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Field Emergency Response Plan

Eastern Region Response Zone

ENBRIDGE

Version: Core 10.2 | Annex 10.0
2025-2026

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Effective 2025-2026 Version: Core 10.2 | Annex 10.0

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INCIDENT COMMAND SYSTEM FORMS

The Incident Briefing (ICS 201) provides the Incident Commander (and the Command and General Staff) with basic information regarding the event situation and the resources allocated to the event. In addition to a briefing document, the ICS 201 Forms also serve as an initial action worksheet. It serves as a permanent record of the initial response to the event.

The ICS 201 package and the ICS 214a form included in this plan can serve as part of the initial Incident Action Plan (IAP); however, all forms (EM, ICP and ICS) are available to all staff on the LP_GDL - Governance Document Library – EM-EM Forms, and offline, by syncing and creating an offline O&M eLibrary (PDF Guide)

Records will be made and kept as events occur that capture the following information:

- Notification
- Response Actions
- Communications with Non-Company Personnel
- List of All Persons On-Scene
- Costs Incurred

The forms listed below are to be filled out in the reactive phase of a response.

- Electronic fillable forms are located on the Governance Documents Library. Download form and save,
- Real time web-based forms can be filled out through the Incident Action Plan (IAP) software.

ICS 201-1	Incident Briefing
ICS 201-2	Summary of Current Actions
ICS 201-3/207	Current Organization
ICS 201-4	Resources Summary
ICS 201-5	Site Safety
ICS 214a	Individual Logs

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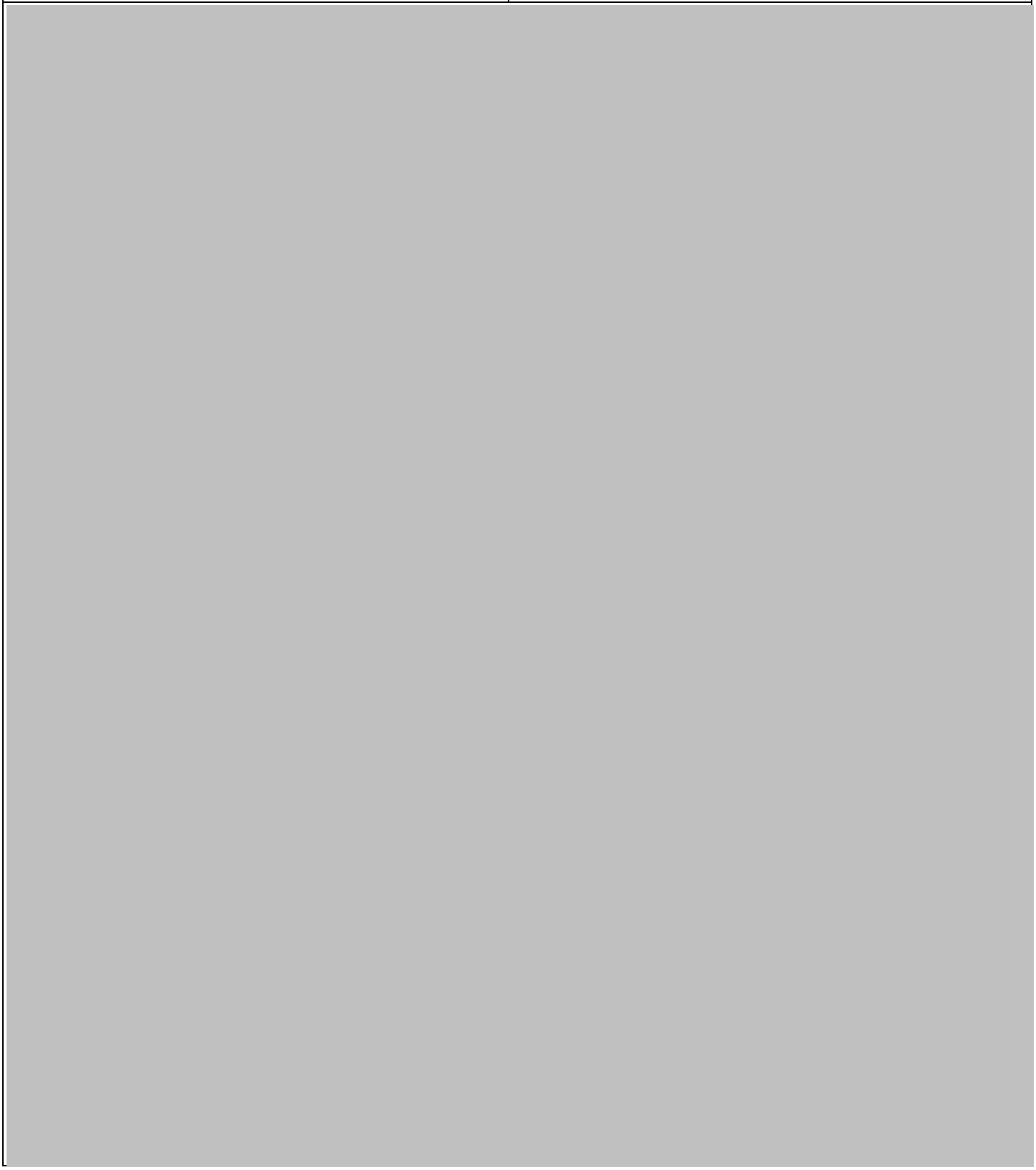
ENBRIDGE	Incident Briefing Map/Sketch	ICS 201-1

Incident:	Prepared By: at:
Period:	Version Name:



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Summary of Current Actions

ICS 201-2

Incident:	Prepared By: at:
Period: to	Version Name:

Incident Information

Initial Incident Objectives

Summary of Current Actions

Date/Time	Action Notes

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Current Organization

ICS 201-3 / 207

Incident Name: Operational Period:

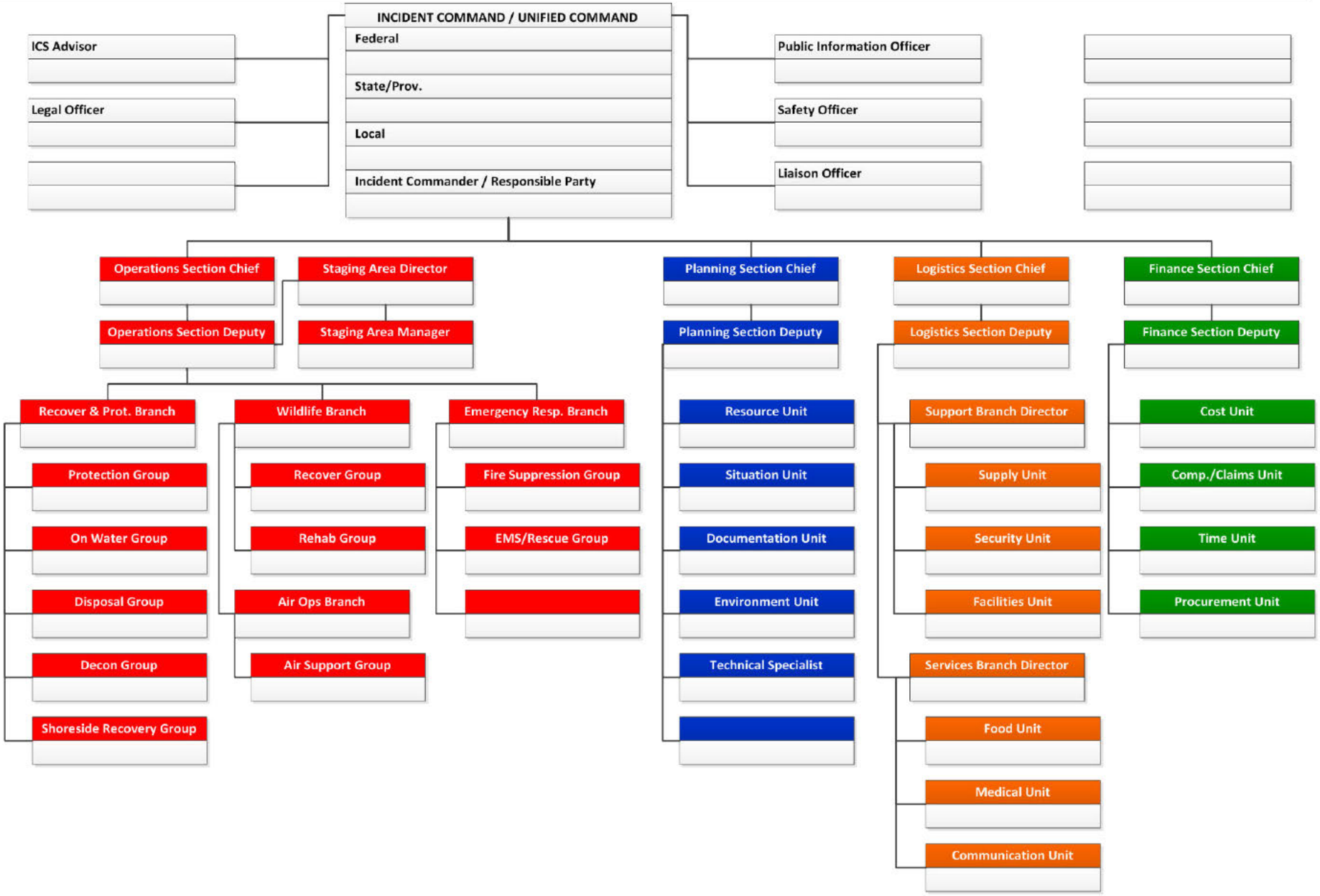

Illustration shows suggested ICS positions. ICS is scalable; the positions are filled according to the needs of the incident. If positions are not filled, the responsibility is assumed by the Section Chief or Incident Commander.

Retention: Retained in the Region Permanently

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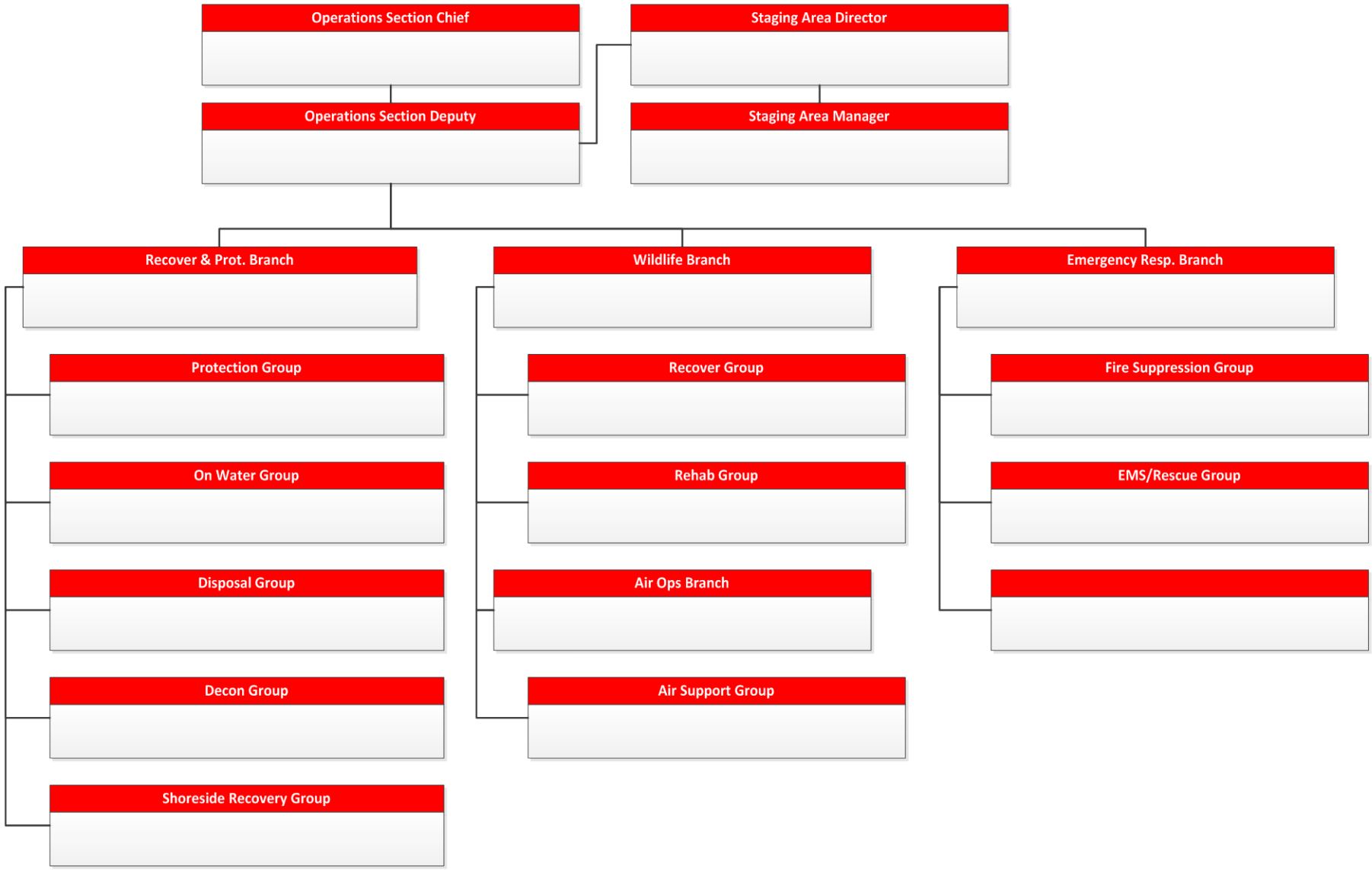
Operations Section



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Resource Summary

Incident:					Period:			
ID	Supplier	Resource Type	Description	Quantity	Size	Area of Operation	Status	Status Date/Time

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Site Safety and Control Analysis

ICS 201-5

Incident:	**Prepared By:** **at:**
Period:	**Version Name:**

Site Control

1. Is Site Control set up? ☐ Yes ☐ No	2. Is there an on-scene command post? ☐ Yes ☐ No If so, where?
3. Have all personnel been accounted for? ☐ Yes ☐ No ☐ Don't Know	Injuries: Fatalities: Unaccounted: Trapped:
4. Are observers involved, or rescue attempts planned? Observers: ☐ Yes ☐ No Rescuers: ☐ Yes ☐ No	5. Are decon areas setup? ☐ Yes ☐ No If so, where?

Hazard identification, immediate signs of: (if yes, explain in Remarks)

1. Electrical line(s) down or overhead? ☐ Yes ☐ No	2. Unidentified liquid or solid products visible? ☐ Yes ☐ No
3. Wind direction across incident: ☐ Towards your position Wind Speed: ☐ Away from your position	4. Is a safe approach possible? ☐ Yes ☐ No
5. Odors or smells? ☐ Yes ☐ No	6. Vapors visible? ☐ Yes ☐ No
7. Holes, ditches, fast water, cliffs, etc. nearby? ☐ Yes ☐ No	8. Fire, sparks, sources of ignition nearby? ☐ Yes ☐ No
9. Is local traffic a potential problem? ☐ Yes ☐ No	10. Product placards, color codes visible? ☐ Yes ☐ No
11. Other Hazards? ☐ Yes ☐ No	12. As you approach the scene from the upwind side, do you note a change in the status of any of the above? ☐ Yes ☐ No
13. Remarks:	

Hazard Mitigation: have you determined the necessity for any of the following?

1. Entry Objectives:	
2. Warning sign(s), barriers, color codes in place? ☐ Yes ☐ No	
3. Hazardous material being monitored? ☐ Yes ☐ No 3a. Sampling Equipment: 3b. Sampling location(s): 3c. Sampling frequency: 3d. Peak Reading: 3e. Personal exposure monitoring:	
4. Protective gear / level:	4a. Gloves: 4b. Respirators: 4c. Clothing: 4d. Boots: 4e. Chemical cartridge change frequency:
5. Decon 5a. Instructions: 5b. Decon equipment and materials:	
6. Emergency escape route established? ☐ Yes ☐ No Route?	
7. Field responders briefed on hazards? ☐ Yes ☐ No	
8. Remarks:	

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Protective Zones: record initial control perimeters (see Figure 1)

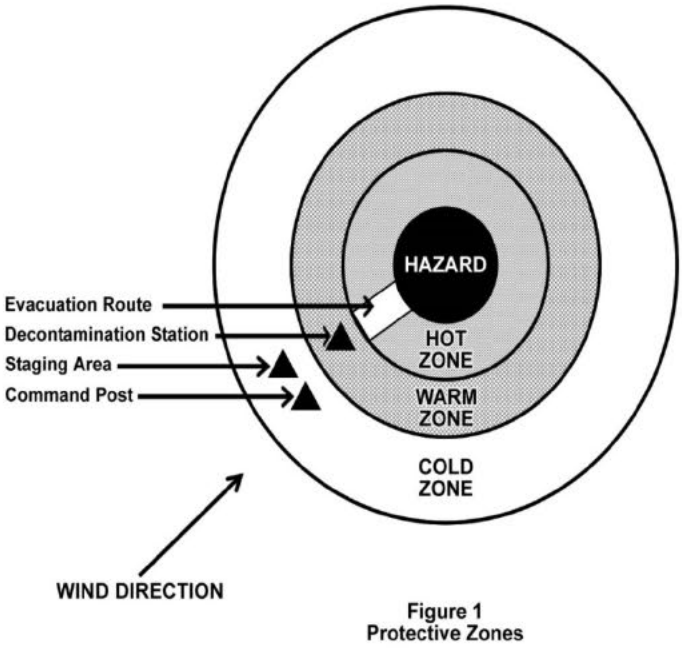

Figure 1
Protective Zones

1. Is there a Hot Zone established? ☐ Yes ☐ No

If so, where?

2. Is there a Warm Zone established? ☐ Yes ☐ No

If so, where?

3. Is there a Cold Zone established? ☐ Yes ☐ No

If so, where?

4. Remarks: (Include any information on evacuation route etc.)

5. Include any site sketches or photos of the protective zones (if available):

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Individual Logs

ICS 214a

Incident:	Prepared By:	at:
Period:	Version Name:	

Activity Log

Date/Time	Events/Notes

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Individual Logs

ICS 214a

Incident:	Prepared By:	at:
Period:	Version Name:	

Activity Log

Date/Time	Events/Notes

1.0 INITIAL RESPONSE ACTIONS

The following Initial response checklists are designed to promote safety and guidance for first responders and regional management.

1.1 Enbridge First Responder Checklist

To be used by the Enbridge First Responder | Initial Incident Commander for initial response actions.

Safety	
☐	Stop work immediately if ongoing
☐	Conduct Field Level Hazard Assessment
☐	Wear appropriate PPE including a Four Head Gas Monitor
☐	Approach the site from uphill, upwind, or upstream, only if safe to do so. If not safe, DO NOT approach
☐	Eliminate all ignition sources
☐	Assign a Safety Officer as soon as possible
Isolate	
☐	Source Control – contact CCO to shutdown and isolate the system
☐	Secure and restrict access to the site
☐	Evacuate unnecessary personnel

Notifications	
☐	Contact Regional Management and People Leader (Regional On-call)
☐	Verify Control Center has been informed
☐	Inform Public Affairs, Communications & Sustainability (PACS) Crisis Communications team
Documentation	
☐	Review Hazard Specific Response Actions and Initial Response within the FERP
☐	Document initial actions on 214a Individual Log (if applicable based on the Event Classification)
☐	Initiate ICS 201 packet
☐	*ICS forms are required for events classified at Level 1-3, not an alert level

Additional Considerations	
☐	Scene size up – estimate volume out to determine emergency level and tiered response actions
☐	If applicable, work with the external first responding agency on scene to ensure a coordinated response

1.2 Initial Emergency Reporting Contacts

Edmonton Control Center	1-877-420-8800 CDN Regions (Prairie and Eastern)
Enbridge Media Hotline	1-888-992-0997
Public Information Officer	1-866-761-5400 (leave a voicemail) [redacted]
Security Reporting	1-844-786-8305

1.3 Regional Management/Regional On-Call

To be used by Regional Management/Regional On-Call for initial response actions.

Activate Response Plan(s)	
☐	Integrated Contingency Plan
☐	Field Emergency Response Plan
☐	Any other relevant company documents *(Incident Management Handbook, Inland Response Tactics Guide, Control Points, OMMs, Safety Procedures etc.)*
Internal Notifications	
☐	Activate Support Services (Safety, Compliance, Public Awareness, Environment, Security, Lands and ROW, and Emergency Management to assist prior to the Incident Command System structure being stood up)
☐	Activate Field Response Team
☐	Activate Incident Management Team, and put potential members on standby notice
External Notifications	
☐	Engage Region Compliance to conduct federal regulatory notifications
☐	Activate Spill Response Contractors (if needed)
☐	Review external stakeholder list in the *Notifications* section, notify as required
Documentation	
☐	Document initial actions on 214a Individual Log (if applicable based on the Event Classification)
☐	Begin the development of the Incident Action Plan

1.4 Federal Emergency Reporting Contacts

Federal Regulatory Reporting	1-403-299-2773 Canada Energy Regulator Incident Line 1-819-997-7887 CER & TSB Reporting Hotline for all Reportable Events

Refer to OMM Book 1: General Compliance, reference-02-02-12 Unexpected Operational Event Response . Which applies to Regional Management On-Call Personnel in responding to certain unexpected operational events or leak triggers, such as restart of the line following investigation of an alarm that did not require activation of this plan.

1.5 Quebec Province (CRIP)

For major disasters that necessitate a significant response, coordination with the municipal, provincial, and federal government of Quebec is required. This coordination is facilitated through an Emergency Operations Center (EOC), as outlined in the Pipeline Response Frame of Reference (PRFR), also known in French as CRIP (Cadre de reference intervention pipeline).

The FRPR or CRIP does not modify the roles, responsibilities or regulatory and legislative obligations of relevant authorities and does not replace a company's jurisdictional regulatory requirements and approaches to achieve compliance, including those regulated by the CER.

1.6 Emergency Definition / Confirmation

Not all events, will result in an activation of the Emergency Response Plan for Enbridge Liquids Pipelines. An Emergency is defined as an unforeseen combination of circumstances or a disruption of normal operating conditions that poses a potential threat to human life, health, property, and/or the environment if not contained, controlled, or eliminated immediately. Emergency could include but not limited to:

- Death or injury requiring hospitalization
- Explosion or fire
- Leak, rupture, or spill
- Any significant event such as a natural disaster impacting operations that may threaten people, environment, assets, or relationship

Once an emergency has been confirmed, activate the Plan, and implement the appropriate notifications and response actions.

1.7 Emergency Response Phases

Emergency response can be divided into three distinct phases:

Activation	
Control the Event Site	The event scene should first be controlled to ensure a safe and effective response to any event: • Don't rush in; hazards should first be fully assessed • Conduct vapour monitoring and confirm levels (H2S, LEL levels) are safe as approaching the event site • Establish and maintain an isolation perimeter, with hot, warm, and cold zones • Establish communications with the Control Centre; request information regarding the situation (e.g., alarms, product, pipeline readings, shutdown actions and other relevant information) • Establish an Incident Command Post, either at the event scene location or, if necessary, at a remote location • Establish staging area(s)
Size up the Situation	A site assessment will identify the scope and nature of the event, as well as any potential hazards to responders: • Assess whether visual alarms have been activated • Recognize and identify any hazardous materials involved • Identify source of any releases • Potential exposures
Evaluate the Hazards and Risks	An assessment should be conducted to evaluate the level of risk to responders and the public: • Assess health, physical and chemical hazards • Gather technical data (SDSs, etc.) • Conduct vapour monitoring

Select and Don Personal Protective Equipment (PPE)	All event responders should be protected with the appropriate PPE of the identified hazards. PPE includes but not limited to: • Approved Fire-Resistant Coveralls • Hard Hats (where overhead hazards are present) • Gloves • Rubber Steel-Toed Boots • Also: o All responders leaving the *Hot Zone* should go through a decontamination zone *(Warm Zone)* to ensure that contamination is not spread into the *Cold Zone.*
Operations	
Manage Information and coordinate Resources	It is essential that information flows quickly and freely to all resources to ensure a safe and coordinated response: • Expand the Incident Command System as needed • Ensure that all (internal and external) notifications are made • Conduct briefings • Confirm all communications to ensure that they are fully understood and implemented
Implement Response Objectives	Once initial objectives have been established, it will be possible to develop, and implement, strategies and tactics to achieve these objectives. These may be: • Offensive (i.e., emergency rescue, spill source control) • Defensive (i.e., protecting the public, spill response) • Non-intervention (protecting the public)

Manage the Event	On larger events, it will be necessary to operate over a number of Operational Periods. In these cases, it will be necessary to fully-staff the Incident Management Team, especially the Planning Section: • Establish Event Objectives for each Operational Period • Conduct Tactics and Planning Meetings • Develop and approve Incident Action Plans • Conduct Operations Briefings
Demobilization	
Terminate the Event Response	Once the response phase of the emergency is over, the Incident Commander will stand down the Incident Management Team and ensure that all post-event activities are completed: • Transition to, the recovery phase of the response • Conduct an incident debrief • Ensure that all event documentation is completed • Ensure that all equipment, and response management supplies are replenished • Transition from Response Phase to Project Phase with adequate documentation and continue any required project phase activities, i.e., site remediation, repair to terminal assets

1.7 Emergency Shutdown

Upon verification of an emergency, shut down of assets is required until deemed safe for restart. Ensure the following actions are completed:

- Verify with the Control Center the line is shut down and isolated
- If the exact location of the release is unknown, the immediate supervisor will request an aerial patrol, or if conditions are favorable, a foot patrol, manpower might be used to walk the line

Once a leak site has been located, the following information is to be confirmed:

- Eliminate ignition sources
- Assess if water intakes are at risk
- Assess if public evacuation is required
- Restrict access to site:
  - Request support from law enforcement agencies
- Inform local response agencies and advise of the product characteristics and handling; precautions are described in the Safety Data Sheets
- Notify railroads or utility companies in the area

1.8 Responsibilities

Enbridge First Responder/Initial Incident Commander responsibilities:

Internal Actions	
☐	Contact Control Center to isolate the system
☐	Contact Regional Management and People Leader, see Regional Manager On Call Schedule if after hours.
☐	Assume the role of Initial Incident Commander and assign a Safety Officer
☐	Request support from other groups as required (Safety, Compliance, Public Awareness, Environment, Pipeline Integrity, and Emergency Management) to assist prior to the Incident Command System structure being stood up
☐	Activate the Emergency Response Plan(s): • *Integrated Contingency Plan* • *Field Emergency Response Plan* • Any other relevant company documents (*OMMs: Safety Procedures* etc.)
☐	Take measures to reduce the impact of the event
☐	If applicable, lock culverts/sewers, dam ditches, shut down ignition sources and maintain the safety of personnel involved in these activities

External Actions	
☐	If applicable, work with the external first responding agency on scene to ensure a coordinated response
☐	If applicable, direct all media to the Public Information Officer, if not on site, see *Regional Communications* for actions

1.9 Response Considerations

The level of response is dependent upon few factors:

- severity of the release
- the size
- potential environmental, social, and economic impact
- the expected public interest in the event

Where response activities will require Ground Disturbance (defined as any work, operation or activity that results in the penetration of the ground to any depth), ensure that an Emergency One Call notification is placed to the applicable One Call Center and that all Ground Disturbance requirements are met for the duration of the response.

1.10 Emergency Classification and Tiered Response

The Response Organization is based on a three-tiered response structure. Not all criteria are required to determine a specific level. However, there may be instances where an aspect of the emergency is so significant, that it would result in an increase in the response level. The Incident Commander or designate is responsible for determining the level of the emergency. The decision to downgrade the emergency level will be made once the situation improves. The decision may be based on monitoring data, control/containment of the situation or reduced risk to the public or environment.

Where appropriate, the Incident Commander will invite the participation of Federal, Provincial/State, and local Agencies to form a Unified Command.

1.11 Emergency Classification and Tiered Response Chart

Condition	Alert Event	Level 1	Level 2	Level 3
General criteria	The Company investigates abnormal operating condition detected by the Control Center, or any reported or observed emergency or possible emergency, will be given an emergency status until the report is confirmed or negated	The Company has the capability to manage and control a Level I emergency using company resources available within the area. The First Responder will assume the Initial Incident Commander position until a transfer of command occurs.	The Company has the capability to manage and control a Level 2 emergency using company resources and expertise, with some assistance from local contractors. The Regional Director or alternate Qualified Individual will assume the Incident Commander position.	The Company may request assistance from other Industry, Municipal or State/Provincial Agency personnel to support the response to the event. The Region Director or alternate Qualified Individual will assume the Incident Commander position.
Threat to people / environment	• No threat to people • Minimal area impact	• No immediate threat to people • No threat to facility infrastructure, no effects outside company property, very limited effects on pipeline right-of-way • Minimal impact on company property and no impact on public property • Minimal environmental impacts (including wildlife, ecosystems)	• Potential exists for injury/ threat to people • Offsite impact possible • Potential threat to company facility infrastructure, no immediate threat outside company property, moderate effect on pipeline ROW • Moderate environmental impacts	• Fatality/ serious injury or illness and/or ongoing threat to public safety • Ongoing threat to facility infrastructure • High environmental impact • Potential for long-term or significant impact to operations (or no indication of how long impact may last)

Condition	Alert Event	Level 1	Level 2	Level 3
Containment & control	• Immediate control at hand • Restricted to site • Low probability of escalation • No immediate impact to operations	• Control of released product pending • Minimal impact to operations • Typically, respond with existing resources • External resources may be required	• Limited or short-term impact to operations • External resources may be required	• External resources required
Response actions	• May complete 3rd party / regulatory notifications • Handled through normal operating procedures under the direction of the supervisor or senior worker on site o Pressure drops, pipeline shut in, field dispatched to investigate o Pressure safety relief valve discharge, field cleanup activities	• Complete 3rd party / regulatory notifications • The Incident Command System is activated • Response control at hand and can quickly move to Tier 2 as situation warrants • Local resources/ contractors and response organizations may be required • Response activities under direction of Incident Commander • Response personnel: Initial Incident Commander and Safety officer at a minimum	• Complete 3rd party / regulatory notifications • The Incident Command System activated • Actions taken to ensure public safety • Support personnel/equipment from neighboring region activated and awaiting notice of deployment as needed • Broader range of response activities • Local resources/ contractors and response organizations required and sourced	• Complete 3rd party / regulatory notifications • Actions taken to ensure public safety • Support personnel/equipment from neighboring region deployed • Immediate multi-agency involvement required; Unified Command established • Local resources/contractors and response organizations required and sourced

Condition	Alert Event	Level 1	Level 2	Level 3
Response personnel / team(s)	• Field Responder(s) • Regional Management / Regional On-Call	• Field Response Team(s) • Incident Management Team staffed as required o one position may assume many responsibilities o at minimum, the Incident Commander and Safety Officer will be staffed	• Field Response Team(s) • Incident Management Team to manage reactive and proactive phases • Incident Support Team activated to support if required • Crisis Management Team notified if emergency warrants	• Field Response Team(s) • Full Incident Management Team activation • Crisis Management Team notified • Incident Support Team • Enbridge Enterprise Emergency Response Team (E3RT) activated to support longer term events if required
Documentation	• If possible, complete ICS 214a Individual Log to capture initial response actions	• Complete ICS 214a Individual Log to capture initial response actions • Incident Command System 201 packet completed (reactive phase of the response)	• Complete ICS 214a Individual Log to capture initial response actions • Incident Action Plan required for multiple operational periods (proactive phase)	• Complete ICS 214a Individual Log to capture initial response actions • Detailed Incident Action Plan created for each operational period
Note	1.Regulatory classification levels may not align with Enbridge classifications 2.In Eastern Region, 3rd party notifications will be reported for alter level events 3.Event records are required for post event / lessons learned 4.Scale response actions / levels to meet the needs of the emergency 5.Additional guidance documents may be activated and implemented to meet the needs of emergency 6.Gulf Coast Terminals Region: Field Responder / Field Response Team actions are primarily performed by Miller Environmental (on-site OSRO) 7.Local resources (Miller Environmental (On-site), Marine Spill Response Corporation (OSROs) and RTFC Industrial Response Contractor for large scale, fire events.			

2.0 NOTIFICATIONS OVERVIEW

Immediate actions are required at the onset of an emergency response to limit the extent of a release, minimize the potential hazard to human health and the environment, and coordinate an effective response. It is also important to act decisively to create a professional working atmosphere among Company personnel and stakeholders. This section provides the steps for determining the appropriate initial response and notification actions that should be carried out in the event of a release or other emergency event.

The internal notification procedures are essentially the same for all emergency events although the external notifications will vary depending on the type of event, type and quantity of material released, and the consequences (injuries, deaths and property damage).

Company personnel have the authority and obligation to terminate any operation in response to an abnormal, threatening or hazardous situation.

2.1 Emergency Notification / Activation

The chart on the following page is an overview of roles and responsibilities of personnel or groups upon initial discovery, from reporting the emergency to activating Emergency Response Teams to manage an emergency.

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Eastern Region Notification Chart

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Last Updated 07-Feb-2025

Incident Observer

Member of the Public calls the toll free number	Industrial User or Local Police contacts Control Center	**Enbridge Employee discovery call Edmonton Control Center** 1-877-420-8800	Internal Alarm is Sounded	*Telephone Answering Service (T.A.S) in Quebec

Control Center Operations

Document incoming call from incident observer	Contact Regional Management /Region On-Call to dispatch company first responder	Alert Police *if required	Implement CCO notifications

Regional Management

During Regular Work Hours:

[redacted]

(outside of regular hours see Region On-Call Schedule)

Dispatch First Responder (nearest employee or on-call person)

IF CONFIRMED; ACTIVATE THE EMERGENCY RESPONSE PLAN (ICP & FERP) & ICS

Mobilize Support Services (Safety, Compliance, EM, Public Awareness, Environment, Security, Lands and Right of Way, and other groups as required); transition to ICS roles

Gov't Notification

Ontario – Spills Action Center 1-800-268-6060
Quebec – Ministry of Environment (French Only) 1-866-694-5454
Quebec - Ministry of Public Security
Gov't Operations Center: 1-866-650-1666

Transportation Safety Board (**TSB**)
Incident Line 1-819-997-7887
Fax 1-819-953-7876
E-mail address: PipelineNotifications@tsb.gc.ca

Canada Energy Regulator (**CER**) Incident Line 403-299-2773
CER Online Event Reporting System (OERS) (https://apps.cer-rec.gc.ca/ers)

If confirmed/applicable, see notification lists to:

- Activate Incident Management Team
- Notify required government agencies
- Notify external stakeholders
- Activate support resources (spill co-operatives etc.)

Canada/US Border Emergency Enbridge US – Schererville

[redacted]

Senior Management

Primary

[redacted]

Alternate

[redacted]

Crisis Management Team

* 1. Any party is to continue through the next step if contact cannot be made

*2. Emergency reports may be received from Police, Public, Employees or Alarms

Alert & Mobilization diagram, updated by the Pipeline Emergency Measures Technical Subcommittee (PEMTS)

Last update: 07-Feb-2025

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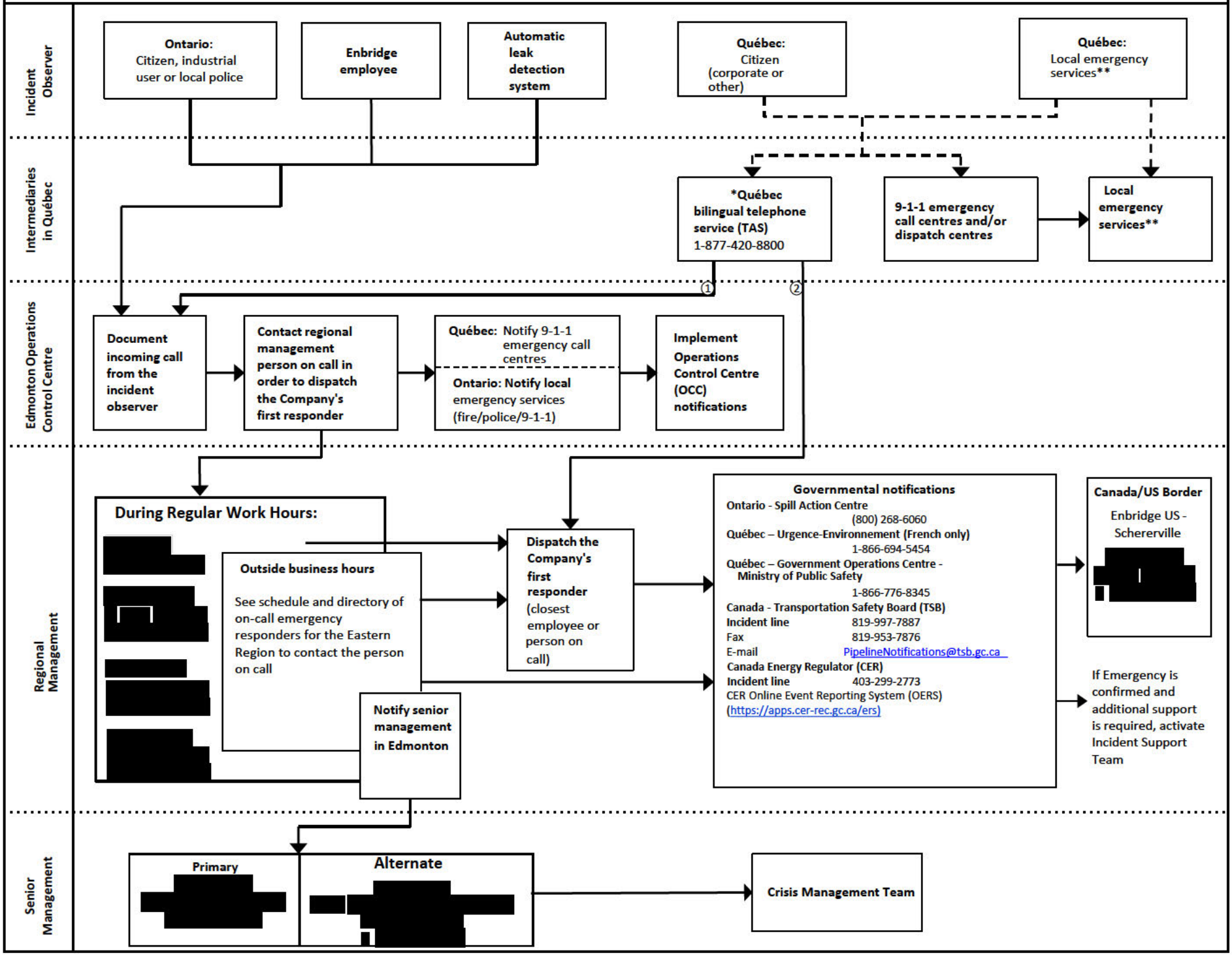


Dotted line (- - - -): Optional/non-systematic notification.

Full line (_____): Systematic notification.

* In Québec, citizens call 1-877-420-8800 to report an emergency. These calls are directed to the bilingual telephone service (TAS) in Montréal. The TAS then relays the information to the Edmonton Operations Control Centre.

** Local emergency services include police, fire, ambulance, civil protection and other required services.

2.2 Event Observer

Any person, who observes or becomes aware of a release, shall immediately report the event to the Control Center

Responsibilities
• Trigger could be an odor compliant • Notification from public on potential loss of containment • Notification from local response agency • Control Center alert (Leak detection alarm, volume imbalance) • Initial discovery by an employee
Guidance Documents
• *Field Emergency Response Plan* • *Operations and Maintenance Manuals* • *Control Center Procedures*

2.3 Control Center Operations

Any abnormal operating condition detected by the Control Center, or any reported or observed emergency or possible emergency, will be given an emergency status until the report is confirmed or negated. Follow up investigation and confirmation of a spill, or threat of spill, will be done immediately.

Responsibilities
• Document incoming call from the event observer • Contact Regional on-Call personnel to dispatch company first responder • If directed by Regional Management, alert external first responder agencies • Initiate Control Center notifications and procedures to mitigate hazards • Others identified in the Control Center operations procedures • The Municipal/Community emergency services will be notified unless directed otherwise by regional personnel
Guidance Documents
• *Control Center Procedures* • *Operations and Maintenance Manuals* • *Integrated Contingency Plan(s)*

2.4 Enbridge First Responder / Field Response Team / Initial Incident Commander

Any field responder, who observes or becomes aware of a release, shall immediately report the event to the Control Center and Regional Management/Regional On-Call.

Responsibilities
• Call the Control Center to isolate the system • Assess situation and activate this plan if an event is confirmed • Activate the Incident Command System, assume Incident Commander position and designate a Safety Officer. • Update Regional Management/Regional On-Call regarding the status • Request Regional Support Services; Compliance, Safety, Public Awareness, Environment, Emergency Management, and other groups as required to review and identify required actions • Verify the Control Center has been informed / support ongoing communications with the Control Center and Regional On-Call • Complete proper documentation for assessment of emergency (Safe Work Permit, FLHA, 214a) • Coordinate on-scene activities • Set up perimeter control and site access • Include emergency response agencies as appropriate • If applicable, direct all media to the Public Information Officer, if not available, provide the media hot line • Transfer command once the Incident Command System is stood up

Guidance Documents
• *Field Emergency Response Plan* • *Incident Management Handbook* • *Operations and Maintenance Manuals* • *Inland Spill Response Tactics Guide* • *Pre-Fire Plans* • *Integrated Contingency Plan* • *Control Points (EMap)* • *Safety Standards*

2.5 Regional Management / Regional On-Call

As the scope of the event requires, Regional Management/Representative/On-Call Representative will:

Responsibilities
• Dispatch Enbridge First Responder or follow up with the field if already on site • Update the Control Center, establish a future communications plan • Notify Regional Director / Qualified Individual, review resource requirements and activate required roles from the Incident Management Team • Alert emergency response agencies (Police/Fire/911) if appropriate • Notify government agencies and complete regulatory reporting in conjunction with Regional Compliance

Responsibilities
• Notify Local Emergency Management Agencies if affected area is beyond Enbridge property line, contact Regional On-call Public Information Officer • Notify Support Services (Safety, Compliance, Public Awareness, Environment, and Emergency Management) in the reactive phase of Incident Command System • Support an assessment of resource requirements, provide either standby notice or activation of Incident Management Team prior to Incident Commander transition from Enbridge First Responder, engage Pipeline Integrity to support repair, re-start plans if required • Utilize the Enbridge Alert System (MIR3) if the need arises • Consider if Enbridge Response Teams, such as the Incident Support Team, E3RT and Crisis Management Team should be activated • Ensure regulatory notifications have been conducted with support from Compliance • Call response agencies/oil spill removal agencies (Annex 2) as required; and • Depending on the circumstances of the emergency, consider requesting aircraft deployment for situational awareness
Guidance Documents
• *Field Emergency Response Plan* • *Incident Management Handbook* • *Inland Spill Response Tactics Guide* • *Integrated Contingency Plan* • *Operations and Maintenance Manuals*

2.6 Incident Management Team / Incident Support Team

As the scope of the event requires, additional Emergency Response Teams will be activated.

Responsibilities
• Place Incident Management Team Members on standby as event assessment and resource requirements are established (can use notification tool). • Consider activating LP Emergency Management, Enterprise Security as appropriate for the event. Identify resourcing shortfalls and request support from other Enbridge Incident Management Teams or Incident Support Team
Guidance Documents
• *Integrated Contingency Plan* • *Incident Support Plan* • *Crisis Communication Plan*

2.7 External Notifications

The Initial Incident Commander/Enbridge First Responder is responsible for assuring that all required notifications/reports are completed in a timely manner for all events until a transfer of command to Regional On-Call occurs.

The Control Center, Liaison Officer and On-Call Public Information Officer will confirm that additional required notifications are completed:

- Government Representatives (elected and public service, various jurisdictions)
- Local authorities/Community Leaders
- Regulators
- Landowners
- Response contractors
- Indigenous groups and Tribes
- Stakeholders

All public statements should be pre-approved by the Public Information Officer if appointed, the Legal Officer, and approved by the Incident Commander.

Local fire, police, and emergency medical service officials will be requested to communicate the emergency to those in proximity to the event. The Liaison Officer role (which may be filled by groups such as Compliance, Community Relations, Stakeholder Relations and Indigenous Relations representatives or Land Agents for the area) will also ensure contact/follow up with local landowners, municipal representatives, government, regulators, Indigenous groups and other groups, holders.

2.8 BASES - Bluewater Association for Safety, Environment and Sustainability (previously known as CAER – Community Awareness Emergency Response)

In the City of Sarnia, a request for fire, police, ambulance and mutual aid is completed by submitting a BASES code through the Everbridge system.

BASES Emergency Preparedness member companies utilize a standardized system to communicate with area Emergency Management Coordinators, Dispatch, and one another in the event of an emergency. This codified system is known as Mutual Aid Code Notifications and alerts necessary parties to the nature of an emergency event.

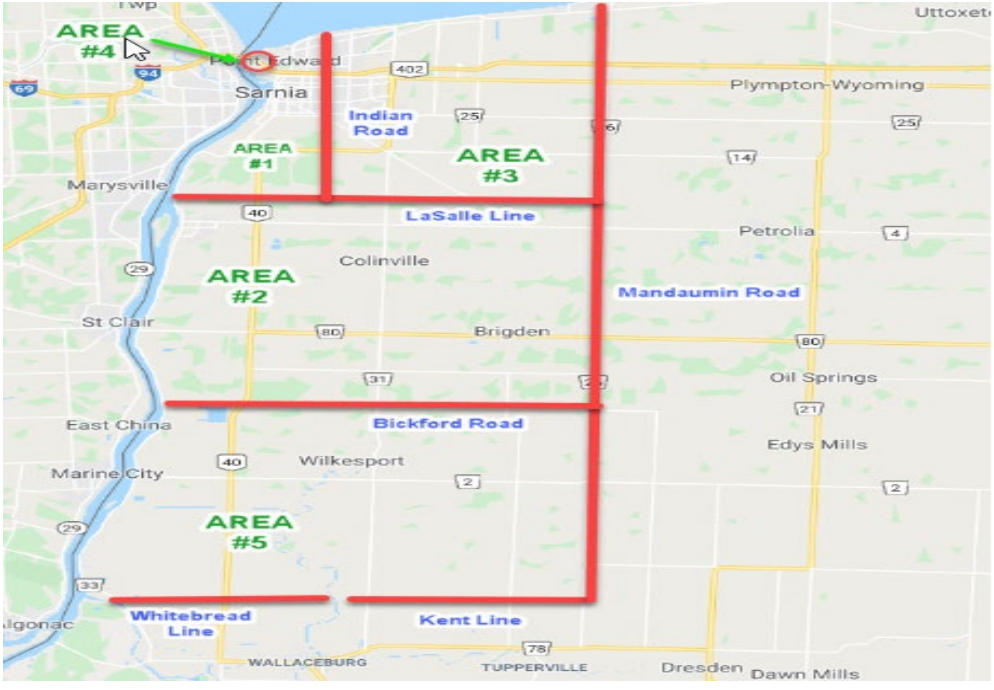
Eastern Region personnel who serve as Manager On Call have access to this system and can submit a code call from anywhere just by logging into the system.

[redacted]

Description of the BASES Codes

BASES CODE	What it means
CODE 5	Emergency without ownership
CODE 6	Municipal response for community impact
CODE 7	Security threat
CODE 8	Internal emergency response event
CODE 9	Mutual aid request
CODE 9-1	Request for specific responders or equipment
CODE 9-2	Request for mobilization of all response teams and equipment
CODE 10	Spill to the St. Clair River requiring downriver notification

Map Showing CAER Area Boundaries



2.9 Indigenous Business Database

Community & Indigenous Engagement (CIE) and Supply Chain Management (SCM) maintain the Indigenous Business Database, which provides rapid and easy access to qualified indigenous businesses that might be able to assist during an event response. Some of these businesses have equipment or provide services that could be useful during an event.

The IBD is accessible by members of the SCM Indigenous Engagement Team, PACS-CIE and Operations. In case of an event, a member of these teams can access the IBD, housed on Power BI. To extract a list of Indigenous Businesses, use the *Emergency Response Filter* for the geographic area.

3.0 EVENT REPORTING – RESOURCE ACTIVATION

A list of emergency contact information detailing required internal notifications and external agency contacts is located in this section. The following summarizes who should be contacted in an emergency:

3.1 Required Notifications / Emergency Contacts

Any person, who observes or becomes aware of a release, shall immediately report the event to the Control Center and Regional Management/Regional On-Call. If applicable, direct all media to the Public Information Officer, if the PIO is not available:

Control Center			
Edmonton Control Centre		CDN Region including Quebec: 877-420-8800	
Enbridge Media Hotline			
Media Hotline		888-992-0997	
Enbridge Qualified Individuals			
Job Title	Name	Office #	Cell #
Director, Eastern Region Operations	[redacted]		[redacted]
Alternate Qualified Individuals			
Mgr. Regional Services	[redacted]	[redacted]	[redacted]
Mgr. Area Operations Sarnia	[redacted]	[redacted]	[redacted]
Mgr. Area Operations St Lawrence	[redacted]	[redacted]	[redacted]

3.2 Incident Management Team

The Region has designated personnel that will be activated based on the needs of the event response to fill command and general staff roles within the Incident Command System. To see the latest IMT List, go to the ER Portal - Regions.

ICS Position	Normal Job Title	Name	Office Nbr	Alt. Number
Command Staff				
Incident Commander (IC)	Director, Eastern Region Ops	[redacted]		
Alternate IC	Mgr Area Operations - Sarnia			
Alternate IC	Manager Regional Services			
Alternate IC (FR)	Manager Area Operations St. Lawrence Area			
Liaison Officer (LOFR)	Sr Advisor Regulatory Compliance			
Alternate LOFR	Supervisor Lands & ROW			
Alternate LOFR (Fr)	Advisor Lands & ROW			
Alternate LOFR (Fr)	Right of Way Sr Advisor			
LOFR to CCM (Fr)	Manager Area Operations St. Lawrence Area			
Public Information Officer (PIO)	Sr Advisor Community & Indigenous			
Safety Officer (SOFR)	Sr Safety Advisor			

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ICS Position	Normal Job Title	Name	Office Nbr	Alt. Number
Alternate SOFR	Maintenance Planner			
Alternate SOFR	Supervisor Safety Cdn. Liquids Pipelines			
Legal Advisor	Associate General Counsel			
Alt. Legal Advisor	Associate General Counsel			
	Operations S			
Operations Section Chief (OSC)	Mgr Area Operations - Sarnia			
Alternate OSC (Fr)	Manager Area Operations - St. Lawrence Area			
Alternate OSC	Manager Area Operations - Westover Area			
Alternate OSC (Fr)	Supervisor Elect/Mech and Operations			
Alternate OSC	Supervisor PLM - Westover			
Alternate OSC	Supervisor PLM - Sarnia			
Alternate OSC	Supervisor Maintenance Services			
Staging Area Manager (STAM)	Mechanical Specialist			
Alternate STAM	Supervisor Maintenance Services			

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ICS Position	Normal Job Title	Name	Office Nbr	Alt. Number
Alternate STAM	Supervisor Maintenance Services			
Alternate STAM (Fr)	Mechanical technician			
	Planning Se			
Planning Section Chief (PSC)	Supervisor Engineering & Tech Services			
Alternate PSC	Sr Engineer			
Alternate PSC	Supervisor maintenance planning			
Situation Unit Leader (SITL)	Sr. Regional engineer			
Alternate SITL	Scheduler			
SITL to PC (Fr)	Maintenance planner			
Environmental Unit Leader (ENVL)	Senior Advisor Environment			
Alternate ENVL	Supervisor Environment Programs			
Alternate ENVL	Environmental Manager			
Documentation Unit Leader (DOCL)	Operation Training Specialist			
Alternate DOCL	Scheduler 1			
Alternate DOCL	Administrative Assistant III			
Alternate DOCL (Fr)	Administrative Assistant III			

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ICS Position	Normal Job Title	Name	Office Nbr	Alt. Number
Resource Unit Leader (RESL)	Supervisor PLM-Sarnia			
Alternate RESL	Engineer			
Alternate RESL	Maintenance planner			
	Logistics Se			
Logistics Section Chief (LSC)	Sr Analyst Lands & ROW			
Alternate LSC	Planner II			
Alternate LSC	Planner II			
Alternate LSC (Fr)	Administrative Assistant III			
	Finance Se			
Finance Section Chief (FSC)	Operations Financial Analyst II			
Alternate FSC	Regional Analyst			

3.3 Regulatory Reporting Criteria

Event reporting requirements are for the company are outlined in the Canada Event Reporting Guide located on the Governance Document Library (GDL).

The guide includes verbal and written reporting. Verbal reports include immediate notification to appropriate internal departments, as well as external reporting to federal/provincial/municipal agencies on provincially and federally regulated lines.

3.4 Government Contacts

Calls should be made to **911** for all on-site emergency situations. The numbers listed in this table are not designed for any emergency related type of calls but for administrative calls only (i.e.: notifications, information, …).

Name	Prov	Phone	Phone 2	Fax
Categories: 1. Ontario Emergency Services				
Ambulance		911		
Fire Department		911		
Ontario Provincial Police (OPP)		911	(888) 310-1122	
Bluewater Health	ON	(519) 464-4400		(519) 464-4407
Brampton Civic Hospital	ON	(905) 494-2120	(416) 494-2120	
Brantford General Hospital	ON	(519) 751-5544		
Brockville General Hospital	ON	(613) 345-5649		
Cambridge Memorial Hospital	ON	(519) 621-2330		(519) 740-4938
Charlotte Eleanor Englehart Hospital of Bluewater Health	ON	(519) 882-4325		(519) 882-3711
Cornwall Community Hospital	ON	(613) 938-4240		(613) 930-4502
Emergency Management Ontario	ON	1-866-314-0472		
Fire Marshall (OFM)	ON	(647) 329-1200		
Glengarry Memorial Hospital	ON	(613) 525-2222		
GO Transit Control Centre (GTCC)	ON	(416) 601-2174	(888) 438-6646	
Great Lakes St. Lawrence Seaway Systems	ON	(613) 932-5170		
Hamilton General Hospital	ON	(905) 521-2100		

Name	Prov	Phone	Phone 2	Fax
Hawkesbury & District General Hospital	ON	(613) 632-1111		
Kingston General Hospital	ON	(613) 549-6666	(613) 548-3232	
Lakeridge Health	ON	(905) 576-8711		
London Health Sciences Centre	ON	(519) 685-8500	(519) 685-8380	
Ministry of Community Safety and Correctional Services (MCSCS)	ON	(416) 326-5060	(866) 517-0571	(416) 326-0498
Ministry of Environment and Climate Change (MOECC), Spills Action Centre (SAC)	ON	(800) 268-6060	(416) 325-3000	(416) 314-6713
Ministry of Natural Resources (MNR)	ON	(866) 898-7372	(800) 667-1940	
Niagara Health System (St. Catharines)	ON	(905) 378-4647		
Niagara Health System (Welland)	ON	(905) 378-4647		
Norfolk General Hospital	ON	(519) 426-0130		(519) 429-6998
North York General Hospital	ON	(416) 756-6000		
St. Marys General Hospital (Kitchener)	ON	(519) 744-3311		(519) 749-6426
Toronto General Hospital	ON	(416) 340-3131		
Trillium Health Centre	ON	(905) 848-7100		
Woodstock General Hospital	ON	(519) 421-4211		
Categories: 2. Lead Ontario Agencies				
Aamjiwnaang First Nation	ON	(519) 336-8410		(519) 336-0382
City of Belleville	ON	(613) 968-6481		
City of Burlington	ON	(905) 335-7600	(905) 335-7777	
City of Hamilton	ON	(905) 546-2489		
City of Kingston	ON	(613) 546-1181	(613) 546-0000	

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Name	Prov	Phone	Phone 2	Fax
City of Mississauga	ON	(905) 615-4311		(905) 615-4081
City of Niagara Falls	ON	(905) 356-7521		
City of Oshawa	ON	(905) 436-3311	(800) 667-4292	(905) 436-5642
City of Pickering	ON	(905) 683-7575	(866) 683-2760	(905) 420-6064
City of Quinte West	ON	(613) 392-2841	(866) 485-2841	
City of Sarnia	ON	(519) 332-0330		(519) 332-3995
City of Thorold	ON	(905) 227-6613		(905) 227-5590
City of Toronto	ON	(416) 392-2489		
City of Welland	ON	(905) 735-1700		(905) 732-1919
Ministry of Health and Long Term Care (MOHLTC)	ON	(866) 797-0000	(866) 532-3161	
Ministry of Labour (MOL)	ON	(877) 202-0008		
Ministry of Transportation (MTO)	ON	(519) 873-4100	(416) 327-9200	
Municipality of Clarington	ON	(905) 623-3379	(800) 563-1195	
Municipality of Middlesex Centre	ON	(519) 666-0190	(800) 220-8968	
Municipality of North Middlesex	ON	(519) 294-6244	(888) 793-9637	(519) 294-0573
Municipality of Port Hope	ON	(905) 753-2230		(905) 753-2434
Municipality of Thames Centre	ON	(519) 268-7334	(866) 425-7306	(519) 268-3928
Ontario Power Generation River Control (International Control Dam)	ON	(905) 357-6700	(905) 357-6702	
Technical Standards & Safety Authority (TSSA)	ON	(877) 682-8772	(416) 734-3300	
Town of Ajax	ON	(905) 683-4550	(905) 619-2529	
Town of Brighton	ON	(613) 475-0670		(613) 475-3453
Town of Greater Napanee	ON	(613) 354-3351		(613) 354-6545

Name	Prov	Phone	Phone 2	Fax
Town of Milton	ON	(905) 878-7252		(905) 878-6995
Town of Oakville	ON	(905) 845-6601		(905) 815-2025
Town of Pelham	ON	(905) 892-2607	(866) 271-0391	(905) 892-5055
Town of Plympton-Wyoming	ON	(519) 845-3939	(877) 313-3939	(519) 845-0597
Town of Whitby	ON	(905) 668-5803	(905) 430-4300	
Township of Adelaide Metcalfe	ON	(519) 247-3687	(866) 525-8878	(519) 247-3411
Township of Alnwick Haldimand	ON	(905) 349-2822		(905) 349-3529
Township of Augusta	ON	(613) 925-4231		(613) 925-3499
Township of Blandford-Blenheim	ON	(519) 463-5347		(519) 463-5881
Township of Cramahe	ON	(905) 355-2821	(877) 272-4263	(905) 355-2821
Township of East Zorra-Tavistock	ON	(519) 462-2697		(519) 462-2961
Township of Edwardsburgh Cardinal	ON	(613) 658-3055	(866) 848-9099	(613) 658-3445
Township of Elizabethtown-Kitley	ON	(613) 345-7480		(613) 345-7235
Township of Front of Yonge (Mallorytown)	ON	(613) 923-2251		(613) 923-2421
Township of Hamilton	ON	(905) 342-2810		(905) 342-2818
Township of Leeds and the Thousand Islands	ON	(613) 659-2415	(866) 220-2327	(613) 659-3619
Township of Loyalist	ON	(613) 389-3648		
Township of North Dumfries	ON	(519) 632-8800		(519) 632-8700
Township of South Dundas	ON	(613) 543-2673	(800) 265-0619	(613) 543-1076
Township of South Glengarry	ON	(613) 347-1166		(613) 347-3411
Township of South Stormont	ON	(613) 534-8889	(800) 265-3915	(613) 534-2280
Township of St. Clair	ON	(519) 867-2021	(800) 809-0301	
Township of Tyendinaga	ON	(613) 396-1944		(613) 396-2080

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Name	Prov	Phone	Phone 2	Fax
Township of Warwick	ON	(226) 848-3926		(226) 848-6136
Township of West Lincoln	ON	(905) 957-3346		(905) 957-3219
Township of Zorra	ON	(519) 485-2490	(888) 699-3868	(519) 485-2520
Workplace Safety and Insurance Board (WSIB)	ON	(800) 387-0750	(416) 344-1000	
Categories: 3. Lead Quebec Agencies				
Bureau of Rivière-Des-Prairies	QC	311	(514) 872-0311	
Le Ministère – Urgence Environnement	QC	(866) 694-5454		
Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST)	QC	(866) 302-2778	(844) 838-0808	
Ministère du Travail, de l'Emploi et de la Solidarité Sociale	QC	(877) 767-8773	(514) 873-4000	
Ministère de la Santé et des Services Sociaux	QC	(514) 644-4545	(877) 644-4545	
Ministère de la Sécurité Publique	QC	(866) 650-1666	(866) 776-8345	
Ministère du Développement durable, de l'Environnement, de la Lutte Contre…	QC	(800) 561-1616		
Ministère de l'Énergie et des Ressources Naturelles	QC	(866) 248-6936		
Montreal General Hospital	QC	(514) 934-1934		
Municipalité de Pointe-Fortune	QC	(450) 451-5178		(450) 451-4649
Municipalité de Saint-André-d'Argenteuil	QC	(450) 537-3527		(450) 537-3070
Municipalité de Très-Saint-Rédempteur	QC	(450) 451-5203		(450) 451-8894
Municipalité de Saint-Placide	QC	(450) 258-2305	(514) 230-8221	(450) 258-3059
Garde Côtière du Canada-(Secteur Québec)	QC	(800) 363-4735	(418) 648-4557	
Municipalité de Sainte-Justine-de-Newton	QC	(450) 764-3573		(450) 764-3180
Sûreté du Québec	QC	(514) 598-4141		

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Name	Prov	Phone	Phone 2	Fax
Transportation of Dangerous Goods	QC ON	911		
Transports Quebec	QC	(888) 355-0511		
Ville de Laval	QC	(450) 978-8000		(450) 978-6569
Ville de Mirabel	QC	(450) 475-8653		(450) 475-7195
Ville de Montreal	QC	(514) 872-0311		
Ville de Montreal-Est	QC	(514) 905-2000		(514) 645-7485
Ville de Rigaud	QC	(450) 451-0869		(450) 451-4227
Ville de Sainte-Anne-des-Plaines	QC	(450) 478-0211		(450) 478-5660
Ville de Terrebonne	QC	(450) 961-2001		(450) 471-4482
Categories: 4. Lead Federal Agencies				
Régie de l'Énergie du Canada – Canadian Energy Regulator	AB	(403) 292-4800	(800) 899-1265	(403) 292-5503
Ducks Unlimited	MB	(800) 665-3825		(204) 467-9028
NAV Canada (London)	ON	(866) 992-7433		
Canadian Coast Guard (Ontario)	ON	(613) 925-4471	(613) 925-0666	(613) 925-4519
Environment and Climate Change Canada	ON	(800) 668-6767	(613) 949-8259	
CANUTEC	ON	(888) 226-8832	(613) 996-6666	
Environmental emergency Canada	ON	(866) 283-2333		
Fisheries and Oceans Canada (Burlington)	ON	(905) 336-6240		
Fisheries and Oceans Canada- Pêches et Océans Canada (General)	QC	(418) 648-2239		
Fisheries and Oceans Canada (Peterborough)	ON	(705) 750-0269		

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Name	Prov	Phone	Phone 2	Fax
Fisheries and Oceans Canada (Prescott)	ON	(613) 925-2865		
Fisheries and Oceans Canada (Sarnia)	ON	(866) 290-3731		
Health Canada	ON	(613) 957-2991	(866) 225-0709	(613) 941-5366
Human Resources and Skills Development Canada – Service Canada	ON	(800) 622-6232		
Canadian Wildlife Service	QC	(800) 668-6767	(613) 949-8259	
Énergir	QC	(800) 361-8003		
Hydro-Québec	QC	(514) 385-7252	(888) 385-7252	
Transportation Safety Board of Canada–Bureau de la sécurité des transports du Canada	QC	(819) 997-7887	(800) 387-3557	(819) 997-2239
Categories: 5. Support Services				
BASES - Bluewater Association for Safety, Environment and Sustainability (previously known as CAER)	ON	(519) 383-1222		
David Brown Construction Ltd	ON	(613) 537-2255		(613) 537-8561
Eastern Canada Response Corporation (ECRC)	ON	(613) 230-7369		(613) 230-7344
Quantum Murray	ON	(800) 251-7773		
EVOS Pipeline Services	QC	(514) 316-8977		(514) 313-5525
Categories: 6. BASES fka. CAER				
Arlanxeo Canada Inc	ON	(519) 337-8251		
BASES	ON	(519) 383-1222		
CF Industries	ON	(519) 867-2739		
City of Sarnia	ON	(519) 332-0330		
Enbridge Pipelines	ON	(877) 969-0999	(877) 420-8800	

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Name	Prov	Phone	Phone 2	Fax
Imperial Oil	ON	(780) 784-3405	(519) 339-2000	
Nova Chemicals	ON	(519) 862-2911	(844) 346-3202	
Village of Point Edward	ON	(519) 337-3021		
Shell Canada	ON	(519) 481-1100	(800) 661-7378	
St. Clair Township	ON	(519) 481-0111		
Suncor Energy	ON	(519) 337-2301	(403) 296-3000	
Categories: 7. Quebec Emergency Services				
Ambulance/Pompier/Police		911		
Hôpital de Rivière-Des-Prairies	QC	(514) 323-7260		(514) 323-8622
Centre Hospitalié d'Argenteuil	QC	(450) 562-3761		
Sûreté du Québec - Municipalité de Saint-André-d'Argenteuil	QC	(450) 562-2442	(800) 565-0911	
Municipalité de Saint-André-d'Argenteuil	QC	(450) 537-3527	(450) 562-2442	(450) 537-3070
Sûreté du Québec Vaudreuil- Municipalité de Très-Saint-Rédempteur	QC	(450) 456-3883		(450) 456-3804
Municipalité de Sainte-Marthe	QC	(450) 459-4284		(450) 459-4627
Sureté du Québec Oka - Municipalité de Saint-Placide	QC	(450) 479-1313		
Municipalité de Saint-Placide	QC	(450) 258-2305	(514) 230-8221	(450) 258-3059
Police – Saint-Eustache	QC	911	(450) 974-5300	
Hôpital du Suroît - Sainte Justine de Newton	QC	(450) 371-9920		
Sûreté du Québec Vaudreuil - Sainte Justine de Newton	QC	(450) 456-3883		(450) 456-3804
Sécurité Incendie de Sainte Justine de Newton	QC	(450) 802-0772		
Service de police de Laval	QC	(450) 662-4242		

Name	Prov	Phone	Phone 2	Fax
Caserne de pompiers Ville de Laval	QC	(450) 662-4450		
Hôpital régional de Saint-Jérôme - Mirabel	QC	(450) 432-2777		
Service de police de Mirabel	QC	(450) 475-7708		
Hôpital de Saint-Eustache - Mirabel	QC	(450) 473-6811		
Service de la Sécurité Incendie Mirabel	QC	(450) 475-2010		
Service de Police du Grand Montréal	QC	(514) 280-2222		
Ville de Montreal	QC	311	(514) 872-3142	(514) 872-5655
Hôpital Maisonneuve-Rosemont - Montréal-Est	QC	(514) 252-3400	(800) 634-3400	
Service Incendie - Ville de Rigaud	QC	(450) 451-0869		(450) 451-4227
Service d'Incendie de Sainte-Anne-des-Plaines	QC	(450) 478-2520		
Hôpital de la Cité-de-la-Santé - Ville de Sainte-Anne-Des-Plaines	QC	(450) 668-1010		
Service de Police Sainte-Anne-Des-Plaines	QC	(450) 471-4121		
Service de Police Terrebonne	QC	(450) 471-4121		
Hôpital Pierre-Le Gardeur - Terrebonne	QC	(450) 654-7525		

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ONTARIO ONECALL
1-800-400-2255

SARNIA-LAMBTON PIPELINE EMERGENCY CONTACT LIST

Rev. No.: 65
Rev. Date: June 2024

COMPANY / OWNER	CONTACT	CONTACT PHONE NO.	CONTACT EMAIL ADDRESS	EMERGENCY PHONE NO.
Air Products Canada Ltd.	[redacted]	[redacted]	[redacted]	519-332-6193
ARLANXEO Canada Inc.	[redacted]	[redacted]	[redacted]	519-337-8251 x 4272
Cabot Corporation	[redacted]	[redacted]	[redacted]	519-312-0681
	[redacted]	[redacted]	[redacted]	519-331-2907
DOW Canada c/o MIG Engineering	[redacted]	[redacted]	[redacted]	519-466-5676
Enbridge Pipelines Inc.	[redacted]	[redacted]	[redacted]	1-877-420-8800
	[redacted]	[redacted]	[redacted]	1-877-969-0999
Enbridge Gas Inc.	[redacted]	[redacted]	[redacted]	519-862-1473
	[redacted]	[redacted]	[redacted]	1-800-265-5260
	[redacted]	[redacted]	[redacted]	1-877-969-0999
Imperial Oil Prod. Div.	[redacted]	[redacted]	[redacted]	519-339-5666
Imperial Oil	[redacted]	[redacted]	[redacted]	
Canada Fuels Operations	[redacted]	[redacted]	[redacted]	1-800-372-9597
Imperial's Sarnia Products Pipeline (SPPL)	[redacted]	[redacted]	[redacted]	
INEOS Styrolution Canada Ltd.	[redacted]	[redacted]	[redacted]	226-784-3117
Lagasco Inc.	[redacted]	[redacted]	[redacted]	1-877-590-1990
NOVA Chemicals Corporation (Incl. Genesis Pipeline Canada Ltd.)	[redacted]	[redacted]	[redacted]	519-862-2002
Plains Midstream Canada	[redacted]	[redacted]	[redacted]	1-800-265-1423
Pembina Pipelines Corporation	[redacted]	[redacted]	[redacted]	519-862-3561
Linde Canada Inc.	[redacted]	[redacted]	[redacted]	519-332-1311 x 0
Shell Canada	[redacted]	[redacted]	[redacted]	519-862-2822
St. Clair Energy / Invenergy	[redacted]	[redacted]	[redacted]	519-862-5900 x 2227
Sun Canadian Pipe Line	[redacted]	[redacted]	[redacted]	1-800-263-6641
Suncor Energy	[redacted]	[redacted]	[redacted]	519-383-3640
Suncor - St. Clair Ethanol Plant	[redacted]	[redacted]	[redacted]	519-481-0552
Sunoco Logistics c/o LamSar Inc.	[redacted]	[redacted]	[redacted]	519-332-5010 x 6
CF Industries	[redacted]	[redacted]	[redacted]	519-867-2739 x 8
TC Energy	[redacted]	[redacted]	[redacted]	
Subsidiary, Great Lakes Pipeline Canada	[redacted]	[redacted]	[redacted]	1-888-982-7222

Prepared By:
MIGENGINEERING
[redacted]

4.0 RESPONSE ZONE DESCRIPTION (INFORMATION SUMMARY)

4.1 Eastern Region

Eastern Region is under Enbridge Pipelines, Inc. entity ownership. The pipelines traverse from the U.S./Canada Border at the St. Clair River east to the Sarnia Terminal in Sarnia, Ontario. From Sarnia Terminal, lines continue east and terminate at Montréal Terminal in Montréal, Quebec.

Regional asset summary:

- Nine active pipelines, including 3 inactive pipeline segments
- Two inactive pipelines
- 25 tanks total; 17 located at Sarnia terminal and 8 tanks at Westover terminal

The tables below list the assets details within this region by pipeline, facilities, and tank terminals.

Table 1 - Pipeline Information

The Eastern Region includes 7 active and 2 inactive pipelines with approximately 1,345 miles of active pipeline, with pipe diameters ranging from 16 inches to 30 inches.

Line	Pipeline Section	Begin Lat	Begin Long	End Lat	End Long	Diameter	Length (km)	Product
05	St Clair River Border Crossing to Sarnia Terminal	42.9	-82.4	42.9	-82.3	30	11.55	NGL / CO
07	Sarnia Terminal to Westover Terminal **North Westover to Bronte Junction* ***is Inactive***	42.9	-82.3	43.3	-80.0	20	194	CO
08	Sarnia Terminal to Millgrove Junction Take-Off **Millgrove Junction to Bronte Junction Segment* ***is Inactive***	42.9	-82.3	43.3	-79.8	20	210	CO
09	Sarnia Terminal to North Westover Station	42.9	-82.3	43.3	-80.0	30	193	CO
09	North Westover Station to Hilton Station	43.3	-80.0	44.0	-77.8	30	217.3	CO
09	Hilton Station to Cardinal Station	44.0	-77.8	44.8	-75.4	30	216	CO

Line	Pipeline Section	Begin Lat	Begin Long	End Lat	End Long	Diameter	Length (km)	Product
09	Cardinal Station to Montreal Terminal	44.8	-75.4	45.6	-73.5	30	206.1	CO
11	Westover Terminal to Nanticoke Junction Take-Off	43.3	-80.0	43.1	-79.8	20	32.76	CO
11	Nanticoke Junction Take-Off to Nanticoke	43.1	-79.8	42.8	-80.0	16	42.2	CO
78	St Clair River Border Crossing to Sarnia Terminal	42.9	-82.4	42.9	-82.3	30	11.75	CO
95	Sarnia Terminal to Shell Take-Off	42.9	-82.3	42.9	-82.4	20	9.683	CO
12	Clarkson Terminal to Bronte Terminal - ***Inactive***	43.4	-79.7	43.3	-79.7	16		NF
22	Clarkson Lateral - ***Inactive***	43.5	-79.7	43.5	-79.6	24		NF

Note: All the lines listed above are CER regu

CO = Crude Oil
NGL = Natural Gas Liquid
NF = Nitrogen Filled

Table 2 - Terminal/Station Information

The Eastern Region has 3 terminals, 2 with storage tankage, 6 stations, and a number of other facilities along the pipeline system.

Site	Call Sign	Lat	Long	Prov	County	Lines Serviced
Terminal						
Montreal	[redacted]	45.6[redacted]	-73.5[redacted]	QC	Montréal-Est	9
Sarnia		42.9[redacted]	-82.3[redacted]	ON	Sarnia	5, 7, 78, 8, 9, 95
Westover		43.3[redacted]	-80.0[redacted]	ON	Hamilton	7, 9, 11
Station						
Bryanston		43.1[redacted]	-81.2[redacted]	ON	Thames Centre	7, 8, 9
Cardinal		44.8[redacted]	-75.4[redacted]	ON	Edwardsburgh / Cardinal	9
Hilton		44.0[redacted]	-77.8[redacted]	ON	Cramahe	9
Keyser		43.0[redacted]	-81.7[redacted]	ON	Adelaide-Metcalfe	7, 8, 9
Terrebonne		45.7[redacted]	-73.7[redacted]	QC	Montréal-Est	9
North Westover		43.3[redacted]	-80.0[redacted]	ON	Hamilton	7, 8, 9
Take-Off						
Millgrove Junction		43.3[redacted]	-79.8[redacted]	ON	Hamilton	8
Nanticoke		42.8[redacted]	-80.0[redacted]	ON	Haldimand County	11
Nanticoke Junction		43.1[redacted]	-79.8[redacted]	ON	Hamilton	11
Nova / St. Clair		42.9[redacted]	-82.4[redacted]	ON	Lambton	5, 78, 95
Shell / St. Clair		42.9[redacted]	-82.4[redacted]	ON	Lambton	5, 78, 95
Suncor / St. Clair		42.9[redacted]	-82.4[redacted]	SK	Lambton	5, 78, 95

Table 3 – Tank Table

Tank No.	Location	Date Built	Total Volume (bbl)	Total Barrel Capacity at Terminal
301-TK-220	**Westover** [redacted]	1961	81,000	921,000
301-TK-221		1961	81,000	
301-TK-222		1967	128,000	
301-TK-223		1969	96,000	
301-TK-224		1977	101,000	
301-TK-225		1977	101,000	
301-TK-226		1994	165,000	
301-TK-227		1998	168,000	
301-TK-201	**Sarnia** [redacted]	1957	120,000	3,141,000
301-TK-202		1957	120,000	
301-TK-203		1957	120,000	
301-TK-204		1957	120,000	
302-TK-205		1961	151,000	
302-TK-206		1963	120,000	
302-TK-207		1965	151,000	
302-TK-208		1967	160,000	
302-TK-209		1968	158,000	

Tank No.	Location	Date Built	Total Volume (bbl)	Total Barrel Capacity at Terminal
302-TK-210		1971	158,000	
302-TK-211		1972	158,000	
303-TK-212		1976	209,000	
303-TK-213		1976	209,000	
303-TK-214		1973	158,000	
303-TK-215		1979	410,000	
303-TK-216		1978	410,000	
303-TK-218		1975	209,000	
Total Capacity:	**Eastern Region**			**4,062,000**

5.0 SPILL / SITE ASSESSMENT / PRODUCT INFORMATION

The primary purpose of a site assessment is to evaluate the presence of risk to both event responders and the public. However, if it is safe to do so, information about the event should be gathered as quicklyas possible in order to evaluate the situation and develop an initial action plan.

When conducting the site assessment, note the following:

- Identify and evaluate the immediate risks to and impacts on the environment, human health,and infrastructure
- Classify the spill according to the following factors:
  - Substance spilled
  - Quantity of the substance spilled
- The location and circumstances of the spill
- Assess:
  - What is to be done to protect the safety of response personnel and the public
  - Whether or not an evacuation is necessary

5.1 Hazardous Product – Site Assessment

A description of some conditions that should be watched for during a site inspection of the surface is provided below:

5.1.1 Crude Oil Leaks

All leak sites should always be approached upwind, uphill and/or upstream, following company guidelines to ensure personal safety.

- Oil releases will generally be very dark in color and not translucent
- Very defined edges of the oil patch when on soil
- Many crude oils will have a strong odor; those with 'sour' designation will have an H2S or 'rotten egg' smell
- If the leak migrates to a water body, the surface will have a shiny, rainbow-like appearance
- Leaks can migrate underground along fissures, faults, and along the pipeline, therefore, may not be observed directly over the line
- Dead and dying vegetation may be present where the leak is older than one day

5.1.2 NGL Leaks

All leak sites should always be approached upwind, uphill and/or upstream, following company guidelines to ensure personal safety.

- NGL requires heat to vaporize and, as a result, will have a refrigeration effect on the surrounding environment as it turns from liquid to a vapor
- Any atmospheric water vapor will be condensed producing a fog-like cloud in the area.
- There may be an ice dam built up around the leak, and ice built up on exposed pipe
- Yellow-stained snow may indicate NGL accumulation under the snow
- In windless conditions, NGL vapor is heavier than air and the vapor cloud may be visible close to the ground
- The cloud will also collect in depressions and/or follow low spots of the ground contour
- In windy conditions, the cloud will tend to dissipate and to be pushed further away
- NGL liquid has a slight odor of gasoline. Odorant is not added to the material
- Dead and dying vegetation may be present where the leak is older than one day
- Brown vegetation indicates soil saturation

5.1.3 Refined Products and Condensates

All leak sites should always be approached upwind, uphill and/or upstream, following company guidelines to ensure personal safety.

- Translucent appearance
- On water, the material will have a similar appearance to crude.
- The odor will be that of whatever product is in the line at the time (i.e., gasoline, diesel, JetB)
- Vegetation will be dead or dying

5.1.4 Natural Gas

All leak sites should always be approached upwind, uphill and/or upstream, following company guidelines to ensure personal safety.

- It is lighter than air; therefore, the vapor will rise
- If a rupture takes place at the time of the leak, there will likely be a crater at the leak site along with pieces of pipe strewn throughout the area. If ignition takes place, a large fireball will initially be seen followed by a prolonged burn
- If in water, either bubbles or mist spray will be present. Ignition is also possible in this situation
- Loose soil may result in a dust cloud being present
- Natural gas is not odorized until it gets close to the consuming public. Therefore, it may not have an odor to it

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5.2 Site Assessment Checklist

Site Assessment Checklist	
☐	Conduct air monitoring (refer to the LP Safety Standards for Gas Monitor Alarm Set Points)
☐	Complete safe work permit
☐	Remove all non-intrinsically safe equipment (radio's etc.)
☐	Maintain regular communications with the control Centre
☐	Obtain information regarding the situation
☐	Establish communications procedures
☐	Don appropriate PPE
☐	Refer to SDS
☐	Determine wind speed and direction
☐	Determine current direction
☐	Approach spill from upwind, uphill and/or upstream, / up current if possible

In case of Natural Gas Liquids (NGL) release	
☐	Follow the site assessment checklist in the previous table
	Assess the site for potential impacts:
☐	Electrical lines down or overhead
☐	Unidentified visible liquid or solid products.
☐	Visible vapors
☐	Odors or breathing hazards

☐	Fire, sparks or other ignition sources
☐	Holes, caverns, deep ditches, fast water or steep slopes nearby
☐	Local traffic
☐	Ground conditions (dry, wet or icy)
	Control ignition sources:
☐	Smoking or open flames,
☐	Vehicles or garage door openers
☐	Doorbells or burglar alarms
☐	Telephones or pagers
☐	Light Switches or flashlights
☐	Heating system or internal combustion engines and motors

5.3 Event Details Checklist

Event Details Checklist	
☐	Assess safety of personnel, determine if there are injured
☐	Determine source of release
☐	Determine if source is isolated, if not, isolate. Close all valves
☐	Estimate spill volume
☐	Determine if the product has or will reach the water
☐	Determine if the product has escaped local containment
☐	If required, evacuate personnel

5.4 On-Water Spill Surveillance

The following guidelines should assist in spill surveillance:

- Spill surveillance should begin as soon as possible to aid response personnel with assessing spill size, movement, and potential impact locations
- Cloud shadows, sediment, floating organic matter, submerged sand banks, or wind-induced patterns on the water may resemble an oil slick if viewed from a distance
- It is difficult to adequately observe oil on the water from a boat, dock, or shoreline
- Spill surveillance is best accomplished using helicopters or small planes
- Helicopters are preferred due to their superior visibility and maneuverability characteristics
- If fixed-wing planes are used, high wing types provide better visibility than low-wing types
- Flights should minimize impact to wildlife where possible
- Document all observations in writing and with photographs and/or videotapes
- Describe the approximate oil slick dimensions based on available reference points (i.e., vessel, shoreline features, facilities, etc.).
- Use aircraft or vessel (if safe to do so) to traverse the length and width of the slick while timing each pass.
- Calculate the approximate size and area of the slick by multiplying speed and time
- Record aerial observations on detailed maps
- In the event of reduced visibility, such as dense fog or cloud cover, boats may be used for patrols and documenting the location and movements of the spill

- Boats will only be used if safe conditions are present, including on-scene weather and product characteristics
- Surveillance is also required during spill response operations to gauge effectiveness of response operations, to assist in locating skimmers and to continually assess size, movement, and impact of spill

5.5 Spill Volume Estimation

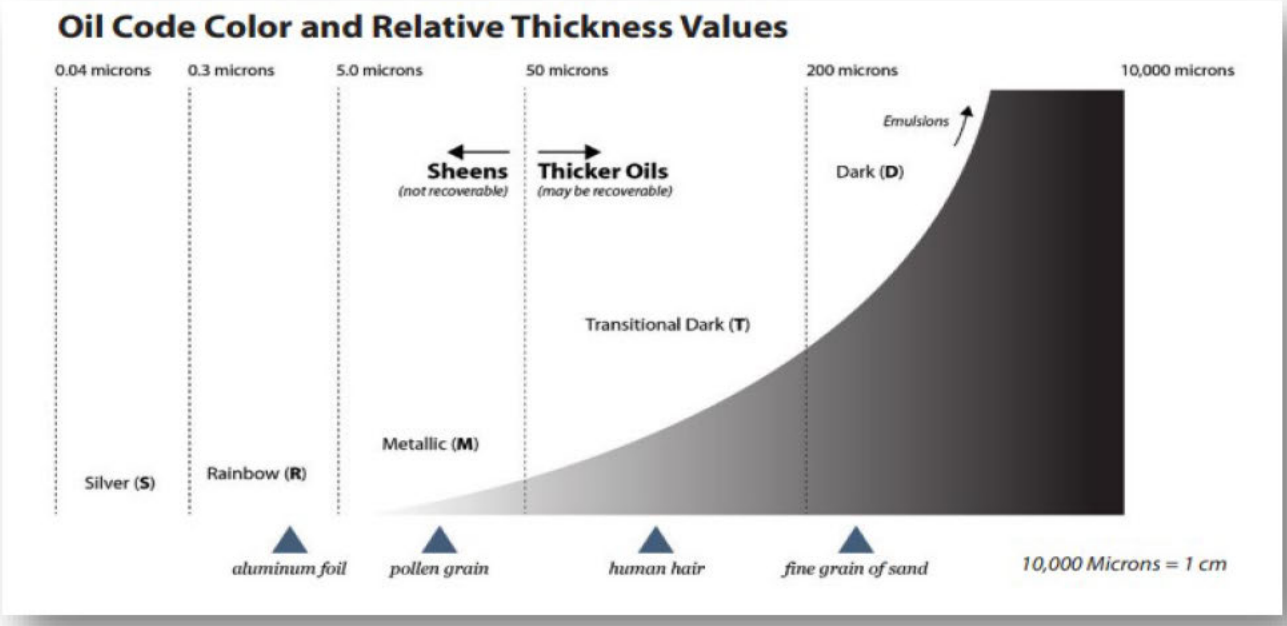
Early along in the response, estimation of spill volume is required to:

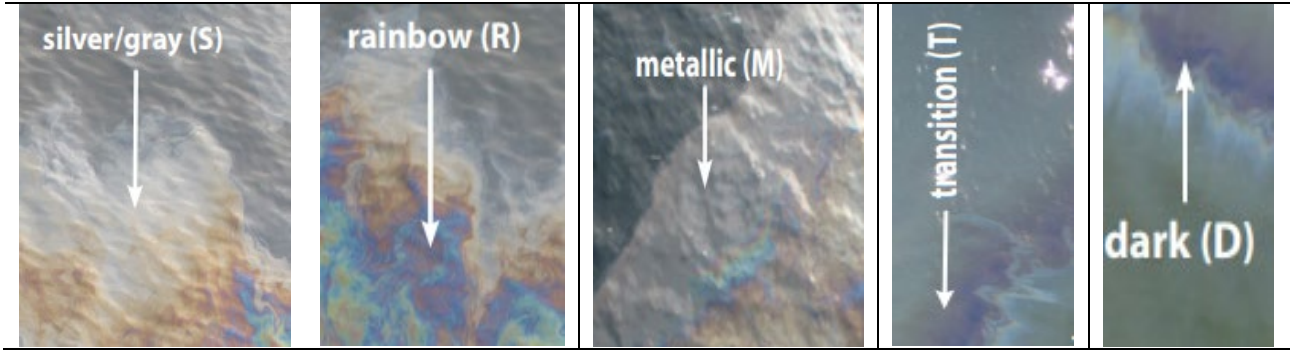
- Report to agencies
- Determine liquid recovery and containment requirements
- Determine disposal and interim storage requirements
- In the event that actual spill volumes are not available, it may be necessary to estimate volume

Visual assessment of the surface area and thickness (note that this method may yield unreliable results):

- Interpretation of sheen color varies with different observers
- Appearance of a slick varies depending upon amount of available sunlight, sea-state/turbulence, and viewing angle
- Different products may behave differently, depending upon their properties

Oil volumes can be estimated by multiplying the area of the slick by the average estimated thickness. The following chart applies when the oil is on water. In the case of an impoundment area the spill can be estimated by multiplying the thickness by the area covered.


Oil Code Color and Relative Thickness Values
0.04 microns
0.3 microns
5.0 microns
50 microns
200 microns
10,000 microns
Emulsions
Sheens
(not recoverable)
Thicker Oils
(may be recoverable)
Dark (D)
Transitional Dark (T)
Metallic (M)
Silver (S)
Rainbow (R)
aluminum foil
pollen grain
human hair
fine grain of sand
10,000 Microns = 1 cm



*Graphics are from NOAA's Open Water Oil Identification Job Aid

Volume calculations for surface spill, pipeline calculator and dispersant can be done online by visiting The Response Group website https://www.responsegroupinc.com/pipeline-volume-calculator.

5.6 Methods for Estimating Spill Size

Inventory Estimate	If available, information provided from the control center can be used to provide an initial estimate of the spill volume. The volume should match the change in a cutoff inventory measurement
Tanks	If the leak source can be isolated to a tank, an initial leak volume estimate can be determined as: • Volume = change in height of the tank x the volume per inch as found on the tanks strapping table An initial release volume can be calculated as: • Volume = (mainline flow rate x time to isolate) + volume of drain-up from the release site • See OMM Book 3: 06-02-15 Drainup and Linefill for the calculation The volume release estimate can be verified by the mismatch in injection and delivery flow meters of tank volume change. In systems monitored by a leak detection system (LDS), imbalances or estimates reported by the LDS may be useful for estimating spill volumes
Land	The following is a list of possible tools that can assist with determining a spill volume on land • Transportation Spill to Land Estimation Tool • SCADA (Control Center calculation) • Tank Data Program In systems monitored by a leak detection system (LDS), imbalances or estimates reported by the LDS may be useful for estimating spill volumes
Leak on Land – Field Measurement	To estimate the volume of a spill in a field location, the spill is segmented to a summation of area calculations. The volume of each area is calculated as the length x the width x the depth: • 1 m3 = 6.29 bbls - 1 ft3 = 0.178 bbls • 1 in = 0.0254 meter - 1inch = 0.0833 ft

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	Length and width should include any soil staining in addition to areas where free product is observed. Depth estimates should consider the following: • Estimate depth of free product penetrating surface as well as depth of staining in soil • Estimate depth of free product sitting on top of the surface at the location where this appears to be deepest • Depth for free product and staining in soil should be taken at a location nearest to the release point • Total depth used for volume estimates should include all depth estimates

Oil Thickness Estimation Chart

Appearance	Approximate Quantity of Oil in Film	
	Inches in Thickness	Gallons/mile2
Barely visible	0.000002	25
Silvery	0.000003	50
Trace of Colors	0.000004	100
Bright Colors	0.00001	200
Dull Colors	0.00004	666
Dark Colors	0.0001	1,332
Thickness of light oils: 0.0010 inches to 0.00010 inches		
Thickness of heavy oils: 0.10 inches to 0.010 inches		

5.7 Spill Volume Estimates Checklist

The following checklist is used with hard to quantify leak volume identified in the field:

Volume Estimates Checklist	
☐	Leak with hard to quantify volume identified in the field
☐	Is volume estimate available from leak detection system? • If yes, estimate using imbalances reported by leak detection system • If no, estimate using SCADA and metering info
☐	Can volume be estimated using pipeline hydraulic calculations combined with SCADA data • If yes, estimate using pipeline hydraulic calculations • If no, conduct Environmental Assessment
☐	Can the potential for product migration into the subsurface be ruled out? • If yes, is the release primarily in the form of pooled product on the surface? • If no, consult with internal departments (Control Center, Measurement Operations, Environment) to determine potential spill parameters
☐	Can volume be estimated with reasonable uncertainty using operational data? • If yes, review estimate with Regional Management and internal stakeholders • If no, conduct Environmental Site Assessment to facilitate volume estimation
☐	Conduct Environmental Site Assessment to facilitate volume estimation • Review volume estimate for reasonableness

Volume Estimates Checklist	
Note	• Estimates should take uncertainties (such as extent of subsurface contamination, duration of leak, etc.) into account • This checklist provides guidance but is not intended to exclude using multiple approaches to estimate spill volume • When multiple methods are available to estimate spill volume, they can be complementary and may together provide a better estimate of the possible spill volume than a single method • Make initial regulatory notifications as required using best available (qualify as preliminary estimate that requires further assessments) • Once more detailed volumes are estimated, conduct follow up notifications to regulatory agencies and other stakeholders, if required

5.8 Site Security and Control

Security is necessary to protect the public and responders, prevent any additional damage due to sabotage, protect the equipment, and eliminate congestion at the work site due to unauthorized personnel. If there is a security event, notify Enterprise Security.

The priority of all Enbridge personnel in any emergency is protecting the public and responders. The public will be prevented access to an emergency site while there is any danger of explosion, fire, hazardous vapors, or other hazardous condition.

Security measures need to be established early in the event to provide the following:

- Protect personnel from loss or damage and protect assets
- Ensure the safety of the public
- Establish a perimeter (zone of safety) around the site
- Ensure the public does not interfere with response and clean-up operations
- Ensure access for personnel and equipment to the access point, staging area and Incident Command Post

[redacted]

[redacted]

5.9 Setting Up 'On-Site' Work Areas

Set up an Incident Command Post, Staging Areas, and Decontamination Stations as necessary for the circumstances.

5.9.1 Protective Zones

Establish initial control perimeters based on the following guidelines:

Protective Zones	To minimize spreading contamination from an emergency site to unaffected areas, the Safety Officer should record protective zones (see Figure 1) on the ICS 201-5 Site Safety and Control Form. Protective zones should identify, the Hot Zone, Warm Zone, Cold Zone
Hot Zone	The hot zone is the release site or site of clean-up operations. Any area that requires respiratory protection should be within the boundary of a designated hot zone. Access to the hot zone is restricted to trained and properly equipped emergency response personnel only. Personnel not involved in emergency operations should be prevented from entering and escorted off the site if necessary
Warm Zone	The warm zone is a transition zone where equipment may be cleaned, and contaminated clothing removed, before leaving the site. Follow the established Decon plan. Appropriate PPE is required. Could initially be consider a containment area
Cold Zone	The cold zone is the largest zone and includes all areas not immediately involved in the emergency. Take all possible efforts to ensure contamination does not spread to this area. Air monitoring delineates the perimeter where air contaminants and combustible vapors cease to be detected. The cold zone should be established outside of this perimeter. Locate the Incident Command Post and staging area (pre-deployment staging area for equipment arriving on site) in the cold zone. For large events, ensure that the Incident Command Post is not positioned near the event

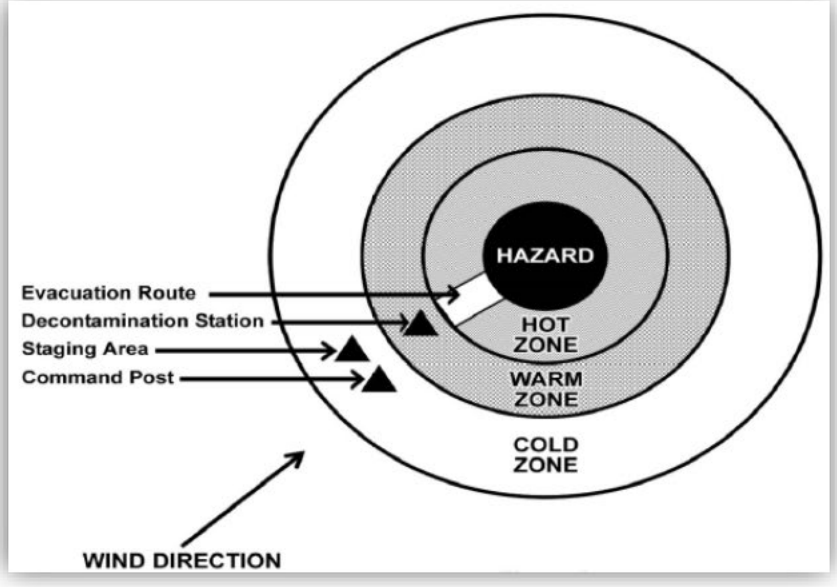

Figure 1: Protective Zones

5.9.2 Isolation Distance

The following table depicts safe distancing as recommended by the latest edition of the Emergency Response Guidebook (ERG), by the Department of Transportation, and Transport Canada. Reference to the latest edition of the Emergency Response Guidebook is further recommended to confirm safe distancing relative to the site-specific conditions.

Product	Guide No	ID No	Immediate Precautionary Evacuation Measure	Large Spill Evacuation	Evacuation in the Event of a Fire
Condensate (Diluent), Natural Gas, Butane, Ethane, Methane, Propane, Natural Gas Liquids	115	1971, 1011, 1075, 1035, 1978, 1971, 1075	100 meters (330 feet)	800 meters (½ mile)	1,600 meters (1 mile)
Naphthalene Crude	133	1334	25 meters (75 feet)	100 meters (330 feet)	800 meters (½ mile)
Petroleum Crude Oil, Petroleum products, Pentane, Hexane, Heptane, Octane, Nonane, Decane	128	1270, 1267, 1265,1268, 1208, 1206, 1262, 1920, 2247	50 meters (150 feet)	300 meters (1,000 feet)	800 meters (½ mile)
Petroleum sour crude oil, flammable, toxic	131	3494	60 meters (200 feet)	800 meters (½ mile)	800 meters (½ mile)
Benzene, Toluene, Xylene	130	1114, 1294, 1307	50 meters (150 feet)	300 meters (1,000 feet)	800 meters (½ mile)
Hydrogen Sulfide Gas	117	1053	100 meters (330 feet)	300 meters (1,000 feet)	1,600 meters (1 mile)

Consider the hazards associated with the hazard categories:

Flash Fire and Vapor Cloud Explosion	Should be considered potentially hazards in structurally condensed areas (heavy urban areas) especially under low wind, stable weather conditions
Pool Fires	Should be considered potential hazards in structurally condensed areas (heavy urban areas) especially if wind speed is high and ignition is delayed (product has pooled significantly). These hazards may result in a travelling flame front, damaging overpressure, or exposure to thermal radiation; therefore, responders should use the distances identified for “Evacuation in the Event of a Fire” even if no fire is present. In a full-bore rupture where there is a risk of Flash Fire or Vapor Cloud Explosion, these distances should be doubled.
Vapor Cloud Explosion	These distances should be doubled. • Additional conditions that should be considered when determining an evacuation zone include weather, full bore rupture, wind speed, overcast/clear sky and day/night • These substances may also present a Toxic Inhalation Hazard (TIH) and nighttime distances will defer from above

6.0 EVACUATION / SHELTER IN PLACE

6.1 Personnel Evacuation

Evacuation plans are located in the applicable facility. All evacuation directives will be communicated through an audible signal, either through voice by the designated Individual, or by the activation of an alarm system.

The evacuation plans provide guidance in the event of shutdown and evacuation.

- In case of an event, the facility operator will stop the flow of product by normal operating procedures
- All facility personnel should evacuate except for any individuals designated to remain on site (refer to the LP Safety Standards for further details)
- The Fire Department will be notified if there is a fire
- Arriving personnel, equipment and fire resources will be met at the main gate or muster point of the facility, unless deemed unsafe to do so
- Tactical deployment of arriving resources will depend on the current situation

Evacuation Checklist	
☐	Immediately stop work activities
☐	Check the wind direction
☐	Move upwind or cross wind
☐	Check the wind again
☐	Conduct a head count to account for all personnel known to be at the facility,
☐	Assist in alerting and escorting personnel, including visitors and contractors to the appropriate muster point
☐	Notify the Control Center
☐	Shut off running equipment if safe to do so
☐	Assist in hazard control activities as requested
☐	Check in at muster point for accountability
☐	Assist in search and rescue of missing persons
☐	Injured personnel will be transported to the nearest emergency medical facility. All other personnel will remain at the evacuation point until the "All Clear" signal is given.
Note:	Evacuation should be carried out in an orderly manner. Personnel should walk, NOT run or panic.

6.2 Community Evacuation

In planning an evacuation, the following should be considered:

- The size and expected duration of the release
- Egress routes
- Current and expected meteorological conditions
- The potential for unexpected ignition

A recommendation to evacuate should be made by a Qualified Individual/Incident Commander based on LEL monitors and or air quality monitoring. If public safety is impacted, carry out the following actions:

- Evacuation of the public should only proceed when it is safe to do so and ONLY in cooperation and coordination with Local Emergency Services as identified under community emergency response plans. The decision to evacuate is a community responsibility
- Support the evacuation and cover the cost of the response
- Evacuation is recommended for events in which the plume is visible, and egress can occur in any direction away from the plume

- If the public should be evacuated before external response agencies arrive or if these agencies are not available, the Incident Commander should take all steps necessary to ensure public protection (e.g., assigning Company employees to begin a door-to-door evacuation), then turn over these duties to community agencies as soon as possible
- Provide a clear recommendation to evacuate the public should the Company become aware of an immediate threat to life and safety that may not be under action by first responders
- Enbridge will serve only in an advisory capacity during an evacuation order and may assist with the logistics of an evacuation

6.3 Shelter in Place

Sheltering is the primary public protection measure for high vapor pressure products and when the hazard is of limited duration. This creates an indoor buffer to protect affected individuals from higher (more toxic) concentrations that may exist outdoors. The goal is to reduce the movement of air into and out of the building until either the hazard has passed, or other appropriate emergency actions can be taken (such as evacuation).

Sheltering indoors is a viable public protection measure in circumstances when:

- There is insufficient time or warning to safely evacuate the public
- Residents are waiting for evacuation assistance
- The release will be of a limited size and /or duration

- The location of the release has not been identified
- The public would be at a higher risk if evacuated
- Stopping traffic (e.g., on roads, rail lines, bridges), as required

For long-term releases, evacuation is preferred to sheltering if public safety can be assured during the evacuation process. Evacuation is a viable public protection measure in circumstances when:

- The location of the plume is known, and safe egress routes can be assured
- The release will not likely be contained in the near future
- Visibility and road conditions are good
- The residents clearly understand their directions
- Residents should also be evacuated during ongoing emergency flaring or burning if their health and safety could be affected by the operation

A natural gas release may be ignited at the source in order to reduce public exposure to the hazard. If an immediate threat to human life exists and there is not sufficient time to evacuate the hazard area the Incident Commander is authorized to ignite the release.

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7.0 RESPONSE OPERATIONS

7.1 Enbridge Response Management System

Enbridge's Emergency Response is structured to ensure that appropriate resources and support are deployed to suit the complexity and severity of the emergency, from the initial response through the duration of the event. Both tactical and strategic response and support have been considered. Depending on the scale and scope of the event, multiple teams will be activated.

Enterprise Crisis Management Team – Strategic (EXTERNAL TO Emergency Management Program)
As identified in the Enterprise Crisis Management Plan (external to this framework and Emergency Management Program): Responsible for "Actions taken away from the scene to support and assist the Incident Support Team and [Incident Management Team] in planning, business recovery projects and address the implications of the problem and its potential on the Company's viability, operability, and credibility"
LP Incident Support Team - Strategic
This is a team of pre-identified senior BU leaders and central function personnel capable of taking strategic actions at and/or away from the event scene to support the IMT, facilitate planning, and manage business recovery projects. The IST may be scaled appropriately to coordinate business upset conditions with or without an operational impact.

Incident Management Team – Tactical & Strategic (Regional)

A regionally based team that manages the overall response using the National Incident Management System (NIMS) Incident Command System (ICS), creating Incident Action Plans, and providing other support functions to coordinate the efforts of response personnel. The IMT functions near the event scene to support tactical response operations. The IMT is normally activated for Tier 2 and 3 responses (though an Incident Commander will activate it as they see fit) and operates in the "cold zone" at the Incident Command Post.

LP Membership – Enbridge Enterprise Emergency Response Team

This is a business unit team, trained and organized similarly to regional IMTs (Incident Management Team). The purpose of the team is to augment and/or replace members of the IMT during complex and/or long responses. When activated, members of E3RT cease to report to their regular leader and will report to the Incident Commander. The E3RT remains in place until the Incident Commander no longer requires their services.

Full Membership – Enbridge Enterprise Emergency Response Team

At the request of the Regional Director, the full membership of this cross-business unit team of individuals, who are specially trained to support significant events, will fill roles in the Incident Management Team.

Field Response Team - Tactical

A team of tactical Enbridge responders who conduct prolonged response actions at an event scene including cleanup operations. This can include implementing containment & recovery measures, employing initial response actions, and initiating the use of facility fire equipment.

7.2 Incident Command Structure

Enbridge utilizes the Incident Command System for response management:

- Enables a well-managed response and limits the effects of an emergency through the rapid, effective, coordinated response of resources
- Clarifies the roles of personnel involved in emergency response
- Allows for essential information and resources to be organized into a logical structure for planning and implementing the required actions
- Provides a flexible preplanned emergency response organizational structure for any type or size of event
- The structure of the Incident Command System required depends on the nature and complexity of the emergency, and is based on need

7.3 Incident Management Handbook and Job Aids

The Incident Management Handbook incorporates core Incident Command System principals noted above and reflects Enbridge-specific processes and procedures while remaining consistent with NIMS ICS. The handbook consists of:

- Planning cycle process – initial response phase
- Planning cycle process – proactive phases
- Guidance documents – detailed Incident Action Plan

Section specific job aids outline responsibilities for the following response management roles:

- Incident Command Section
- Operations Section
- Planning Section
- Logistics Section
- Finance Section

The Incident Management Handbook and associated Job Aids for specific sections is located on the Governance Documents Library.

7.4 Operational Period Planning Cycle

In accordance with the Incident Command System, Enbridge follows the “Planning P” model for event response. The Planning cycle and associated meeting schedule can be found in the Incident Management Handbook on the Governance Documents Library.

7.5 Incident Command Posts

The Operations Section Chief, Incident Commander, or designate, select the location of the Incident Command Post based on factors such as:

- Wind direction, areas of high ground and site access
- The potential for plume development/migration, explosion and toxic effects of a spill should be taken into account

- Input from the Communications Unit Leader should be sought for advice on radio and information technology connectivity

If a vapor cloud is present or imminent, adapt the location of the Incident Command Post to the specific circumstances of the emergency. For example:

- In isolated areas, it may be more appropriate to set up several miles from the emergency site
- In populated areas, it may be more appropriate to set up close to the emergency site
- Refer to the ER guidebook for guidance on safe distance

The Incident Command Post:

- Should be clearly illuminated and identified by signage at the emergency site entrance (or just inside), visible to all entering the site
- Always attended
- Depending on the security situation in the area, seek advice from the Intel Advisor and/or Security Manager and/or Enterprise Security)
- For evolving events, the Incident Command Post may need to be moved to allow for expanding activities. This may include moving to a community center, hotel conference room or other location
- The ICS 208 Site Safety Plan posted on the situation status board
- Will have the following minimum materials, maps, control points, situation status boards, response plans, communications systems

8.0 HAZARD-SPECIFIC RESPONSE SCENARIOS AND ACTIONS

Enbridge uses an all-hazards approach to mitigate and respond to a variety of hazards and threats. The Field Response Team will consider the impacts to *people, environment, assets,* and the *relationship* of the company as response actions are carried out.

General Initial response actions bellow will be carried out, and following sections is additional guidance for hazard specific response situations. Ensure to document actions as required.

Initial Response Actions (summary)	
☐	**S** – safety first and always • Ensure health and safety of self and others at all times • Assign a Safety Officer
☐	**I** – isolate and deny entry • Stop work • Contact the Control Center to shut down and isolate the system • Secure and restrict access to the site • Evacuate upwind to shoulder point (on foot)
☐	**N** – notifications • Contact Regional Management and People Leader (Regional On-call) • Verify the Control Center has been informed • Support ongoing communications with Control Center and Regional On-Call

8.1 Facility Hazards

Initial containment actions will focus limiting the environmental impact to the immediate spill area.

The containment of spilled oil will:

- Reduce the spread of slicks and their impacts beyond the property
- Reduce potential impacts to the surrounding environment
- Reduce potential economic impacts
- Maximize the thickness of floating slicks
- Maximize the effectiveness of mechanical counter measures (i.e., skimmers and sorbents)

Selection of the appropriate location and containment and recovery tactic method will depend upon:

- Length of time since the spill occurred
- Amount and type of spilled material
- Area of coverage
- Environmental factors such as wind speed and direction

The following sections outline spill mitigation procedures, and response options for containment and recovery of spilled oil. Refer to the Inland Spill Tactics Guide and Tactical Control Point sheets for detailed information on response tactics.

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8.1.1 Pipeline Release / Line Strike

In the event of a pipeline release, carry out and document the following actions (if qualified and/or safe to do so):

Pipeline Release	
☐	If CCO operating procedures did not require immediate shut down, provide consultation and direction on this decision
☐	If shut down was required, confirm with CCO that all potentially affected lines have been shut down
☐	Isolate leaking section of piping
☐	Contain in a safe fashion
☐	Control drain-up of isolated piping
☐	Periodically confirm with CCO that sectionalized pipeline system is holding pressure
☐	If spill in water: Consult Control Point(s) and Environmentally Sensitive Area maps for appropriate response strategies
☐	Consult Inland Spill Response Tactics Guide for recommended equipment and tactics
☐	Gather data for Pipeline Integrity to assess the line
☐	Initiate recovery / repair / clean-up actions with the support of Pipeline Integrity

8.1.2 Equipment Failure

In the event of equipment failure, carry out and document the following actions (if qualified and/or safe to do so):

Equipment Failure	
☐	Shut off the flow and transfer pumps. Close header & tank valves
☐	Evacuate the area as necessary
☐	Drain remaining contents to containment tanks
☐	Secure area if safe to do so
☐	Tighten leaky valve or fitting, if safe
☐	Eliminate sources of vapour cloud ignition by shutting down all engines and motors
☐	Initiate response actions

8.1.3 Piping Rupture / Leak

In the event of if piping rupture/ leak, carry out and document the following actions (if qualified and/or safe to do so):

Piping Rupture / Leak	
☐	Shut off the flow and transfer pumps. Close header & tank valves
☐	Shut down pumps. Close the closest block valves on each side of the rupture
☐	Drain the line back into contained areas (if possible). Alert nearby personnel of potential safety hazards
☐	Shut down source of vapour cloud ignition by shutting down all engines and motors
☐	If piping is leaking and under pressure, relieve pressure by draining into a containment area or back to a tank (if possible). Then repair line according to established procedures

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8.1.4 Tank Failure

In the event of a tank failure, carry out and document the following actions (if qualified and/or safe to do so):

Tank Failure	
☐	Evacuate nonessential personnel or personnel at high risk
☐	Shut down or divert source of incoming flow to tank
☐	Transfer fluid to another tank with adequate storage capacity (if possible)
☐	Shut down source of vapour cloud ignition by shutting down all engines and motors
☐	Ensure that containment bay discharge valves are closed
☐	Monitor containment area for leaks and potential capacity limitations
☐	Begin cleaning up spilled product as soon as possible

8.1.5 Fire or Explosion

In the event of a tank fire/explosion, carry out and document the following actions (if qualified and/or safe to do so), noting: large or fully involved fires are to be fought by professional firefighters or tank fire specialists, refer to Terminal Pre-Fire Plan on the Governance Document Library for further details.

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Fire / Explosion	
☐	Evacuate nonessential personnel or personnel at risk of injury
☐	Notify local fire and police departments
☐	Attempt to extinguish fire if it is in incipient (early) stage Small Fire: Dry chemical, CO_2, water spray or regular foam
☐	Shut down transfer or pumping operation. Attempt to divert or stop flow of product to the hazardous area (if it can be done safely)
☐	Eliminate sources of vapour cloud ignition shutting down all engines and motors
☐	Control fire before taking steps to contain spill
☐	Large Fire – use defensive tactics only: • Water spray, fog, or regular foam • Do not use straight streams • Move containers from fire area if you can do so without risk
☐	Fire involving Tanks or Car/Trailer Loads – use defensive tactics only: • Fight fire from maximum distance or use unmanned hose holders or monitor nozzles • Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. • ALWAYS stay away from tanks engulfed in fire • For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn

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8.1.6 Manifold Failure

In the event of a manifold failure, carry out and document the following actions (if qualified and/or safe to do so):

Manifold Failure	
☐	Evacuate nonessential personnel or personnel at risk of injury
☐	Terminate transfer operations immediately
☐	Isolate the damaged area by closing block valves on both sides of the leak/rupture
☐	Shut down source of vapour cloud ignition by shutting down all engines and motors
☐	Drain fluids back into containment areas (if possible)

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8.1.7 Radioactive Source Emergencies

In the event of an accident (e.g., fire, explosion), damage or any other event that may affect the integrity of a radiation source (e.g., nuclear densitometers, either portable or fixed):

Radioactive Source Emergencies	
☐	Stop all activity in the immediate area
☐	Evacuate the immediate vicinity of the source head and clear personnel within a 6-meter radius perimeter around the source head
☐	Notify local Operations personnel and/or call the 24-hour emergency number shown on the warning sign
☐	Consult Site Safety Plot Plans/Evacuation Plans for the locations of radioactive sources for facilities
☐	Do not allow workers to re-enter the area until a radiation survey is completed by a radiation specialist
☐	If the device has sustained physical damage, contact a radiation specialist to leak test the device
☐	Follow company procedures for required initial notifications
☐	Notify the CNSC 24-hour Duty Officer and inform them of the event at 613-995-0479 or 1-844-879-0805
☐	Contact Enbridge's Radiation Safety Officer as outlined in the Canada Event Reporting Guide located on the Governance Document Library (GDL).

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8.1.8 Overhead Power Line

In the event of a line fall or is contacted carry out the following actions (if qualified and/or safe to do so):

Overhead Power Line	
☐	Keep everyone at least 100 ft (30 m) aways
☐	Use red "Danger" tape to keep others aways
☐	Do not attempt to move the wire(s)
☐	Do not touch anything that is touching the wires
If a person becomes energized	
☐	Do not touch the person, or anything in contact with the person
☐	Rescue is to be undertaken only after all hazards have been removed and verified by a utility company representative
If energized conductors contact a vehicle	
☐	Turn off the vehicle, remain inside the vehicle and wait for rescue
☐	If it becomes necessary to the exit the vehicle: • Jump clear of the vehicle without touching it • Maintain balance and keep feet together • Shuffle or bunny-hop away from the vehicle at least 30 ft of 10 m
☐	Do not return to the vehicle or allow anyone else near it until the utility company representative has de-energized and removed power lines and confirmed that the vehicle is no longer in contact with the power lines
☐	Quarantine rubber-tired vehicles for 48 hours (to address the hazards of pyrolysis)

8.1.9 Natural Gas Liquid Event

If there is an event involving natural gas liquids release, remember the following safety precautions:

- Methane vapors rise and dispense in a mushroom cloud formation
- Most NGL vapors are heavier than air
- Time is critical in the decision to ignite large leaks
- NGLs expand 300 times when changing from liquid to vapor

Assess the leak and controlling measures, taking into account:

- Whether the leak will continue to spread if it isn't ignited
- Whether residents are safe or should be evacuated
- What toxic conditions and topography are doing to the vapor cloud
- Whether ignition will cause additional fire hazards
- Whether personnel can ignite the leak safely
- Whether the subsequent fire can be controlled
- Monitor wind direction, speed, and ambient temperatures

Natural Gas Liquid	
☐	Discovery / Investigation For the initial action it is important to remember: • Don't try to control more area than can be effectively isolated and controlled • The more time, distance and shielding between the Enbridge Responder and the released product, the lower the risk • Designate an emergency evacuation signal and identify shoulder points if emergency evacuation is necessary
☐	Management of Release Small Release • If the released NGL is creating a local safety hazard, the NGL may then be ignited following the procedure for igniting NGL • Where available, water fog may be used to break up and disperse small vapor clouds • Air movers are also an effective method of providing air circulation in confined areas or in buildings • Ensure they are safe (intrinsically safe) to use in that environment
☐	Large Release • If the NGL release is large or the NGL batch cannot be pumped past the release site, ignite the NGL following the standard procedure • If the vapor plume is moving toward a populated area the area will be evacuated • If the vapor cloud cannot be ignited and repair procedures should begin, all equipment and vehicles will be located a minimum of 0.5 mi (0.8 km) upwind of the leak site • Continuously monitor the perimeter of the vapor cloud to detect any shift in the vapor cloud
☐	Isolating the Pipeline Section When NGL is escaping uncontrolled, the affected pipe section will be immediately isolated by closing the appropriate sectionalizing valves

Natural Gas Liquid	
☐	Relieving Pressure Use one of the following methods to relieve pressure at a pipeline section releasing NGL: • If NGL is present at the blowdown valve, install a pipe discharge line and flare the NGL • Transfer the product to a properly rated pressure containment vessel • Install a pump complete with a discharge check valve to pump across the downstream sectionalizing valve • If elevation does not provide a standing head in the isolated section, a transfer pump connected to the blowdown valve will be needed to fill a properly rated pressure containment vessel
☐	Evacuation/Site Security • Establish roadblocks if release is near roads • Due to the high flammability of NGL and the possibility of a vapor plume forming, it may be necessary to evacuate workers and visitors from the area, and to secure the site to protect the public and property
☐	Digging out a Release Site • Repair operations involving NGL are difficult, slow, and hazardous • Pockets of gas may be trapped in the ground • If NGL has been leaking for some time, the condensate portion may have saturated the soil for a considerable distance around the site • Before beginning excavation or line repairs, active NGL releases are ignited or left burning • Ensure liquid has replaced the NGL at the release site • Follow appropriate Company standards on pipeline excavation • Ensure fire extinguishing equipment is immediately at hand • Consider obtaining external firefighting services and equipment • If no wind is blowing, use air movers to keep air moving across the worksite and away from workers • Continuously monitor air using a gas detector; and • Constantly monitor wind direction

8.2 Natural Hazards

The pipeline passes through a variety of landscapes each with theirown diverse geographic features and climates. As the pipeline passes through each local environment, it may be exposed to a range of natural and human induced hazards each with the ability to negatively impact operations and personnel. The following section aims to describe hazards that could negatively impact the system and workers in order to provide both hazard context and to outline actions that may be undertaken in order to mitigate and/or respond to such events.

8.2.1 Wildfire

In the event of wildfire, carry out and document the following mitigation and response actions (if qualified and/or safe to do so):

Wildfire – Mitigation Actions	
☐	Continuously manage vegetation in and around facilities
☐	Identify evacuation staging areas in evacuation plans for use during a wildfire event
☐	Set up triggers for evacuation
☐	Ensure air quality is monitored at all manned facilities that are, or may be impacted
☐	Decrease the number of personnel onsite during a wildfire event
☐	Stay tuned to local media for update on the wildfire conditions

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Actions that can be taken during a wildfire to mitigate a release include:

Wildfire – Response Actions	
☐	Discuss requirement before shutting down the line(s) as the product movement can reduce the heat flux on the system, if appropriate: • Shut down the line • Isolate energized system
☐	Continually manage vegetation in and around the facilities and cut it back further if required
☐	Conduct fly-over patrol for fire behavior impact in coordination with local authorities and respecting any NOTAMs (notice to airmen)

8.2.2 Earthquake

In the event of an earthquake, carry out and document the following mitigation and response actions (if qualified and/or safe to do so):

Earthquake	
☐	Isolate and/ or shut down energized systems to anticipate aftershock and/ or additional tremors
☐	Shut down the lines
☐	Check for secondary hazards
☐	Extinguish small fires, shut of the water supply if broke pipes are leaking, shut off the electricity when damaged wiring threatens to spark fires, shut off the gas if you suspect a leak
☐	Monitor site for evidence of leaks from pipelines and tanks

Earthquake	
☐	Access to buildings that have sustained structural damage should be prohibited until they can be assessed by a structural engineer
☐	Evacuate building(s) when any of the above hazards are present or if there is structural damage
☐	Engage Facilities Integrity to support and determine fitness for service (PI-97 Monitoring Seismic Activity)

8.2.3 Flooding/Hurricane

In the event of a flood, carry out and document the following mitigation and response actions (if qualified and/or safe to do so):

Flooding/Hurricane	
☐	Watch for high water, be aware of sudden changing water conditions and/or increased flow rates (monitor the StormGeo's Trigger Report, Probability of Wind Impact (Phases 1-5) during hurricane season to prepare for threats or impacts to the system)
☐	Shut down the lines
☐	Isolate the system
☐	Deploy personnel so that they will be in position to shut down, isolate, contain, or perform any other emergency action on an affected pipeline
☐	Fill all tankage to a minimum of 6 feet to prevent floating tankage
☐	Perform visual inspection to determine if facilities that are normally above ground (e.g., valves, regulators, relief sets, etc.) have become submerged and are in danger of being struck by vessels or debris and, if possible, mark such facilities with Coast Guard approval and an appropriate buoy

Flooding/Hurricane	
☐	Perform frequent patrols, including appropriate overflights, to evaluate right- of-way conditions at water crossings during flooding and after waters subside. Report any flooding, either localized or systemic, to integrity staff to determine if pipeline crossings may have been damaged or would be in imminent jeopardy from future flooding
☐	Have open communications with local and state officials to address their concerns regarding observed pipeline exposures, localized flooding, ice dams, debris dams, and extensive bank erosion that may affect the integrity of pipeline crossings
☐	Engage Facilities Integrity to support and determine fitness for service

The Saffir-Simpson Hurricane Scale is a 1-5 rating based on the hurricane's present intensity. This is used to give an estimate of the potential property damage and flooding expected along the coast from a hurricane landfall. The Scale or Category of hurricanes is as follows:

Speed	Wind Damage	Storm Surge	Water Effect	CAT
Minimal Hurricane 74-95 mph 64-82 knots 119-153 kph	No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs.	4-5 ft above normal	Low-lying coastal roads inundated, minor pier damage, some small craft in exposed anchorage torn from moorings.	1

Speed	Wind Damage	Storm Surge	Water Effect	CAT
Moderate Hurricane 96-110 mph 83-95 knots 154-177 kph	Some roofing material, door, and window damage of buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers.	6-8 ft above normal	Coast roads and low-lying escape routes inland cut by rising water 2 to 4 hours before arrival of hurricane center. Considerable damage to piers. Marinas flooded. Small craft in unprotected anchorages torn from moorings. Evacuation of some shoreline residences and low-lying areas required.	2
Extensive Hurricane 111-130 mph 96-113 knots 178-209 kph	Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Damage to shrubbery and trees with foliage blown off trees and large tress blown down. Mobile homes and poorly constructed signs are destroyed.	9-12 ft above normal	Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Flooding near the coast destroys smaller structures with larger structures damaged by battering of floating debris. Terrain continuously lower than 5 ft above mean sea level may be flooded inland 8 miles (13 km) or more. Evacuation of low-lying residences within several blocks of the shoreline may be required.	3
Extreme Hurricane 131-155 mph 114-135 knots 210-249 kph	More extensive curtain wall failures with some complete roof structure failures on small residences. All signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows.	13-18 ft above normal	Low-lying escape routes may be cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of structures near the shore. Terrain lower than 10 ft above sea level may be flooded requiring massive evacuation of residential areas as far inland as 6 miles (10 km).	4

Speed	Wind Damage	Storm Surge	Water Effect	CAT
Catastrophic Hurricane >155 mph 135 knots 249 kph	Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Complete destruction of mobile homes. Severe and extensive window and door damage.	>18 ft above normal	Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of all structures located less than 15 ft above sea level and within 500 yards of the shoreline. Evacuation of residential areas on low ground within 5-10 miles of the shoreline may be required.	5

8.2.4 Tornado

In the event of a tornado, carry out and document the following mitigation and response actions (if qualified and/or safe to do so):

Tornado	
☐	Shut down the line
☐	Isolate the system
☐	If appropriate, use of the emergency shutdown system for the terminals
☐	Check for secondary hazards
☐	Extinguish small fires, shut of the water supply if broke pipes are leaking, shut off the electricity when damage wiring threaten to spark fires, shut off the gas if you suspect a leak.
☐	Evacuate the building when any of the above hazards are present or if there is structural damage.
☐	Engage Facilities Integrity to support and determine fitness for service

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8.2.5 Medical Emergencies

The basic steps to follow in a medical emergency are as follows:

Medical Emergency	
☐	Don't attempt a rescue from a confined space or a toxic atmosphere unless you have appropriate breathing protection and a backup
☐	Check the person: • Assess the situation, don't move the person unless leaving them will cause further injury • Administer required first aid in the following order: o Give artificial respiration (victims of H2S exposure require resuscitation within three minutes). o Control bleeding o Treat for physical shock o Treat open wounds, burns and fractures o Arrange for transportation
☐	Call for assistance/additional resource, inform Regional Management / Regional On-call of the situation and ask for help
☐	Care for life-threatening conditions first: Reduce the risk of disease transmission by using protective equipment such as disposable gloves and a barrier device
☐	Take charge of the site and organize others to assist

8.3 Security Hazards

Security hazards present themselves in a variety of ways including, bomb threat, cyber-attack, active assailant, workplace violence, suspicious packages, suspicious activities, protestors activity, security events. The objective of these actions can be to halt or disrupt normal operations. For these reasons Enbridge has established security protocols contained in the Operations Security Response Plan where security protocols and response actions are detailed.

Enterprise Security focuses on direct and/or impending threats to ongoing operations and in most instances resolves issues without concern. However, in the event that a substantial security event results in an impact to operations, there is a strong likelihood that the Incident Management Team and Emergency Response Plans will be activated. As outlined, procedures for dealing with specific events can be found in the Operations Security Response Plan *(OSRP)*. Consideration should also be given to completing the Security Threat Checklist information gathering. Regions will also be required to input initial details of a security event into Encompass and complete the Incident Learning and Prevention fields.

The Operations Security Response Plan (OSRP) contains procedures for the following event types:

- General Security Response Procedure Steps
- Response to an Intruder Alarm at an Unattended Facility
- Response to a Person(s) Considered to be a Threat at an Attended Facility
- Bomb Related Response Procedures

- Response for Bomb Threat from a Telephone Call
- Response for Receipt or Discovery of Suspicious Mail, Parcels, or Packages

- Cyber Attack Response
- Active Assailant Response
- Workplace Violence Response
- Protest Activity Response

8.3.1 Security Threat Levels

The Operations Security Response Plan (OSRP) contains procedures for the Security Threat Response Plan (STRP) which is the process for escalating and deescalating the security threat level for Enbridge facilities.

Security Threat Levels	
Baseline	Provides guidelines on minimum requirements for facilities. These include access control, fencing, gates, security guards, employee awareness, communications, facility lighting, intrusion detection, closed-circuit video, and general policies/practices
Elevated	Provides direction in the event security measures require elevating. Changes typically include tighter perimeter control, visitor restrictions and increased perimeter checks
Imminent	Provides direction in the event that security measures require elevation based on a credible, imminent threat information. Changes typically include Elevated Security measures plus further personnel and vehicle restrictions, the use of security guards, more frequent and random perimeter checks, work restrictions and potentially operational restrictions. Although most anonymous security threats are hoaxes intended to create an atmosphere of anxiety and panic in order to interrupt normal operational activities, all threats should be taken seriously

8.3.2 Threat Level Escalation Process

The process for changing the security threat levels is as follows.

Step	Description
1	The BU/CF, TIS and Enterprise Security monitor the security threat advisory systems and other forms of intelligence.
2	ES and TIS should assess emerging threats and notify the appropriate BU/CF Directors or VPs with recommendations to escalate the STRP level, if warranted.
3	With VP or Director, Operations approval, the Operations Directors should notify Local Management of the effected facilities that the STRP level has changed and instruct them to implement the security measures associated with the new STRP level.
4	Local Management should instruct their staff to implement the appropriate security measures.

8.3.3 STRP Threat Level Implementation

In the event of a change in the Security Threat Response Plan (STRP) threat level, the security measures listed in the Operations Security Response Plan (OSRP) Appendix D: STRP Security Measures by Threat Level should be implemented.

- Base Level
- Elevated Level
- Imminent Level

8.3.4 General Security Response Procedures

Please refer to the Operations Security Response Plan (OSRP) for the most current security response procedures.

- General Security Response Procedure Steps
- Response to an Intruder Alarm at an Unattended Facility
- Response to a Person(s) Considered to be a Threat at an Attended Facility
- Response for Bomb Threat from a Telephone Call
- Response for Receipt or Discovery of Suspicious Mail, Parcels, or Packages
- Cyber Attack Response
- Active Assailant Response
- Workplace Violence Response
- Protest Activity Response

9.0 ENVIRONMENTAL RESPONSE

In the event of a release that requires an environmental response, the Environment Unit Leader and Safety Officer will immediately mobilize a preferred consultant if necessary.

As a precaution, ensure the applicable Federal and Provincial/State Environmental Regulatory Agencies have been contacted.

Air And Groundwater Monitoring: If the spilled material is not readily identifiable, conduct sampling activities for laboratory analysis. As petroleum products react and change (e.g., weather) when exposed to the environment, the laboratory data may not be representative of "real-time" conditions; rather the data may reflect the chemical characteristics of the spilled material(s) at the time of sample collection depending on thenature and location of the release:

Air Monitoring	Air monitoring will be set up to assess real time hydrocarbon related compound concentrations and background air quality conditions as needed
Groundwater	Groundwater samples will be collected as necessary from onsite public and private wells (residential, public utility, commercial and industrial) within a specified potential receptor zone around the site
Surface Water	Surface water sampling and monitoring procedures will be utilized to assess visible product and/or hydrocarbon sheen that may affect navigable waterways as well as to document background conditions within the waterways.
Sediment	Sediment samples will be collected periodically to provide a baseline evaluation of current conditions and confirm the presence or absence of hydrocarbon impacts

Community Air Monitoring will be completed by a qualified third party based on an assessment that it is required.

Oil Sampling Activities: Collect product samples as soon as possible after a spill in order to fingerprint the product.

9.1 Wildlife Management

In the event of a release where impacts to wildlife are present or suspected, consult with the Environment Unit immediately. Environment Unit will mobilize a preferred wildlife response consultant or consultants. A site-specific wildlife management and response plan may be developed for the site. A toll-free number would be set up if required. If set up, report all impacted wildlife sightings to the established toll-free report phone line.

Dead and injured wildlife found during response operations should be collected by trained and authorized personnel and properly documented. An inventory of dead, injured, rehabilitated, and released wildlife needs to be maintained as a component of the U.S. Natural Resources Damage Assessment.

10.0 PROTECTION, CONTAINMENT AND RECOVERY

Protection refers to the action of preventing harm and/or suffering from someone or something. Containment and recovery refer to the techniques or methods that can be employed to contain and recover petroleum spills on water or the containment of petroleum spills flowing overland. Recovery of terrestrial spills is often very similar or uses the same techniques as shoreline clean-up. Other techniques, such as ice tactics and open water recovery, are covered in the Inland Spill Response Tactics Guide; the techniques described in the Integrated Contingency Plan are most commonly used.

Consider the following when planning or implementing containment and recovery operations:

- Containment is most effective when conducted near the source of the spill where the oil has not spread over a large area and the contained oil is of sufficient thickness to allow effective recovery and/or clean-up
- Feasibility of containment is generally dependent on the size of the spill, available logistical resources, implementation time, environmental conditions, and the nature of the terrain in the spill area
- Aquatic (water) containment is primarily conducted using oil spill containment booms (this is a key tactic to control the water discharged from upstream impoundments)
- Skimmers are usually the most efficient means of recovery of aquatic spills, although pumps, vacuum systems, and sorbents can also be effective, particularly in smaller waterways
- Terrestrial (land) containment typically involves berms or other physical barriers
- Recovery of free petroleum from the ground surface is best achieved by using pumps, vacuum sources, and/or sorbents

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10.1 Control Points

Control Points contain detailed site-specific information including recommended tactics for spill response actions to provide the highest probability for properly establishing containment/recovery and to ensure that sensitive resources are protected. The tactics are flexible to accommodate for varying conditions. The types of tactics that may be used can be found in the Inland Spill Response Tactics Guide. The Control Point viewer is accessible on EMap from company computers and mobile phones.

Control point site sheets contain:	During an event:
• Latitude and longitude information • Valve information • Watercourse information • Logistical information • Safety concerns • Implementation details • Environmental areas • Closest equipment location and recommended equipment • Site images / diagrams	• Refer to Control point for guidance on protection, containment and recovery locations and strategies • Contact an Environment representative for detailed screening of the site during a response • If required, assess site for hazards • Prepare site prior to beginning tactics (grading/clearing) • Seek permission if not already secured for any of the following: o highways and secondary roads, bridges, campgrounds, public boat launches, private access points, cut lines or remote access trails

10.2 Inland Spill Response Tactics Guide

The Inland Spill Response Tactics Guide is a Company document that can be used as a quick reference by Enbridge first-on-scene responders to select and implement containment and recovery tactics with Enbridge-owned oil spill response equipment during the first 72 hours of the response. It illustrates a collection of inland spill tactics that can be applied using obtainable resources to a liquid product release until additional resources and personnel arrive on site.

Consult the guide for more details on Inlands Spill Control Tactics for:

- Land with the use for berms and trenches
- Small watercourses with the use of dams, weir, culvert blocks, filter fence, siphon dam, sorbent boom
- Larger watercourse with the use of containment boom, shore seal boom, deflection/exclusion booming
- Open water using current busters, oil boom and arctic brush bucket system
- Cold weather, ice assessments and tactics with the use of oil detection under ice, trenching on ice sheets, and ice slotting

Consult the guide for the following tactical information:

- Purpose (of the tactic)
- Application
- Environmental considerations
- Equipment required
- Operation (description regarding tactic)
- Tips regarding execution

The guide also contains specific response equipment and diagrams for material recovery or alternative removal. The Inland Spill Response Tactics Guide can be found on the Governance Document Library.

The objective of mechanical recovery is to collect contained and concentrated oil and to transfer the oil to temporary storage for subsequent disposal. Spills that have been contained by a boom, a berm or in slots cut into the ice can be skimmed and pumped into storage containers.

10.3 Submerged Oil Content

Enbridge's tariff restricts products on the system to those with a density of no greater than 940 kg/m^3 at 15˚C. Most products shipped on the Enbridge system are floating oils, including dilbit and synbit. Enbridge acknowledges that, under certain environmental conditions, some fraction of oil released into a water body may become entrained in the water column, submerge or sink, in freshwater environments. This is the case irrespective of whether the product is diluted bitumen, synthetic crude, or conventional crude oil. This is not an issue that is limited to diluted bitumen.

Enbridge considers the potential for sinking and submerged oil as part of our Emergency Response plans and in the execution of such plans. In the unlikely event of a spill, Enbridge would work with regulatory agencies to determine the appropriate response and remedial actions given the specific circumstances of the event. This would include decisions regarding the short-term emergency response as well as subsequent clean-up of residual amounts of submerged oil. More details regarding the Submerged Oil Management Program can be found on the Governance Document Library.

10.4 Shoreline and Terrestrial Operations

In the event that soils do become oiled or that petroleum contacts and becomes stranded on a shoreline, clean-up operations should be undertaken to minimize the environmental effects of the petroleum. In this case, clean-up operations should be implemented immediately.

- Documentation of the location, degree and/or extent of oil conditions
- Evaluation of all environmental, cultural, economic, and political factors
- Clean-up technique selection
- Mitigation of physical and environmental damage associated with clean-up technique implementation
- Cost-effectiveness

Contractors are capable of being on site and ensuring spill recovery activities are accomplished within the appropriate tiered response times. They will provide sufficient recovery equipment to ensure enough capacity is available to respond to a Worst-Case Discharge.

Non-mechanical response options that could be used in responding to a spill include:

- Chemical treatment
- Bioremediation
- In-situ Burning

When non-mechanical methods can result in reduced human hazard or environmental damage, consideration of their use is appropriate, but will require regulatory approval.

- In Canada, chemical treatments / dispersants are not a commonly used tactic on inland waters and would only be considered after consultation and approval from the Department of Fisheries and Oceans and other applicable regulatory stakeholders.
- In the U.S., the request to use dispersants as a tactic is requested through Unified Command to the appropriate Federal On-Scene Coordinator.

10.5 In-Situ Burning

If mechanical recovery is not best option, In-Situ Burning may be considered with the approval from appropriate regulatory agencies as there are potential safety and air pollution hazards to the surrounding area.

In-situ burning alters the composition of the spilled oil by eliminating anywhere from 90 to 99 percent of the original volume of oil provided it is controlled within a fire-resistant boom or other containment system. A portion of the original oil is released into the atmosphere as particulate and gaseous emissions. Solid or semi-solid residues typically remain following a burn, but are relatively easy to retrieve. They can be further reduced in volume through repeated burns, and ultimately are collected and removed from the environment.

10.5.1 Evaluation

The potential for implementing a successful burn depends upon the knowledge and experience of those responsible for the assessment of the spill situation. Review of the spill conditions, together with the spill checklist below, will ensure that the safety issues, the benefits, and the environmental impacts will have been examined carefully. While steps may be taken to move critical equipment into position for a possible burn, there should be no attempt to ignite spilled oil without prior authorization from federal, provincial, state, and local authorities.

Decisions to burn or not to burn oil in areas considered case-by-case are made on the basis of the potential for humans to be exposed to the smoke plume, and pollutants associated with it.

- Regulatory permits and approvals specific to the jurisdiction
- Appropriate monitoring is in place to limit particulate matter (PM-10) exposure to 150 micrograms per cubic meter
- Smoke plume modeling is done to predict which areas might be adversely affected
- Aerial surveys are also conducted prior to initiating a burn to minimize the chance that concentrations of wildlife are in the operational area and affected by the response
- Sampling should be conducted for particulates at sensitive downwind sites prior to the burn (to gather background data) and after the burn has been initiated.

- The following data on particulate levels need to be recorded along with recommendations to the Incident Commander:
  - Oil type, amount, and condition
  - Environmental conditions
  - Availability of personnel and equipment
  - Timing
  - Human safety
  - Danger of fire spreading
  - Presence of explosive vapors
  - Damage to nearby habitats that may prolong natural recovery

10.5.2 Request Process and Approval Procedure

When requesting approval for an in-situ burn, carry out the following actions:

Request Process	
☐	Complete In-Situ Burn Template (location on the Governance Document Library, ER Forms)
☐	The burn should be outside the corporate city limits, except as deemed necessary by the local fire department
☐	Wind direction should move the smoke away from the city and/or populated areas
☐	Burning should be at least 300 feet (91.44 meters) from any adjacent properties
☐	Burning should commence during daylight, typically between the hours of 9:00 am and 5:00 pm
☐	Wind speed should be between 5 mph (8.052 km/h) and 20 mph (32.19 km/h) (IAW SMART recommendations) during the burn period
☐	Burn should not be conducted during persistent atmospheric thermal inversions

Approval for the burn should be obtained from regulatory bodies and other stakeholders. The approval required to conduct a burn will vary in each jurisdiction.

Approval Procedure	
☐	Document the need to carry out a burn is to be documented in the Incident Action Plan during the Planning Cycle process
☐	Incident Commander reviews and approves the request

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Approval Procedure	
☐	The request is presented to the Federal On-Scene Coordinator for approval
☐	The Federal On-Scene Coordinator will submit the burn plan to Federal, State, and local regulatory entities/stakeholders for review and approval
☐	Communicate with the National Response Center 1-800-424-8802

10.5.3 Plume Dispersion Modeling

If necessary, conduct a plume trajectory assessment to determine public health safe distances for the following reasons:

- Regulatory requirements – obtain approval to burn
- Local terrain not (relatively) flat
- Winds exceed 18km/hr (11mph)
- Close proximity of populated areas (safety considerations)
- The presence of unusual meteorological consideration (temperature inversions)
- Wind speed of 35 km/hr (21 mph) is established upper limit at which fire behavior can be predictably managed

10.5.4 Monitoring

Due to these potential affects monitoring before, during and after a burn may be required.

- Of these smoke constituents, small particulates less than 10 microns in diameter, known as PM-10, are considered to pose the greatest risk to humans and nearby wildlife
- Monitoring should be conducted when the predicted trajectory of the smoke plume indicates that the smoke may reach population centers, and the concentrations of smoke particulates at ground level may exceed safe levels
- When impacts are not anticipated, monitoring levels will be decided by the federal, provincial, state, and local authorities
- In-situ burning generates a thick black smoke that contains primarily particulates, and various gases (carbon dioxide, carbon monoxides, water vapor, nitrous oxides, and Polycyclic Aromatic Hydrocarbons (PAHs))
- Deploy monitoring teams at designated areas of concern to assess ambient concentrations of particulates before the burn starts
- During the burn, sampling and continuous readings are recorded both in the data logger of the instrument and manually in the recorder data log
- After the burn has ended and the smoke plume has dissipated, the teams remain in place for some time (15-30 minutes) and again sample for and record ambient particulate concentrations

10.5.5 Product Characteristics and Considerations

Consider the following characteristics when conducting a burn:

- Refined product or light to medium crude will burn more efficiently and leave less residue to recover compared to heavier product
- Heavy oil requires longer heating times and a hotter flame to ignite than lighter oils
- Product that is relatively fresh (less than 3 days of exposure to the elements) will burn more efficiently than weathered product
- Burn duration can be estimated based on known burn rates for different product types (e.g., 2.54 mm [1/10 in.] of depth per minute for medium crude)
- Dense wetland vegetation can slow evaporation and prolong the opportunity for conducting an efficient burn
- A layer of water at least 2.5 mm to 10 mm (1 in. to 4 in.) under the burning product will provide protection to vegetation root systems from heat stress
- Burned areas should not be flooded with high water levels shortly after the burn
    - The remaining root systems require oxygen from the air or soil until new vegetation emerges

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10.5.6 Ignition Considerations and Procedure

After completing all the pre-burn requirements, determine the appropriate time and conditions for igniting the spill:

Ignition Considerations and Procedure	
☐	Determine the appropriate time and conditions for igniting the spill: • Use experienced personnel to oversee the burning activities and monitor the burn plan • The area around the spill site should be monitored using an explosive / toxic gas meter to determine any explosive / toxicity hazards • The spill should be approached from upwind during all phases of the operation by personnel who are properly equipped and trained to monitor the conditions
☐	Continually monitor weather conditions: • burning should occur only when wind conditions are low • weather should be stable
☐	Ignition should not occur until entire area is secured
☐	Ensure there is a sufficient supply of the following on-site (actual numbers will be determined based on the individual spill conditions): • fire-fighting equipment • personnel (workers and emergency staff) • water supplies
☐	If potential exists for secondary fires, ignition should take place during low burning period, between 9:00am-5:00pm
☐	If the product is heavy oil, or it is severely weathered, it may be advantageous to burn during the heat of the day in order to assist with ignition, if safe to do so

Ignition Considerations and Procedure	
☐	Determine what method of ignition will work the best while still allowing for safe implementation • Ignition procedures should be designed to allow the response team to be well back of the site when the spill is ignited. Individual companies may have their own ignition procedures based on the type of product and ignition devices available • Ensure the oil at point of ignition is between 2-3 mm thick to create a sustained burn. Ignition source should generate sufficient heat long enough to cause the oil to ignite • Spills that contain light ends will probably ignite without the assistance of an auxiliary fuel source. A flare shell propelled from a safe distance should be adequate • Spills that contain a high percentage of heavy ends may require the use of an auxiliary fuel or ignition promoter • Auxiliary fuel usually consists of diesel, kerosene and gasoline but can also be in the form of dry straw, etc. • Diesel and kerosene are considered to be the best ignition promoters as the flame temperature is higher • Lighter products, such as gasoline, evaporate much faster than diesel which results in faster cooling of the slick • Dry straw can be effective, but application should be able to be done in a safe manner • Ignite the outer edge of the spill and allow the fire to burn from the outside in (helps to reduce chances of fluid migration) • Use multiple ignition points, where possible, to encourage the spreading of flames throughout the spill area and improve burn efficiencies • Ignition devices may include: o flare shells o gelled gasoline o diesel or kerosene o mixtures of gasoline and diesel fuel o crude oil o organic matter such as peat moss or straw o canister igniters o aerial ignition devices

Ignition Considerations and Procedure	
	○ dry straw ○ propane torches
☐	Ignite the spill • Determine flammability / toxicity around the spill using an explosive / toxic gas meter • Apply the auxiliary fuel agents (if necessary) to the determined ignition areas • Approach the ignition points from upwind • Ensure ignition workers are in a safe zone by continuously monitoring for explosive / toxic mixtures • Ignite all sites of the spill at the same time, using the selected method • Allow initial burn to complete without adding any additional fuel.
☐	Monitor the spill site during the burn period to ensure that no hazards exist • Monitor the weather conditions on a regular basis • Be prepared to implement the emergency plan should the conditions change for the worse • Ensure the workers are in a safe area • Monitor the success of the burning procedures as they are implemented and at completion of the burn • For larger spills, burning may continue over an extended period of time, involving night-time conditions • Maintain security until the hazards have been totally eliminated • Utilize a fire guard crew on the entire perimeter to ensure no secondary fires occur • Monitor the site for black smoke • Ensure that regulatory agencies, landowner(s), stakeholders, the public, and media are kept informed • Ambient air monitoring programs should be implemented as required

10.5.7 Igniting an NGL Plume

Before ignition of an NGL plume:

- Ensure the area where people are congregating is and remains a Cold Zone by the use of gas detectors;
- Ensure proper permits for firearm and ignition if applicable;
- The area of the vapor plume is maintained clear of people and vehicles and people are prevented from going near the area;
- The potential impact on adjacent facilities is evaluated;
- Every attempt to obtain clearance from Regional Management and the municipal fire chief has been made;
- Stage fire extinguishers nearby;
- Review flare shotgun safe handling procedures (jurisdictional firearm rules apply); and
- Confirm that the available pistol is in working order, verify the number of flares available and ensure that they are the correct type for the firearm.

If contact with the QI/IC cannot be obtained quickly (e.g. no cell phone communication in area or no definite answer given) and there is an immediate risk to the public, the Enbridge Responder or a designee trained in NGL ignition may proceed with ignition.

If applicable, have local fire department on-scene prior to any attempt at ignition.

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Consider the Impact on People, the Environment and Property

Assess as follows:

If the plume remains un-ignited or the wind direction changes:

- ☐ Are the responders or the public at risk?
- ☐ Is there a greater potential for property and/or environmental damage due to accidental ignition or explosion?

No

Continuously review:

- ☐ Employee and public safety considerations.
- ☐ Existing site conditions and changes.
- ☐ Site Control procedures.
- ☐ Monitoring of the Emergency Hazard Area.

Yes

Review pre-igition considerations:

- ☐ Consider safer alternatives (i.e. close valves, ventilate, etc.)
- ☐ Assess the area/permiter of impact
- ☐ Proximity to residences, public facilities, towns or urban centers.
- ☐ Status of evacuations.
- ☐ Wind conditions and genral topography.
- ☐ The potential for changes in weather and its implications.
- ☐ Transition from daylight to night darkness.
- ☐ Fire hazard after igition in relation to adjacent area.
- ☐ Safety of all personnel in the Hazard Area
- ☐ The presence of other underground or overhead utilities. De-energize if possible.
- ☐ Will the situation worsen by burning seals out of adjacent valves or by starting pumps on fire?
- ☐ Controlled depressurization at other locations in the damaged section will reduce down time.

IS IGNITION THE MOST FAVOURABLE CONTROL POINTS TO MINIMIZE HAZARDS?

No

- ☐ Continue with release control procedures onsite.
- ☐ Review alternative control procedures.

Yes

- ☐ Is there time to discuss the igition decision with Regional QI/ IC, Regional On-Call or Supervisor?

No

- ☐ Go to Igition Procedures Flowchart.

Yes

- ☐ Review decision to Ignite with Regional QI/IC, On Call or Supervisor
- ☐ Determine post-ignition emergency services requirements.
- ☐ Assemble and brief Ignition Team.
- ☐ Go to the next page for ignition procedure flowchart.

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Onsite Personnel will coordinate and lead the safe ignition of gas release

PREPLANNING

Prior to igition the Operations Section Chief will:

- ☐ Ensure all nonessential personnel are evacuated.
- ☐ Isolate the hazard area using manned roadblocks.
- ☐ Assemble the Igition Team (2 people).
- ☐ Ensure the Igition Team is protected with personal protective equipment, clothing and breathable apparatus (cover exposted skin).
- ☐ Erect windsock and streamers (if time permits).
- ☐ Monitor the area for combustible gas.
- ☐ Fully discuss ignition procedures.
- ☐ Check radio communications.

APPROACH

Select a position to attempt safe ignition which will:

- ☐ Allow for safe retreat.
- ☐ Provide cover from the initial flash.
- ☐ Be upwind of the gas leak 250m (820ft) minimum from edge of identified vapor plume for first attempt - this may be reduced in subsequent attempts as long as it is safe to move forward).
- ☐ Be in an area where no combustible gas is deteced.
- ☐ Shoot for the outer edge of the cloud.

ATTEMPT IGNITION

- ☐ Aim for the outer edge of plume. The center of the plume is too rich to ignite. Arcing shots or bounce shots can be used.
- ☐ Turn away from target to avoid heat flash.
- ☐ Lay down if possible to minimize percussion to body.

PLUME IGNITED?

No

REPEAT IGNITION

- ☐ Continue approach inwards using chart distances and repeat (as long as safe to do so) until sucessful. Do not go closer than 100m (330 ft) from plume.

Yes

POST IGNITION

- ☐ Advise Regional Management.
- ☐ Continue to monitor downwind for gas accumulations.
- ☐ Maintain security around immediate area.
- ☐ Assist emergy service crews with any fire control measures needed.

10.6 Bioremediation

Consider Bioremediation when mechanical disturbance is not warranted or would cause additional damage based on a Net Environmental Benefits Analysis.

- Apply nutrients (fertilizer containing nitrogen and phosphorus) or genetically engineered bacteria to oiled terrestrial or shoreline areas to accelerate the natural biodegradation process
- During this process, micro-organisms (bacteria) oxidize hydrocarbons, ultimately converting them to carbon dioxide and water
- Biodegradation occurs primarily at the oil/water or oil/air interface and is limited by oxygen, moisture, and nutrient availability. It is also sensitive to temperature. The lower the ambient temperature, the lower the rate
- If nutrients are used, they should be supplied in such a way that they will not be washed away by tides or any water runoff

10.6.1 Bioremediation Evaluation

- The Incident Commander will be responsible for providing event specific information needed to approve the use of bioremediation operations.
- Generally, the physical containment and recovery of oil is preferred to bioremediation
- The decision to use bioremediation treatment should be based on the type of spill, the character of the area impacted
- In some cases, other forms of clean-up may be required in conjunction with nutrient addition to achieve the desired enhancement rate

- Oil spill response chemicals, approval should be obtained from The U.S. Federal On-Scene Coordinator and U.S. State On-Scene Commander or applicable Canadian regulatory stakeholders before the nutrients are applied, and the products should be listed on government product schedules where required to determine authorization/preauthorization requirements for approval
- The U.S. Regional Area Contingency Plan and National Contingency Plan contains options for the authorization of biological agents for use under certain conditions and in certain locations

10.7 Freshwater Biological Disinfection

Biological disinfection is the systematic reduction in the probability of spreading invasive biological organisms between freshwater environments.

Determine if equipment needs to undergo disinfection, either prior or post deployment, a full inspection of the equipment is needed:

- Inspection any attached mud, plants, and other organisms
- If debris is found, the equipment should undergo disinfection procedures
- All inspections should be documented on the Enbridge Invasive Species Inspection and Certification Form. Further information on how inspection should be conducted can be found in the Emergency Response Aquatic Invasive Species Inspection Procedures

General guidelines that will assist with the implementation of the plan:

- Use a tagging system to identify infected from disinfected equipment
- Look in cracks/crevices that may otherwise go unnoticed and hide unwanted organisms
- Use rubber waders, gloves, and boots where possible, as neoprene waders and gloves as well as felt soled boots retain moisture and organism such as Rock Snot and whirling disease. Neoprene and felt soles are also harder to disinfect
- Allow equipment to dry completely and for the recommended times between uses
- To help prevent transfer of aquatic invasive species, in addition to the above-mentioned disinfection methods, where possible efforts should be made to designate equipment and personal gear to a single waterbody
- When using chemicals, the appropriate PPE is to be used (e.g., appropriate gloves, safety glasses and clothing) and the SDS are to be reviewed and available

General guidelines for setting up disinfection stations:

- Consider weather conditions
- Proximity to water bodies or means by which water and cleaning solutions could enter water bodies
- Disinfection stations will be constructed with secondary containment to collect wash water. Wash water will be collected and disposed of as per the site-specific waste management plan

- Wherever possible, draining water from equipment (e.g., bilge water) should be done in the waterbody in which work was conducted
- Type and quantity of PPE, clothing, heavy equipment, and vehicles to be disinfected
- Once items are disinfected, they should not encounter infected waters or other material.
- Avoid touching absorbent materials with other absorbent materials during disinfection

10.7.1 Disinfection Procedures

Disinfection methods should be matched to best suit the type of equipment being used. Disinfection procedures may vary depending on whether particular organisms are being targeted, as well as what may be most suitable, based on what the equipment is made of, how readily some supplies are, and the feasibility of obtaining large enough quantities of cleaning solutions in the field.

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Disinfection Procedures:	
☐	Use drying as a disinfection process if the following procedure can be followed: • Some aquatic invasive species can survive out of water for more than two weeks. It is important to know potential species to which equipment may have been exposed. Equipment should be dried before transporting to another body of water, according to the site-specific species of concern • If targeting adult zebra mussels, 30 days may be required to kill organisms in cool or humid weather • If targeting *Didymosphenia geminate* (commonly referred to as Didymo or Rock Snot), equipment should be dried completely inside and out, and then for an additional 5 days. Freezing items solid will also kill Didymo cells. Freezing overnight should work in most instances • Porous materials should be soaked in cleaning solutions for a minimum of 30 mins while non-porous materials need to be scrubbed for a minimum of 10 mins. Materials should be dry to the touch both inside and out, and allowed to dry for at least an additional 48 hours prior to entering a different waterway
Note:	If drying cannot be implemented, an active cleaning method of disinfection will be required to limit the potential of transporting biological organisms from one freshwater environment to another
☐	Soak and scrub non-absorbent items for 10 minutes and absorbent items for 30 minutes (otherwise specified below) in one of the following solutions: • 5% solution of dishwashing liquid (500 mL or 2 cups and water added to make 10 liters). • 2% solution of bleach (200 mL and water added to make 10 liters).5% solution of salt (500 ml or 2 cups and water added to make 10 liters) • 5% antiseptic hand cleaner (500 mL or 2 cups and water added to make 10 liters). • A dilute solution of 7% hydrogen peroxide mixed in a 64 ml (hydrogen peroxide):1litre (water) ratio. Can be applied using spray equipment. Infected equipment should be completely covered with the solution and allowed to sit for approximately 60 minutes before rinsing with clean water. • Iodophor solution of 100 mg/L for moving equipment out of Viral Hemorrhagic Septicemia (VHS) management zones • Vinegar Dip (100% vinegar for 20 minutes)

Disinfection Procedures:	
	• 1% salt solution in place of the vinegar dip for 24 hours • Full strength cleaning agents with quaternary ammonium compound alkyl dimethyl benzyl ammonium chloride (ex Parvasol ®and Kennelsol ®or Formula 409® and Fantastic ®) • These can also be used in a 2:1 water to disinfectant ratio • Soak all equipment for a minimum of 10 minutes
☐	Consider the following when deciding on the appropriate active cleaning methodology for nonabsorbent items: • Disinfection with chemicals is not effective against killing spiny water fleas resting eggs • Disinfection with chlorine or iodophor should be used if fieldwork is conducted within and outside of the VHS management zones • Water-based solutions should be at least 60ºC (140ºF) and soaked for at least 20 minutes in hot water kept above 45ºC (113ºF) • For equipment that cannot be submerged, solutions may be applied by either washing with a pressure washer, or with a pressurized garden hose. Pressure washers should reach at least 250 pounds per square inch (psi). Pressure washers may not be appropriate for all equipment
☐	Absorbent items (e.g., felt-soled waders and diving suits) will require longer soaking times than non-absorbent items, to allow thorough saturation. Soak absorbent items in the following solutions: • At least 40 minutes in hot water kept above 45ºC • At least 30 minutes in hot water kept above 45ºC containing a 5% dishwashing detergent solution • For SCUBA gear, the following solution and soak times may also be used: • Submerge and wash the suit and equipment (including inside of buoyancy compensator with hot water that is at least 40ºC (or 104ºF) • Submerge/wash suit and equipment in a tub/tote with a salt solution (1/2 cup salt dissolved in 3.4 liters of water), then rinse with clean water
☐	Contain and store materials and solutions used in the disinfection process for appropriate disposal

10.8 Decontamination

All personnel and equipment should go through a decontamination process to ensure spilled material does not contaminate a larger area than needed. An event specific decontamination plan will be developed to support the Incident Action Plan based on these principles:

Establish a decontamination corridor based on the established work sites outlined in the Site Safety Plan. As workers exit the hot zone, they should go through the decon procedures at stations within the warm zone.

To determine the scope of decontamination stations needed, consider:

- Weather conditions
- Site conditions
- Size of the emergency
- Quantity of PPE
- Amount of tools and equipment
- Sensitive areas
- Natural drainage patten
- Logistics of decon and waste disposal

To prevent contamination from spreading from equipment and tools outside the Warm Zone:

- Remove contaminated soil caught in tires and the undersides of equipment and vehicles as much as possible
- Use pressure washers to clean the outsides and undersides of vehicles, boats (protection from invasive species and contamination) and equipment. When pressure washers are not feasible, use brushes and buckets with a cleaning solution
- Ensure containers for storing contaminated materials are available
- Dispose of all waste generated by cleaning equipment in an acceptable manner
- Build bermed or lined areas to contain runoff or surface water
- Minimize waste generated from cleaning equipment as much as possible but not to the extent that it compromises adequate decontamination
- If large equipment should be moved offsite or from one location to another for more thorough cleaning, inspect the equipment to ensure contamination will not occur during transport and ensure the alternate location is pre-approved by the Incident Commander

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10.8.1 Decontamination Procedures

All emergency response personnel will be briefed on decon procedures before entering the decon corridor:

Decontamination Procedures	
☐	Clearly identified the area by yellow tape or other highly visible method with clearly identifiable entry and exit points
☐	Established upwind of the Hot Zone or in a location where vapors from the Hot Zone will not significantly impact the corridor
☐	If possible, set up close to services (water, electricity, road access, etc.)
☐	Cover the floor with PVC sheets/10 mil poly to prevent contamination of the soil. The rest of the decon corridor will be lined with non-slip sorbent surface and bordered with sorbent rolls, pylons and barrier tape
☐	Identify decon corridor entry and exit will be located within the Warm Zone
☐	Contained runoff water will be removed either by portable pump or buckets into drums or other suitable containers for subsequent hazardous waste removal
☐	Set up tents or plastic barriers for protection from inclement weather and also for privacy during disrobing, establish separate disrobing tent/ barrier stations per gender
☐	Set up chairs where needed to assist in PPE removal and boots/booties
☐	Set up decon pools for primary wash/rinse and wading pools for secondary wash/rinse
☐	Set up a tool drop just outside the decon corridor entry point (wading pool and/or other suitable containment)
☐	All water used in the Hot Zone will be treated as hazardous waste (minimize water use as much as possible)
☐	Dispose of heavily contaminated PPE, clothing/equipment considered to be a hazardous waste, discard without decontamination as required

Decontamination Procedures	
☐	Ensure cleaning solutions have adequate grease cutting properties and be evaluated by the degree of hazard for workers and the environment, (reference the Waste Management Plan). Brushes should be effective in removing contamination, but not damage clothing or PPE or cut/injured personnel
☐	Personnel wipe down will always be done in a downward motion, away from the facial area (goggles should be left on until personnel enter the Cold Zone). Gloves off last
☐	Ensure adequate hazardous waste containment is on hand and set up along the corridor. Once filled, containers will be closed, sealed, and marked as hazardous waste before being removed to a collection area
☐	Collect hazardous waste disposed in plastic (garbage) bags, and stored in a marked waste bin or other protective secondary containment
☐	Collect PPE items that may be reused after decontamination (e.g., rubber suits, rubber boots) and store near the Cold Zone and made available to responders as required
☐	Ensure a supply of fresh respirator cartridges will be available to responders
☐	Collect used contaminated cartridges and store in an identified container
☐	Ensure there is a supply of facial wipes, paper towels and clean water maintained outside the Cold Zone for final, personal cleaning. A shower facility (if possible) should be available at this location
☐	All materials used in the decon corridor will be marked and placed in suitable containment, including inner packaging and outer packaging, as required for further decontamination before final storage
☐	Any tools and equipment that can be decontaminated will be decontaminated to allow future use and to reduce replacement cost
☐	Any tools and equipment considered of no further use will be properly disposed of

10.8.2 Decontamination Corridor Set Up

See the diagram below for setting up a decontamination area:

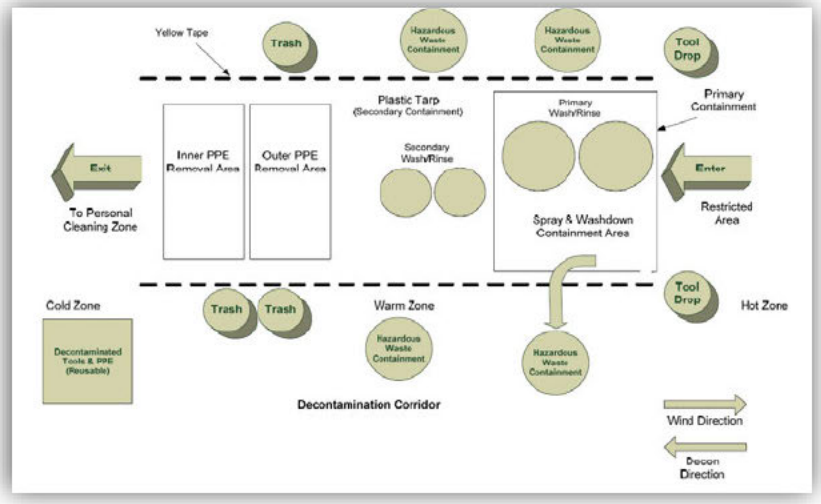

Figure 2: Decon Corridor

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10.8.3 Decontamination Trailers

When using a decon trailer:

- Fill freshwater tanks onsite
- Do not tow the trailer with full water tanks
- A licensed contractor should pump wastewater tanks onsite, and wastewater should be disposed of in an acceptable manner
- Ensure the trailer is located on firm stable surface
- Fill fuel tanks onsite, and maintain a generator onsite, if needed
- Organize electric and water hookups, if available
- Arrange for laundering clothing offsite
- Level the trailer to ensure its components function properly.
- Stock with personal hygiene articles (e.g., soap, shampoo, towels)
- Complete and record trailer maintenance

Personnel –Decontamination Trailer Procedure	
☐	Follow decontamination procedure
☐	Enter decontamination trailer and remove all other personal clothing
☐	Place clothing into designated area

Personnel –Decontamination Trailer Procedure	
☐	Shower
☐	Redress in designated area
☐	Exit decontamination area without passing through the undressing area

10.9 Demobilization

The decision to downgrade an emergency level(s) is made by the Incident Commander. This decision may be based on monitoring data, control/containment of the situation, or reduced risk to the public or environment.

Before demobilization of the Incident Management Team can occur, the following should be done:

Demobilization Triggers	
☐	Event has been contained (the threat has been removed)
☐	Incident Command System resources needs have been assessed and scaled back
☐	Containment in place and effective
☐	The visual extent of impact has been identified
☐	Clean up resources are in place
☐	Internal and external stakeholder notification conducted (including Indigenous representatives)
☐	Other plans have been considered and drafted: e.g., monitoring and sampling plan, remediation plan, wildlife mitigation plan, communications plan, and waste management plan
☐	Transition Plan developed and agreed on by Incident Command/Unified Command
☐	Moved from the proactive phase into project phase

The demobilization should consider both the priority of release, and how activities will be transferred fully and effectively to regional operations, project teams, and/or other supporting business departments. Resources no longer required for the response to the event will be demobilized as rapidly as is feasible. Enbridge staff, contractors and sub-contractors are required to go through the demobilization process.

Employees are required to contact Human Resources (if present) or their event leader upon safe return to their home residence and provide their preferred contact method prior to departure from their event response work location so that Human Resources (if present) or their event leader can follow-up if a callback has not been received.

11.0 RESPONSE EQUIPMENT

11.1 Enbridge Equipment Locations

Equipment Locations and Call Signs	Emergency Phone Number	Address	Lat	Long
Eastern Region Response Units				
Sarnia Terminal	519-337-0924			
Westover Terminal	905-659-2000			
Belleville Office	613-966-1955			
Montreal Terminal	514-643-4755			
Mississauga Office	905-659-2004			
Hilton				

11.2 External Spill Response Organizations

Equipment Locations	Emergency Phone Number	Address	Lat	Long
Eastern Canada Response Corporation (ECRC-SIMEC) https://www.ecrc-simec.ca/en/	[redacted]			
QM Environmental https://www.qmenv.com/expertise/emergency-response/				
EVOS Pipeline Services https://evospipeline.ca/en/				
David Brown Construction Ltd. - DBC Environmental Services https://dbcltd.ca/				
BASES - Bluewater Association for Safety, Environment and Sustainability (prev. known as CAER) https://www.lambtonbases.ca/				

11.3 Conversion Table

Length	English to Metric	Length	Metric to English
1 inch (in)	2.54 centimetres (cm)	1 cm	0.393 in
1 foot (ft)	0.3048 meters (m)	1 m	3.28 ft
1 mile (mi)	1.609 kilometres (km)	1 km	0.621 mi
1 nautical mile (nm)	1. 852 kilometres (km)	1 km	0.540 nm
Area			
1 square foot (ft^2)	929 square centimetres (cm^2)	1 cm^2	0.0129 ft^2
	0.0929 square metres (m^2)	1 m^2	10.76 ft^2
1 acre (ac)	4.047 square metres (m^2)	1000 m^2	0.247 ac
1 square mile (mi^2)	2.59 square kilometres (km^2)	1 km^2	0.386 mi^2
Volume			
1 US Gallon (US gal)	3.785 litres (l)	1 l	0.264 U.S. gal
1 Imperial Gallon (Imp gal)	4.546 litres (l)	1 l	0.220 imp gal
1 Barrel	0.16 cubic metres (m^3)	1 m^3	6.29 bbl
	159 litres (l)	1 l	0.00629 bbl
Velocity			
1 mile per hour (mph)	1.609 kilometres/hr (kph)	1 km/h	0.621 mph
1 nautical mile per hour (knot)	1.852 kilometres/hr (kph)	1 km/h	0.54 knot
1 foot per second (fps)	0.3048 metre/second (m/sec)	1 m/sec	3.28 fps
	1.097 kilometres/hr (kph)	1 km/h	0.911 fps

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Length	English to Metric	Length	Metric to English
Weight			
1 pound (lb)	0.454 kilogramme (kg)	1 kg	2.205 lb
1 short ton (st)	0.907 tonne (mt)	1 t	1.102 st
1 long ton (lt)	1.016 tonne (mt)	1 t	0.984 lt
Temperature			
$^oF = (^oC\ (9) \div 5) + 32$			
Pressure			
1 pound per square inch (psi)	0.0689 bar	1 bar	14.504 psi
	6.89 kilopascals (kPa)	1 kPa	0.145 psi
	0.704 metre (water column) (mwc)	1 m CE	1.42 psi
1 inch mercury (in Hg)	25.4 mm mercury (mm Hg)	1 mm Hg	0.0394 in Hg
1 atmosphere (atm)	1.033 kg/cm^2	1 kg/cm^2	0.968 atm
	760 mm mercury (mm Hg)	1 mm Hg	0.00132 atm
Flow			
1 gallon per minute (gpm)	0.227 $metre^3$ per hour (m^3/hr)	1 m^3/h	4.403 gpm
1 cubic foot per minute (cfm)	1.699 cubic meters per hour (m^3/hr)	1 m^3/h	0.5886 cfm
1 barrel per day (bph)	0.1104 litres per minute (lpm)	1 lpm	9.057 bpd
Power			
1 horsepower (hp)	0.746 kilowatt (kw)	1 kw	1.341 hp

11.4 Equipment List

The following equipment list was pulled for inclusion in Dec. 2024. Equipment may move throughout the year, real time inventory is accessible to internal users in Maximo.

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Eastern Region			
Assigned Storeroom	Description	Barcode	Asset #
Location:	Bellville		
Location Call sign:	[redacted]		
[redacted]	TRAILER:NOMODIFIER;BOATTRAILER, DUAL AXLE	[redacted]	
	TRAILER:NOMODIFIER;BOATTRAILER, DUAL AXLE		
	DAM:NOMODIFIER;WATERGATE,25'		
	DAM:NOMODIFIER;WATERGATE,25'		
	TRAILER:NO MODIFIER; RESPONSE ENCLOSED, DUAL AXLE, 20' to <26'		
	PUMP:NO MODIFIER; 3 IN, TRASH		
	BOOM:NO MODIFIER;BOOMVANE, 0.5M SMALL BOOM VANE		
	PUMP:NO MODIFIER; 3 IN, DIAPHRAM		
	SKIMMER:NOMODIFIER;SUCTION, MANTA RAY		
	GENERATOR:NOMODIFIER; GAS, 3000W		
	PUMP:NO MODIFIER; 2 IN, TRASH		
	PUMP:NO MODIFIER; 2 IN, WATER		
	BLOWER:NOMODIFIER; BLOWER		
	BLOWER:NOMODIFIER; BLOWER		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER; PORTABLE, POP-UP (400 gal to <600 gal, 1514L to < 2271L)		
	TANK:NOMODIFIER; PORTABLE, POP-UP (400 gal to <600 gal, 1514L to < 2271L)		

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Assigned Storeroom	Description	Barcode	Asset #
	BOOM:NOMODIFIER;SHORESEAL, 50' SECTION LENGTH, 63 SECTIONS (3150' TOTAL)		
	SKIMMER:NO MODIFIER; PEDCO/PELICAN, WEIR		
	SKIMMER:NOMODIFIER;SMOOTHDRUM, TDS118		
	GENERATOR:NOMODIFIER; GAS, 4000W		
	POWER UNIT:HYDRAULIC; DUALHYDRAULICS, DIESELFUEL		
	TANK:NOMODIFIER; PORTABLE, POP-UP (1000 gal to <2000 gal, 3785L to < 7570L)		
	PUMP:NO MODIFIER; 2 IN, TRASH		
	PUMP:NO MODIFIER; 3 IN, WATER		
	Mississauga		
	[redacted]		
	BOOM:NO MODIFIER; ALUMINUM, BOOMVANE		
	POWER UNIT:HYDRAULIC; SINGLE HYDRAULICS		
	SKIMMER:NO MODIFIER; SMOOTH DRUM		
	PUMP:NO MODIFIER; 3 IN, DIAPHRAM		
	SKIMMER:NOMODIFIER;SUCTION, MANTA RAY		
	BOOM:NOMODIFIER;RIVER, FOAM, 50' SECTION LENGTH, 4 SECTIONS		
	PUMP:NO MODIFIER; 3 IN, WATER		
	TANK:NOMODIFIER; PORTABLE, POP-UP (1000 gal to <2000 gal, 3785L to < 7570L)		
	BOOM:NOMODIFIER;RIVER, FOAM, 50' SECTION LENGTH, 3 SECTIONS (150' TOTAL)		
	VEHICLE:NO MODIFIER; ARGO		
	POWER UNIT:HYDRAULIC; DUALHYDRAULICS, DIESELFUEL		
	SKIMMER:NOMODIFIER;WEIR, OCEANSKATER		

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Eastern Region			
Assigned Storeroom	Description	Barcode	Asset #
Location:	Montreal		
Location Call sign:	[redacted]		
	TRAILER:NO MODIFIER;BOAT TRAILER, DUAL AXLE		
	TRAILER:NO MODIFIER;BOAT TRAILER, DUAL AXLE		
	TRAILER:NOMODIFIER;INCIDENT COMMAND POST, DUAL AXLE (30' TO <50') - ML-4		
	TRAILER:NO MODIFIER; FLATDECK - TRAILER, BOOM (ML-6)		
	TRAILER:NO MODIFIER;BOAT TRAILER, DUAL AXLE		
	VEHICLE:NO MODIFIER;VACCUM		
	TOOL:CHAINSAW;CHAINSAW, 36 INCH		
	PUMP:NO MODIFIER; 3 IN, TRASH		
	POWER UNIT:HYDRAULIC; DUALHYDRAULICS, DIESELFUEL		
	PUMP:NO MODIFIER; 3 IN, DIAPHRAM		
	SKIMMER:NOMODIFIER; SMOOTH DRUM, MAGNUM200		
	DAM:NOMODIFIER;WATERGATE,25'		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER; PORTABLE, POP-UP (400 gal to <600 gal, 1514L to < 2271L)		
	TANK:NOMODIFIER; PORTABLE, POP-UP (400 gal to <600 gal, 1514L to < 2271L)		
	TRAILER:NO MODIFIER; RESPONSE ENCLOSED, DUAL AXLE, 18' to <20' - TRAILER, Environmental (ML-8)- UNIT-229		
	BOOM:NOMODIFIER;RIVER, FOAM, 50' SECTION LENGTH, 4 SECTIONS		

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Eastern Region

Assigned Storeroom	Description	Barcode	Asset #
	BOOM:NOMODIFIER;RIVER, FOAM, 50' SECTION LENGTH, 3 SECTIONS (150' TOTAL)		
	TRAILER:NO MODIFIER; RESPONSE ENCLOSED, DUAL AXLE, 18' to <20' - First Responder (ML-7)- UNIT: 201		
	DAM:NOMODIFIER;WATERGATE,25'		
	GENERATOR:NOMODIFIER; DIESEL, >10000W		
	POWER UNIT:HYDRAULIC; DIESEL FUEL, SINGLE HYDRAULICS		
	BOOM:NO MODIFIER; HYDRAULIC REEL		
	BLOWER:NOMODIFIER;		
	GENERATOR:NOMODIFIER; GAS, 7000W		
	POWER UNIT:HYDRAULIC; DIESEL FUEL, SINGLE HYDRAULICS		
	SKIMMER:NOMODIFIER;GROOVEDDRUM, TDS118G		
	PUMP:NO MODIFIER; 3 IN, WATER		
	BOOM:NOMODIFIER;CREEK, FOAM, 50' SECTION LENGTH, 2 SECTIONS		
	BOOM:NOMODIFIER;RIVER, FOAM, 50' SECTION LENGTH, 2 SECTIONS (100' TOTAL)		
	SKIMMER:NOMODIFIER;SUCTION, MANTA RAY		
	TANK:NOMODIFIER; PORTABLE, POP-UP (1000 gal to <2000 gal, 3785L to < 7570L)		
	TANK:NOMODIFIER; PORTABLE, POP-UP (1000 gal to <2000 gal, 3785L to < 7570L)		
	GENERATOR:NOMODIFIER; GAS, 7000W		
	SKIMMER:NO MODIFIER; PEDCO/PELICAN, WEIR		
	BOOM:NO MODIFIER;BOOMVANE, 0.5M SMALL BOOM VANE		
	BOOM:NOMODIFIER;CREEK, FOAM, 50' SECTION LENGTH, 2 SECTIONS		
	PUMP:NO MODIFIER; 2 IN, TRASH		

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Eastern Region			
Assigned Storeroom	Description	Barcode	Asset #
Location:	Sarnia		
Location Call sign:	[redacted]		
[redacted]	BOAT:NOMODIFIER; JONBOAT, 10 TO < 20 HP, 14 FT, OUTBOARDJET		[redacted]
	BOAT:NO MODIFIER; OUTBOARD PROPELLER, 50 to < 60 HP, 18 FT, WORKBOAT		
	TRAILER:NO MODIFIER; DUAL AXLE, BOAT TRAILER, Unit 239		
	TRAILER:NO MODIFIER; RESPONSE ENCLOSED, DUAL AXLE, 18' to <20', Unit 180		
	TRAILER:NO MODIFIER; RESPONSE ENCLOSED, DUAL AXLE, 18' to <20', Unit 230		
	SMALLMOTOR:NOMODIFIER;BLOWER		
	BOOM:NO MODIFIER;BOOMVANE, 0.5M SMALL BOOM VANE		
	TRAILER:NO MODIFIER; DUAL AXLE, BOAT TRAILER		
	MOTOR:NOMODIFIER; OUTBOARDPROPELLER, 5 TO <10 HP		
	DAM:NOMODIFIER;WATERGATE,25'		
	DAM:NOMODIFIER;WATERGATE,25'		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TRAILER:NO MODIFIER; ENCLOSED, DUAL AXLE, 18' to <20'		
	PUMP:NO MODIFIER; 2 IN, TRASH		
	PUMP:NO MODIFIER; 2 IN, TRASH		
	PUMP:NO MODIFIER; 2 IN, TRASH		

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Eastern Region

Assigned Storeroom	Description	Barcode	Asset #
[redacted]	PUMP:NO MODIFIER; 2 IN, TRASH	[redacted]	[redacted]
	PUMP:NO MODIFIER; 3 IN, TRASH		
	PUMP:NO MODIFIER; 3 IN, TRASH		
	TANK:NOMODIFIER; PORTABLE, POP-UP (2000 gal to <4000 gal, 7570L to < 11356L)		
	POWER UNIT:HYDRAULIC; DUALHYDRAULICS, DIESELFUEL		
	SKIMMER:NOMODIFIER;SUCTION, MANTA RAY		
	BOOM:NO MODIFIER; ALUMINUM, BOOMVANE		
	TANK:NOMODIFIER; PORTABLE, POP-UP (400 gal to <600 gal, 1514L to < 2271L)		
	TANK:NOMODIFIER; PORTABLE, POP-UP (400 gal to <600 gal, 1514L to < 2271L)		
	SKIMMER:NO MODIFIER; PEDCO/PELICAN, WEIR		
	PUMP:NO MODIFIER; 3 IN, DIAPHRAM		
	PUMP:NO MODIFIER; 2 IN, TRASH		
	SKIMMER:NOMODIFIER;SMOOTHDRUM, TDS118		
	TANK:NOMODIFIER; PORTABLE, POP-UP (1000 gal to <2000 gal, 3785L to < 7570L)		
	PUMP:NO MODIFIER; 3 IN, WATER		
	SKIMMER:NO MODIFIER; MI-30, 3 x 30 x 2.5 FT, 16 GPM, DISC		
	POWER UNIT:HYDRAULIC; DUALHYDRAULICS, DIESELFUEL		
	BOOM:NO MODIFIER; FOAM, 50' SECTION LENGTH, RIVER		
	TANK:NOMODIFIER; PORTABLE, POP-UP (1000 gal to <2000 gal, 3785L to < 7570L)		
	BOOM:NO MODIFIER; RIVER, FOAM, 50' SECTION LENGTH		

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Eastern Region			
Assigned Storeroom	Description	Barcode	Asset #
Location:	Westover		
Location Call sign:	[redacted]		
	BOAT:NOMODIFIER; JONBOAT, 10 TO < 20 HP, 14 FT, OUTBOARDJET		
	BOAT:NO MODIFIER; OUTBOARD PROPELLER, 50 to < 60 HP, 18 FT, WORKBOAT		
	TRAILER:NO MODIFIER; DUAL AXLE, BOAT TRAILER, Unit 239		
	TRAILER:NO MODIFIER; RESPONSE ENCLOSED, DUAL AXLE, 18' to <20', Unit 180		
	TRAILER:NO MODIFIER; RESPONSE ENCLOSED, DUAL AXLE, 18' to <20', Unit 230		
	SMALLMOTOR:NOMODIFIER;BLOWER		
	BOOM:NO MODIFIER;BOOMVANE, 0.5M SMALL BOOM VANE		
	TRAILER:NO MODIFIER; DUAL AXLE, BOAT TRAILER		
	MOTOR:NOMODIFIER; OUTBOARDPROPELLER, 5 TO <10 HP		
	DAM:NOMODIFIER;WATERGATE,25'		
	DAM:NOMODIFIER;WATERGATE,25'		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TRAILER:NO MODIFIER; ENCLOSED, DUAL AXLE, 18' to <20'		
	TRAILER:NO MODIFIER; DUMP, DUAL AXLE, 18' to <20'		
	PUMP:NO MODIFIER; 2 IN, TRASH		
	PUMP:NO MODIFIER; 2 IN, TRASH		
	PUMP:NO MODIFIER; 2 IN, TRASH		

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Eastern Region

Assigned Storeroom	Description	Barcode	Asset #
	PUMP:NO MODIFIER; 2 IN, TRASH		
	PUMP:NO MODIFIER; 3 IN, TRASH		
	PUMP:NO MODIFIER; 3 IN, TRASH		
	TOOL: NO MODIFIER: THERMAL IMAGER, FLIR, T540		
	TANK:NOMODIFIER; PORTABLE, POP-UP (2000 gal to <4000 gal, 7570L to < 11356L)		
	POWER UNIT:HYDRAULIC; DUALHYDRAULICS, DIESELFUEL		
	SKIMMER:NOMODIFIER;SUCTION, MANTA RAY		
	BOOM:NO MODIFIER; ALUMINUM, BOOMVANE		
	TANK:NOMODIFIER; PORTABLE, POP-UP (400 gal to <600 gal, 1514L to < 2271L)		
	TANK:NOMODIFIER; PORTABLE, POP-UP (400 gal to <600 gal, 1514L to < 2271L)		
	SKIMMER:NO MODIFIER; PEDCO/PELICAN, WEIR		
	PUMP:NO MODIFIER; 3 IN, DIAPHRAM		
	PUMP:NO MODIFIER; 2 IN, TRASH		
	SKIMMER:NOMODIFIER;SMOOTHDRUM, TDS118		
	TANK:NOMODIFIER; PORTABLE, POP-UP (1000 gal to <2000 gal, 3785L to < 7570L)		
	PUMP:NO MODIFIER; 3 IN, WATER		
	SKIMMER:NO MODIFIER; MI-30, 3 x 30 x 2.5 FT, 16 GPM, DISC		
	POWER UNIT:HYDRAULIC; DUALHYDRAULICS, DIESELFUEL		
	BOOM:NO MODIFIER; FOAM, 50' SECTION LENGTH, RIVER		
	TANK:NOMODIFIER; PORTABLE, POP-UP (1000 gal to <2000 gal, 3785L to < 7570L)		
	BOOM:NO MODIFIER; RIVER, FOAM, 50' SECTION LENGTH		

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Eastern Region			
Assigned Storeroom	Description	Barcode	Asset #
Location:	Hilton		
Location Call sign:	[redacted]		
[redacted]	SKIMMER:NOMODIFIER;DISC		[redacted]
	POWER UNIT:HYDRAULIC; DUALHYDRAULICS, DIESELFUEL		
	TANK:NOMODIFIER;PORTABLE, POP-UP (600 GAL TO <1000 GAL, 2271L TO < 3785L)		
	TRAILER:NO MODIFIER; FLATDECK, DUAL AXLE BUMPER PULL		
	TRAILER:NO MODIFIER; RESPONSE ENCLOSED, DUAL AXLE, 20' to <26'		
	TRAILER:NO MODIFIER; RESPONSE ENCLOSED, DUAL AXLE, 20' to <26'		
	BOOM:NO MODIFIER; RIVER, FOAM, 50' SECTION LENGTH		
	CONTAINER:NOMODIFIER; STANDARD, NOSKIDSMOUNTED		
	TRAILER:NO MODIFIER; RESPONSEENCLOSED, DUAL AXLE (16 TO <18')		
	TRAILER:NO MODIFIER; RESPONSEENCLOSED, DUAL AXLE (16 TO <18')		
	PUMP:NO MODIFIER; 2 IN, DIAPHRAM		
	MOTOR:NOMODIFIER; DRILL, STIHL BT45		
	AUGER:NOMODIFIER; ICEAUGER, GAS		
	TOOL:CHAINSAW; CHAINSAW, 36 INCH, 385XP		
	TOOL:CHAINSAW; CHAINSAW, 36 INCH, 390XP		
	AUGER:NOMODIFIER; ICEAUGER, GAS		
	PUMP:NO MODIFIER; 2 IN, TRASH		
	POWER UNIT:HYDRAULIC; SINGLEHYDRAULICS , GASFUELSELF CONTAIN DUAL AIR/PUMP; GAS POWERED POWER UNIT		
	TOOL:CHAINSAW; CHAINSAW, 36 INCH, 390XP		
	GENERATOR:NOMODIFIER; GAS, 7000W		
	SKIMMER:NOMODIFIER; WEIR		

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Eastern Region

Assigned Storeroom		Description	Barcode	Asset #
[redacted]		PUMP:NO MODIFIER; 3 IN, WATER	[redacted]	[redacted]
		BOOM:NO MODIFIER; RIVER, FOAM, 50' SECTION LENGTH		
		GENERATOR:NOMODIFIER; GAS, 7000W, HONDA, EM6500SX		
		SKIMMER:NOMODIFIER;SMOOTHDRUM, TDS118		
		POWER UNIT:HYDRAULIC; DUALHYDRAULICS, DIESELFUEL		
		TANK:NOMODIFIER; PORTABLE, POP-UP (1000 gal to <2000 gal, 3785L to < 7570L)		
		BOOM:NO MODIFIER; RIVER, FOAM, 50' SECTION LENGTH		

12.0 RESPONSE TIME MAPPING

Drive times depicted in the Regional Emergency Response Time Maps were generated using Environmental Systems Research Institution (ESRI) ARCPro. Times were calculated utilizing actual street speed limits based on a network dataset build from ESRI's Street map Premium North America, which contains street information from 2023. Optimal driving conditions during morning commute hours were used in this response time analysis, actual time is subject to change based on local road, traffic, and weather conditions.

These response time maps are considered a conservative timeframe for travel to site and do not include additional time for deployment. In case of an event, reference to individual maps will be necessary.

Manned station and Emergency Response Trailer travel times are calculated in hour increments up to 6 hours. The colored zone changes every hour on the maps. This will show the travel time required from the manned stations and company trailers to areas along the pipeline.

OSRO Emergency Response Trailer location travel times are represented by calculating every hour up to 6 hours based on the above criteria. The colored zone changes every hour on the maps. Response times may vary with the locations of OSRO personnel at the time of an event. This is representative of travel time for the trailers only.

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13.0 SAFETY DATA SHEETS

Safety Data Sheets can be accessed through the 3E Protect application available on Enbridge computers and mobile phones.

SDS on elink or Enbridge apps	Safety Data Sheets are maintained in the 3E Protect SDS Database and can be accessed through a single sign-on process for Enbridge employees.
SDS app on mobile phones	Scan this QR code to visit or download the 3E Mobile site [redacted] [redacted]
SDS by phone 1-800-451-8346 1-760-602-8703	Employees can use this 24/7 service to contact 3E and request an SDS(s), or any related information such as PPE, fire fighting, etc… The number can also be used as a poison control number.

Here are the links to the SDS for the products that are commonly shipped in Enbridge pipelines:

Product Name	Version	Product Name	Version
Condensate	US - English	**Sweet**	US - English
	Canada - English		Canada - English
	Canada - French		Canada - French
Dilbit	US - English	**Synbit**	US - English
	Canada - English		Canada - English
	Canada - French		Canada - French
Light Synthetic	US - English	**Heavy**	US - English
	Canada - English		Canada - English
	Canada - French		Canada - French
Natural Gas Liquids	All		

The following safety cards can assist first responders on-scene by providing information on the dangers, handling and storage, required PPE, and first aid, for the following products:

- Petroleum Crude Oil
- Natural Gas Liquid (NGL)

Workplace Safety Card Mar 17, 2025 / Version 1

REDACTED COPY

Product Name Petroleum Crude Oil **UN No.**

Synonyms

DESCRIPTION

Danger

H224 Extremely flammable liquid and vapour. H319 Causes serious eye irritation. H315 Causes skin irritation. H340 May cause genetic defects. H350 May cause cancer. H361 Suspected of damaging fertility or the unborn child. H304 May be fatal if swallowed and enters airways. H336 May cause drowsiness or dizziness. H372 Causes damage to organs (hearing organs) through prolonged or repeated exposure. H302+H312 Harmful if swallowed or in contact with skin. H330 Fatal if inhaled.

Physical Properties

Flash Point: > -35 C	**Autoignition**:	**Explosive Limits**:	
Boiling Point: -18 - 560 C	**Viscosity**:	**Appearance**:	**pH**:

HANDLING

Handling & Storage

For safe handling, avoid contact with skin, eyes, and clothing, and do not breathe vapours or swallow. Handle containers with care, use only in well-ventilated areas, keep away from ignition sources, and wear protective clothing and respiratory protection if needed. Store the product in a dry, cool, well-ventilated place, away from children, ignition sources, and oxidizing materials. Ensure containers are tightly closed, properly labeled, and use appropriate containment to avoid environmental contamination.

Incompatibilities

Strong oxidizing agents, Halogens, Strong acids, Strong bases, Nitrates, Chlorates, Peroxides, Chlorine, Chlorine dioxide

Personal protective equipment (PPE) is mandatory. The type of PPE must be in accordance with the working conditions to be performed and be appropriate to control the exposure to the product. Consult risk assessment or work permit.

Eye / Face	Respiratory	Other
		
Wear safety goggles or a face shield to protect against splashes, vapours, and particles.	If vapor concentrations are unknown - (SCBA). Full Face Organic Vapor.	Other protection: Wear suitable gloves/suits resistant to chemical penetration

FIRST AID, FIRE AND SPILLS

First Aid

Eye Contact	Rinse cautiously with water for several minutes. If eye irritation persists, seek medical advice or attention.
Skin Contact	Immediately remove all contaminated clothing and rinse the skin with water or shower. If skin irritation occurs, seek medical advice or attention.
Inhalation	immediately move the person to fresh air and keep them comfortable for breathing. If the person is not breathing, perform artificial respiration. Call emergency services.
Ingestion	IF SWALLOWED: immediately call 1-800-451-8346 or a doctor. Do not induce vomiting unless directed by medical personnel.

Fire Fighting

Appropriate Extinguishing Agents Dry Chemical, CO2 (Carbon Dioxide), Water Spray (Fog), Foam

Decomposition or Combustion Products Oxides of Carbon, sulfur dioxide, hydrocarbons

Specific Fire Fighting Instructions. Personal Protection.

Contain spill. Wear full fire fighting turn-out gear (full Bunker gear). - Respiratory Protection: Use self-contained breathing apparatus (SCBA) for respiratory protection.

Spills / Leaks Instructions. Personal Protection.

Refer to the Enbridge Field Emergency Response Plans on the GDL. DOT ERPG: Condensate/NGL - 115, Napthalene Crude - 133, Petroleum crude - 128, Petroleum Sour - 131.

Workplace Safety Card Mar 25, 2025 / Version 2

REDACTED COPY

Product Name Natural Gas Liquids (NGL) - Safety Information **UN No.**

DESCRIPTION

Synonyms

Danger

H220 Extremely flammable gas. H350 May cause cancer. H315 Causes skin irritation. H361 Suspected of damaging fertility or the unborn child. H336 May cause drowsiness or dizziness. H371 May cause damage to organs through prolonged or repeated exposure. Not applicable May displace oxygen and cause rapid suffocation. H280 Contains gas under pressure; may explode if heated. H304 May be fatal if swallowed and enters airways. H340 May cause genetic defects.

Physical Properties

Flash Point:	**Autoignition**:	**Explosive Limits**:	
Boiling Point:	**Viscosity**:	**Appearance**:	**pH**:

HANDLING

Handling & Storage

NGLs are highly flammable and should be kept away from heat, sparks, open flames, and hot surfaces. Do not breathe the gas. Use only outdoors or in a well-ventilated area, and follow emergency response plans in case of a spill. NGLs should be stored in large pressurized tanks engineered to safely contain them, with emergency pressure relief mechanisms in place. Regular inspection and maintenance of storage containers are essential to ensure their integrity. Portable storage tanks must be handled with caution, and only trained personnel should fill, transport, and offload them

Incompatibilities

Acids, Bases, Bleach, Metals, Peroxides

Personal protective equipment (PPE) is mandatory. The type of PPE must be in accordance with the working conditions to be performed and be appropriate to control the exposure to the product. Consult risk assessment or work permit.

Eye / Face	Respiratory	Other
		
Safety goggles or a face shield.	NIOSH/MSHA approved air-purifying respirator, with organic vapor cartridge, or self-contained breathing apparatus.	Hand Protection: Wear cold insulating gloves.

FIRST AID, FIRE AND SPILLS

First Aid

Eye Contact	If in eyes: Rinse cautiously with water for at least 15 minutes. Continue rinsing. Get immediate medical advice/attention.
Skin Contact	May cause irritation and/or frostbite. Do not remove adherent material or clothing. If on skin: Wash with plenty of water. Get immediate medical advice/attention.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Get medical attention immediately.
Ingestion	Do NOT induce vomiting. If vomiting occurs naturally, have person lean forward to reduce the risk of aspiration. Get medical attention immediately.

Fire Fighting

Appropriate Extinguishing Agents Class B, CO2 or dry chemical for small fires. Spray or fog for large fires.

Decomposition or Combustion Products Oxides of carbon. Oxides of sulphur.

Specific Fire Fighting Instructions. Personal Protection.

Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

Spills / Leaks Instructions. Personal Protection.

As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions. Stay upwind. Many gases are heavier than air and will spread along ground and collect in low or confined areas. Keep out of low areas. ELIMINATE all ignition sources. All equipment used when handling the product must be grounded.