

SECTION V: Safety

1. Agency Jurisdiction:

The Alaska Department of Labor and Workforce Development, Occupational Safety and Health (AKOSH) has jurisdiction for worker safety. AKOSH conducted an on site inspection. The officer with AKOSH and JPO Department of Labor Safety Liaison, conducted an inspection of the oil spill at Milepost 400 of the Trans-Alaska Pipeline on October 8 and 10 for compliance with 29 CFR 1910.120(q), Emergency Response.

The Alaska Department of Public Safety State Fire Marshal's Office (SFM) has jurisdiction for fire prevention and suppression. The SFM did not conduct an on site inspection.

BLM and ADNR have safety authorities arising from the Stipulation 1.20, *Health and Safety* of the Federal Agreement and Grant of Right of Way and the State Right of Way Lease.

EPA and ADEC are the lead Federal and State oil spill response agencies per the National Contingency Plan and Alaska State statutes/ regulations.

2. Background:

Alyeska Pipeline Service Company (APSC) managed the cleanup with the assistance of approximately fifteen contractors. There was an average of 150 workers on site at any given time. Alyeska was the first responder to control the site. Once the incident command structure was up and running, the work was organized into task forces supervised by APSC employees.

Task Force One consisted of personnel (outfitted in Level C PPE) working to contain and recover oil. These workers used absorbent pads, pumps, skimmers, vacuum units, shovels, and other hand tools. Contractors included Alaska Clean Seas Cooperative, CCI, and village response teams from Minto (Tolovana Construction), Stevens Village (River Village Inc.), and Rampart.

Task Force Two operated the earth-moving equipment that loaded dump trucks with contaminated soil for transport to the spoiled material staging area at the Alaska Department of Transportation and Public Facilities (DOTPF) materials pit north of the Elliot Highway. Houston NANA was the primary contractor for this task force with support from the village response teams.

Task Force Three was the Environmental Unit, which was made up of APSC employees supported by SLR, an environmental contractor. This task force collected soil, water, and vegetation samples for testing and provided overall environmental monitoring of the cleanup site and contaminated materials staging area.

Task Force Four was the crew located at the contaminated material staging area in the DOTPF materials pit north of the Elliot Highway. This crew received and stored the contaminated soil for future treatment, prepared the used absorbent pads for disposal, and operated the separator that removed debris from the recovered oil. Phillips Environmental and MI Corporation operated the unit with support from Houston NANA.

The Repair Task Force, made up of Houston NANA employees, was disbanded after the leak was repaired.

On October 9, Task Forces One and Two were reorganized into Task Force One, and Task Force Four became Task Force Two. The remaining task forces and others on site were referred to as the Support Group.

There are significant health and safety threats while working around an oil spill. Personal Protective Equipment (PPE), including air filters, self-contained breathing apparatus, and protective clothing, can protect workers from respiratory exposure or skin contact, but other dangers include slips, trips and falls and reduced visibility and sight lines.

With the presence of flammable vapors in the outdoors, any ignition source, including a spark of static electricity, could start a fire. If the vapor concentrations are high enough, an explosion could occur. The mechanized construction equipment needed to lift or apply heavy clamps against pressure is almost always a potential source of ignition.

3. Observations and Recommendations:

A. Emergency Response Plan

Observation: OSHA 1910.120(q)(1) requires an Emergency Response Plan. A plan by that title does not exist; however, the requirements can be found in the following APSC documents: CP35-1 *Oil Spill Contingency Plan*, EC 71-7 *Emergency Contingency Action Plan*, and the *Site-Specific Hazardous Waste Operations Health & Safety Plan*.

Recommendation: Future Site-Specific Health & Safety Plans should be called *Emergency Response Plan* or *Site Specific Emergency Response Plan* and address each of the items required by 29 CFR 1910.120(q)(2).

B. Personal Protective Equipment (PPE)

Observation: Workers in the hot zone were wearing Level C PPE, which included chemical resistant clothing, gloves, boots, safety glasses, hardhat, and respirators.

Respirators are not required when monitoring results indicate vapors are less than the Permissible Exposure Limit (PEL). In such cases, workers were observed in Level C PPE without a respirator creating the image that workers were not properly protected. They are required to be trained and fit-tested for respirators and must use the respirator when the hazardous atmosphere exceeds the permissible limits.

All other workers were wearing gloves, boots, hardhat, and safety glasses.

Recommendation: None.



Figure V-1: Workers in protective clothing installing the clamp.

C. Air Monitoring

Observation: Various contractors took air samples for Lower Explosive Limits (LEL), hydrocarbons, and benzene. The results were posted in the decontamination area and updated, as changes occurred. Some workers used respirators; however, they were not required to because the hazardous atmosphere was below the exposure limits.

Recommendation: None.

D. Respirator Fit Test

Observation: Records of APSC employees and its contractors' employees who responded to the spill were evaluated for respirator fit testing as required by 29 CFR 1910.134(f). No evidence was provided that one of the Houston NANA Baseline Crew employees was fit tested.

Recommendation: The fit testing records of employees who have spill response responsibilities should be reviewed annually for currency.

E. Controlled Entry

Observation: A security guard was posted at the intersection of the Elliot Highway and the pipeline right-of-way and the entry to the DOTPF materials pit main staging area. Additional entry points were controlled at the support staging area and the warm/hot zone. There were no problems with entry to the staging areas and spill site.

Recommendations: None.

F. Decontamination

Observation: The decontamination area setup was progressive and fully operational within 48 hours.

Recommendations: None.

G. On Site Safety Briefing and Training

Observation: Everyone entering the support staging area received a site-specific orientation. The degree of training depended on the work the individual was tasked to perform. For example, visitors received a brief orientation explaining traffic patterns, smoking areas, and what to do in the event of an emergency. Visitors were required to be with an escort at all times. Workers in the warm zone, hot zone, or spoiled material staging area received a detailed orientation.

Recommendations: None.

H. Hazardous Waste Operations and Emergency Response (HAZWOPER) Training

(1) **Observation:** The training records of APSC and Houston NANA's first responders to the oil spill were evaluated for initial and annual refresher HAZWOPER, *First Responder Operations Level* (8 hour) training required by 29 CFR 1910.120(q)(6)(ii). No deficiencies were noted.

Recommendation: None.

(2) **Observation:** The training records of Houston NANA's repair crew were evaluated for initial and annual refresher HAZWOPER *Hazardous Materials Technician* (24 hour) required by 1910.120(q)(6)(iii). No evidence was provided that two Houston NANA Repair Crew employees received this training or annual refresher training prior to working on the spill.

Recommendation: Training records of employees who have spill response responsibilities should be reviewed annually for currency.

(3) **Observation:** The training records of APSC and its contractors' support staff who entered the warm and hot zones were reviewed for initial and annual refresher HAZWOPER *Hazardous Materials Specialists* (24 hour) training required by 1910.120(q)(6)(iv). No deficiencies were noted.

Recommendation: None.

(4) Observation: The training records of APSC's Operations Section Chiefs were evaluated for HAZWOPER *Hazardous Materials Specialists* training required by 1910.120(q)(6)(iv) and *On Scene Incident Commander* training required by 1910.120(q)(6)(v). No deficiencies were noted.

Recommendation: None.

I. Fire Prevention

Observation: APSC made every effort possible to prevent a fire. The atmosphere was monitored for Lower Explosive Limits. Staging areas, a warm zone, and a hot zone were established. Access was restricted in the warm and hot zone. Vehicles were kept in the staging areas and non-sparking tools were used in the warm and hot zones to minimize sources of ignition.

Recommendation: None.

J. Fire Suppression

(1) Observation: Repair crews who removed the insulation wore Silver Fire Resistant Proximity Suits. Repair crews who installed the clamp wore Blue Fire Resistant Clothing. Firefighters on standby for rescue or fire fighting wore bunker gear. Foam was available as an extinguishing agent in the event of fire. The Steese Volunteer Fire Department dispatched a fire engine and crew to assist with any fire fighting. Williams Fire and Hazard Control was dispatched from Texas for onsite fire fighting expertise.

Recommendation: APSC should continue to seek the assistance of the Fairbanks North Star Borough Emergency Operations Department and the Municipality of Anchorage Emergency Services staff for the coordination of local fire suppression resources and support.

(2) Observation: Mutual aid received from the Steese Volunteer Fire Department together with the expertise brought in from Williams Fire and Hazard Control provided a critical element of the overall site safety.

Recommendation: Future exercises and preparedness training should include participation by community fire departments together with APSC fire and safety personnel in order to establish or enhance mutual aid and working relationships. There should also be an effort to identify in-state and out-of-state resources that could enhance fire prevention and fire suppression capabilities.

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