Message

From: Towle, Michael [Towle.Michael@epa.gov]
Sent: 2/7/2023 1:14:46 PM
To: Leonard, Paul [leonard.paul@epa.gov]
Subject: FW: EOC Spot Report: Region 5, East Palestine Train Derailment, Update #6, East Palestine, OH, NRC#1359227

HQ is still issuing Spot Reports based upon R5 reporting. Here is the latest.

From: Eoc, Epahq <Eoc.Epahq@epa.gov>
Sent: Tuesday, February 7, 2023 7:55 AM
To: Eoc, Epahq <Eoc.Epahq@epa.gov>
Subject: EOC Spot Report: Region 5, East Palestine Train Derailment, Update #6, East Palestine, OH, NRC#1359227

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EOC Spot Report: Region 5, East Palestine Train Derailment, Update #6
EAST PALESTINE, OH, NRC#1359227

US Environmental Protection Agency
Report Date: 2/07/2023
Last edited 2/07/2023 12:53 PM UTC

Overview: A train derailment occurred at approximately 8:55 pm EST on February 3, 2023 in East Palestine, OH. Norfolk Southern, the potentially responsible party (PRP), reported the incident at 10:53 pm ET 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, although three of those were listed as empty/hazardous residue only. The incident occurred in the town of East Palestine where a few buildings were reported as being on fire. An evacuation of the surrounding area was put in place.

Information is still being gathered regarding which cars and how many cars derailed and were damaged. 5 cars held Vinyl Chloride, which is a colorless, flammable gas chiefly used to produce PVC pipes. Approximately 50 rail cars total were impacted by the fire with the rest being uncoupled and removed from the site.

At approximately 11:30 am on February 4, 2023, the water quality of Sulphur Run (a nearby stream) appeared to be impacted by runoff from the fire. Measures to capture the runoff have been
implemented, but complete containment is not viable. Vacuum trucks and aerators are mobilizing to mitigate the effects of runoff to Sulphur Run and Leslie Run, another nearby stream. As of approximately 5:00 am ET on February 5, 2023, an aeration pump was installed at a third location along Sulphur Creek, for a total of four pumps. Booming is in place and underflow dams are being constructed. 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. Water quality sampling has been recommended to Norfolk Southern in both streams. Ohio EPA will oversee that effort.

As of 6:30 pm ET on February 4, 2023, the fire has lessened in intensity. However, burning is expected to continue for several days. Due to the unstable nature of the Vinyl Chloride the intent is to allow the product to burn. This will include a controlled burn of several impacted cars that are no longer safe for transfer of contents.

A State of Emergency has been declared by the City of East Palestine and Columbiana County. Approximately 1500 to 3000 residents have voluntarily evacuated from East Palestine. The evacuation is expected to stay in place until the fire is extinguished per the Fire Chief. There have been no injuries reported. A reoccupation plan is being considered. As of 6:00 am ET on February 5, 2023, all community air monitoring readings were non-detect.

At 8 pm ET on February 5, 2023, responders gave an update to Governor DeWine. The PRP had been tracking the temperature of the vinyl chloride rail cars involved in the fire. The pressure relief valve on one of the cars has failed and the car temperature increased to 135 degrees Fahrenheit, indicating that a reaction was ongoing. The rail car had cooled to 132 degrees Fahrenheit an hour later and is currently holding steady. Norfolk Southern has indicated that if the temperature reaches 150 degrees Fahrenheit, personnel will have to stop all actions until the temperature reduces again. Norfolk Southern is planning a “vent and burn” of the affected rail car on the afternoon of February 6, 2023. They are currently planning and mobilizing in resources for this action.

There is the potential for a Boiling Liquid Expanding Vapor Explosion (BLEVE) with the rail car. A mandatory evacuation was issued for a 1 mile radius of the incident. Due to the risk of a BLEVE, the Incident Command Post (ICP) was relocated to the East Palestine Elementary School. All air monitoring equipment was moved outside of the 1 mile evacuation radius. Air monitoring readings were interrupted during the relocation of the ICP. New air monitoring locations were set up by approximately 6:30 am ET on February 6, 2023.

Norfolk Southern continued to monitor the temperature of the one unstable railcar containing vinyl chloride throughout February 6, 2023. Due to the potential BLEVE, Norfolk Southern prepared to perform a vent and burn of the affected rail car between 1200 and 1300 EST on February 6, 2023. 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 in the surrounding community were evacuated. The vent and burn was conducted by Norfolk Southern at approximately 4:30 pm EST, and was completed on February 6, 2023. The fire in the flare trenches was reported to be out at 9 pm EST on February 6, 2023, although the train car fires continued throughout the night.

**State, Local and other Federal Agency Actions and Roles:** An Ohio EPA (OEPA) State OSC (SOSC) arrived on scene at approximately 1:30 am on February 4, 2023. The National Transportation Safety Board (NTSB) reached out to EPA Region 5’s Phone Duty Officer (PDO) and stated that they were aware of the situation and would be mobilizing personnel to the scene.
Representatives from OEPA, Pennsylvania Department of Environmental Protection (PADEP), NTSB, City of East Palestine (Office of the Mayor and Fire Department), Ohio Highway Patrol, Columbiana County Sheriff’s Office, East Palestine Police Department, East Palestine Fire Department, Federal Railroad Administration, and Columbiana County EMA are on site. Additionally, Ohio Department of Natural Resources (ODNR) is on site and is assessing the impacts to aquatic life. There have been observed negative impacts to aquatic life but no count or species have been noted yet. Department of the Interior (DOI) was updated as soon as the negative impacts were reported to USEPA. The Ohio Department of Public Health has been consulted regarding community air monitoring levels. Further, East Liverpool Water Treatment Plant (WTP) has been notified of the spill. The East Liverpool WTP confirmed there were no adverse affects to the WTP as of approximately 1:30 am on February 5, 2023.

At 12 pm ET on February 5, 2023, the Mayor of the City of Palestine, Columbiana County EMA, OEPA, and USEPA provided a press briefing.

As of the evening of February 5, 2023, Governor DeWine is mobilizing the Ohio National Guard (ONG) and State Highway Patrol to assist with going door to door to evacuate residents. The Governor has also issued a press release regarding the mandatory evacuation. At 4:00 am ET on February 6, 2023, the 52nd Civil Support Team of the ONG arrived at the command post with air monitoring equipment and a portable laboratory.

OEPA 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 contaminated material. Aeration continues to be utilized to mitigate surface water effects via four aerators. Ohio DNR is conducting an assessment of the wildlife impacts. Daily water sampling and monitoring is being conducted by Norfolk Southern.

**EPA Actions and Roles:** This incident is in EPA jurisdiction and EPA is the lead Federal OSC. As of 2:00 am on February 4, two EPA Region 5 Federal OSCs (FOSCs) and 2 EPA’s Superfund Technical Assessment and Response Team (START) were en-route to the incident. Additionally, an Interagency Modeling and Atmospheric Assessment Center (IMAAC) has been requested.

EPA Region 5 mobilized five OSCs and 8 START members. Region 3 mobilized 2 OSCs and START due to the impacts to western PA. A mobile command post was mobilized to the site on February 4, 2023. Region 3 is prepping for AreaRAE and Special Purpose Monitor (SPM) deployment. In all, 12 EPA AreaRAEs and 5 Norfolk Southern AreaRAEs are being deployed and are monitoring for VOCs (vinyl chloride, butyl acrylate, benzene, isobutylene, etc), phosgene, hydrogen chloride, and mineral acids. Additionally, handheld monitors are being used to monitor areas of significant odor. No elevated readings have been reported. VIPER is being set up to capture EPA and Norfolk Southern air monitoring results and put up for continuous evaluation. IMAAC Plume models have been provided to USEPA. A couple of update models will be provided. US EPA has requested updated IMAAC models to assist with air monitoring efforts during the vent and burn action as well as a potential BLEVE. Water samples in Sulphur Run have been collected and will continue to be collected by USEPA and the PRP.

An Environmental Justice (EJ) analysis was conducted for the Site and its surrounding area utilizing Region 5’s EJ Screen Tool. No EJ criteria scored above 80% in the area impacted by the derailment.

EPA’s ASPECT (Airborne Spectral Photometric Environmental Collection Technology) system mobilized to the Site on February 6, 2023 to conduct chemical detection and infrared/photographic
imagery. ASPECT was not able to run any flights due to poor weather conditions. A flyover is scheduled for the morning of February 7, 2023.

USEPA conducted stationary and roaming air monitoring surrounding the vent and burn on February 6, 2023. 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 and hydrogen chloride (HCl) were observed within the plume, but below the screening levels. One Summa Canister (used for the collection of air samples) was deployed at the center of the smoke plume just prior to vent and burn operations.

Throughout overnight response actions from February 6 to 7, 2023, USEPA 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 tedar bag sample (a method used to store and transport the gas samples under analysis) was collected near Leslie Run in Negley, OH, where odors were observed. No readings were observed on the monitoring equipment. The sample will be analyzed by EPA's Environmental Response Team (ERT) mobile lab, which EPA mobilized to the Site on February 6, 2023.

Media Interest: High

Media Links:

The EPA will continue to monitor and provide updates as needed

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