



## National Energy Board Pipeline Patrol Audit Protocol

### Appendix II – Pipeline Patrol interaction with other Management System sub-elements

#### 1.0 POLICY AND COMMITMENT

##### 1.1 Leadership Accountability

Expectations: The company shall have an accountable officer appointed who has the appropriate authority over the company's human and financial resources required to establish, implement and maintain its management system and protection programs, and to ensure that the company meets its obligations for safety, security and protection of the environment. The company shall have notified the Board of the identity of the accountable officer within 30 days of the appointment and ensure that the accountable officer submits a signed statement to the Board accepting the responsibilities of their position.

**Regulatory References: OPR 6.2(3), 6.3, 6.4**

##### Questions for discussion:

1. Who is the accountable officer?
2. Explain the accountable officer role and authority regarding sub-element 4.1 *Inspection, Measuring and Monitoring*

##### Documents and records:

- Provided documents and records to demonstrate the link between this sub-element and pipeline patrols.
- For example, does the evaluation of need incorporate pipeline patrols in its consideration of staffing levels?
- Documentation on role, responsibility and authority of accountable officer.
- Documentation related to determination evaluation of need related to patrol programs

##### 1.2 Policy and Commitment Statements

Expectations: The company shall have documented policies and goals intended to ensure activities are conducted in a manner that ensures the safety and security of the public, workers, the pipeline, and protection of property and the environment. The company shall base its management system and protection programs on those policies and goals. The company shall include goals for the prevention of ruptures, liquids and gas releases, fatalities and injuries and for the response to incidents and emergency situations.

The company shall have a policy for the internal reporting of hazards, potential hazards, incidents and near-misses that include the conditions under which a person who makes a report will be granted immunity from disciplinary action.

The company's accountable officer shall prepare a policy statement that sets out the company's



commitment to these policies and goals and shall communicate that statement to the company's employees.

**References: OPR s 6.3 CSA 3.1.2 (a)**

Questions for discussion:

1. Does the company have a policy or policies which account for the pipeline patrol program?
2. Is there a line of sight from the policy to the patrol program?

Documents / records for review:

- Processes and procedures that demonstrates a link from the policy to the patrol program
- Policy that is related to / drives the patrol program

## 2.0 PLANNING

### 2.1 Hazards Identification, Risk Assessment and Control<sup>1</sup>

Expectations: The company shall have an established, implemented and effective process for identifying and analyzing all hazards and potential hazards. The company shall establish and maintain an inventory of hazards and potential hazards. The company shall have an established, implemented and effective process for evaluating the risk associated with these hazards, including the risks related to normal and abnormal operating conditions. As part of its formal risk assessment, a company shall keep records to demonstrate the implementation of the hazard identification and risk assessment processes.

The company shall have an established, implemented and effective process for the internal reporting of hazards, potential hazards, incidents, and near-misses and for taking corrective and preventive actions, including the steps to manage imminent hazards. The company shall have and maintain a data management system for monitoring and analyzing the trends in hazards, incidents, and near-misses.

The company shall have an established, implemented and effective process for developing and implementing controls to prevent, manage and mitigate the identified hazards and risks. The company shall communicate those controls to anyone exposed to the risks.

**References OPR 6.5 (1)(c), (d),(e), 40, 47, 48**

**CSA Z662-15 clause 10.6.1, 10.6.2, 10.1,10.7**

**DPR-Os.7,9,10,11,16(b)(c)**

Questions for discussion:

1. Discuss how the patrol program is linked through inputs and or outputs to the hazard identification process.
2. Describe the process for the determination of pipeline patrol frequency.

Documents and records for review:

- Current hazard assessments and/or inventories (related to patrol program)
- Current risk evaluations (assessments)
- Documents related to the determination of frequency, location, method of patrol
- Records demonstrating past and on-going development, implementation, communication of hazard assessments, risk evaluations, trends analysis, controls and hazard inventories related to

<sup>1</sup> Hazard: Source or situation with a potential for harm in terms of injury of ill health, damage to property, damage to workplace environment, or a combination of these. Risk: Combination of the likelihood and consequence(s) of a specified hazardous event occurring



pipeline patrol

- this could include past (out-dated) documentation, meeting records, communication records, safety meeting records, employee orientation records, working files, hazard assessments

## 2.2 Legal Requirements

Expectations: The company shall have an established, implemented and effective process for identifying, and monitoring compliance with, all legal requirements that are applicable to the company in matters of safety, security and protection of the environment. The company shall have and maintain a list of those legal requirements. The company shall have a documented process to identify and resolve non-compliances as they relate to legal requirements, which includes updating the management and protection programs as required.

**References OPR 6.5(1) (g)(h)(i)**

### Questions for discussion:

- Provide the process for the identification of legal requirements as related to pipeline patrols.
- Provide the legal list related to pipeline patrol.

### Documents records to provide:

- Provide procedures and processes
- Provide records demonstrating that the pipeline patrol activities are linked to legal requirements

## 2.3 Goals, Objectives and Targets

Expectations: The company shall have an established, implemented and effective process for developing and setting goals, objectives and specific targets relevant to the risks and hazards associated with the company's facilities and activities (i.e. construction, operations and maintenance). The company's process for setting objectives and specific targets shall ensure that the objectives and targets are those required to achieve their goals, and shall ensure that the objectives and targets are reviewed annually.

The company shall include goals for the prevention of ruptures, liquids and gas releases, fatalities and injuries and for the response to incidents and emergency situations. The company's goals shall be communicated to employees.

The company shall develop performance measures for assessing the company's success in achieving its goals, objectives, and targets. The company shall annually review its performance in achieving its goals, objectives and targets and performance of its management system. The company shall document its annual review of its performance, including the actions taken during the year to correct any deficiencies identified in its quality assurance program, in an annual report, signed by the accountable officer.

**References OPR sections 6.3, 6.5(1)(a), (b), 6.6**

**CSA 3.1.2 (h)**

### Questions for discussion:

1. Discuss the identification, implementation, communication, management, measurement and review of goals, objectives and specific targets related to or that include the patrol program?
2. What, if any goal objectives and targets have the company developed for the patrol program?

### Documents and records for review:

- Current lists of goals, objectives and targets and performance measures for or that include



measures from the patrol program

- Records demonstrating past and on-going development, implementation, integration, communication, maintenance and management of the processes related to goals, objectives, targets and performance measures that incorporate information from or provide information to the patrol program

## 2.4 Organizational Structure, Roles and Responsibilities

**Expectations:** The company shall have a documented organizational structure that enables it to meet the requirements of its management system and its obligations to carry out activities in a manner that ensures the safety and security of the public, company employees, the pipeline, and protection of property and the environment. The documented structure shall enable the company to determine and communicate the roles, responsibilities and authority of the officers and employees at all levels. The company shall document contractor's responsibilities in its construction and maintenance safety manuals.

The documented organizational structure shall also enable the company to demonstrate that the human resources allocated to establishing, implementing, and maintaining, the management system are sufficient to meet the requirements of the management system and to meet the company's obligations to design, construct, operate or abandon its facilities to ensure the safety and security of the public and the company's employees, and the protection of property and the environment. The company shall complete an annual documented evaluation of need in order to demonstrate adequate human resourcing to meet these obligations.

**References:** OPR 6. 3, 6.4, 6.5 (c)(j)(k)(l)  
CSA 3.1.2 (b)(c)

### Questions for discussion:

1. Where does the accountability for the patrol program reside in your organization?
2. Who is responsible for the patrol program?
3. Does the company use contractors in their patrol program? Please explain.
4. Are the resource needs to conduct patrol activities reflected and considered during the evaluation of need?

### Documents and records for review:

- Current organizational structure which explains who is responsible for the pipeline patrol activity
- Documentation relating to the management of contractors
- Records for review
- Copies of patrol contracts (if applicable)
- Copies of job descriptions that include patrol and associated duties
- the annual evaluation of need including any mention of/links to account for patrol duties

## 3.1 IMPLEMENTATION

### 3.2 Operational Control-Normal Operations

**Expectations:** The company shall have an established, implemented and effective process for developing and implementing corrective, mitigative, preventive and protective controls associated with the hazards and risks identified in elements 2.0 and 3.0, and for communicating these controls to anyone who is



exposed to the risks.

The company shall have an established, implemented and effective process for coordinating, controlling and managing the operational activities of employees and other people working with or on behalf of the company.

**References: OPR s.39, OPR s. 6.5(1)(e), (f), (g)**  
**CSA 3.1.2(f), 10.6.1, 10.6.1.2, 10.6.2**

Questions for discussion:

1. Who is responsible for the pipeline patrol program procedures?
2. Who develops the patrol schedule?
3. Who reviews the patrol reports?
4. How are issues identified on patrol followed up on?  
Resolved?
5. How are patrols scheduled?

Documents and records to provide:

- Current pipeline patrol procedures including reporting and following up on identified issues
- Procedures provided to contractors
- Documents outlining expectations for contractors (patrol)
- Patrol records (all reports for 2015 and 2016)
- Records that demonstrate issues reported for 2015 and 2016

### 3.2 Operational Control-Upset or Abnormal Operating Conditions

Expectations: The company shall establish and maintain plans and procedures to identify the potential for upset or abnormal operating conditions, accidental releases, incidents and emergency situations. The company shall also define proposed responses to these events and prevent and mitigate the likely consequence and/or impacts of these events. The procedures must be periodically tested and reviewed and revised where appropriate (for example, after upset or abnormal events). The company shall have an established, implemented and effective process for developing contingency plans for abnormal events that may occur during construction, operation, maintenance, abandonment or emergency situations.

**References: OPR 6.5(1)(c)(d)(f)(t)**  
**CSA 3.1.2 f)ii, h)vi**

Questions for discussion:

1. Do patrol procedures include expectations for upset / abnormal conditions? How?
2. What, if any, abnormal conditions trigger changes to the patrol schedule?

Documents and records to provide:

- Records demonstrating these procedures are established and implemented
- Records relating to abnormal conditions from patrol reports

### 3.3 Management of Change

Expectations: The company shall have an established, implemented and effective process for identifying



and managing any change that could affect safety, security or protection of the environment, including any new hazard or risk, any change in a design, specification, standard or procedure and any change in the company's organizational structure or the legal requirements applicable to the company.

**References: OPR 6.5(1)(i)**

**CSA3.1.2 (g)**

Questions for discussion:

1. How does the MOC process trigger changes to the patrol program?

Documents and records to provide:

- MOC process (for context)
- Records demonstrating MOC as it relates to the patrol program.

### **3.4 Training, Competence and Evaluation**

Expectations: The company shall have an established, implemented and effective process for developing competency requirements and training programs that provide employees and other persons working with or on behalf of the company with the training that will enable them to perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment.

The company shall have an established, implemented and effective process for verifying that employees and other persons working with or on behalf of the company are trained and competent and for supervising them to ensure that they perform their duties in a manner that is safe, ensures the security of the pipeline and protects the environment. The company shall have an established, implemented and effective process for making employees and other persons working with or on behalf of the company aware of their responsibilities in relation to the processes and procedures required by the management system or the company's protection programs.

The company shall have established and implemented an effective process for generating and managing training documents and records.

**References OPR s.6.5(1)(j), (k), (l), (p), 46**

**CSA 3.1.2(c)**

Questions for discussion:

1. How are staff trained to conduct patrols?
2. How are contractors trained/ evaluated on patrol procedures and company expectations?

Documents and records to provide:

- Provide documents that demonstrate the established and implemented training processes and procedures relating to pipeline patrol.
- Provide records demonstrating that employees and contractors have been trained in procedures relating to pipeline patrol including but not limited to training in the identification of issues on the ROW and how they are communicated.
- Provide all training records from 2015 and 2016 for employees/ contractors that conduct pipeline patrol.



### 3.5 Communication

Expectations: The company shall have an established, implemented and effective process for the internal and external communication of information relating to safety, security and environmental protection. The process should include procedures for communication with the public; workers; contractors; regulatory agencies; and emergency responders.

**References:** OPR 6.5(l)(m)(q)  
CSA Z662 clause 3.1.2(d), g)(v)

Questions for discussion:

1. How are issues discovered by patrols communicated throughout the organization?

Documents and records to provide:

- Communication process (as it relates to patrols)
- Records demonstrating implementation of communication process (internal and external) as it relates to issues identified on pipeline patrol.

### 3.6 Documentation and Document Control

Expectations: The company shall have an established, implemented and effective process for identifying the documents required for the company to meet its obligations to conduct activities in a manner that ensures the safety and security of the public, company employees, the pipeline, and protection of property and the environment. The documents shall include all of the processes and procedures required as part of the company's management system.

The company shall have an established, implemented and effective process for preparing, reviewing, revising and controlling documents, including a process for obtaining approval of the documents by the appropriate authority. The documentation should be reviewed and revised at regular and planned intervals.

Documents shall be revised where changes are required as a result of legal requirements. Documents should be revised immediately where changes may result in significant negative consequences.

**References** OPR 6.5(1)(i),(n),(o), 6.5(3)  
CSA 3.1.2 (e)

Questions for discussion:

1. How does the document control process apply to patrol procedures?

Documents and records to provide:

- Process for documenting processes, templates etc as they relate to pipeline patrols
- Records demonstrating the review and maintenance of processes, templates related to pipeline patrols

## 4.1 CHECKING AND CORRECTIVE ACTION

### 4.2 Inspection, Measurement and Monitoring





Expectations: The company shall have an established, implemented and effective process for inspecting and monitoring the company's activities and facilities to evaluate the adequacy and effectiveness of the protection programs and for taking corrective and preventive actions if deficiencies are identified. The evaluation shall include compliance with legal requirements.

The company shall have an established, implemented and effective process for evaluating the adequacy and effectiveness of the company's management system, and for monitoring, measuring and documenting the company's performance in meeting its obligations to perform its activities in a manner that ensures the safety and security of the public, company employees, the pipeline, and protection of property and the environment.

The company shall have an established, maintained and effective data management system for monitoring and analyzing the trends in hazards, incidents and near-misses. The company shall have documentation and records resulting from the inspection and monitoring activities for its programs.

The company management system shall ensure coordination between its protection programs, and the company should integrate the results of its inspection and monitoring activities with other data in its hazard identification and analysis, risk assessments, performance measures, and annual management reviews, to ensure continual improvement in meeting the company's obligations for safety, security and protection of the environment.

**References OPR s. 6.1(d), 6.5(1)(g), (s), (u), (v), (w), (x), 56**

**CSA 10.6.1, 10.6.1.2, 10.7 (class location)**

**DPR-O s.16(b)**

Questions for discussion:

1. What role do patrols play in the inspection program?
2. What role do patrols play in the monitoring of land use changes?

Documents and for review:

- Current pipeline patrol and related procedures
- Current monitoring plans and schedules (general and site-specific)
- Records demonstrating past and on-going development, implementation, communication and maintenance of an appropriate inspection and monitoring program.
- Records demonstrating that issues noted on patrol have been documented, managed and tracked to resolution.

#### **4.2 Investigations of Incidents, Near-misses and Non-compliances**

Expectations: The company shall have an established, implemented and effective process for reporting on hazards, potential hazards, incidents and near-misses, and for taking corrective and preventive actions. This should include conducting investigations where required or where hazards, potential hazards, incidents and near-misses have or could have resulted in the safety and security of the public, workers, the pipeline, and protection of property and the environment being appreciably significantly compromised.

The company shall have an established, maintained and effective data management system for monitoring and analyzing the trends in hazards, incidents and near-misses.

The company should integrate the results of their reporting on hazards, potential hazards, incidents and





near-misses with other data in hazard identification and analysis, risk assessments, performance measures, and annual management reviews, to ensure continual improvement in meeting the company's obligations for safety, security and protection of the environment.

**References: OPR s. 6.5(1)(r), (s), (u), (w), (x), 52  
DPR-O s.11**

Questions for discussion:

1. What is the role of patrols in the reporting of hazards, potential hazards, incidents and near-misses discovered during patrols?
2. How are these hazards, potential hazards, incidents and near-misses documented and tracked?
3. What role, if any, do patrols play in the investigation of issues reported on the right of way?

Documents and records for review:

- Investigation procedures (related to patrol)
- Records demonstrating any investigation of issues by patrols

#### 4.3 Internal Audit

Expectations: The company shall have an established, implemented and effective quality assurance program for the management system and for each protection program, including a process for conducting regular inspections and audits and for taking corrective and preventive actions if deficiencies are identified. The audit process should identify and manage the training and competency requirements for staff carrying out the audits.

The company should integrate the results of their audits with other data in identification and analysis, risk assessment, performance measures, and annual management review, to ensure continual improvement in meeting the company's obligations for safety, security and protection of the environment.

**References: OPR s. 6.1, 6.5(1)(w), (x), 40, 47, 48  
CSA 3.1.2 h(v)(vi)(vii)**

Questions for discussion:

1. Does the internal program apply to patrol activities?
2. Has the company conducted an audit that included and evaluated the pipeline patrol program?

Documents and records for review:

- Any protocol used to conduct compliance or conformance audits that included the pipeline patrol programs
- Past audits or quality reviews that have been conducted which included a review of the adequacy and effectiveness of pipeline patrol program
- Provide any records of any corrective actions recommended and implemented based on the reviews

#### 4.4 Records Management

Expectations: The company shall have an established, implemented and effective process for generating, retaining, and maintaining records that document the implementation of the management system and it



protection programs and for providing access to those who require them in the course of their duties.

**References OPR s 6.1, 6.5(1)(p), 40, 47, 48**

**CSA 3.1.2 (e) , 10.4.4.1**

Questions for discussion:

1. How are the records that are generated from patrol activities retained, maintained and managed?

Documents and records for review:

- Records management policy (for patrol related activities)
- Records provided will be reviewed for their adherence to the company's records management policy

## **5.0 MANAGEMENT REVIEW**

Expectations: The company shall have an established, implemented and effective process for conducting an annual management review of the management system and each protection program and for ensuring continual improvement in meeting the company's obligations to perform its activities in a manner that ensures the safety and security of the public, company employees, the pipeline, and protection of property and the environment. The management review should include a review of any decisions, actions and commitments which relate to the improvement of the management system and protection programs, and the company's overall performance.

The company shall complete an annual report for the previous calendar year, signed by the accountable officer, that describes the performance of the company's management system in meeting its obligations for safety, security and protection of the environment and the company's achievement of its goals, objectives and targets during that year, as measured by the performance measures developed under the management system and any actions taken during that year to correct deficiencies identified by the quality assurance program. The company shall submit to the Board a statement, signed by the accountable officer, no later than April 30 of each year, indicating that it has completed its annual report.

**References: OPR sections 6.1, 6.5(1)(w), (x), 6.6, 40, 47, 48**

**CSA 3.1.2 (h)(vii)**

Questions for discussion:

1. Is the patrol program included in the annual management review?
2. Are the patrol programs included in the management assessment of overall safety and security goals?

Documents and records to provide:

- Provide any process document that relates to management review of protection programs (including patrols)
- Provide any report (or section) that included a review of the pipeline patrols