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Administrative Handling Instructions

- 1. The title of this document is Cass Lake Agreed Exercise After Action Report.
- 2. This After Action Report is published by Enbridge Energy Partners, LP, with input from the US Environmental Protection Agency. Any changes to it will require their approval and issue.
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Section 1: Introduction

The Functional Exercise was designed to address a portion of the Cass Lake "Agreed Exercise" as stipulated in the US Department of Justice Consent Decree (CD). The exercise was developed to test Enbridge, tribal, local, state and federal emergency management capabilities including communication and notifications, incident management, public safety and health and environmental health as a result of a release of crude oil into Cass Lake. Use of the Incident Command System, employing Unified Command was a requirement of the exercise and within Unified Command were the Enbridge Incident Commander for the Responsible Party, Leech Lake Band of Ojibwe (LLBO), Local On-Scene Coordinator (Cass County), The State On-Scene Coordinator (MN Pollution Control Agency) and the Federal On-Scene Coordinator (EPA Region V).

The pages to follow will describe the exercise scenario, participants, evaluation, and lessons learned. A key high level learning from this exercise is that Enbridge should continue to employ Incident Command System (ICS) and Position Specific Training as part of its training program. We also encourage cross functional, external, participation in exercises to facilitate continual learning and experience in ICS, exercise design, and to develop relationships.

Exercise Scenario Summary

At 0530 on 26 Sep 2017 the Enbridge Control Center in Edmonton recognized a pressure drop on Line 2 and initiated an Emergency Shutdown. The detection was immediately initiated and a complete shut down and isolation of the line was achieved within 13 minutes. The Control Center also called the Superior Region on-call manager and informed him of the situation. It was later determined that an estimated volume of approximately 5,800 bbls of light crude was released. Superior Region takes action.

The on-call manager called an Enbridge staff member working out of Bemidji and asked him to immediately go to the site and confirm evidence of a release. Immediately afterwards the on-call manager called the Superior Regional Director to advise him of a release. The region called the National Response Center to inform them of the release. Due to location and the sensitivity of the area, the Regional Director activated Superior's Field Response Teams (FRT), the regional Incident Management Team (IMT) and directed the activation of an Incident Command Post in accordance with the Superior Region Integrated Contingency Plan (ICP) and Cass Lake Tactical Response Plan. A series of notifications occurred from Superior Region and the Control Center with Tribes, police, local emergency management agencies, government agencies, communities, and stakeholders notified.

Passersby called 911 as a hydrocarbon odor can be detected in the general area of Highway 2. The Enbridge staff member, while conducting a reconnaissance with members of the Cass Lake Fire Department saw oil and sheen on the surface of the water. Police called the Control Center to confirm the odor. Police were advised that an Enbridge responder (Bemidji staff member) had been dispatched and is in location. The police were also told that Enbridge activated its FRT and IMT.

It is now 0800 on 26 Sep and the local weather is partly cloudy, winds from the NE at 8.5 mph, temperature 55 degrees F, and the water temperature is 63 degrees F. Local Authority and Tribal Emergency Operations Centers have been activated and local resources deployed. Enbridge Field Response Teams have arrived and are deploying in accordance with Cass Lake Tactical Response Plan. Enbridge Superior Region Incident Management Team have established an Incident Command Post at the Sanford Center in Bemidji.

Participating Organizations

Federal Agencies

U.S. Environmental Protection Agency Region V (EPA)

U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA)

U.S. Fish and Wildlife Service (FWS)

U.S. Forest Service

USDA - Animal and Plant Health Inspection Service

Tribal Agencies

Leech Lake Band of Ojibwe

State Agencies

Minnesota Pollution Control Agency (PCA)

Minnesota Department of Natural Resources (DNR)

Minnesota Department of Health

Minnesota Office of Pipeline Safety (OPS)

Minnesota Homeland Security & Emergency Management (HSEM)

Minnesota Office of Public Safety

Office of the State Fire Marshal

Local Agencies

City of Cass Lake

Cass County Sheriff Office

Cass County Public Health

Itasca County

Beltrami County

City of Bemidji

Private Sector

Enbridge

Tri-State Wildlife

Marine Pollution Control

The Response Group

Section 2: Exercise Development

General Setup

The functional exercise was produced with input, advice, and assistance from the exercise planning team consisting of Enbridge, tribal, federal, state governments, local authorities, and key response contractors. A Concept & Objectives meeting was conducted on, 8 Nov 2016, with the EPA, and subsequent planning meetings as indicated in the paragraph titled "Schedule of Planning Meetings" (below) with members of the exercise planning team. This exercise was developed to follow the guidance set forth in the Enbridge Exercise design guide (HSEEP model) to exercise Enbridge, federal, state, local, and tribal ER Plans. The exercise was intended to satisfy a requirement in the Consent Decree Civil Action No 1:16-cv-914. This plan will align with the requirements in section 115 (f) "Agreed Exercise Plan" in the Consent Decree Civil Action No 1:16-cv-914, but the scope was revised in agreement with the US EPA. In 2017, Enbridge conducted the first part of the Cass Lake Exercise that included a functional exercise with the mobilization and deployment of Enbridge's local Incident Management Team and a functioning command post. The first part of the Cass Lake Exercise implemented the Incident Command System ("ICS"), including operation of the unified command structure in preparation for the field exercise to be conducted during the second part of the Cass Lake Exercise. Enbridge shall conduct the field deployment part of the exercise at a later date.

Schedule of Planning Meetings Conducted

- Concept & Objectives Meeting: 08 November 2016
- Initial Planning Meeting: 29 November 2016
- Midterm Planning Meeting: 16 February 2017
- Master Scenario Events List (MSEL) Meeting: 24 May 2017
- Final Planning Meeting: 24 August 2017



Exercise Objectives

At the After Action Meeting, it was agreed by the evaluation & planning teams that the exercise objectives were met. The information below – in the format followed by the exercise evaluation team – shows the successes and areas of improvement observed by the evaluation team that align objectives with HSEEP Core Capabilities and NPREP Components (Core Capabilities and NPREP Components are described after the table below).

Objective	Core Capability	National Preparedness for Response Exercise Program (NPREP) Components	Comments
Objective 1: Demonstrate the ability to establish and maintain safe response operations in accordance with the Health & Safety Plan.	Environmental Response/Health Safety	A.3) Ability to operate within the response management system A.12) Personnel Support	Environment Evaluator: Safety was an integral part of planning. Truth Assistant: Objectives, Core Capabilities and NPREP Components were achieved but it took the Ops Section time to identify affected areas. Safety Evaluator: Response occurred in accordance with the Health & Safety Plan. The safety team realized the requirements of response staff and nothing impaired safety's monitoring efforts.
Objective 2: Conduct Unified command response operations in accordance with the Enbridge & Stakeholder's emergency response plans.	Operational Coordination	A.3) Ability to operate within the response management system	Planning Evaluator: Planning went well within Unified Command ("U/C"). Planning Section Chief did well, including meeting faciliatation. More staff is required in the section as well as more TRG staff for the IAP Software. Planning Evaluator: Need to ensure timely information is relayed to U/C. U/C should ensure availability to the command post by sitting in the command post and not their meeting room (unless they're conducting a meeting). Ops Evaluator 1: The Ops Section used the ICS, including branches and deputies for span of control. There was heavy use of Control Points and the Cass Lake Tactical Response Plan (TRP) to develop tactics, and the use of the Integrated Contingency Plan ("ICP", Enbridge's ER Plan) for equipment confirmation.
			Ops Evaluator 2: These were demonstrated throughout the exercise via the exercise organization and the formulation of common goals. Unified Command (U/C) Evaluator: All jurisdictions within the U/C team worked well together. There were some ICS questions from Tribe (also noted by Environment evaluator). There was a strong IC who ensured the ICP, TRP, Incident Management Handbook ("IMH") were applied. The initial U/C

Objective	Core Capability	National Preparedness for Response Exercise Program (NPREP) Components	Comments
Objective 3:	Operational	A.1) Notifications	Environment Evaluator 1: good planning ability was shown. Environment Evaluator 3: The Environment Unit Leader attended all ICS meetings. The unit was part of the ICS structure and organized in accordance with the IMH. The Environment Unit worked with Safety to coordinate plans to ensure correct actions would have been taken. Resource Unit Leader (RESL) Evaluator: Developed a Documentation Management Plan that met Legal's requirements. Ops Evaluator 1: Multiple response agencies described their
Conduct an ICS 201 Workshop	Coordination, Operational Communication, Situational Assessment	A.2) Staff Mobilization A.3) Ability to operate within the response management system A.4) Source Control A.5) Assessment A.6) Containment	mobilization. The source was also controlled via block valve closure. The group worked through the initial assessment and the time containment would have been achieved. Containment was simulated via ICS 215, 234 and start of 204s, and via the Common Operating Picture. (COP) Ops Evaluator 2: Notifications and the 201 were completed within the allotted time. Ops Evaluator 3: Discussion occurred concerning access for water intakes at Cass Lake and Stony Point. U/C Evaluator: The National Response Center (NRC) was called. Source Control was demonstrated via valve closure and shutdown time (13 mins) with volume out (noted by Environment Evaluator). Discussion occurred regarding scene assessment. Containment was achieved via 201 development and identification of a Control Group. Environment Evaluator: The 201 was successful but there was some uncertainty regarding notification. RESL Evaluator: The workshop was also used to coach in the use of the IAP Software, especially its use in notification, but more awareness is needed. Truth Assistant: Saw no issues with notification or any gaps in mobilization. Environment Evaluator 3: Environment notifications were completed. The Environment Unit was organized in accordance with ER Plans and the IMH. The group produced trajectory maps from Truth, but this was needed earlier as it's a high

Objective	Core Capability	National Preparedness for Response Exercise Program (NPREP) Components	Comments
			priority. The group discussed an environmental assessment but this could have been followed up better. Environment Plans were part of the overall IAP, but greater interaction was needed with the rest of planning section.
Objective 4: Work toward development of a Period 1 Incident Action Plan under Unified Command by end of exercise.	Operational Coordination, Operational Communications, Situational Assessment, Environmental Response/Health Safety	A.3) Ability to operate within the response management system A.7) Mitigation A.8) Protection A.9) Disposal A.11) Transportation A.12) Personnel Support A.14) Procurement A.15) Documentation	Ops Evaluator 1: various booms and skimmers were planned for use. In-situ burn was discussed. Protection booming around water intake was planned, as well as other forms of protection booming and shoreline protections, which were also reflected in the COP. Injects required Ops to work with Environment for Resources at Risk and air monitoring around Cass Lake. Land, water and air transportation assets were requested involving many agencies. Admin support was coordinated throughout command post. Space was sufficient for the section. Requesting more staff was done, but needed to ensure qualifications/training was included in 213RR. The section requested a lot of equipment to "get big, fast". ICS documents were used for 215-234-204s, but the evaluator did not see a section 214. Ops Evaluator 2: These were demonstrated throughout the exercise via exercise organization, formulation of common goals, and the Ops Section designation of roles and deliverables (including good use of the Cass Fire Dept). Some challenges were noted due to the size and diversity of the group, but containment & recovery would have been achieved, the group identified water intakes and protection zones, with protection measures, air monitoring, and SCAT. The section ordered transportation resources (also noted by Environment Evaluator) U/C Evaluator: Logistics support was reflected in planning. The TRP was used for mitigation and protection efforts. Land transportation requirements were identified. The ICP was used for admin support, Documentation, Procurement, and IT. Environment Evaluator 1: the team did well in IAP development. They addressed water intakes, and did a good job in wildlife recovery and rehab, and record keeping. Environment Evaluator 2: This evaluator provided general suggestions about aligning the Controller/Evaluator with ICS functions, as well as providing more space for written comments — useful!

Objective	Core Capability	National Preparedness for Response Exercise Program (NPREP) Components	Comments
			The Planning Section used the online forms. For short and long term requirements they discussed SCAT, sampling, and waste management. Resources at Risk were identified and communicated effectively with agencies, but some communications challenges with US Fish & Wildlife. The IMT produced great mapping/COP.
			As an area of improvement, the Planning Section needed to address surface water, but water intakes were only addressed.
			Waste management was discussed including use of a contractor.
			RESL Evaluator: The Resource Unit was effective in handling injects after internal processes established.
			Environment Evaluator 3: The Environment Unit used the 213RR/IC Resource Management process to procure required equipment for response.
			Documentation was captured in the IAP software. Some staff had their own 214 log.
			Environmental plans were part of IAP development – a success. Water intakes were identified early in the 232 Resources at Risk (RaR). 232 RaR were issued to Ops to consider during their planning for protective booming (also observed by Ops Evaluator). Tri-State Rescue was integrated into Environment Unit. A Wildlife Plan was developed and communicated. Safety and Public health contributed to the development of an Air Monitoring Plan. A Waste Plan and Disinfection Plan were developed. In-situ burning was discussed with State regulators and Leech Lake Band of Ojibwe (LLBO). LLBO did not approve the concept.
			The Environment Unit worked with the Logistics Section to support staff, but more practice is required.
			Documentation Evaluator: Need better staffing of Documentation Unit (too thin). Greater staffing would have led to greater communications with Legal, the development of a Documentation Management Plan, and the use of a Historian. (Ops Evaluator did note that a Documentation Retention Protocol was established).
			By the end of the exercise, the Documentation Unit was very efficient at issues within the command post, and with injects.

Objective	Core Capability	National Preparedness for Response Exercise Program (NPREP) Components	Comments
Objective 5: Establish a Joint Information Center (JIC) and produce unified and consistent messaging with internal and external organizations.	Public Information & Warning	A.3) Ability to operate within the response management system A.10) Communications	Logistics Evaluator: Began to work immediately on the Medical and Communications Plans – a success. They were prompted to work on Staging Area development. The Logistics Section Chief (LSC) had focus on 213RR process. He delegated very well and was therefore able to focus on meetings. The section addressed need for hotels and negotiating rates, and garbage disposal. The Logistics Section worked on 1-800# for Wildlife concerns. Logistics Section worked very well. Finance Evaluator: good response to injects but more training required on inputting costs in 213RR. U/C Evaluator: The JIC was established and used ICS. A process was established for the approval of messaging through U/C and legal. A Media Plan was established. PIO Evaluator: The JIC took time to establish roles but once done it worked well. The team quickly addressed issues. Agency coordination and teamwork was strong. The JIC effectively dealt with communications throughout the exercise. Truth Assistant: The JIC confirmed and communicated hot zones/affected areas. Environment Evaluator 3: The Environment Unit liaised with the JIC, Public Health, and Safety regarding the air monitoring plan. Explaining the plan was a challenge with the JIC. The JIC demonstrated the ability to communicate internally and externally – a success.
Objective 6: Practice "Liaison" functions and information sharing/passage to participating agencies with a view to achieving a Common Operating Picture (COP).	Intelligence & Information Sharing	A.3) Ability to operate within the response management system A.10) Communications	Ops Evaluator 1: Containment was simulated and depicted via the COP. The COP also showed: various booms and skimmers used, Protection booming around water intake, other forms of protection booming, and shoreline protections. Truth Assistant: Updated the municipal EOCs (simulation cell) but this took time. Radio systems worked but more coordination needs to occur for greater alignment. Environment Evaluator 3: Multi-agency participation within the

Objective	Core Capability	National Preparedness for Response Exercise Program (NPREP) Components	Comments
			Environment Unit helped achieve this objective.
			The Environment Unit communicated plans to the planning section, but needs more practice.
			<u>Liaison Evaluator</u> : Liaison showed good information exchange internally and externally, and responded well to requests, but this would have been better with a tracking process.
Objective 7: Demonstrate and validate the ability of	Operational Communications	A.10) Communications	<u>U/C Evaluator</u> : A Communications Plan was established and the Communications system followed ICS. A Check in/out process was in place.
response personnel to activate and maintain			Ops Evaluator 1: Frequent calls were made from the section to simulated field staff to develop an accurate picture in the field.
communications during response			<u>Truth Assistant</u> : This objective, Core Capability and PREP components were achieved without difficulty.
operations in accordance with all applicable			<u>Liaison Evaluator</u> : Initial difficulties were noted at the start but steady improvement was shown throughout the exercise. There was good linkage between the JIC and the PIO.
contingency and/or response plans.			There was good communications internally but a tracking process to close issues should have been employed.

PREP Components

The following National Preparedness for Response Exercise Program (NPREP) core components (with the exception of A13, A3 paragraph 2f, and sub components in A4 and A5) were met as described above.

1 - Notifications	6 - Containment	11 - Transportation
2 - Staff Mobilization	7 - Mitigation	12 - Personnel Support
3 - Operate w/in response system in response plan	A8 - Protection	14 - Procurement
4 - Source Control	9 - Disposal of recovered material & debris	15 - Documentation
5 - Assessment	A10 - Communications	

Homeland Security Exercise & Evaluation Program (HSEEP) Core Capabilities

The following HSEEP Core Capabilities were met as described above:

Public information & Warning
Operational Coordination
Intelligence & information Sharing
Environmental Response/Health and Safety
Operational Communications
Situational Assessment

Out of Scope Elements

- Incident investigation was not exercised and was out of play.
- Remediation projects was not exercised and was out of play.
- This incident was not declared a Spill of National Significance (SONS) during the exercise.
- Natural Resource Damage Assessment issues were not exercised and were out of play.
- Weather and waterway conditions were artificial for this exercise.
- A terrorism nexus was not a cause of this event; the root cause was unknown.

Section 3: Exercise Resources/Documents

Exercise Facilitation Resources/Documents:

- Exercise Plan
- Participant Handbook
- Controller/Evaluator Handbook with Exercise Evaluation Guide
- Master Scenario Events List (MSEL) and Storyboard Timelines
- Trajectory Models
- ICS 201 Workshop Presentation
- Incident Action Plan (IAP) Software

Exercise References and Relevant Plans:

- Enbridge Superior Region Integrated Contingency Plan (ICP) & Field Emergency Response Plan (FERP)
- Enbridge Inland Spill Response Tactics Guide
- Enbridge Incident Management Handbook
- Enbridge Cass Lake Tactical Response Plan (TRP)
- FEMA National Preparedness Goal
- EPA/USCG National Contingency Plan
- EPA 2016 NPREP Guidelines
- EPA Region V Regional/Area Contingency Plan
- Leech Lake Band of Ojibwe Applicable Emergency Response or Hazard Mitigation Plans
- Minnesota Emergency Operations Plan
- Cass County Applicable Emergency Response or Hazard Mitigation Plans
- Beltrami County Applicable Emergency Response or Hazard Mitigation Plans

Section 4: Equipment Used

Enbridge was not required to deploy equipment in 2017 as part of the Cass Lake Agreed Exercise. Enbridge shall conduct a field deployment exercise at a later date.



Section 5: Lessons Learned

An After Action Meeting was conducted on September 28, 2017. Representatives from the following organizations were involved in the discussion:

- Enbridge Energy
- Leech Lake Band of Ojibwe
- Cass County
- Minnesota Office of Pipeline Safety
- Minnesota Pollution Control Agency
- Minnesota Department of Health
- Minnesota Department of Natural Resources
- Minnesota Department of Homeland Security & Emergency Management
- EPA Region V
- US Forest Service
- US Fish & Wildlife
- The Response Group
- Exercise Evaluation/Control Team

An open forum discussion was co-facilitated by Enbridge Energy and The Response Group, during which, lessons learned were discussed that included the employment of the Incident Command System and exercise design. Those points have been consolidated in the following lessons learned, and are categorized in accordance with the US Department of Justice Consent Decree.

Observation	Applicable to Future exercises	Improvement to Response Actions
EPA FOSC observed that more time was needed on achieving the objectives of the Planning Meeting.	Continue with section position specific training. Ensure the Planning Section Chief has the tools to facilitate meetings. Enbridge to distribute an internal reminder that speaks to this lesson learned to IMT Planning Section Chiefs.	Continue with section position specific training. Ensure the Planning Section Chief has the tools to facilitate meetings. Enbridge to distribute an internal reminder that speaks to this lesson learned to IMT Planning Section Chiefs.
Quick determination of hot, warm & cold zones, would help with evacuation plan development.	Develop an internal initial briefing list (Bang List) that will include an item that ensures Safety, Operations, and local authorities quickly identify response zones.	Develop an internal initial briefing list (Bang List) that will include an item that ensures Safety, Operations, and local authorities quickly identify response zones.
Some external participants were unsure of ICS Processes, JIC, and IAP Software functionality.	Potentially provide ICS, JIC, and tools orientation/overview prior to future agreed exercises if felt needed by future exercise planning committees.	Not applicable.
There was confusion of multiple ICS 201s developed during the 201 Workshop	Brief Unified Command on the consolidated ICS 201 prior to the exercise. Pre-populating some parts of the ICS 201 will provide greater consistency amongst the groups, reduce confusion, and decrease the ICS 201 Workshop time.	Not applicable.

Observation	Applicable to Future exercises	Improvement to Response Actions
Initial confusion around notifications. However, the group listening in to the NRC notification call was beneficial from a training perspective.	Continue to review internal and external notification process during the pre-exercise 201 workshop. Continue to conduct an NRC call openly in front of the audience.	Not applicable.
Lack of information on ICS resource management process (213-RR).	Provide overview on the ICS resource management process prior to exercise start.	Remind the IMT on the ICS resource management process early in a response.
Some participants were unclear as to role of control and truth simulations as it relates to local issues.	Provide an overview of Truth & Control prior to the exercise to ensure processes are understood including artificialities, pace of injects, and impacts to players.	Not applicable.
There was confusion on actions to take when receiving injects.	Right size truth control/evaluation organization, ensure that those who assume a role as a controller / evaluator have the proper experience, and continue to provide information on truth/inject processes prior to the exercise.	Not applicable.
During meetings, at times, it was difficult to hear the speaker.	Consider audio equipment to be available if needed. Planning Section Chief needs to ensure speakers can be heard.	Consider audio equipment to be available if needed. Planning Section Chief needs to ensure speakers can be heard.
More realistic finance injects	The planning team will work to develop additional finance injects.	Not applicable.
Provide the overall storyboard to controllers and evaluators.	Develop storyboard of critical events throughout the exercise that will be shared with controllers and evaluators.	Not applicable.

In closing, Enbridge would like to specifically thank members of the exercise planning team who devoted approximately a year in the design of this exercise. Additionally, we would like to thank all participants who played a role during the exercise. The success of the exercise is attributed to their hard work. Several lessons were learned from the exercise that will be considered as part continual improvement of Enbridge's Emergency Management Program.