placement of air monitoring locations within the affected area.

EPA continued air monitoring at twelve (12) locations within the affected area. As part of air monitoring, EPA has deployed twelve (12) AreaRAE Pro units which monitor volatile organic compounds (VOCs), hydrogen cyanide (HCN), carbon monoxide (CO), hydrogen sulfide (H₂S), and lower explosive limit (LEL). Six (6) SPM flex units have also been deployed to monitor phosgene and mineral acids. Additionally, roaming air monitoring continued throughout the reporting period for particulates (particulate matter [PM] 2.5 and PM 10), hydrogen cyanide (HCN), benzene, phosgene, and mineral acids. The majority of air monitors are equipped with VIPER wireless telemetry at this time.

Air monitoring readings as of 1800 EST were below detection levels except for particulate matter. Detection levels for each monitored parameter are as follows: CO 1ppm, H₂S 0.1 ppm, VOC 0.01 ppm, Particulate Matter 0.1 ug/m³, Mineral Acids 1 ppm, Benzene 50 ppb, Phosgene 2 ppb.

Fixed air monitoring locations are selected based on site conditions and projected plume modeling from IMAAC. Roaming air monitoring is being conducted in addition to fixed positions.

Norfolk Southern is also conducting work zone and community air monitoring and cooperating with EPA in data sharing via common operating picture.

At approximately 1330 EST two air samples (SUMMA canisters) were deployed for 24 hour sampling within the affected area. Air samples will be collected on 2/6 for laboratory analyses. A product sample was collected from Leslie Run for analysis via an integrated Raman and FTIR handheld chemical analyzer however no match was found.

Measures were taken to upgrade the underflow dam location on Sulfur Run and hard boom locations. Currently one vacuum truck is located at the confluence of Sulfur and Leslie Run, with a second vacuum truck en-route to be staged upstream closer to the location of the derailment. Vac tanks are being offloaded into an onsite frac tank within the affected area. There have been observed negative impacts to aquatic life; however, no count or species have been taken yet due to safety concerns. Water quality sampling has been recommended to Norfolk Southern in both Sulphur Run and Leslie Run with Ohio EPA overseeing those efforts. Approximately 1.55 miles of Sulphur Run and Leslie Run have visible impacted material. Multiple containment points were installed and are collecting material. Aeration continues to be utilized to mitigate surface water effects via four (4) aerators.

The East Liverpool Water Treatment Plant was notified of the spill on 2/5/2023.

Surface water samples collected on 2/4/2023 by EPA from Leslie Run and Sulphur Run (3) and air samples (1- 8 hour SUMMA; 1- 24 hour SUMMA) collected by EPA from the affected area were shipped for laboratory analyses. Results of air samples collected on 2/5 (8-24 hour collection) are expected 2/7 or 2/8. Results from the water samples are expected by 2/8 or 2/9.

At approximately 2100 EST incident command was notified of a risk that one of the vinyl chloride rail car tanks had raised internal temperature and was no longer venting. Due to the risk of a BLEVE, Command Post was relocated to the East Palestine Elementary School. All air monitoring equipment was pulled outside of the 1 mile evacuation radius. Air monitoring readings were interrupted during the relocation of the

command post. Air monitoring locations were planned in coordination with IMAAC models of a BLEVE occurring from the vinyl chloride tank car.

Norfolk Southern and their contractors developed a plan to breach and flare the contents of the unstable vinyl chloride car. This is scheduled to occur at 1200 EST on 2/6/2023. Norfolk Southern and their contractors state that this operation will prevent further deterioration of the tank. EPA is providing this scenario to the IMAAC model and using that output to influence air monitoring locations to be protective of the surrounding area. Norfolk Southern indicated that it is their intent to either let the contents of the additional vinyl chloride tanks burn off or facilitate that process by opening the tanks into an earthen trench and flaring the contents.

At approximately 0230 EST TransCanada Energy stopped and purged their natural gas pipeline that runs several miles north of the derailment location as a preventative measure.

At 0400 EST on 2/6 the 52nd Civil Support Team arrived at the command post with air monitoring equipment and a portable laboratory.

EPA's ASPECT (Airborne Spectral Photometric Environmental Collection Technology) system is mobilizing to the Site on 2/6 to conduct chemical detection and infrared/photographic imagery.

As of 0400 EST, set up for the new air monitoring locations began with the new points completed at approximately 0630 EST.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The cause of train derailment is still under investigation. No determinations regarding enforcement from EPA or State have been made at this time.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

- Continue ambient air monitoring
- Continue air sampling
- Assess wreckage when safe to do so
- Conduct oversight of Norfolk Southern response actions
- Mobilize additional resources, as needed, to complete the above activities

2.2.1.1 Planned Response Activities

See above

2.2.1.2 Next Steps

Continue ongoing emergency response activities

2.2.2 Issues

2.3 Logistics Section

EPA OSCs and START have been deployed from R5 and R3 with air monitoring instruments, air sampling equipment, and multi media sampling equipment. A mobile command post was mobilized to the site on 2/4/2023. EPA ordered the ASPECT system to mobilize to the site on the morning of 2/6/2023 for airborne chemical detection.

2.4 Finance Section

2.4.1 Narrative

N/A

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

City of East Palestine (Office of the Mayor and Fire Department), Columbiana County EMA, US EPA, Ohio EPA, Pennsylvania Department of Environmental Protection, Norfolk Southern, Ohio Department of Natural Resources.

3.2 Cooperating Agencies

Various Mutual Aid Fire Departments
Beaver County HAZMAT

Columbiana County HAZMAT
Mahoning County HAZMAT
Columbiana County Sheriff
Ohio Department of Natural Resources
Ohio State Police
National Transportation Safety Board
52nd Civil Support Team

4. Personnel On Site

7 - USEPA OSC
12 - START (TetraTech and Mannik & Smith Group)

5. Definition of Terms

ASPECT - Airborne Spectral Photometric Environmental Collection Technology
BLEVE - Boiling Liquid Expanding Vapor Explosion
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
HAZMAT - Hazardous Materials
OSC - On-Scene Coordinator
ppb - parts per billion
ppm - parts per million
START - Superfund Technical Assessment Response Team
UC - Unified Command
US EPA - United States Environmental Protection Agency

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
East Palestine Train Derailment - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: POLREP #3
Progress
East Palestine Train Derailment

East Palestine, OH
Latitude: 40.8360395 Longitude: -80.5222838

To: Jim Augustyn, U.S. EPA
Carolyn Bohlen, U.S. EPA
Sam Borries, U.S. EPA
Jaime Brown, U.S. EPA
Phillippa Cannon, U.S. EPA
Jason El-Zein, U.S. EPA
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Mike Eberle, Ohio EPA
Valincia Darby, U.S. DOI
John Nelson, U.S. DOI
Amber Bellamy, U.S. FWS
Deborah Millsap, US FWS

From: OSC Josh Peters
Date: 2/7/2023
Reporting Period: 2/6/2023 0645 - 2/7/2023 0700

1. Introduction

1.1 Background

Site Number:	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority: CERCLA	Response Type: Emergency
Response Lead: EPA	Incident Category: Removal Action
NPL Status: Non NPL	Operable Unit:
Mobilization Date: 2/3/2023	Start Date: 2/3/2023
Demob Date:	Completion Date:
CERCLIS ID:	RCRIS ID:
ERNS No.:	State Notification:
FPN#:	Reimbursable Account #:

1.1.1 Incident Category

Emergency Response - Transport Related

1.1.2 Site Description

1.1.2.1 Location

A cargo train was derailed in East Palestine, Columbiana County, Ohio (80.5215884°W, 40.8360864°N) at approximately 2055 EST on February 3, 2023. Approximately 50 cars were impacted by the derailment with some or all impacted by a fire within the derailment.

1.1.2.2 Description of Threat

A commercial train carrying hazardous substances was derailed and a segment of rail cars were ignited due to an unknown source. Multiple cars containing hazardous substances including vinyl chloride, ethylene glycol, isobutylene, and butyl acrylates were affected by the derailment and subsequent fire.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Not applicable

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

A train derailment occurred at approximately 2055 EST on February 3, 2023 in East Palestine, OH. Norfolk Southern reported the incident at 2253 EST to the NRC. At that time, it was reported that it was unknown

as to how many of the 150 cars had derailed, but 20 of the cars were listed as carrying hazardous substances. There have been no confirmed injuries associated with a release from the derailment. Evacuation of the surrounding area was put in place.

After further investigation it was determined that approximately 50 cars were impacted by the derailment. 11 of those cars contained Hazardous Materials including: Vinyl Chloride, Stabilized (5), Ethylene Glycol (1), Butyl Acrylates, Stabilized (1), Isobutylene (1), Ethylhexyl Acrylate(1), Empty Residue – last contained Benzene(2).

This fire is still active.

Refer to PolRep #2 for previous updates.

2.1.2 Response Actions to Date

Response Actions for 2/6/2023

Norfolk Southern continued to monitor the temperature of the one unstable railcar containing vinyl chloride. Due to a potential BLEVE situation, Norfolk Southern prepared to perform a vent and burn of the affected rail car between 1200 and 1300 EST. Norfolk Southern then determined that they would conduct a vent and burn of all five vinyl chloride tanks. Air monitoring locations were adjusted to address this change and additional areas were evacuated. The vent and burn was conducted by Norfolk Southern at 1639 EST. The fire in flare trenches was reported to be out at 2100 EST with train car fires continuing throughout the night. The situation will be reassessed by Norfolk Southern the morning of 2/7.

EPA conducted stationary and roaming air monitoring surrounding the vent and burn. As part of air monitoring, EPA has deployed AreaRAE Pro units which monitor volatile organic compounds (VOCs), hydrogen cyanide (HCN), carbon monoxide (CO), hydrogen sulfide (H2S), and lower explosive limit (LEL). SPM flex units have also been deployed to monitor phosgene and mineral acids. Roaming air monitoring teams screened for particulates (particulate matter [PM] 2.5 and PM 10), hydrogen cyanide (HCN), benzene, phosgene, and mineral acids. During the vent and burn, low levels of phosgene (2-3 ppb) and HCL (0.02 to 1.37 ppb) were observed within the plume but below the screening levels of 0.04 ppm and 1.8 ppm. One (1) Summa Canister was deployed at the center of the smoke plume just prior to vent and burn operations.

Ohio EPA continues to monitor and investigate runoff impacts to surface water in both Sulphur Run and Leslie Run. Multiple containment points were installed and are collecting material. Aeration continues to be utilized to mitigate surface water effects via four (4) aerators. Ohio DNR is conducting an assessment of the wildlife impacts. Daily water sampling and monitoring is being conducted by Norfolk Southern. EPA's surface water samples from Leslie Run and Sulphur Run are expected to receive results by 2/8 or 2/9.

EPA's ASPECT (Airborne Spectral Photometric Environmental Collection Technology) system mobilized to the Site on the morning of 2/6 but were not able to run any flights due to poor weather conditions. A flyover is scheduled for the morning of 2/7 at 0700 EST.

Overnight Response Actions 2/6 to 2/7

EPA continued ambient air monitoring at fixed locations and roaming circuits with portable equipment. One roaming air monitoring team was dispatched to follow up on several odor complaints outside of the evacuation zone. Detections of VOCs, PM 2.5 and 10, HCN, and HCl were observed downwind of the derailment fire but below the screening levels. One (1) tedlar bag sample was collected near Leslie Run in Negley, OH where odors were observed. No readings were observed on the monitoring equipment. The (1) sample will be analyzed by the ERT mobile lab.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The cause of train derailment is still under investigation. No determinations regarding enforcement from EPA or State have been made at this time.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

- Continue ambient air monitoring
- Continue air sampling
- Assess wreckage when safe to do so
- Conduct oversight of Norfolk Southern response actions
- Mobilize additional resources, as needed, to complete the above activities

2.2.1.1 Planned Response Activities

See above

2.2.1.2 Next Steps

Continue ongoing emergency response activities

2.2.2 Issues

2.3 Logistics Section

EPA OSCs and START have been deployed from R5 and R3 with air monitoring instruments, air sampling equipment, and multi media sampling equipment. A mobile command post was mobilized to the site on

2/4/2023. EPA ordered the ASPECT system to mobilize to the site on the morning of 2/6 for airborne chemical detection. EPA also mobilized the ERT mobile laboratory to the Site on 2/6.

2.4 Finance Section

2.4.1 Narrative

N/A

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

City of East Palestine (Office of the Mayor and Fire Department), Columbiana County EMA, US EPA, Ohio EPA, Pennsylvania Department of Environmental Protection, Norfolk Southern, Ohio Department of Natural Resources.

3.2 Cooperating Agencies

Various Mutual Aid Fire Departments
Beaver County HAZMAT
Columbiana County HAZMAT
Mahoning County HAZMAT
Columbiana County Sheriff
Ohio Department of Natural Resources
Ohio State Police
National Transportation Safety Board
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4. Personnel On Site

7 - USEPA OSC
1 - USEPA Supervisor
17 - START (TetraTech and Mannik & Smith Group)

5. Definition of Terms

ASPECT - Airborne Spectral Photometric Environmental Collection Technology
BLEVE - Boiling Liquid Expanding Vapor Explosion
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
HAZMAT - Hazardous Materials
OSC - On-Scene Coordinator
ppb - parts per billion
ppm - parts per million
START - Superfund Technical Assessment Response Team
UC - Unified Command
US EPA - United States Environmental Protection Agency

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
East Palestine Train Derailment - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: POLREP #4
Progress
East Palestine Train Derailment

East Palestine, OH
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Mike Eberle, Ohio EPA
Valincia Darby, U.S. DOI
John Nelson, U.S. DOI
Amber Bellamy, U.S. FWS
Deborah Millsap, US FWS

From: OSC Josh Peters
Date: 2/8/2023
Reporting Period: 2/7/2023 0700 - 2/8/2023 0700

1. Introduction

1.1 Background

Site Number:	Contract Number:
D.O. Number:	Action Memo Date:
Response Authority: CERCLA	Response Type: Emergency
Response Lead: EPA	Incident Category: Removal Action
NPL Status: Non NPL	Operable Unit:
Mobilization Date: 2/3/2023	Start Date: 2/3/2023
Demob Date:	Completion Date:
CERCLIS ID:	RCRIS ID:
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1.1.1 Incident Category

Emergency Response - Transport Related

1.1.2 Site Description

1.1.2.1 Location

A cargo train was derailed in East Palestine, Columbiana County, Ohio (80.5215884°W, 40.8360864°N) at approximately 2055 EST on February 3, 2023. Approximately 50 cars were impacted by the derailment with some or all impacted by a fire within the derailment.

1.1.2.2 Description of Threat

A commercial train carrying hazardous substances was derailed and a segment of rail cars were ignited due to an unknown source. Multiple cars containing hazardous substances including vinyl chloride, ethylene glycol, isobutylene, and butyl acrylates were affected by the derailment and subsequent fire.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Not applicable

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

A train derailment occurred at approximately 2055 EST on February 3, 2023 in East Palestine, OH. Norfolk Southern reported the incident at 2253 EST to the NRC. At that time, it was reported that it was unknown

as to how many of the 150 cars had derailed, but 20 of the cars were listed as carrying hazardous substances. There have been no confirmed injuries associated with a release from the derailment. Evacuation of the surrounding area was put in place.

After further investigation it was determined that approximately 50 cars were impacted by the derailment. 11 of those cars contained Hazardous Materials including: Vinyl Chloride, Stabilized (5), Ethylene Glycol (1), Butyl Acrylates, Stabilized (1), Isobutylene (1), Ethylhexyl Acrylate(1), Empty Residue – last contained Benzene(2).

Fire continues in two rail cars, both identified as non hazardous cars.

Refer to PolRep #3 for previous updates.

2.1.2 Response Actions to Date

Response Actions for 2/7/2023

EPA continued stationary and roaming air monitoring surrounding the derailment fire. As part of air monitoring, EPA has deployed AreaRAE Pro units which monitor volatile organic compounds (VOCs), hydrogen cyanide (HCN), carbon monoxide (CO), hydrogen sulfide (H2S), and lower explosive limit (LEL). SPM flex units have also been deployed to monitor phosgene and mineral acids. Roaming air monitoring teams screened for particulates (particulate matter [PM] 2.5 and PM 10), hydrogen cyanide (HCN), benzene, phosgene, and mineral acids. One (1) Summa Canister was collected and one (1) Summa Canister was deployed for air sampling. Collected Summa Canisters are shipped to an offsite contract lab for analysis.

The 52nd Civil Service Team conducted air monitoring in three public administration buildings and collected one (1) Tedlar Bag sample from each building. The three (3) samples will be analyzed by the ERT mobile lab on 2/8.

Ohio EPA continues to lead efforts to monitor and investigate runoff impacts to surface water in both Sulphur Run and Leslie Run. Multiple containment points were installed and are collecting material. Air sparging is running 24/7. Daily water sampling and monitoring is being conducted by Norfolk Southern. EPA received preliminary surface water sample results from Leslie Run and Sulphur Run. Results from the downstream samples exceeded Ohio River Basin Human Health - Nondrink Criteria for Benzo(a)anthracene, Chrysene, and Phenol. High levels of DRO, ORO, and GRO were detected in the two downstream samples however.

EPA and Ohio EPA inspected the wreck site and found product spilling to Sulphur Run. The substance was believed to be butyl acrylate found in several large pools at the wreck. Norfolk Southern was contacted regarding the spill and began removing the product by vacuum truck.

EPA's ASPECT (Airborne Spectral Photometric Environmental Collection Technology) system completed two (2) flyovers of the derailment fire before demobilizing on 2/7. Photos were received with additional survey data being processed.

Overnight Response Actions 2/7 to 2/8

EPA continued ambient air monitoring at fixed locations and roaming circuits with portable equipment. A complaint of odors was reported at the Darlington Twp PA Fire Station. A roaming circuit team took monitoring equipment to the station where they did not observe any contaminants above detection limits. At approximately 2300 EST concentrations of VOCs increased were observed downwind of the derailment fire but below the screening level. Fires in two non hazardous rail cars were observed to increase as Norfolk Southern continued work in the cars. Particulate matter was the only parameter detected above screening levels. Two (2) tedlar bag samples were collected. The (2) samples will be analyzed by the ERT mobile lab.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The cause of train derailment is still under investigation. No determinations regarding enforcement from EPA or State have been made at this time.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

- Continue ambient air monitoring
- Continue air sampling
- Assess wreckage when safe to do so
- Conduct oversight of Norfolk Southern response actions
- Mobilize additional resources, as needed, to complete the above activities

2.2.1.1 Planned Response Activities

See above

2.2.1.2 Next Steps

Continue ongoing emergency response activities

2.2.2 Issues

2.3 Logistics Section

EPA OSCs and START have been deployed from R5 and R3 with air monitoring instruments, air sampling equipment, and multi media sampling equipment. A mobile command post was mobilized to the site on 2/4/2023. EPA ordered the ASPECT system to mobilize to the site on the morning of 2/6 for airborne chemical detection. EPA also mobilized the ERT mobile laboratory to the Site on 2/6.

Aspect was demobilized from the site on 2/7/23.

2.4 Finance Section

2.4.1 Narrative

N/A

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

City of East Palestine (Office of the Mayor and Fire Department), Columbiana County EMA, US EPA, Ohio EPA, Pennsylvania Department of Environmental Protection, Norfolk Southern, Ohio Department of Natural Resources.

3.2 Cooperating Agencies

Various Mutual Aid Fire Departments
Beaver County HAZMAT
Columbiana County HAZMAT
Mahoning County HAZMAT
Columbiana County Sheriff
Columbiana County Health District
Ohio Department of Health
Pennsylvania Department of Health
Ohio Department of Natural Resources
Ohio State Police
National Transportation Safety Board
52nd Civil Support Team
ATSDR

4. Personnel On Site

7 - USEPA OSC
1 - USEPA Supervisor
17 - START (TetraTech and Mannik & Smith Group)

5. Definition of Terms

ASPECT - Airborne Spectral Photometric Environmental Collection Technology
ATSDR - Agency for Toxic Substances and Disease Registry
BLEVE - Boiling Liquid Expanding Vapor Explosion
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
DRO - Diesel Range Organics
GRO - Gasoline Range Organics
ORO - Oil Range Organics
HAZMAT - Hazardous Materials
OSC - On-Scene Coordinator
ppb - parts per billion
ppm - parts per million
START - Superfund Technical Assessment Response Team
UC - Unified Command
US EPA - United States Environmental Protection Agency

6. Additional sources of information

6.1 Internet location of additional information/report

<https://response.epa.gov/EastPalestineTrainDerailment>

6.2 Reporting Schedule

7. Situational Reference Materials

No information available at this time.