Canada Energy Regulator | Régie de l'énergie du Canada

Operations Regulatory Compliance

Closed Report - CV1920-187 - 12 November 2019

Event Type
Emergency
Response Exercise

CV Event Number
CV1920-187

Project Companies

- Trans Mountain Pipeline ULC

Name of the Operating Company
Kinder Morgan Canada
Inc

Rationale, Scope, and Additional Description
As part of the NEB's annual compliance planning, TMPU was identified to verify the company's response capabilities during an emergency response exercise.

Selected Province/Territory

- British Columbia

Start Date
2019-09-18

End Date
2019-09-18

Inspection Officer Number

- 2460
- 1618

Selected Disciplines

- Emergency Management
- IAMC Observation

No Tool Used

This inspection was undertaken to verify compliance with the following legislative requirements:

- National Energy Board Act (NEBA)
  - National Energy Board Act (NEBA) 2016-06-19
  - National Energy Board Onshore Pipeline Regulations (OPR)

Selected Regulatory Instrument Numbers

Not Selected

Facility Details

Facility Types

Pipeline

- Pipeline

Life-cycle Phases

- Operations

Additional Information

All facilities owned or operated by company

Observations (No follow-up required)

Exercise Planning and Conduct

Date
2019-09-19
Discipline
Emergency Management
Categories

- Exercise Planning and Conduct
  - Participant Package
  - Scenario Briefing
  - Exercise Objectives

Facility

Observations
Trans Mountain (TM) staff began the planning for this event in the spring of 2019, with Canada Energy Regulator (CER) staff attending two face to face meeting with TM in both Prince George and Valemount. The planning team for this exercse was made up of the CER , BC Ministry of Environment and Climate Change Strategy (BCENV), Simpcw Fist Nation, Trans Mountain and the Regional District of Fraser / Fort George (RDFFG). A third planning meeting was held over the phone. This allowed the interested parties to have say into the objectives and rules of play for the event, while still ensuring that TM staff were successfully exercising all aspects of their plan within their three year cycle.

The Players Manual was sent to CER staff ahead of time, and copies of the manual were also made available to participants in the Incident Command Post (ICP).

The manual contained the exercise overview and objectives, timelines and ground rules of play. The manual also outlined the locations of the exercise and contained general Incident Command System (ICS) information such as the Planning P, overviews of forms and meetings, as well as who should attend each meeting. The exercise was planned to end at the Tactics Meeting.

The ICP for this exercise was the arena in the village of Valemount, with the field location being approximately 25 minutes away on Kinbasket Lake.

The scenario for the exercise, as found in the manual, was: *"The simulated scenario for this exercise involves a crew conducting road work on Bear Road along the right of way, strikes line at KP 505.42. It results in a rupture of the line and release of approximately 5,000 bbls (794,937 litres) of Cold Lake Blend into the Canoe River."*

Prior to start of play a general safety briefing was held outlining potential hazards and muster locations for players in the ICP. This also included discussion of the additional hazard of an ammonia release, due to the ICP being held in the community's hockey arena.

The exercise began with a transfer of command from the simulated previous Incident Commander (IC). The transition from outgoing to incoming IC was smooth and led to the Initial Incident Briefing in front of all participants, and conformed to an ICS 201 format.

The Objectives for this exercise, also found in the players manual, were:

- *"Establish a functioning Incident Command Post with Incident Command Staffing appropriate to the scenario.*
- *Implement ICS Planning Cycle through the successful completion of a Tactics Meeting.*
- *Complete objectives as assigned by Unified Command and react to and complete tasks that are injected by the sim cell.*
- *Develop local community emergency management awareness and capacity through the observation and participation of local and Indigenous community attendees.*
- *Coordination of response actions and communication between field operations and ICP for a chance find of a cultural / archaeological resource."*

The exercise objectives are appropriate for Trans Mountains exercise program, and the objective of developing local emergency management capacity is noted as a positive step towards involving local communities and indigenous partners into emergency management through providing exposure to spill response to people who may not otherwise experience it.

The entire list of invitees for the exercise were:

National Energy Board (sic), Regional District of Fraser Fort George, British Columbia Ministry of Environment and Climate Change Strategy, Northern Health Authority, Village of Valemount, Simpc'w First Nation, Tk'emlups te Secwepemc, Bonaparte Indian Ban, Upper Nicola Band, Canim Lake Indian Band, Lheidli T'enneh Firstb Nation, Nooaitch First Nation.

Tool Used
No
Tool Used

Notification and Reporting

Date
2019-09-19
Discipline
Emergency Management
Categories

- Notification and Reporting
  - Notification & Reporting as per EPM
  - Incident Classification

Facility

Observations

On the hand-off between the outgoing and incoming IC's the event level was established as a Level three as per the Trans Mountain Emerency Procedures Manual (EPM). This was properly established due

to the size of the release and the impact to water ways in the area, as well as the significant interest the incident would likely generate.

All notifications were simulated only. As Kinbasket Lake water levels are controlled via reservoir downstream (Mica Dam), this meant there was the additional notification to go out to the dam operators as well. TM staff were prepared for that notification and included it along with the appropriate notifications to relevant federal departments, provincial departments, potentially impacted first nations and local governments, as required for incident reporting under the *Onshore Pipeline Regulations* (OPR). Those notifications were made in a timely manner. They also contacted other industry that had infrastructure in the area such as BC Hydro and Ministry of Transportation and Infrastructure (MOTI) due to traffic safety and impact to highway considerations.

An initial Coordination Call with Emerency Management BC (EMBC) was discussed with impacted parties, such as federal, provincial, and municipal governments, and potentially impacted Indigenous communities being included as potential participants.

Tool Used
No
Tool Used

Documents

Safety

Date
2019-09-19
Discipline
Emergency Management
Categories

- Safety
    - Safety Plan
    - Personal Protective Equipment

Facility

Observations

Security and safety planning was a priority for Trans Mountain at the ICP and at the simulated incident site. Trans Mountain and contract staff from The Response Group (TRG) were present and actively monitoring participants and entrances at the ICP.

A safety officer was established immediately both in the field and the ICP. The Field Level Hazard Assessment (FLHA) included a Health and Safety Site Plan and addressed muster points, escape routes, evacuation procedures, alerting methods, medical surveillance, First Aid and local sources of assistance, spilled product information, atmospheric monitoring, gas monitoring, site security, traffic and access awareness, general site hazards and controls, wind conditions, hot/warm/cold zones as well as PPE requirements. As the scenario changed throughout the exercise, the safety requirements were evaluated, and changed if required to mitigate potential safety concerns with exercise injects.

By the end of the exercise, a working Safety Plan had been completed and signed off on by the Unified Command (UC). All field staff wore appropriate Personal Protective Equipment (PPE) during the exercise, including on water safety considerations. A safety / rescue boat was used in the field in the event of anyone falling into the water.

Tool Used
No
Tool Used

Response Management

Date
2019-09-19
Discipline
Emergency Management
Categories

- Response Management
  - Roles and Responsibilities
  - Emergency Procedures Manual
  - Meetings & Briefings

Facility

Observations
Unified Command was quickly established, made up of a federal government representative (CER), the province of BC through BCENV (formerly BCMOE), The Regional District of Fraser / Fort George (RDFFG), Trans Mountain and the Simpcw First Nation. A full ICP was staffed with appropriate positions being filled, including Command staff and full Operations, Planning, Logistics and Finance staff.

On the commencement of the initial UC meeting, the event name was decided as being "Bear Road Release". Critical information – that which UC would want to be immediately notified of, was established and included injuries to personnel and significant changes to the incident status or response efforts. UC did discuss the potential for this product to become submerged due to its density (approx .930) and the sediment load of the river at that time of year. However, the potential for sunken or submerged Cold Lake Blend Crude was not an objective for the exercise.

Unified Command was briefed on the resources that were currently onsite and what was still expected. An overflight had been simulated at first light of that morning, and so the extent of spreading of the product was known and communicated throughout the ICP. Maps were generated reflecting this and Divisions along the river and lake were established. At the start of play, the pipe was confirmed as no longer losing oil, and source control from that point had been accomplished.

Meetings conformed to expected ICS protocol and were run efficiently, with written agendas, a roll call taken and meeting rules being effectively communicated to participants and observers. At the meetings, clear linkage was provided between the work to be undertaken and the objectives established, which are noted below.

ICS forms were available to participants and the Incident Status Display board was updated regularly.

The current working objectives the simulated responders were operating under original were:

- Ensure Safety of the Public and Responders
- Control the source of the oil
- Contain and recover spilled material
- Ensure protection of cultural and historical resources

Once Unified command formed and had time to discuss and review the objectives, the following were also added to that list through the collaborative effort of the UC:

- Ensure a safe supply of drinking water
- Minimize environmental impacts
- Manage a coordinated response
- Ensure communication to the public and stake / rights holders

BCENV posted their list of response goals as per the BC Emergency Management System (BCEMS) in order to ensure the response objectives reflected those. The UC took this into consideration and made sure BCENV felt their response goals were met.

A list of environmentally-sensitive receptors at risk was created and mitigation proposed to protect those receptors. This activity was documented using an ICS 232 form – Resources at Risk. The GIS unit also displayed electronic maps with updated information and visual representation, as the exercise progressed.

Environmental consultants were retained and identification of environmental sensitivities along with trajectory and vapor modeling, were used to determine control point locations. Environmental consultants used air modeling data to predict areas potentially impacted by Volatile Organic Compounds (VOCs). Environmental consultants were also retained to develop the appropriate plans.

By the end of exercise play, the following plans had been drafted or completed and signed off:

- Waste management plan for soil and water
- Site Safety Plan
- Medical Plan
- Air monitoring plan
- Surface water and Sediment sampling plan
- Archeology Plan
- VIP Tour Plan
- Indigenous Liaison and Communication Plan
- Wildlife management plan
- Decontamination plan

Both the CER and TM staff also filled roles of a Deputy UC. The Deputy UC staff worked well together and received regular updates from their counterparts in UC. While the UC players were in meetings, the value of the deputy role was observed on several occasions specifically when items needed to be actioned such as updates, approval for plans and answering questions regarding spill monitoring methods.

At the simulated incident site and at control points, protection boom strategies were successfully exercised and placement of boom occurred efficiently. Note that CER staff had attended an equipment deployment two weeks prior to this exercise, and the same strategies of containment booming and shoreline protection were exercised. In both instances Trans Mountain staff and contractors showed a high level of proficiency in tactical response.

Tool Used
No
Tool Used

Communications

Date
2019-09-19
Discipline
Emergency Management
Categories

- Communications
  - External Comms Strategy
  - Internal Comms Strategy

Facility

Observations

With UC established, and in order to meet the exercise objectives, CER Staff observed that the Public Information Officer (PIO) was efficient in addressing communication needs for the incident. CER Staff observed the PIO staff working collaboratively with each other at the ICP and with BCENV communications.

Throughout the exercise, CER Staff noted a well-coordinated, well-executed effort throughout the ICP and the PIO, specifically related to external communications produced and disseminated.

Company personnel adequately prioritized internal communications ensuring all affected stakeholders and rights holders were informed, demonstrating appropriate responsiveness relative to the scenario. The company's efforts to promote collaboration among all agencies and support those involved in the PIO, positively contributed to the overall success of this exercise and its communications activities. CER Staff did note that it was not difficult to get approval of key messaging by UC in order to ensure it reflected all positions and to determine critical information to be communicated externally.

Additionally, TM staff also created a specific plan to increase the efficiency of communicating with indigenous communities in the area, the 'Indigenous Liaison and Communications Plan'.

Tool Used
No Tool Used

Response Tactics

Date
2019-09-19
Discipline
Emergency Management
Categories

- Response Tactics
  - Plans and Procedures
  - Control Points
  - Hazard Monitoring

Facility

Observations
Tactics and strategies were discussed among Operations staff and presented to UC for approval. UC appropriately discussed objectives for the response and altered them as new information became available. At the simulated incident site, air quality monitoring (LELs, O2 levels, H2S, VOCs, benzene,

carbon monoxide and vapor) was completed. Ongoing air monitoring was conducted using personal monitors.

TM staff simulated overflights in order to determine the extent of oiled areas and later to begin shoreline impact assessment. The initial flight went up at first light, with subsequent flights occurring every few hours after. This was crucial in maintaining an overall knowledge of the status of the spilled material. It was also mentioned that 4 oiled birds had been spotted, though not recovered.

The potential for sunken or submerged Cold Lake Blend Crude was not an objective for the exercise.

Equipment at the incident site included 3 Trans Mountain response boats, Trans Mountain Blue River response trailer, Trans Mountain Blue River boom trailer, Decontamination trailer, Trans Mountain Jasper Wildlife trailer, Simpcw boat trailer and resources (equipment and human) provided by a 3rd party contractor. Overall, CER Staff noted that communication with the Operations and Planning Sections was good.

A key component of the exercise was to test the integration and coordination of Simpcw First Nation response resources with those of Trans Mountain. CER Staff observed a good working relationship between response personnel and did not note any particular challenges in the integration of personnel and equipment. Both parties are commended for a successful first field testing of how they would work together in the event of an incident. Trans Mountain and Simpcw personnel demonstrated a good working knowledge of onwater deployment of oil spill response equipment, including operation of boats.

CER Staff had attended a previous training session with TM staff two weeks prior to this exercise, where the company drilled the same boom deployment tactics as used on Kinbasket Lake. In both events, TM staff and their contractors showed a high level of proficiency in, and understanding of, tactical response for on water and shoreline-based containment, collection and recovery strategies.

As part of the exercise, an inject was submitted that crews in the field had a chance archeology find. TM crews correctly cordoned off the area of the simulated find, and the ICP began developing an archeology plan to correctly address this and other potential findings.

Tool Used
No
Tool Used

Post Exercise

Date
2019-09-19
Discipline
Emergency Management
Categories

- Post Exercise
  - Debrief Meeting
  - Participant/Stakeholder Feedback
  - Evaluation Against Objectives

Facility

Observations
Following the exercise, a debrief was held at the ICP. Exercise participants provided feedback on what worked well and identified areas for improvement. The feedback was documented by Trans Mountain.

The following, but not all, general highlights were noted by CER Staff:
What worked well:

- Working relationships built among responding parties, Indigenous communities and agencies and those potentially affected by an incident or those with expertise to inform the response and to inform respective emergency response plans were extremely beneficial.
- Unified Command worked very well together with open and frank conversations.
- The location of the ICP was excellent.
- CER Staff observed that the groups that it interacted with most frequently; that is, Operations and Planning Sections and Command Staff worked efficiently and effectively in developing the relevant plans and deliverables to UC.
- The ICP, response activities at Kinbasket Lake were well staffed.
- CER Staff note that the SDS for the product spilled was up to date (dated July 2019).
- Participants at the exercise understood their roles and respected the ICS organizational structure and span of control. Liaising and cooperation between participants in the ICP was satisfactory and the overall flow of the exercise improved as the exercise progressed. Overall, CER Staff are of the view that the exercise was successful in achieving the exercise objectives.
- CER Staff are of the view that Trans Mountain appropriately implemented its emergency response plans and demonstrated its ability to respond to the scenario exercised and communicate with the public and other potentially affected parties for the scenario tested.
- The Planning Section Chief (PSC), a Trans Mountain employee, is commended for his conduct in this position. He ran efficient and effective meetings and positively facilitated response planning.
- The Indigenous Engagement Plan was elaborate and informative.

Areas for improvement:

- The EMBC Coordination Call should be implemented for next exercise.
- Connectivity issues were experienced for some players.
- Online Trans Mountain specific forms were out of date and time consuming to fill out properly.
- Not all resource requests went to resource unit.
- Additional local knowledge input would have benefited the exercise.
- Additional hand held radios for the field unit
- Clarify BCENV specific goals in advance of exercise as to not delay progression of exercise objectives and tactics.

It was also pointed out that approximately 30-40 percent of players in the ICP had either never been part of an exercise before or were playing entirely new roles to them on this exercise. This is a very good example of a company working to expose their staff to new roles in order to develop broad knowledge and skill sets of their employees, and increasing the depth of their emergency management team. During the exercise, a total of 56 injects were made with all of them reaching the status of 'Completed'.

Tool Used
No
Tool Used

Emergency Response Manual

Date
2019-09-19
Discipline
Emergency Management
Categories

- Emergency Response Manual
    - Initial Actions and Response
    - Emergency Response Procedures
    - Product Information

Facility

Observations
Trans Mountain has developed field guides for the Emergency Procedures Manual (EPM), which were prevalent throughout the ICP. CER Staff noted these manuals were used and referred to frequently, and the contents of these field guides was very similar to the CER's Field Operations Guide. The TM manual included job specific aides, outlines of ICS forms, the Planing P and suggested response objectives.

The response objectives, response strategies and ICP functions were all consistent with the company's submitted EPM.

The exercise also tested the appropriate Geographic Response Plan (GRP) that TM has developed for the area. While the response strategies were appropriate to the time of year and scenario, TM will also be reviewing this exercise and the GRP to determine areas of improvement, as part of their ongoing requirements.

Tool Used
No
Tool Used