



# Guideline for the Reporting and Investigation of Incidents

June 1, 2009

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#### 1.0 Introduction

The C-NLOPB and CNSOPB Guidelines for the Reporting and Investigation of Incidents (hereafter referred to as the "Guideline") includes:

- Environmental and health and safety reporting requirements;
- Guidance on expectations for the investigation and follow-up of Incidents; and
- Adoption of criteria from the International Regulator's Forum (IRF)
   Performance Measurement Working group (www.
   irfoffshoresafety.com) for measuring and comparing offshore safety
   performance among participating IRF countries.

By incorporating international criteria for incident reporting, the C-NLOPB and CNSOPB (hereafter referred to as the "Boards") are able to perform effective trending and analysis that will aid in efforts to improve industry performance, not only within our own jurisdictions, but across jurisdictions. The release and sharing of data will not contravene the relevant privilege provisions of information disclosure specified in the Accord Acts.

# 2.0 Purpose

This Guideline is not a statutory instrument. This Guideline is intended to assist Operators and other Workplace parties to comply with requirements of the Accord Acts, the regulations, and the terms and conditions of Board approvals and authorizations for the reporting and investigation of Incidents that occur in the Offshore Area. This Guideline also:

- describes what constitutes an Incident that is reportable to the Boards;
- explains the procedures to be followed by Operators in reporting Incidents;
- outlines the reporting requirements for injury/illness statistics; and
- explains the Boards' expectations for incident investigations conducted by the Operator.

The Boards will review this Guideline at least once every three years and update as required.

# 3.0 Scope

This Guideline applies to all operations in the Offshore Area conducted under the authority of a work authorization issued by either the C-NLOPB or the CNSOPB. This includes, but is not limited to, all operations on:

#### Installations

- o Production Installations, e.g.
  - Fixed production platforms (manned and unmanned)
  - Floating production platforms (e.g. floating production, storage and offloading vessels)
- o Drilling Installations, e.g.
  - Mobile Offshore Drilling Units (MODU) (e.g. drill ships)
  - Column-stabilized MODU's (semi-submersible drill rigs)
  - Self-elevating MODU's (jack-up drill rigs)
- Diving Installations
- Accommodation Installations

#### Vessels

- Conducting geophysical or other data gathering activities e.g. geotechnical, geological, environmental monitoring, etc.
- Conducting construction activities e.g. installation of offshore installations, rock dumping, dredging, pipe laying, etc. in support of an active authorization
- Active support vessels, including standby, supply, personnel transport and ice management vessels

#### Aircraft

- Conducting geophysical activities
- Helicopters used for personnel transportation.

Clarification on reporting of Incidents is provided in Section 8.1 and 8.2.

# 4.0 Authority

Relevant provisions of the regulations issued pursuant to the Accord Acts require that Operators report and investigate all Incidents as per Section 8.0 and 9.0 of this Guideline. The legislation also gives the Boards the authority to issue guidance that provides an interpretation of the legislation. References to relevant legislative requirements are included

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<sup>&</sup>lt;sup>1</sup> AIANL 151.1 and AIANS 156.(1)

within each section as required. The Boards also have the authority to investigate any Incident within its jurisdiction.

# 5.0 Acronyms

AIANL Canada-Newfoundland and Labrador Atlantic Accord

Implementation Act (Federal Version)

AIANS Canada- Nova Scotia Offshore Petroleum Resources Accord

Implementation Act (Federal Version)

**C-NLOPB** Canada–Newfoundland and Labrador Offshore Petroleum

Board

**CNSOPB** Canada Nova Scotia Offshore Petroleum Board

**DR** Newfoundland Offshore Petroleum Drilling Regulations,

1993 and Nova Scotia Offshore Petroleum Drilling

Regulations, 1992

**DVR** Newfoundland Offshore Area Petroleum Diving Regulations,

1988 and Nova Scotia Offshore Area Petroleum Diving

Regulations, 1995

GR Newfoundland Offshore Area Petroleum Geophysical

Operations Regulations, 1995 and Nova Scotia Offshore

Area Geophysical Operations Regulations, 1995

**INST** Newfoundland Offshore Petroleum Installation Regulations,

1995 and Nova Scotia Offshore Petroleum Installation

Regulations, 1995

**IRF** International Regulator's Forum

**NL** Newfoundland and Labrador

NS Nova Scotia

**OSH (NL)** Newfoundland Offshore Petroleum Area Occupational Safety

and Health Regulations, 1989 (Draft)

**OSH (NS)** CNSOPB Occupational Health and Safety Requirements,

December 2000

**OGP** International Association of Oil & Gas Producers

**P&C** Newfoundland Offshore Area Petroleum Production &

Conservation Regulations, 1995 and Nova Scotia Offshore

Area Petroleum Production & Conservation Regulations, 1995

**TQSP** CAPP (Canadian Association of Petroleum Producers)

Canadian East Coast Offshore Petroleum Industry Standard Practice for the Training and Qualification of Personnel,

December 2005

WCA Worker's Compensation Act of Nova Scotia

WHSCA Workplace Health, Safety and Compensation Act of

Newfoundland and Labrador

#### 6.0 Definitions

"Accord Acts (NL)" means the Canada-Newfoundland and Labrador Atlantic Accord Implementation Act and the Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act.

"Accord Acts (NS)" means the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act and the Canada Nova Scotia Offshore Petroleum Resources Accord Implementation Nova Scotia Act.

"Barrier" means technical, human or organizational barriers or safeguards that are put in place to prevent, mitigate or

control health, safety or environmental risks.<sup>2</sup>

"Boards" means the Canada-Newfoundland and Labrador

Offshore Petroleum Board and the Canada Nova Scotia

Offshore Petroleum Board.

"Board Officer" means the Chief Conservation Officer, the Chief Safety

Officer, a Conservation Officer or a Safety Officer.

"Chief Conservation Officer" means the person designated by the relevant Board as the Chief Conservation Officer pursuant to either the Accord Acts (NL) or the Accord

Acts (NS).3

AIANL 140 and AIANS 144

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<sup>&</sup>lt;sup>2</sup> Barriers can be equipment, personnel or procedures identified during both major and on-site risk assessments which must be implemented to reduce risk to as low as reasonably practicable. This includes the design, maintenance and implementation of equipment, implementation of operating and maintenance procedures and training and competency of personnel. Barriers can also be those elements of a management system that are put in place to reduce risk by seeking to identify and improve deficiencies within a management system.

"Chief Safety Officer" means the person designated by the relevant Board as the Chief Safety Officer pursuant to either the Accord Acts (NL) or the Accord Acts (NS).<sup>4</sup>

#### "Committee"

means an occupational health and safety committee comprised of Employer and worker representatives whose primary role is to monitor the health, safety and welfare of workers at the Workplace.<sup>5</sup> The Boards also encourage the Operator to involve Committees in matters related to environmental protection.

"Conservation Officer" means a Conservation Officer appointed by the relevant Board under either the Accord Acts (NL) or the Accord Acts (NS).<sup>6</sup>

# "Employee"

means a person who is employed by, or contracted to perform work under the supervision of, an Employer and includes a dependent contractor.<sup>7</sup>

# "Employer"

means a person who employs one or more Employees or contracts for the services of one or more Employees, and includes a contractor or subcontractor.<sup>8</sup>

#### "Hazard"

means any existing or potential practice or condition that may result in injury or illness to a person or damage to property or the environment.

"Hazardous Substance" means a chemical, biological or physical agent that, by reason of a property that the agent possesses, is hazardous to the safety or health of a person exposed to it.9

#### "Incident"

refers to any event that caused or, under slightly different circumstances, would likely have caused harm to personnel or the environment or an imminent threat to the safety of an installation, vessel or aircraft. It also includes any event that impairs the function of any equipment or system critical to the safety of personnel, the installation, vessel or aircraft or any event that impairs the function of equipment or system critical to the protection of the natural environment. <sup>10</sup> Clarification on what constitutes an "Incident" is provided in Section <u>8.4</u>.

<sup>&</sup>lt;sup>4</sup> AIANL 140 and AIANS 144

<sup>&</sup>lt;sup>5</sup> AIANL 152; Section 37 of the Newfoundland and Labrador Occupational Health and Safety Act; C-NLOPB Other Requirements Respecting Occupational Health & Safety and OSH (NS) Element 1, Part 5

<sup>&</sup>lt;sup>6</sup> AIANL 188 and AIANS 193

OSH (NL) 1.1; OSH (NS) Element 1, Part 1, Section 1.1

<sup>&</sup>lt;sup>8</sup> OSH (NL) 1.1; OSH (NS) Element 1, Part 1, Section 1.1

<sup>&</sup>lt;sup>9</sup>OSH (NL) 1.1; OSH (NS) Element 1, Part 1, Section 1.1

<sup>10</sup> OSH (NL) 15; OSH (NS) Element 1, Part 1, Section 1.1; INST 70; DR 145; P&C 67

- "Occupational Illness" means any abnormal condition or disorder, other than one resulting from an Occupational Injury, caused by prolonged or repeated exposure to environmental factors associated with employment. Occupational Illness may be caused by inhalation, absorption, ingestion or direct contact with a hazard, as well as exposure to physical and psychological hazards. The effects of ordinary Workplace stress (i.e. inherent to job duties) are not considered to be a psychological hazard. 11 12
- "Occupational Injury" means any injury which results from a work incident or from a single instantaneous exposure in the work environment. Conditions resulting from one-time exposure to chemicals are considered to be injuries. Injuries and fatalities that occur while the worker is onsite at the offshore installation or vessel and off duty/off-shift are included. Self-inflicted injuries or fatalities are not included. <sup>13</sup> Injuries and fatalities that occur while a person is in transit to and from the offshore installation or vessel are included (i.e. from the time a person boards a Support Craft prior to their hitch to the time they debark the Support Craft at the end of their hitch)
- "Offshore Area" means the area within the limits defined in the Accord Acts (NL) and the Accord Acts (NS). 14
- "Operator" means the holder of an authorization to carry on work or activity under the Accord Acts (NL) and the Accord Acts (NS). 15
- "Physical Environmental Conditions" means meteorological, oceanographical and other natural conditions, including ice conditions that could affect an operation. 16
- "Representative" means a health and safety representative who provides a similar function as a Committee in a Workplace. 17

instantaneous events are considered occupational illnesses.

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<sup>&</sup>lt;sup>11</sup> Definition obtained from IRF performance measures criteria. The IRF criteria was adopted from the OGP definition of occupational illness (modified) and is also defined by OSH (NL) 15.1 and OSH (NS) Element 2, Part 15, Section 15.1.
<sup>12</sup> Whether a case is classified as an occupational injury or occupational illness is determined by the nature of the original exposure that caused the case, not by the resulting condition of the affected employee. Injuries are caused by instantaneous events in the work environment or events close in time. Cases resulting from anything other than

<sup>&</sup>lt;sup>13</sup> Definition obtained from IRF performance measures criteria. The IRF criteria was adopted from the OGP definition of occupational injury (modified to add clarifying statements about off-shift and self-inflicted injuries) and is also defined by OSH 15.1 and OSH (NS) Element 2, Part 15, Section 15.1.

<sup>14</sup> AIANL 2; AIANS 2

<sup>&</sup>lt;sup>15</sup> AIANL 137, 138, 138.1; AIANS 140, 142, 142.1; DR 2; GR2; INST 2; P&C 2; DVR 2

<sup>16</sup> P&C 2(1), DR 2

<sup>&</sup>lt;sup>17</sup> AIANL 152; Section 37 of the Newfoundland and Labrador Occupational Health and Safety Act; C-NLOPB Other Requirements Respecting Occupational Health & Safety and OSH (NS) Element 1

"Risk" means a measure of probability and severity of a Hazard.

"Safety Officer" means a Safety Officer appointed by the relevant Board

under either the Accord Acts (NL) or the Accord Acts

(NS).<sup>18</sup>

"shall" means an expectation that an Operator must meet to be

considered in compliance with legislation.

"**should**" refers to a recommended method which provides an

example of how an Operator can meet an expectation,

but does not prevent an Operator from selecting

alternative best practices.

"Spill" refers to a "Spill" as defined in the Accord Acts (NL) and

the Accord Acts (NS). 19

"Support Craft" means any vessel, standby vessel, vehicle, tug, ship,

aircraft, air-cushion vehicle or other craft used to provide transportation for or assistance to persons on the site

where a work or activity is conducted.<sup>20</sup>

"Unauthorized Discharge" means any escape, emission or discharge of

any substance or form of energy into the natural

environment, outside of the limits (e.g. exceedances) established in an authorization issued by the relevant

Board. This excludes domestic chemicals. 21

"Workplace" means any working area, or place, including an

installation or marine vessel, where an Employee is or is likely to be engaged in any occupation and includes any vehicle or mobile equipment used or likely to be used by

an Employee in an occupation.<sup>22</sup>

<sup>&</sup>lt;sup>18</sup> AIANL 188; AIANS 193

<sup>&</sup>lt;sup>19</sup> AIANL 160; AIANS 165

<sup>&</sup>lt;sup>20</sup> DR 2; P&C 2(1)

<sup>&</sup>lt;sup>21</sup> NEB/C-NLOPB/CNSOPB Offshore Waste Treatment Guidelines, 2002

<sup>&</sup>lt;sup>22</sup> OSH (NL) 1.1; C-NLOPB Other Requirements Respecting Occupational Health & Safety; OSH (NS) Element 1, Part 1, Section 1.1

# 7.0 Operator's Reporting and Investigation of Incidents

The legislation requires Operators to have adequate and effective mechanisms for internal and external reporting and analysis of Hazards and Incidents as well as for taking corrective actions to prevent their recurrence. <sup>23</sup>

# 7.1 Reporting by Employees

When an Employee becomes aware of an Incident, the Employee shall report the occurrence to the Operator, Employer or both.<sup>24</sup> To ensure that Employees report all Incidents, the Operator shall define reporting protocols and ensure that a mechanism and a culture are in place that will encourage everyone to report. The legislation prohibits Operators, Employers, unions and other parties from subjecting workers to discrimination of any kind for reporting health and safety Hazards or Incidents. Operators should ensure that the mechanisms in place for reporting do not result in an any undue hardship for Employees.

# 7.2 Reporting to and Participation by the Committee or Representative

The Committee or Representative shall be notified of all health and safety related incidents as soon as possible. The Committee or Representative shall also be provided with a copy of the associated investigation report upon its completion. It is the Boards' expectation that Operators involve the Committee or Representative in investigations of all incidents relative to the Committee or Representative's mandate. The Boards also encourage that Operators involve the Committee or Representative in investigations relating to Incidents that may be outside the Committee or Representatives mandate (e.g. environmental matters). In order that the Committee or Representative are effective in reviewing investigation reports and participating in Incident investigations, the Operator shall provide training in the investigation process to these individuals.<sup>25</sup> It is the Operator's responsibility to ensure Committees or Representatives are promptly notified and can carry out their obligations with regard to health and safety related Incidents.<sup>26</sup>

<sup>26</sup> OSH (NL) 15.3; OSH (NS) Element 2, Part 15, Section 15.3

<sup>&</sup>lt;sup>23</sup> OSH (NL) Part XV; OSH (NS) Element 2, Part 15; DR 145; P&C 67; INST 70; GR 27 & 28; DVR 6; P&C 51; Safety Plan Guidelines (NL); Operators Safety Plan Guideline No. 3150.002 (NS)

OSH (NL) 15.2; OSH (NS) Element 2, Part 15, Section 15.2; AlANL 161(2); AlANS 166(2)
 WHSCC Occupational Health and Safety Committees Handbook, July 2004; CAPP TQSP 3.2.9

# 7.3 Investigation Team

The investigation team should include representatives of the Operator, the facility owner, the Committee (or Representative) and other expertise as required. The lead investigator shall have received formal lead investigator training in the investigation process. Appropriate training is recommended for all members of investigation teams.<sup>27</sup> For investigations to be effective and objective, they shall collect all facts surrounding the Incident and shall be unbiased. In this regard, the lead investigator should not have directly or indirectly contributed to or have been involved in the Incident.

# 7.4 Incident Investigations

Investigations shall seek to collect all evidence and facts related to the occurrence of an Incident. It is the Boards' expectation that investigations be aimed at correcting deficiencies within the Operator's management system.

Incident investigations should identify all failed or inadequate technical, human and/or organizational Barriers or safeguards associated with the occurrence of an Incident and review the efficiency and effectiveness of the emergency response that occurs following an Incident. Incidents are an indication of the performance of a management system. Thus, it is important when an Incident occurs that the investigation goes beyond identifying failed Barriers and determines the underlying root causes. By correcting the underlying root causes, Operators can prevent other Incidents from occurring.

A root cause is a cause for which corrective measures will prevent or reduce the probability of a recurrence of the Incident. The investigation shall identify the underlying root causes of an Incident and not stop at the direct or noticeable causes. For example, when a root cause points to a technical flaw, procedural flaw or a failure by an individual, the corrective actions that are assigned to prevent a similar event are limited. These corrective actions typically aim to fix the technical problem, fix the procedure and replace or retrain the individual responsible. These types of corrections lead to misguided and potentially disastrous beliefs that the underlying problem has been solved, when only a symptom has been addressed.<sup>28</sup>

<sup>27</sup> CAPP TOSP 3.2.9

<sup>&</sup>lt;sup>28</sup> Section 1.2.1, 9.4.16 & 10.1.2 of the US Chemical Safety and Hazard Investigation Board Investigation Report of the March 23, 2005 BP Texas City Refinery Explosion and Fire, Report No. 2005-04-I-TX, March 2007

Operators should pay particular attention to assigning corrective actions. Corrective actions shall address all identified root causes. Corrective actions should be long-term measures and not short term fixes. They should be specific, measurable, reasonable, and effective in preventing or reducing the odds of the problem happening again. They should also be implemented in a timely manner. Following a specified period of implementation, corrective actions should be reviewed by the Operator to ensure there are no unintended negative impacts. <sup>29</sup>

All Incidents shall be investigated to a level appropriate to the potential consequences and not solely based on the actual consequences. When an Incident occurs, it indicates that at least one safeguard has failed. Each failed safeguard should have at least one root cause and actions shall be taken to address that root cause.

# 7.5 Documentation Requirements

Operators shall have documented policies, procedures and administrative controls for the reporting and investigation of incidents and should describe how the process contributes to continual improvement of quality, health, safety and the environment. Operators shall effectively implement these policies, procedures and controls. Documentation should be designed such that Employees are encouraged to report Hazards and incidents.<sup>30</sup> The procedures should:

- Specify positions involved in the incident investigation process or the subsequent review and outline their responsibilities.
- Specify training requirements for all above positions
- Specify requirements for investigation teams.
- Provide clear criteria for the internal and external communication of incidents and investigation results.
- Provide instructions for Incident reporting and conduct of investigations.
- Describe the incident tracking system. (Incident details, root causes and corrective actions should be recorded in a centralized record keeping system and data should be utilized in activities such as incident trending, process hazard analysis and management review).
- Describe how the results of incident investigations will contribute to continual improvement.

P&C 51(1)(a); Safety Plan Guidelines (NL); Operators Safety Plan Guideline No. 3150.002 (NS)

<sup>&</sup>lt;sup>29</sup> TapRooT® The System for Root Cause Analysis, Problem Investigation and Proactive Improvement, 2000, Mark Paradies and Linda Unger, Chapter 3, pg. 81

- Describe the monitoring, auditing and review of the effectiveness of the incident investigation process.
- Contain criteria for implementation of actions to ensure that corrections are implemented in a timely manner.

All records related to incident investigations are to be made available to a Board Officer upon request.31

#### 8.0 **Incident Reporting to the Boards**

This section specifies which Incidents Operators shall report to the Boards and provides clarity on when to report Incidents (Sections 8.1 and 8.2), types of notifications (Section 8.3.1 and 8.3.2) and Incident classifications (Section 8.4).

It is recognized that an Incident could be classified under several Incident classification categories defined in Section 8.4. For each Incident, the Operator shall specify the actual Incident classification(s) associated with an Incident. It is also recognized that several Incidents have the potential to result in Incident classification(s) of a higher consequence. For each Incident, the Operator shall specify all higher potential incident classification(s).32

#### 8.1 When to Report an Incident

Operators shall notify the relevant Board of all Incidents, which occur on any installation, vessel or aircraft in the course of conducting any work or activity related to an authorization.

Further clarification on reporting requirements for Support Craft are as follows:33

- For Support Craft, an Incident shall be reported if the Support Craft is in the Offshore Area and conducting any work or activity related to an authorization.
- An Incident shall be reported at any time while the Support Craft is engaged in transporting personnel (via air or sea) to or from an installation or vessel.

Reporting requirements to other agencies and authorities are provided in Section 8.2.

<sup>33</sup> OSH (NL) 15; DR 145; P&C 67

<sup>&</sup>lt;sup>31</sup> AIANL 189; AIANS 194 <sup>32</sup> OSH (NL) 15.4, OSH (NS) Element 2, Part 15, Section 15.4; INST 70; DR 145, P&C 67

# 8.2 Reporting to Other Agencies and Authorities

The Boards, as lead regulatory agencies for offshore oil and gas activities, typically coordinate communications regarding Incidents. In some instances, in addition to the relevant Board being notified, direct contact with other federal or provincial departments will also be required. The Operator is responsible for ensuring that all external agencies and authorities are appropriately contacted. A list of some of the common agencies is included below. This list is not all-inclusive.

#### 8.2.1 Joint Rescue Coordination Centre

If the Incident involves, or has the potential to involve, any element of marine search and rescue, the Operator shall ensure that immediate notification is made to the Joint Rescue Coordination Centre (JRCC), Halifax and Marine Rescue Sub-Centre (MRSC), St. John's. Both agencies have 24-hour contact numbers for this purpose.

#### 8.2.2 Canadian Coast Guard

For marine pollution Incidents, the Operator shall ensure that immediate notification is made to the Canadian Coast Guard, Regional Operations Centre. This agency has a 24-hour contact number for this purpose.

## 8.2.3 Transport Canada Marine Safety

The Operator shall ensure that all incidents involving fatalities, missing persons or injury/illness to personnel working on a Canadian flagged vessel or installation regulated under Part II of the Canada Labour Code are reported to the Canadian Coast Guard Regional Operations Centre who will then transfer the notification to Transport Canada Marine Safety. In addition, the master or owner of a Canadian flagged vessel, which has sustained damage affecting the seaworthiness or efficiency of that vessel, shall report the matter directly to the regional director of Transport Canada Marine Safety<sup>34</sup>

# 8.2.4 Royal Canadian Mounted Police

The Operator shall ensure that all incidents involving criminal activity (including serious injuries), terrorism, fatalities or

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<sup>&</sup>lt;sup>34</sup> Canada Shipping Act, 2001

missing persons are reported to the Royal Canadian Mounted Police (RCMP). The RCMP may be contacted at, (709) 772-5400 in Newfoundland & Labrador or (902) 426-7766 in Nova Scotia.

# 8.2.5 Provincial Workplace Compensation

The Accord Acts (NL) direct Employers of any marine installation or structure, to comply with applicable sections of the Workplace Health, Safety and Compensation Act (WHSCA).<sup>35</sup> The Accord Acts (NS) direct Employers of any marine installation or structure to comply with applicable sections of the Worker's Compensation Act of Nova Scotia (WCA)<sup>36</sup>. Part of these obligations include mandatory reporting of injuries and illnesses to the Workplace Health. Safety and Compensation Commission (WHSCC) of Newfoundland and Labrador or to the Worker's Compensation Board (WCB) of Nova Scotia where circumstances may entitle a worker to compensation. The legislation, guidelines, reporting information and standardized report forms are available from the WHSCC at www.whscc.nf.ca or from the WCB at www.wcb.ns.ca. Reporting of injuries or illnesses to these agencies shall be in accordance with their relative requirements.

# 8.2.6 Certifying Authority

The Operator shall ensure that any deterioration of the installation that could impair the safety of the installation or damage the environment are reported to the certifying authority and to the relevant Board.<sup>37</sup>

# 8.3 Types of Incident Notifications

The regulations require an Operator to notify the relevant Board of any Incident as soon as possible.<sup>38</sup> This section outlines two types of notifications to the Boards – emergency (immediately) and written (within 24 hours).

# 8.3.1 Emergency Notification

Immediately after the Operator has taken actions to ensure the safety of personnel and the environment, the Operator

<sup>35</sup> AIANL 152; WHSCA 56

<sup>&</sup>lt;sup>36</sup> AIANS 157; WCA 86

<sup>&</sup>lt;sup>37</sup> INST 67

<sup>38</sup> OSH (NL) 15.2; OSH (NS), Element 2, Part 15, Section 15.2; INST 70; DR 145;, DVR 6 (j); GR 27

shall verbally notify the on-call Duty Officer for incidents that involve the following:

- **Fatality**
- Missing Person
- Maior Injury
- Medical Evacuation (MEDEVAC)
- Fire/Explosion
- Collision
- Loss of Well Control
- Major Hydrocarbon Release (refer to Hydrocarbon Release)
- Spills Requiring Emergency Notification (refer to Spill)
- Adverse Environmental Conditions
- Security
- Major Impairment/Damage

Further information on the above classifications is provided in Section 8.4.

Operators should direct all Immediate or Emergency Notifications to the C-NLOPB Duty Officer at (709) 682-4426 or to the CNSOPB Duty Officer at (902) 422-5588. The Duty Officers are on call 24 hours a day, seven days a week.

The Operator shall provide the Duty Officer with their contact information, the consequences of the Incident, immediate (and ongoing) response efforts, any further actions planned, and any other information the Duty Officer requests. 39

As soon as reasonably practicable following the verbal notification, the Operator shall provide written notification to the C-NLOPB or to the CNSOPB as described in Section 8.3.2.

#### 8.3.2 Written Notification

For all Incidents, the Operator shall provide a written notification to the relevant Board and the Committee or Representative as soon as possible but no later than 24 hours after the Operator becomes aware of any Incident. 40 The written notification may be submitted to the C-NLOPB either by email to incident@cnlopb.nl.ca or fax to (709) 778-1473 or to the CNSOPB by email to incident@cnsopb.ns.ca

 $<sup>^{39}</sup>$  OSH (NL) 15.4; OSH (NS) Element 2, Part 15, Section 15.4; INST 70, DR 145  $^{40}$  OSH (NL) 15.4, OSH (NS) Element 2, Part 15, Section 15.4; DR 145, INST 70, DVR 6 (j), GR 27

or fax at (902) 422-1799. The written notification shall contain the following information:

- Date and time of the Incident
- Operator
- Operator contact name and phone number
- The installation or vessel name
- Location
- Description of the Incident (including events leading up to the Incident and any other relevant information)
- Description of site operations and relevant environmental factors at time of Incident
- Actual and Potential Incident classifications (as per Section 8.4)
- Immediate response action(s) taken
- Planned response action to be taken
- For Spills and Unauthorized Discharges, information on material spilled, volume, and information / observations of environmental impact.

The Boards encourage Operators to use the Incident Notification Form posted on the C-NLOPB website (www.cnlopb.nl.ca) and the CNSOPB website (www.cnsopb.ns.ca). Further information on the classification of each type of Incident is located in Section 8.4.

#### 8.4 Incident Classifications

All notifications and investigation reports shall include both the actual and potential consequences associated with an Incident. As some Incidents may have multiple consequences (e.g., hydrocarbon release combined with a spill), all classifications that apply shall be specified. Operators shall use the following Incident classifications when reporting incidents to the Boards:

# 8.4.1 Fatality

All fatalities shall be reported via the emergency notification process described in Section 8.3.1<sup>41</sup> and shall also be reported to the RCMP and the Province's Chief Medical Examiner. If the Chief Medical Examiner determines that the death was due to natural causes then this Incident will not be classified as a fatality. Any work-related death that occurs within one year after the Incident shall be reported via the

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<sup>&</sup>lt;sup>41</sup> OSH (NL) 15.4, OSH (NS) Element 2, Part 15, Section 15.4; INST 70; DR 145; DVR 6 (j), GR 27

written notification process described in Section 8.3.2 as a fatality.42

# 8.4.2 Missing Person

All missing persons shall be reported via the emergency notification process described in Section 8.3.143 and shall also be reported to the RCMP.

# 8.4.3 Major Injury

Any Occupational Injury that results in one or more of the following:

- Amputation: Includes whole or partial amputation of parts of the body (does not include loss of fleshy tip of finger, nail, or tooth).
- Skeletal injuries: Includes bone fractures (including chipped or cracked bone or hairline fracture) and dislocation of shoulder, hip, knee of spine. They do not include simple hairline fractures or fractures to fingers, thumbs, toes, or broken nose.
- Burns: Only if the injured person becomes unconscious, is admitted to the hospital, or requires resuscitation.
- Injuries to internal organs: Only if the injured person becomes unconscious, is admitted to the hospital, or requires resuscitation.
- Eye injuries resulting in loss of sight (permanent or temporary).
- Eye injuries resulting from a penetrating eye injury or a chemical or hot metal burn to the eye.
- Any acute illness caused by exposure to harmful chemicals or biological agents and physiological effects e.g. decompression illness, loss of hearing, and radiation sickness.
- Hypothermia or heat induced illness (unconsciousness).
- Any injury resulting in unconsciousness, resuscitation, or admittance to the hospital. 44

Major injuries shall be reported via the emergency notification process described in Section 8.3.1<sup>45</sup>.

OSH (NL) 15.4; OSH (NS) Element 2, Part 15, Section 15.4; INST 70, DR 145; DVR 6 (j); GR 27

 $<sup>^{\</sup>rm 42}$  Definition obtained from IRF performance measures criteria.

<sup>&</sup>lt;sup>43</sup> OSH (NL) 15.4, OSH (NS) Element 2, Part 15, Section 15.4; INST 70; DR 145; DVR 6 (j), GR 27
<sup>44</sup> Definition obtained from IRF performance measures criteria. This criteria was adopted from the Health & Safety Executive (UK) and the Petroleum Safety Authority (Norway)

# 8.4.4 Lost/Restricted Workday Injury

Any Occupational Injury other than a "Major Injury" which results in a person being unfit for work on any day after the day of occurrence of the injury or unfit for full performance of the regular job on any day after the injury. Any day includes rest days, weekend days, leave days, public holidays, or days after ceasing employment. Lost/restricted workday injuries shall be reported via the written notification process described in Section 8.3.2. The number of lost/restricted workdays associated with an injury shall be reported on the quarterly statistics report described in Section 10.0.

# 8.4.5 Occupational Illness

Occupational Illnesses shall be reported via the written notification process described in Section 8.3.2. 47

# 8.4.6 Medical Treatment Injury

Cases that are not severe enough to be reported as lost/restricted workday cases but are more severe than requiring simple first aid treatment are considered to be medical treatment injuries. <sup>48</sup> Medical treatment injuries shall be reported on the quarterly statistics report described in Section 10.0.

# 8.4.7 First Aid Injury

Cases that are not sufficiently serious to be reported as medical treatment or more serious cases but nevertheless require minor first aid treatment, e.g. dressing on a minor cut, removal of a splinter from a finger are considered to be first aid injuries.<sup>49</sup> First aid injuries shall be reported on the quarterly statistics report described in Section 10.0.

# 8.4.8 Medical Evacuation (MEDEVAC)

Any medical evacuations from an offshore installation or vessel shall be reported via the emergency notification

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<sup>&</sup>lt;sup>46</sup> Definition obtained from IRF performance measures criteria. This criteria was adopted from the OGP definition of Lost Workday Case and Restricted Workday Case (slightly modified) and are required to be reported by OSH (NL) 15.4; OSH (NS) Element 2, Part 15, Section 15.4; INST 70; DR 145; DVR 6 (j); GR 27

<sup>&</sup>lt;sup>47</sup> OSH (NL) 15.4; OSH (NS) Element 2, Part 15, Section 15.4

<sup>48</sup> Definition obtained from IRF performance measures criteria. The criteria was adopted from the OGP definition of Medical Treatment Case (slightly modified) and is defined in OSH (NL) 15.1 and OSH (NS) Element 2, Part 15, Section 15.1.

<sup>&</sup>lt;sup>49</sup> Definition obtained from IRF performance measures criteria. The criteria was adopted from OGP definition of First Aid Case (slightly modified) and is also defined in OSH (NL) 15.1 and OSH (NS) Element 2, Part 15, Section 15.1.

process described in Section 8.3.1 whether they are occupational or non-occupational 50. If the injury/illness is occupational, the Operator shall provide the details of the condition in the report and report the injury/illness using the classifications noted above. However, if the injury/illness is determined to be non-occupational (i.e. the result of a medical condition not related to the injured person's employment), the written notification shall contain a statement to this effect and the individual's name. These instances will be recorded as non-occupational medevacs. and shall not give cause to undertaking an investigation in accordance with Section 9.0.

# 8.4.9 Fire/Explosion

If a fire or explosion results in an injury to personnel or Major/Damage Impairment as described in Section 8.4.17 shall be reported via the emergency notification process described in Section 8.3.1.51 All other fires or explosions that occur without these consequences shall be reported via the written notification process described in Section 8.3.2).

#### 8.4.10 Collision

Any collision of a marine vessel, iceberg/pack ice or aircraft with an offshore installation or vessel, which results in an injury to personnel or Major/Damage Impairment as described in Section 8.4.17, shall be reported via the emergency notification process described in Section 8.3.1.52. All other collisions that occur without these consequences shall be reported via the written notification process described in Section 8.3.2).

#### 8.4.11 Loss of Well Control

A loss of well control is any Incident associated with drilling, completion, workover, or abandonment operations that results in:

- An uncontrolled release of formation or other well fluids
- An uncontrolled flow between two or more exposed formations (this includes uncontrolled flow resulting from failures of either surface or subsurface equipment or procedures) or

<sup>&</sup>lt;sup>50</sup> OSH (NL) 15.4 and OSH (NS) Element 2, Part 15, Section 15.4 <sup>51</sup> OSH (NL) 15.4; OSH (NS) Element 2, Part 15, Section 15.4; INST 70; DR 145; GR 27; DVR 6 <sup>52</sup> OSH (NL) 15.4; OSH (NS) Element 2, Part 15, Section 15.4

A flow of formation or other well fluids through a diverter<sup>53</sup>

All losses of well control where the duration of the uncontrolled or diverted flow is greater than 5 minutes shall be reported to the relevant Board via the emergency notification process described in Section 8.3.1.54 All other losses of well control shall be reported via the written notification process described in Section 8.3.2.

# 8.4.12 Hydrocarbon Release

A hydrocarbon release refers to an unintentional or uncontrolled release of gas or liquid hydrocarbons from the processing, storage or offloading systems on an offshore installation that has significant potential and meets one of the two hydrocarbon release categories defined below. A hydrocarbon release does not include releases that result from processes designed into the production and processing systems to respond to upset conditions. 55 Two types of hydrocarbon releases shall be reported:

- A Major Hydrocarbon Release is defined as:
  - A gas release rate above 1 kg/sec for at least 5 minutes duration
  - The amount of gas released is greater than 300 kg or
  - The amount of liquid released is greater than 300 L.

Major hydrocarbon releases shall be reported via the emergency notification process described in Section 8.3.1.

- A Significant Hydrocarbon Release is defined as:
  - A gas release rate between 0.1 kg/sec and 1 kg/sec and lasts for 2 to 5 minutes
  - The amount of gas released is between 1 kg and 300 kg or
  - The amount of liquid released is between 5 L and 300 L.

Significant hydrocarbon releases shall be reported via the written notification process described in Section 8.3.2.56

<sup>53</sup> Definition obtained from IRF performance measures criteria

<sup>&</sup>lt;sup>54</sup> OSH (NL) 15.4; OSH (NS) Element 2, Part 15, Section 15.4; INST 70; DR 145 Definition obtained from IRF performance measures criteria

<sup>&</sup>lt;sup>56</sup> AIANL 160, 161; AIANS 165, 166; OSH (NL) 15.4; OSH (NS) Element 2, Part 15, Section 15.4; DR 60(5), 112, 145; INST 70; GR 27, 28; P&C 2, 67

For converting gas release volumes to gas release rates, the following formula can be utilized<sup>57</sup>:

$$GR_{Rate} = 132.52 \times \left(\frac{d}{1000}\right)^2 \times \sqrt{D_{Gas} \times P_{Gas}}$$

where  $GR_{Rate}$  = gas release rate (kg/sec) d = equivalent hole diameter (mm)  $D_{Gas}$  = gas density (kg/m3)  $P_{Gas}$  = operating pressure (bara)

If, at any time, a Hydrocarbon Release enters the ocean it shall also be reported as a Spill (refer to Section 8.4.13).

# 8.4.13 Spill

Any discharge, emission or escape of gas or liquid hydrocarbons from an installation or vessel, which enters the ocean, shall be reported to the relevant Board as a Spill.<sup>58</sup> Reporting shall be as follows:

# Spills Requiring Emergency Notification

- Spills of 5 L or greater from the processing, storage or offloading systems on an offshore installation shall be reported via the emergency notification process described in Section 8.3.1.
- Other spills of liquid petroleum in excess of 100 L shall be reported via the emergency notification process described in Section 8.3.1.
- Spills Requiring Written Notification All other spills shall be reported immediately by email to incident@cnlopb.nl.ca or to the CNSOPB by email to incident@cnsopb.ns.ca. A written notification shall also be submitted via the written notification process described in Section 8.3.2.

# 8.4.14 Unauthorized Discharge

All Unauthorized Discharges shall be reported to the relevant Board via the written notification process described in Section 8.3.2. 59 Additionally, if the Unauthorized Discharge is a hydrocarbon that is significantly above the limits established in the authorization, refer to Section 8.4.12 for Hydrocarbon Release or refer to Section 8.4.13 for Spill.

NEB/C-NLOPB/CNSOPB Offshore Waste Treatment Guidelines, 2002

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<sup>&</sup>lt;sup>57</sup> Definition obtained from IRF performance measures criteria

<sup>&</sup>lt;sup>58</sup> AIANL 160, 161; AIANS 165, 166; Newfoundland Offshore Area Oil and Gas Operations Regulations Section 6; DR 60(5), 112, 145; INST 70; GR 27, 28;P&C 2, 67

### 8.4.15 Adverse Environmental Conditions

A forecast of or actual Physical Environmental Conditions or icebergs/pack ice that may result in or have resulted in loads or load effects in excess of those for which the offshore installation, vessel or aircraft was designed shall be reported to the relevant Board via the emergency notification process described in Section 8.3.1. The relevant Board shall also be notified via the emergency notification process described in Section 8.3.1 if pre-cautionary measures, such as downmanning, securing the well or depressurizing of flow lines, is performed due to threatening Physical Environmental Conditions is initiated. 60

# 8.4.16 Security

If there is a significant threat, breach or Incident regarding security, the Chief Safety Officer and appropriate law enforcement agencies shall be notified as soon as possible. Security issues shall be reported via the emergency notification process described in Section 8.3.1.61

# 8.4.17 Major Impairment/Damage

All damages or impairments that compromise the ongoing integrity or emergency preparedness (from a safety, environmental, or resource conservation perspective) of an offshore installation, vessel or aircraft are considered reportable. 62 This includes the impairment of critical systems but does not include the impairment of individual pieces of equipment, unless collectively or individually they have the ability to impair a critical system. It does not include the reporting of damages or impairments to equipment where there are redundant systems in place such that functionality and availability of the system is not lost. Any damage or impairment, which results in production shut-in or drilling suspension, is considered reportable. In addition, any damage or impairment to environmental critical equipment, which results in the inability to meet established limits, is considered reportable. Some examples of major impairment/damages include (but are not limited to):

Loss of stability or buoyancy

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<sup>60</sup> OSH (NL) 15.4; OSH (NS) Element 2, Part 15, Section 15.4; INST 70

<sup>&</sup>lt;sup>61</sup> "Requirements Respecting the Security of Offshore Facilities", Subsection 3(f), 9(j)

<sup>&</sup>lt;sup>62</sup> OSH 15.4 (NL), OSH (NS) Element 2, Part 15, Section 15.4; INST 67 and 70; DR 145. Definition adopted from the IRF performance measures criteria.

- Impairment of fire protection system
- Explosion, collapse or bursting of any closed vessel or associated pipework.
- Impairment of waste treatment system
- Loss or damage to a Support Craft
- Failure of any load-bearing parts and critical components of cranes or elevating devices

Major Impairment/Damages shall be reported via the emergency notification process described in Section 8.3.1.

# 8.4.18 Impairment/Damage to Critical Equipment

All impairments to at least one piece of safety or environmentally critical equipment shall be reported via the written notification process described in Section 8.3.2.63 If the damages or impairments compromise the ongoing integrity or emergency preparedness of an offshore installation, vessel or aircraft, then it should be reported as a Major Impairment/Damage. Some examples of impairments include, but are not limited to:

- Failures or unsuccessful test of the safety system of a production installation or of any component of the safety system<sup>64</sup>
- Impairment of firefighting or lifesaving equipment,
- Failure of load bearing parts of containers, lifting devices. elevating devices or loose lifting gear

#### **8.4.19 Near Miss**

All Incidents that, if under slightly different circumstances, would likely have had potential to result in the following shall be reported as near misses:

- An occupational injury/illness which could be classified as at least a Lost/Restricted Workday Injury
- Any Unauthorized Discharge, Spill or Hydrocarbon Release
- Imminent threat to the safety of the installation, vessel or aircraft
- Implementation of emergency response procedures<sup>65</sup>

<sup>&</sup>lt;sup>63</sup> OSH 15.4 (NL), OSH (NS) Element 2, Part 15, Section 15.4; INST 67 and 70; DR 145: P&C 53(4), 67. <sup>64</sup> INST 53(4) <sup>65</sup> OSH (NL) 15.4, OSH (NS) Element 2, Part 15, Section 15.4; INST 70; DR 145, P&C 67

Examples of near misses include, but are not limited to the following:

- Exposure to a Hazardous Substance
- Missing or ineffective safety or environmentally critical Barrier
- Falling objects in areas where personnel could be present
- Free fall of Elevating Devices<sup>66</sup>
- An unauthorized vessel entering the safety zone.
- An unplanned muster.

A near miss shall be reported via the written notification process described in Section 8.3.267.

#### 9.0 **Investigation Reports for the Boards**

Operators shall investigate each Incident reported to the relevant Board 68. For more information on expectations for investigations, refer to Section 7.0. The Operator shall submit a completed Incident investigation report with all the required information to the relevant Board and the Committee or Representative as soon as possible, and in any event, no later than twenty-one days following an Incident. <sup>69</sup> All Incidents shall be investigated to a level appropriate to the potential consequences.

The investigation report shall include, but not be limited to the following information:

- Date and time of the Incident
- Operator
- The installation or vessel name
- Type of installation or vessel (e.g. MODU; fixed installation; floating installation (permanently moored); Artificial Island; Pipeline, Well on fixed or floating installation; Subsea well; or Subsea manifold/gathering facility
- Location
- Operation in progress (i.e. drilling/workover, geophysical survey, hydrocarbon production, ice management, maintenance, sea transport/standby)
- Relevant physical environmental factors at the time of the Incident (maximum combined seas, significant wave height, temperature, visibility, wind, precipitation)
- Work schedule contributors (e.g. extensive overtime, tiredness, stress) for each individual involved in the Incident, if applicable.

<sup>&</sup>lt;sup>66</sup> OSH (NL) Part 4; Section 15.4

OSH (NL) Part 4, Section 13.4

7 OSH 15.4 (NL); OSH (NS) Element 2, Part 15, Section 15.4; INST 70; DR 145, P&C 67

8 OSH (NL) 15.4, OSH (NS) Element 2, Part 15, Section 15.4; AIANL 161; AIANS 166

9 OSH (NL) 15.4, OSH (NS) Element 2, Part 15, Section 15.4; INST 70, DR 145, DVR 6, GR 27; P&C 67

- Experience contributors (e.g. training, competency, onshore/offshore experience) for each individual involved in the Incident, if applicable.
- Actual and Potential Incident classifications (as per Section 8.4)
- Description of Incident (including events leading up to the Incident, the Incident and emergency response taken. The description should also include a summary of review of similar Incidents)
- A description of immediate causes, contributing factors, failures in emergency response procedures and failed Barriers.
- Root cause analysis of factors related to the occurrence of the incident, failures in emergency response procedures and other failed Barriers
- Actions taken to address root causes
- Identification if further investigation is required
- Name and titles of:
  - o Individuals who investigated the occurrence
  - o Operator's representative
  - o Committee Member or Representative

# • For injuries/illnesses:

- Name of affected worker
- Nationality
- Occupation
- o Employer
- Duration of lost/restricted workdays (known or anticipated).
   The final number of lost /restricted workdays shall be reported on the quarterly statistics report.
- Nature and severity
- o Indicate if a medevac or scheduled flight was provided

# • For environmental Incidents:

- o Substance(s) spilled / released and volume
- Source of spill/release
- Post Incident monitoring (environmental receptors/endpoints at risk)
- Mitigation or response measures and their effectiveness
- o Environmental impacts

#### For damages:

- Type of equipment involved
- Severity of damage (no impairment, impairment to critical equipment, impairment to critical equipment system, shutdown required)
- Time to repair and mitigative measures in place until repaired

For the purposes of submitting investigation reports, the Boards have prescribed the report form, which can be used as either a full investigation report or as a supplement to an Operator's own internal investigation report. Information should be submitted in an electronic format that can be

copied and pasted. The <u>Investigation Report</u> form is posted on the respective Board websites. The Operator is required to submit the investigation report form along with supplemental information by email to either the C-NLOPB at <u>incident@cnlopb.nl.ca</u> or to the CNSOPB at <u>incident@cnsopb.ns.ca</u>.

Pursuant to the Accord Acts (NL) and the Accord Acts (NS), the provision of the name of affected workers by the Operator is not a violation of the privacy legislation if the information is provided to the relevant Board for the purposes of monitoring and following up on reported injuries or potential injury to those workers. All injury reports are kept confidential pursuant to the Accord Acts (NL) and the Accord Acts (NS)<sup>70</sup>. If the Operator has concerns of internet security, names of the affected workers may be submitted to the relevant Board via means other than email.

If further investigation is required (e.g. metallurgical analysis of a failed component), an Incident investigation report is still required to be submitted within twenty-one days. Operators are required to submit their completed investigation report to date, which includes all the above information. Any information left to be investigated and the associated reason for deferral shall be noted on the investigation report. Following completion of the further investigation, the final information regarding the root causes and additional actions to be taken shall be submitted.

If a change is to be made to an Incident investigation report following management review, Committee (or Representative) review, Operator review or the relevant Boards' review, then the changes shall be acceptable to the investigation team. Updated Incident investigation reports following review and acceptance by the investigation team are to be provided to the relevant Board and the Committee on the respective installations.

<sup>&</sup>lt;sup>70</sup> AIANL 119; AIANS 122

# 10.0 Quarterly Statistics Report

Operators shall submit a quarterly statistics report within 15 days of the end of the quarter. Operators with short-term duration programs shall submit the report covering the period of their duration in the Offshore Area upon completion of their program.

This report shall contain a list of major injuries, lost/restricted workday injuries, occupational illnesses, medical treatment injuries and first aid injuries along with exposure hours. The Classifications shall be in accordance with Section 8.4. The report shall also contain a summary report of the number of lost/restricted workdays associated with a particular injury/illness by Incident date and installation, vessel or aircraft. These statistics shall be recorded on the report prescribed by the Boards and emailed to either the C-NLOPB at <a href="incident@cnsopb.nl.ca">incident@cnsopb.nl.ca</a> or to the CNSOPB at <a href="incident@cnsopb.ns.ca">incident@cnsopb.ns.ca</a>. The <a href="quarterly statistics report">quarterly statistics report</a> form is posted on C-NLOPB's website at <a href="www.cnlopb.nl.ca">www.cnlopb.nl.ca</a> and CNSOPB's website at <a href="www.cnsopb.ns.ca">www.cnlopb.nl.ca</a> and CNSOPB's

Exposure hours are calculated as follows:

Installation/Vessel/Aircraft

Exposure Hours = 
$$POB \times 12 \times N$$

Personnel Transport

**Exposure Hours** = 
$$(\#ofPersonnelTransported) \times T$$

In the above calculations:

- For clarification on what constitutes an installation, vessel or aircraft refer to Section 3.0
- For clarification on when reporting starts and ends refer to Section 8.1
- POB represents the average number of personnel on board during the period, but does not include the number of personnel being transported
- T represents the transport time
- N represents the number of days worked during the period. For helicopters involved in personnel transport, N can be calculated as 6 x F, where 6 is a constant representing an average return flight time of three hours with two pilots.
- F represents the number of flights for the transportation of personnel

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<sup>&</sup>lt;sup>71</sup> OSH (NL) 15.6; OSH (NS) Element 2, Part 15, Section 15.6

#### 11.0 References

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- 4. Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act, 1988
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