

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
CSX Maryville Fire - Removal Polrep
Initial and Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #1
Initial and Final Pollution Report
CSX Maryville Fire

Maryville, TN
Latitude: 35.7611970 Longitude: -84.0253880

To: Dan Hawkins, TDEC

From: Kevin Eichinger, Federal On-Scene Coordinator

Date: 7/20/2015

Reporting Period: July 2, 2015 through July 9, 2015

1. Introduction

1.1 Background

Site Number:	B46G	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	PRP	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	7/2/2015	Start Date:	7/2/2015
Demob Date:	7/7/2015	Completion Date:	7/9/2015
CERCLIS ID:		RCRIS ID:	
ERNS No.:	1121598	State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Transportation Related Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Emergency Response.

1.1.2 Site Description

The incident occurred in a mixed residential and industrial area of Maryville, Blount County, Tennessee. A 1.5 mile evacuation zone was implemented by Unified Command. Approximately 5,000 to 6,000 residents were displaced by the evacuation.

1.1.2.1 Location

The incident occurred at CSXT Railroad Milepost 00C290.62, between Old Mt. Tabor Road and Mt. Tabor Road, Maryville, Blount County, Tennessee. The geographical coordinates are 35.7611970, -84.0253880.

1.1.2.2 Description of Threat

A DOT 105 tank car carrying approximately 26,000 gallons of acrylonitrile was punctured during transport and caught fire. Unknown amounts of the product were released to the ground, to nearby waters of the United States and to groundwater. An unknown amount of the product was consumed in the fire and the products of combustion (Hydrogen Cyanide, Nitrous Oxides, Particular Matter) were released to the environment. The fire from the tank car directly impinged on another DOT 105 Tank Car carrying acrylonitrile. Additional tank cars of acrylonitrile and liquid petroleum gas were also in close proximity to the tank car that was on fire.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

At approximately 0115 hours on July 2, 2015, EPA was notified of a train derailment. EPA On-Scene Coordinators, EPA Region 4's Superfund Technical Assessment Response Team (START) and Regional Readiness Center (RRC) Emergency Responders mobilized to conduct air monitoring, water quality monitoring and oversee response/cleanup operations. OSC Eichinger arrived at approximately 0630 hours on July 2, 2015 and integrated into Unified Command (UC). The train was moving multiple tank cars of hazardous substances and hazardous materials. OSC Eichinger confirmed that hazardous substances

were released to the environment causing a threat to human health and the environment. The tank car was still actively burning and nearby residence were still in the process of being evacuated. 10 emergency responders were exposed to the products of combustion and were hospitalized due to difficulty breathing, burning eyes. Local residents also seeking treatment for difficulty breathing and burning eyes.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

EPA mobilized three On-Scene Coordinators, Emergency Response Contractors and United States Coast Guard (USCG) Gulf Strike Team (GST) members to the scene. The following actions occurred during this reporting period.

2.1.2 Response Actions to Date

July 2, 2015

On July 2, 2015 at approximately 0630 hours, OSC Eichinger arrived entered into Unified Command. CSX mobilized product specialist and contractor resources. The 45th Civil Support Team (CST) from Nashville was requested to provide air monitoring support. UC requested that EPA support the Fire Department with air monitoring operations during the evacuation process. At approximately 0730 hours, OSC Eichinger and one START Team Member conducted air monitoring in areas where the fire department was evacuating residents. At approximately 1030 hours, sufficient EPA personnel and resources arrived on site and mobile air monitoring operations throughout threatened areas were conducted.

OSC Eichinger was assigned to Unified Command. OSC Harper was assigned to Operations and served as Deputy Operations Chief. OSC Franco was assigned to Operations and served as Deputy Operations Chief for the night operations. Two USCG GST member were requested and assigned to the incident as Assistant Safety Officer.

Cooling operations with firefighting water was implemented on the tank cars surrounding the tank car that was on fire. Plans were developed and implemented to remove rail and tank cars not involved or damaged by the fire. The breached tank car self extinguished at approximately 1800 hours. Firefighting cooling operations continued through the night. Air monitoring continued through the night.

July 3, 2015

- The breached tank car was assessed and determined to empty. All of the product was either consumed in the fire or released to the rail bed.
- The damaged, but non-leaking car of acrylonitrile was pulled away from the breached tank car
- Air monitoring throughout the exclusion zone and evacuated areas continued.
- Underflow dams were installed in drainage paths from the release area
- Containment and absorbent boom were installed in the adjacent creek
- Surface water monitoring was implemented.
- Laydown and work areas were cleared/established
- Two near-by industrial wells were sampled and sent for analysis. Screening indicated that these wells were not contaminated.
- Plans were developed and implemented to remove the product from the un-breached tank car damaged by the fire.
- Between 5000 and 6000 people were evacuated/impacted
- 95 people (10 were emergency responders) were seen at three hospitals. 42 (10 were emergency responders) of the 95 were admitted for observation.
- CSX has provided temporary housing for approximately 1500 residents.
- A Community Out Reach Center was established at the Heritage Middle School. 3737 E. Lamar Alexander Pkwy. CSX and CSX contractors addressed claims, private well sampling, air monitoring questions, reentry questions, water distribution, etc. EPA, State and Local agencies had a presence at the Community Out-Reach Center to address concerns.

July 4, 2015

- Evacuation order was lifted by Unified Command (UC) at Noon on 07/03/2015
- Adjacent well (2 wells) sampling results were received. Concentration of acrylonitrile was less than 0.5 ug/L. The RML for drinking water is 5 ug/L. The recommended restrictions for private drinking water wells was lifted by UC at 1700 hours.
- Breached tank car was moved from the rail. There was residual vapor in the car that was purged and flared with propane. Crews also removed acrylonitrile saturated insulation.
- Transfer operations from the damaged acrylonitrile tank car was completed at 0700 hours this morning.
- Soil remediation plans were submitted to UC and approved after required modifications.
- Soil delineation and excavation operations are ongoing. 700 cubic yards of soil excavated to date and staged pending disposal. Free product has been found.
- Area received a large amount of rain. Underflow dams, containment booms, absorbent booms were maintained.
- 21 private drinking water wells have been sampled by CSX.
- Air monitoring continued throughout work area and the community. No issues found in the community. Soil excavation area requires respiratory protection.
- 2 EPA Community Involvement Coordinators (CIC) joined the Community Out-Reach Operations. ATSDR developed a fact sheet for the response.
- Two contaminated soil staging areas were established. Air monitoring stations were installed and secondary containment measures built. Soil piles were covered when not actively adding waste.
- 116 residents have been seen by local hospitals. 42 of the 116 were admitted for observation and

typically released after 24 hours.

July 5, 2015

- The surface water sample results were received and dissolved acrylonitrile was detected in the water column in samples from Culton Creek.
 - Surface Water Sample Results:
 - DSW1: 47 mg/L
 - DSW2: 8.2 mg/L
 - DSW3: 5.6 mg/L
 - DSW4: non-detect
- A Region Response Team call was conducted at 1500 hours on Sunday July 5, 2015 to inform Natural Resource Trustees and discuss remediation plans moving forward
- Excavation is continuing; however, product pooled into the excavation. Vacuum trucks removed the pooled product, waiting on an update on the volume of liquid waste. To date approximately 3000 cubic yards of soil has been excavated.
- Unified Command has expanded the surface water protection/sampling operations to cover from the derailment site to the Tennessee River. Downstream receptors had been identified and the additional surface water sample locations were chosen based on this information.
- Drinking water well samples results continue to be received and there are currently no issues with private wells. Plans are being developed to sample private wells daily. Public drinking water intakes are up river/upstream from the derailment site.
- Equipment and personnel to complete the aeration/air sparge operations have mobilized to the site.
- Air monitoring continued throughout work areas and the community. No issues found in the community.
- Additional sample teams, ecological toxicologists/scientist and resources have mobilized to the site.
- A fish mortality event was observed early evening on July 5th, 2015. An advisory was issued and residents were ask to stay away from Culton Creek until additional investigations were completed. Three aeration treatment systems were installed through out the two mile segment nearest to the derailment.
- 38 residents requested indoor air monitoring.

July 6, 2015

By the evening of July 6th, soil excavation had been completed. Approximately 4,000 tons of soil was removed and staged pending receipt of sample results and disposal arrangements. The breached tank car was decontaminated. Excavation was back-filled. Rail line and service was restored. Private drinking water well assessment continued. Air monitoring in the work area and in the neighborhoods continued.

July 7, 2015

Acrylonitrile levels in Culton Creek were decreasing and the advisory for the creek was lifted on July 7th.

Acrylonitrile was found in a private well directly adjacent to and within ~300 foot of the derailment site. The property was an industrial site where all response operation were conducted. The property owner was advised to not to use the water and temporary municipal water was installed. Well sampling continued throughout the 1-mile radius of the site and no other detections were observed.

Plans to further assess and mitigate the ground water contamination were developed. Equipment and additional resources were mobilized.

Teams completed a door to door survey to identify all properties wiht 1/2 mile radius of the derailment site and implement daily monitoring. Residents in the 1/2 mile radius were advised not to use their well water until daily testing was implemented. CSX provided the impacted residents with drinking water and facilities to

Unified Command met and conducted a conference call to transfer oversight from EPA to Tennessee Department of Environmental Quality (TDEC). Groundwater remediation and delineation plans were submitted to TDEC for review and approval.

OSC Eichinger demobilized on the evening of July 7th and oversight transferred to TDEC.

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

The Railroad Line and Train was operated by CSXT. The product involved in the release was owned by INEOS Group, INC.

2.1.4 Progress Metrics

No pertinent information at this time to report.

2.2 Planning Section

2.2.1 Anticipated Activities

No further response operations are anticipated by EPA Emergency Response. CSXT will completed remedial activities and oversight transferred to Tennessee Department of Environment and Conservation.

2.2.1.1 Planned Response Activities

No further response operations are anticipated by EPA Emergency Response. CSXT will completed remedial activities and oversight transferred to Tennessee Department of Environment and Conservation.

2.2.1.2 Next Steps

No further response operations are anticipated by EPA Emergency Response. CSXT will completed remedial activities and oversight transferred to Tennessee Department of Environment and Conservation.

2.2.2 Issues

No further response operations are anticipated by EPA Emergency Response. CSXT will completed remedial activities and oversight transferred to Tennessee Department of Environment and Conservation.

2.3 Logistics Section

Logistical support is being provided by CSXT and CSXT Contractors, EPA Regional Readiness Center, START Contractors and EPA personnel.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

Safety Officers and Assistance Safety Officers from multiple sources were assigned to the response. Two United States Coast Guard, Gulf Strike Team Member were assigned by EPA to the health and safety oversight operations.

2.5.2 Liaison Officer

OSC Eichinger coordinated with Local and State Response Partners.

2.5.3 Information Officer

Public information distributed through the Incident Management Team Public Information Officers and the Incident's Joint Information Center (JIC).

3. Participating Entities

3.1 Unified Command

EPA
CSX
TDEC
City of Maryville

3.2 Cooperating/Assisting Agencies

Tennessee Emergency Management Agency
Tennessee Department of Health
Tennessee Wildlife Resources Agency
U.S. Fish and Wildlife Services
43 Civil Support Team
Blount County
United States Coast Guard
Federal Railroad Administration
Agency for Toxic Substances Disease Registry

4. Personnel On Site

The following personnel and/or agencies/resources were on-site during the reporting period. This is not an exclusive list. See the Incident Action Plans for detailed resource information.

EPA - 3 OSC's
START Contactor Tetra Tech - 5
RRC Contractor QSI - 1
USCG GST - 1
TN Civil Support Team - 8
City of Maryville
City of Alcoa
Blount County
TDEC
TEMA
GHD
EnviroScience
Hepaco
Marion Environmental
Cranemaster
Hulcher
RJ Corman

5. Definition of Terms

Abbreviations and acronyms are spelled out within the text of the Pollution Report. Definitions will be added to this section as necessary.

ATSDR - Agency for Toxic Substances Disease Registry
EPA - Environmental Protection Agency
OSC - On- Scene Coordinator
TDEC - Tennessee Department of Environment and Conservation
NCP - National Oil and Hazardous Substances Pollution Contingency Plan
NRC - National Response Center
CFR - Code of Federal Regulations
RP - Responsible Party
NOFI - Notice of Federal Interest
EMA - Emergency Management Agency
ERRS - Emergency Rapid Response Service
CERCLA - Comprehensive Environmental Response, Compensation and Liability Act
FPN - Federal Project Number
TCLP - Toxicity Characteristic Leaking Procedure
RCRA - Resource Conservation and Reclamation Act
OPA - Oil Pollution Act
CWA - Clean Water Act
ERRS - Emergency and Rapid Response Services

6. Additional sources of information

6.1 Internet location of additional information/report

Documents, photographs, maps and other important/pertinent information can be found at epaossc.org/csxmaryvillefire.

6.2 Reporting Schedule

Pollution Reports (POLREP) will be drafted periodically. This schedule will change and be less frequent as the emergency response progresses. Please note that POLREP must be review and approved prior to publication, so there may be a delay.

7. Situational Reference Materials

Documents, photographs, maps and other important/pertinent information can be found at epaossc.org/csxmaryvillefire.