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# Standard

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## Projects – Incident Investigation

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## 1. Purpose

The purpose of this standard is to ensure that Enbridge employees and Contractors use accepted methods to report, investigate and learn from incidents.

## 2. Scope

This standard applies to all employees, contractors, and subcontractors supporting Enbridge Project activities. This standard was developed in accordance with the guidance of the Enbridge Framework Standard – Incident Investigation. This standard applies to all incidents of all Actual and Potential severity as described in the Incident Severity Matrix. If an event has potential LSR implications, then refer to the Lifesaving Rules Guidance Document. If the event is related to Quality Management contact Quality Management Group.

Contractors and subcontractors shall comply with Enbridge Incident Investigation requirements set out in this standard. If a contractor or subcontractor has an Incident Investigation Process or policy materially different from Enbridge's, the contractor/subcontractor shall follow the most stringent requirement. Contractors and subcontractors are still obligated to meet the requirements of all applicable laws related to this standard.

In the event a contractor's or subcontractor's process exceeds the requirements of this standard, Enbridge may, at its sole discretion, choose to adopt the contractor's or subcontractor's process for any given contract or work order.

## 3. Terms and Definitions

Term / Acronym	Definition
CAPA	Corrective and Preventive Actions
Contractor	A legal entity with whom Enbridge may enter into an agreement for the provision of labor, materials and/or equipment by the Contractor in the delivery of a specified scope. This may include Contractors as part of a Joint Venture (JV), either Under Operational Control (UOC) or Non-Operational Control (NUOC) which depends on circumstances, contracts, terms and conditions.
Contractor Incident Owner (CIO)	individual identified by the Contractor who is accountable for the investigation deliverables.
Direct Cause	circumstance that directly lead to the occurrence of the incident
Event	occurrence that is related to the incident
Hazard	source with potential to cause undesirable outcome(s), particularly injury and ill health to people or damage to property or the environment
Incident	occurrence that resulted, or could have resulted, in undesirable outcome(s), particularly injury and ill health to people or damage to property or the environment
Incident Close Out Review	review inclusive of the Incident Owner to ensure that all incident information has been collected and documented and all action items have been actioned, verified and closed out.
Independent Investigation	an investigation that is conducted by or on behalf of the Company independent of any and all contractors or subcontractors involved in a given incident.
Lead Investigator	Company / Company Representative who organizes, conducts and controls the investigation when the Company determines that there is a need to conduct an independent investigation of an event.
Project Incident Owner (PIO)	Company /Company Representative identified by the project who is accountable for the investigation deliverables after initial notification. The identification of the incident owner may be dependent on the severity or complexity of the incident. Although each project incident ultimately belongs to the contractor, the Company shall establish an owner as outlined in this standard to fulfill the requirements for the Company or delegate responsibilities for individuals to complete those requirements.
Root Cause	underlying reasons behind the direct cause that explain why the circumstances existed.

#### 4. Roles and Responsibilities

Roles / Titles	Responsibilities
Company Project Manager shall:	<ul style="list-style-type: none"> <li>Assume the role of Project Incident Owner (PIO) or transfer ownership of event</li> </ul>
Company PIO shall	<ul style="list-style-type: none"> <li>Accept or transfer ownership of the event;</li> <li>Verify the severity or potential severity;</li> <li>Select a Lead Investigator and provide them sufficient resources;</li> <li>Verify that incidents are entered into EnCompass within 24 hours</li> <li>Determine whether to conduct an independent investigation</li> <li>As applicable, make an initial determination if an investigation into a potential LSR violation is required</li> <li>Updates management on Incident investigation progress within 10 days of the event for incidents that meet a Severity Rating of 3 or higher (actual or potential);</li> <li>Verify that information is updated in EnCompass;</li> <li>Review and accept the investigation report;</li> <li>Verify Implementation of Company CAPA;</li> <li>Verify completion of Company CAPA;</li> <li>Present Investigation Report to Company Leadership; and</li> <li>Communicate results (findings, lessons learned. and/or CAPA to applicable parties within the Company).</li> </ul>
Contractors shall:	<ul style="list-style-type: none"> <li>Be accountable for an incident that occurs in the course of their work activities and has an actual or potential impact on their personnel, equipment, or operation.</li> <li>Ensure the scene is secure after an incident occurs;</li> <li>If required, shall escort a worker for post incident Alcohol and Drug testing;</li> <li>Ensure all incidents are reported to the Company;</li> <li>Identify Contractor Incident Owner (CIO)</li> <li>Investigate all incidents;</li> <li>Preserve all incident evidence;</li> <li>Provide appropriate resources to ensure Corrective and Preventive Actions (CAPA) are identified and resolved in a timely manner; and</li> <li>Participate in an incident close out review process as required by the Company.</li> </ul>
Contractors CIO shall:	<ul style="list-style-type: none"> <li>Verify that all notifications are made to the Company;</li> <li>Verify that the incident is investigated according to the Contractor's Incident Investigation Process/Policy/Procedure;</li> <li>Verify that external communications and notifications are made as required;</li> <li>Verify that 24-hour initial incident reports and 7-day final reports are completed and provided to the Company as required and within the applicable deadlines;</li> <li>Verify that incident evidence, incident related documents, incident reports related to any incident are controlled and documented according to the Contractor's Incident Investigation Process/Policy/Procedure, GEOP and Company requirements;</li> <li>Review and accept the Contractor's Investigation reports;</li> <li>Review and approve Contractor CAPA;</li> <li>Verify completion of and documentation of Contractor CAPA;</li> <li>Communicate results (findings, lessons learned, and/or CAPA to the Contractor Workers and the Company).</li> </ul>

#### 5. Incident Investigation Requirements

##### 5.1. Incident Investigation Timelines

#### 5.1.1. Contractor Investigation Timelines:

- An initial written report shall be completed and provided to Company by the Contractor within 24 hours of an Incident
- A detailed final report shall be submitted within 7 calendar days of the Incident unless additional investigation time is necessary. If so, a written request for more time shall be made to the specified Company Representative.

#### 5.1.2. Company Investigation Timelines:

- Company Incident investigations shall be completed within 30 days of the event occurring.
- In the event Company Incident investigations that cannot be completed within the 30 days, the Incident Owner can request an extension from the Incident Owner's Director.

### 5.2. Initial Notifications

#### 5.2.1. Contractor Notifications

Incidents that occur when a Contractor is working for the Company shall be reported verbally immediately to the specified Company Representative.

#### 5.2.2. Company Notifications

Prior to the start of construction, the project team will develop an Incident Communication Plan to guarantee appropriate communication to those individuals with accountability for safety and reporting on the project.

Company projects shall follow the Preliminary Notification for Incident Guideline which sets out the flow of preliminary notifications and the form to utilize.

### 5.3. Incident Owner

#### 5.3.1. Contractor Incident Owner

The Contractor is accountable for an incident that occurs in the course of their work activities and has an actual or potential impact on their personnel, equipment, or operation and is responsible to investigate the event.

As the ultimate owner for project related incident, the contractor has the responsibility to identify the individual who is accountable for the investigation deliverables for the Contractor. The Contractor shall notify the Company who the CIO is for an incident. Within this standard that individual shall be referenced as the Contractor Investigation Owner (CIO).

#### 5.3.2. Non-Contractor Event

If it is determined by the Company that the incident did not involve Contractor, Contractor workers, Sub-Contractors (contracted by contractor) or Contractor Equipment, but only involved Company Employees, Company Representatives, Company Owned/Rented equipment or a sub-Contractor hired directly by the Company, then the event is solely owned by the Company Project Incident Owner. If it is determined it is a "Company Owned Incident" it removes Contractor responsibilities listed in this standard for the applicable event.

#### 5.3.3. Company Incident Owner

After an incident has been identified and reported, the project incident ownership must be established for the Company. The Company has the responsibility to identify the incident owner for the Company and within this standard that individual shall be referenced as the Project Incident Owner (PIO).

By default, the Company Project Incident Owner is the Project Manager. The Project Manager or the Project Manager’s senior leadership may elect to transfer ownership to another individual. In that case, it shall be documented within EnCompass and communicated to the other members of the project team to include the Construction Manager, Chief Inspector, Company Project Health and Safety Personnel or each of their equivalent.

Each incident shall have a severity assigned to the event following the Enbridge Actual & Potential Incident Severity Guidance Document. The PIO should work with the applicable Company Employees/Representatives as per the following chart to determine the Actual (A) / Potential (P) for the event.

Severity Level (per Severity Matrix)	Lead of Safety Supervisor Safety	Supervisor Safety	Manager Safety Projects	Director Safety
0 - None	X			
1 - Minor	X			
2- Moderate	X	X		
3- Serious		X	X	
4- Major			X	X
5-Critical			X	X

At the discretion of the PIO, the Company may accept a combined initial/final, report for events that are assigned A1/P2 or A0/P2 by the Company.

When it is determined that the Company will conduct an independent investigation, the PIO shall assign individuals to complete the Company investigation with consultations with the applicable Lead of Safety, Supervisor Safety and authorize the resources necessary to conduct the investigation and any necessary follow-up.

The size and makeup of the investigation team depends on the incident’s complexity and severity.

The Lead Investigator considerations should include:

- SME as driven by type of incident (i.e. crane incident, equipment related failure, etc.)
- Applicable S&R Safety Professional
- Level or complexity of incident

For Level 4 & 5 incidents, the Director of Safety works with the Project Incident Owner to identify a Lead Investigator who may be independent of the business unit and additional resources to complete the investigation.

If the decision is made to conduct a joint investigation with the Contractor, these same PIO duties and considerations apply, however final decisions would be made in consultation with and subject to negotiations with the CIO.

#### 5.4. Scene Control

The Contractor has the responsibility for scene control for all project related incidents.

The Company reserves the right to take control of the scene of any Company related incident.

The initial response to an incident may require steps to ensure that:

- the scene is secured, and all incident data is preserved as appropriate, and
- only authorized personnel have access to the scene and are permitted to collect incident evidence

The scene of an incident shall only be disturbed to attend to the injured person(s), to prevent further injuries, prevent damage to the environment, or to protect property. Investigators shall be knowledgeable regarding scene preservation requirements in accordance with the authority having jurisdiction.

Regulatory requirements could determine that the scene shall be secured until the authority(s) having jurisdiction take control over (and then releases) the scene.

When the scene of the incident is at a location not under Enbridge control, the investigation team shall coordinate the investigation with the scene authority.

The Company reserves the right to determine when the incident scene can be released.

### 5.5. Pre-Investigation

Contractor shall ensure that external communications and notifications have been carried out to comply with all applicable local, state, provincial and federal laws and regulations.

The Contractor investigation team shall check ensure:

- the scene is secured
- determine which personnel are authorized to interact with the scene
- witness management and support
- initial data collection and preservation

Contractor shall assess the data reported to determine the scope and resource requirements in the investigation.

### 5.6. Investigation Plan

#### 5.6.1. Contractor Investigation Plan

Contractor has the responsibility to plan their investigation.

#### 5.6.2. Company Investigation Plan

When the PIO has determined that the Company will conduct an independent investigation, the Lead Investigator shall develop an investigation plan specific to the incident to be investigated. The plan can be scaled in accordance with the scope of the investigation (determined by the PIO and the actual and potential severity of the incident) and may include the following:

- what data is required
- where and how the data will be obtained and maintained
- how to preserve data that might be altered or destroyed
- measures that will be taken to ensure the continued health and safety of the investigation team



- determination of the need for additional investigation resources (internal or external SMEs, additional team members, etc.)
- identification of other stakeholders (police, other organizations, the authority having jurisdiction, etc.) and the possibility of joint or concurrent investigations
- set out a timeline for progress reports to the Incident Owner

### 5.7. Witness Management and Support

Management of witnesses should:

- limit interaction between witnesses to ensure independent data is gathered
- provide a safe location for witnesses
- make provisions for confidential interviews
- address logistical factors such as shift change when scheduling witness interviews

The witnesses should write a statement of what they were doing, saw and heard at the time of the incident occurring as soon as possible after the incident.

When the Company conducts an independent investigation, the investigation team should conduct interviews with Contractor Workers with a Contractor representative (designated by Contractor).

### 5.8. Data Collection

The Contractor investigation team shall gather data as identified in the contractor's investigation plan.

The data gathered shall be identified, labeled, documented, and kept secure.

The types of evidence that is to be collected fall into four general areas (Four Ps):

- Position—(evidence: photographs, sketches, valve positions, the volume of product)
- Parts—(evidence: equipment, materials, parts, liquids)
- People—(evidence: witness statements, interviews, etc.)
- Paper—(evidence: records, standards, procedures, etc.)

Contributing factors such as work environment, equipment, work practices, supervision, staff skills, education, and training shall be considered.

At a minimum the data should include the following:

- All applicable Permits for work activities (i.e. Safe Work Permit, Ground Disturbance Permit, Hot Work Permit, Confined Space Permit, etc.)
- All applicable Job Hazard Analysis (i.e. FLHA, JSA, Job Procedure, etc.)
- Applicable job packages and materials (job planning, plot plans, etc.,)
- Witness statements
- Adequate numbers of photographs to provide visual picture of scene, layout of incident area, position of equipment, position of people, damage to property, etc.
- All applicable equipment maintenance records, vehicle checklist, equipment checklist, other applicable checklist(s), etc.

- Applicable training records (i.e. equipment operator certifications, confined space associated training, special equipment training, etc.)
- Police report if applicable

When the Company conducts an independent investigation, it may request and make use of data collected in the course of the Contractor's investigation, in addition to any other data it collects

The Company investigation team is not limited to the data collected by the Contractor investigation team. The expectation is that the Contractor will be forthcoming in providing requested materials for the Company's independent investigation

## 5.9. Analysis

Incident investigation teams should use an appropriate root cause analysis technique (e.g., DNV Systematic Causal Analysis Techniques (SCAT), DNV Barrier Systematic Causal Analysis Techniques (BSCAT), 5 Why's, TapRoot) based on the type and severity of the incident.

For injury and property damage specifically, the Company incident investigation teams shall use DNV SCAT technique to ensure all of the direct and basic causes and root causes are identified.

## 5.10. Incident Investigation Report

Incident investigation report shall include the following, at a minimum for all incidents:

- Date and time of the incident
- Date and time of investigation
- Names and titles of the investigation team
- Description of the incident
- Names and titles of the personnel, directly and indirectly, involved including any witnesses (if applicable)
- Injured worker information; including nature of injury; body part and location.
- Statements from injured Worker(s), witnesses, supervisor(s), or others as required
- Photographs and drawings
- Police Report (if applicable)
- Facts determined during the investigation, including a chronology of events leading up to the incident, at the time of the event and immediately following
- Immediate follow-up actions taken by the Contractor
- Type of incident as defined in the severity matrix (Health & Safety (People), Environmental, Operational)
- Causal analysis methodology employed and the analysis results: immediate causes and root causes
- Corrective and/or preventative actions taken and/or recommended measures to prevent recurrence (e.g., need for systems/controls, changes to work processes or systems, etc.), including responsibility and timing
- Report to be signed and dated by authorized Contractor Representative

### 5.10.1. Investigation Report Documentation – Company Responsibility

When documenting the incident investigation in EnCompass the responsible Company Representative should input above items for each incident. Documents that are attached shall be attached as Non-Confidential attachments unless required to do so by Legal, or regulatory requirements.

The Investigation shall determine both immediate and root cause(s) and provide recommendations in the form of CAPA, including their potential for system-wide application as applicable to the Contractor.

When the Company conducts an independent investigation, the Contractor investigation team shall provide recommendations in the form of CAPA, including their potential for system-wide application as applicable.

All aspects of the investigation shall be documented in and retained in the information management system (EnCompass), and in compliance with Records Management expectations. Reports prepared under legal privilege may not be retained in EnCompass if restricted access to the report is required. Legal to determine based on the level of confidentiality and required control of documents.

Investigation reports prepared under privilege and/or investigation reports that must be submitted to a regulator shall be provided to the Regulatory Law & Affairs for review and comment before the final issue.

#### **5.11. Corrective and Preventive Actions (CAPAs)**

CAPAs should address each cause that is identified in the incident report.

CAPAs shall be assigned to an individual, be measurable and have a completion date.

The individual that is responsible for the CAPA should be involved in the creation of the CAPA and should agree to the timeline for completion.

CAPAs should prevent recurrence of the incident or address significant deficiencies discovered in the investigation.

Prior to final approval of CAPAs, the PIO should ensure the applicable level of leadership has been engaged, informed, and approves of the documented CAPAs.

#### **5.12. Company Internal Communications**

Company projects shall follow the Preliminary Notification for Incident Guideline which sets out the flow of preliminary notifications and the form to utilize.

In addition to the Preliminary Notification for Incident Guideline, the Lessons Learned Standard should be used to determine responsibilities related to when, how and where lessons learned are to be communicated.

Learning from events is a critical part of ensuring continuous business and operational improvement. Effective lessons learned point to raising awareness and understanding why and how things went wrong, which decreases the potential for recurrence and results in measurable change.

#### **5.13. Incident Closeout Review**

After the event report has been completed, the Contractor shall be prepared to present a review of the report, the findings, and the CAPA's to the Company in a joint review meeting, as determined by the Company.

For incident Level, A3/P3 or higher the Contractor shall prepare and present a review of the report, the findings, and the CAPA's, to the Company at a formal management review meeting. The scope of the review will be determined by the Company.

Management review of the report(s), findings, and the CAPA's shall occur after the event report has been completed.

#### **5.14. Training Requirements**

##### **5.14.1. Contractor**

Contractor workers are to be trained on their accountability to report incidents to their contractor leaders through onboarding and orientation activities.

Contractor Investigation team members are to be trained on the Contractor Investigation Program.

Contractor should train those appropriate contractor users on an equivalent root cause analysis technique.

##### **5.14.2. Company**

Company Representatives and Employees are to be trained on the incident database (EnCompass) and their associated accountabilities.

Company Representatives and Employees who may be part of incident investigation teams should be trained in basic investigation training.

Investigation team members should receive at a minimum awareness training in Loss Causation theory and for safety-related incidents, DNV Systematic Cause Analysis Techniques (SCAT).

Enbridge Lead Investigators shall have training to a higher-level using Enbridge Lead Investigator training and/or other investigation technics. Training will include how to use the Incident Severity Matrix.

#### **6. Related Documents**

N/A

#### **7. References**

N/A