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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VII

Subject: **POLREP #3**
Progress
CPR Train Derailment
Balltown, IA
Latitude: 42.6618336 Longitude: -90.8493948

To: Dave Williams, USEPA

From: Eric Nold, OSC Joe Davis, OSC (Duty Officer)
Date: 2/7/2015
Reporting Period: 2/6/15, 0800hr. - 2/7/15, 0800hr.

1. Introduction

1.1 Background

Site Number:		**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	OPA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	2/5/2015	**Start Date:**	2/5/2015
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:	E15703	**Reimbursable Account #:**	

1.1.1 Incident Category
OPA Emergency Response

1.1.2 Site Description
Canadian Pacific Railroad train derailment of denatured (3-5% natural gasoline and/or gasoline) ethanol into the Mississippi River. This portion of the rail line is along a steep and remote river bluff. Access is difficult.

1.1.2.1 Location
Right descending bank of the Mississippi River, 10 miles north of Dubuque, Iowa near Balltown, Iowa.

1.1.2.2 Description of Threat
Discharge of approximately 50,000 gallons of denatured (3-5% natural gasoline and/or gasoline) ethanol impacting the Mississippi River.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results
Ongoing

2. Current Activities

2.1 Operations Section

2.1.1 Narrative
At 1120 hours Central Time (CT), Wednesday, February 4, 2015, a southbound Canadian Pacific freight train derailed eleven railcars on the right descending bank of the Mississippi River 10 miles north of Dubuque, Iowa near Baltown, Iowa. Approximately 20,000-30,000 gallons of denatured (3-5% natural gasoline) ethanol were orginally reportedly discharged impacting the Mississippi River. One railcar ignited as a result of the derailment. Up to six railcars containing ehtanol derailed also potentially involved in the discharge. Local, State, and Federal responders are on the scene coordinating response efforts.

As of 2/6/2015, the estimate of denature ethanol discharged is approximately 50,000 gallons.

2.1.2 Response Actions to Date
2/6/2015 - Updates

CPR contract crews continue transferring product out of tank cars overnight. Several of the cars will be pumped/partially pumped, and then moved off to a safer staging area for complete pumping/scrapping. CPR estimates that the final removal of the staged tanks will take approximately 5 more days. Crews will work to get the rail repaired and conduct further remediation and cleanup.

OSC Nold reported that the Surface Water Monitoring Plan was modified to select sampling locations based on unique geographical features (such as wing dikes and sloughs) along the river. The total number of samples was not changed (transect across the river).

USCG personnel from MSD Quad Cities are demobilized the evening of 2/6/15 – EPA expects they will not be needed for the foreseeable future.

Additional updates follow:

- The number of cars derailed was revised to:
- 15 cars
- 14 with denatured ethanol
- 8 of the denatured ethanol cars may have leaked – most likely estimate of quantity discharged is ~50,000 gallons
- 2 locomotives derailed, but did not discharge fuel
- The 3 tanker cars, only partially in the river, have been removed completely from the river
- Unified Command is led by the Sherrill, Iowa Fire Chief as IC
- The range of the Higgin's Eye and Sheep Nose endangered mussels extends into the area and Unified Command are aware of the possibility of mussel beds nearby.
- IDNR remains in the lead for oversight of the environmental response

- EPA and IDNR requested NOAA fate and transport analysis and modelling assistance. The following information (from NOAA) is based on the latest inputs from the scene:

    - Initial consultation based on the 50,000 gallon amount:
    - NOAA Emergency Response Division (ERD) chemists, biologists, oceanographers, and modelers have come to the follow consensus using ERD trajectory and fate models based on 50,000 gallons of product, 24 hour release, and current river discharge rates:
    - 1) Peak concentrations of denatured ethanol (3-5% gasoline) of 10ppm are likely from spill site to first lock & dam (11 miles downstream). Product at this concentration is not known to be toxic to living organisms as listed in the NOAA Chemical Aquatic Fate and Effects Database. Below the first lock & dam, concentrations will likely further drop to ppb levels.

    - 2) Constituent of concern within the 3-5% gasoline portion of the product is benzene. Benzene concentrations within gasoline can make up to 10%. Given current spill information and estimated benzene concentrations, ERD projects that benzene may be detectable, but below the actionable levels of 5ppb downstream to the Davenport, Iowa area.
    - 3) Constituents associated with this spill will likely make it to Davenport, Iowa on Saturday 2/7/2015.

    - NOAA/ERD SMEs (subject matter experts) adjusted the discharge quantity (to a worst-case) and still agree product concentrations are well below known toxicity levels. Even at a 96 hour exposure, - which is unlikely due to river discharge rates -concentrations > 1000ppm were (would be) required for behavior changes in database species. Our models project product concentrations < 10ppm downstream to the first lock and dam with further decreases thereafter (further downstream).
    - Regarding the benzene concern associated with the 3-5% gasoline portion of the product, ERD SMEs were extremely conservative in earlier calculations and had previously doubled all quantities. Given 100,000 gallons (double estimated probable discharged) over 24 hours, 5% gasoline of which contains 10% benzene, projected benzene levels may be detectable but well below actionable levels of 5ppb.

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

The RP has been identified as Canadian Pacific Railroad (CPR).

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
denatured ethanol		~50,000 gallons discharged			

2.2 Planning Section

2.2.1 Anticipated Activities

OSC Heath Smith and another START contractor will arrive on the scene on 2/7/15. He will integrate into the standing Incident Command Structure and support OSC Nold. EPA continues to support IDNR and the IC for oversight of environmental response activities.

2.2.1.1 Planned Response Activities

CPR and their contractors are performing safety/air monitoring for workers at the scene.

Response crews will continue to transfer denatured ethanol from rail tank cars to tanks for transport from the scene.

Frozen denatured ethanol on top of the ice in the spill vicinity may not be easily recovered. This situation is being monitored and evaluated. It is anticipated that the frozen denatured ethanol layer should have a lower thaw/freeze point allowing greater volatilization or sublimation before river ice thaws.

River sampling actually began yesterday (5 transects completed). However, sampling approach is being modified after input from state and federal agencies on-scene. Focus (sampling locations) will be on dikes and sloughs where water may be open versus a strict 1-mile frequency. Also, regarding sampling duration, EPA, USFWS and other agencies on the scene will require ongoing periodic sampling until an appropriates data end point is established by the Unified Command. This position is based on experiences from a similar spill in Illinois a few years ago.

IDNR Fisheries personnel have collected a sample of frozen river substrate (attached to one of the extracted rail cars) that contained an (unknown) number fresh water mussels. This sample is being taken to the local IDNR office in Guttenburg for analysis and identification. The species, condition, and population/quantity have NOT been positively identified/determined.
State and Federal fish and wildlife agencies continue to assess the impact to fish and wildlife including possible populations of the endangered Higgin's Eye and Sheep Nose mussels. These officials are advising on response actions to minimize impacts to these populations.

2.2.1.2 Next Steps
Unified Command and agencies on the scene have initiated the sampling plan drafted by CPR and their contractors. Modifications directed by Unified Command have been made to the plan.

CPR crews should complete restaging of tank cars on 2/7/15. Complete removal of ethanol from the tank cars at the staging area will take an additional 5 days.

Track repair and soil remediation will take place after all cars are moved from the accident scene.

2.2.2 Issues
Airboats operations are hampered by melting ice. This makes access to the channel and mid river sampling more difficult.

Access to the scene remains difficult.

Communications are poor and strict safety and personnel accountability utilizing a buddy-system are being enforced at the scene.

Recovery of material on top of the river ice remains very challenging.

There is no recovery or remediation of material below the ice on the river that is possible at this time. The ethanol denatured with gasoline or natural gasoline is extremely soluble and volatile.

Monitoring and sampling that informs certainty of pollutant conditions in the river, below the ice, and downstream of the scene is very challenging .

2.3 Logistics Section

Logistical issues are being handled by the RP and local IC.

2.4 Finance Section

2.4.1 Narrative
EPA Region 7 has opened the Oil Spill Liability Trust Fund. FPN# E15703 – The requested ceiling is currently $50,000. No agencies have requested funding through a for Pollution Removal Funding Authorization (PRFA).

2.5 Other Command Staff

2.5.1 Safety Officer
Safety responsibilities are being fulfilled by the local IC and the RP. EPA is integrated into the UC/ICS structure at the scene.

2.5.2 Liaison Officer
N/A

2.5.3 Information Officer
EPA Region 7 Public Iinformation Officers are coordinating with the IDNR PIO. IDNR issued a press release on 2/5/15 which EPA and USCG were unable to provide input to due to press deadlines.

3. Participating Entities

3.1 Unified Command
The local Fire Department is the Incident Command. EPA will integrate into the existing ICS structure and support the local IC and State of Iowa.

3.2 Cooperating Agencies
USCG Sector UMR
EPA Region 5
USFWS
IDNR and IDNR fisheries
WDNR

Illinois EPA
Sherrill Fire Department
Dubuque Hazmat

4. Personnel On Site

EPA OSCs (2) Eric Nold and Heath Smith
START contractor (2)

5. Definition of Terms

No information available at this time.

6. Additional sources of information

6.1 Internet location of additional information/report

6.2 Reporting Schedule

Polreps will be generated at least daily by about 0800 hours Central Time daily until 2/9/15 at which time the schedule will likely be extended.

7. Situational Reference Materials

No information available at this time.