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***Guidelines for the
Reporting and Investigation of Incidents***

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1.0 Introduction

The C-NLOPB 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.irffshoresafety.com) for measuring and comparing offshore safety performance among participating IRF countries.

By incorporating international criteria for incident reporting, the C-NLOPB (hereafter referred to as the “Board”) is able to perform effective trending and analysis that will aid in efforts to improve industry performance, not only within our own jurisdiction, but across jurisdictions.

In this Guideline, the term “incident” refers to any event that caused, or under slightly different circumstances, could have caused harm to personnel or the environment. It also includes any event that impairs the function of any equipment or system critical to the safety of persons, the integrity of an installation or support craft or any event that impairs the function of equipment critical to the protection of the natural environment. Clarification on what constitutes an “incident” is provided in Section 8.4.

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 Board;
- explains the procedures to be followed by Operators in reporting incidents;
- outlines the reporting requirements for incident statistics; and
- explains the Board’s expectations for incident investigations conducted by the Operator.

The Board will review and update this Guideline periodically as required.

3.0 Scope

This Guideline applies to all operations in the offshore area that are conducted under the authority of a work authorization issued by the Board. This includes but is not limited to all operations on:

- Installations
 - Fixed production platforms (manned and unmanned)
 - Floating production platforms (e.g. floating production, storage and offloading vessels)
 - 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 i.e. geotechnical, geological or environmental monitoring activities
 - Conducting construction activities e.g. rock dumping, dredging, pipe laying, etc. in support of an active authorization
 - 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 requires that Operators report and investigate all incidents. The legislation also gives the Board the authority to issue guidance that provides an interpretation of the legislation.¹ References to relevant legislative requirements are included within each section as required.

¹ AAIA 151.1

5.0 Acronyms

AAIA	<i>“Canada-Newfoundland and Labrador Atlantic Accord Implementation Act (Federal Version)”</i>
C-NLOPB	<i>“Canada–Newfoundland and Labrador Offshore Petroleum Board”</i>
DR	<i>“Newfoundland Offshore Petroleum Drilling Regulations, 1993”</i>
DVR	<i>“Newfoundland Offshore Petroleum Area Diving Regulations, 1988”</i>
GR	<i>“Newfoundland Offshore Petroleum Area Geophysical Regulations, 1995”</i>
INST	<i>“Newfoundland Offshore Petroleum Installation Regulations, 1995”</i>
IRF	<i>International Regulator’s Forum</i>
OSH	<i>“Newfoundland Offshore Petroleum Area Occupational Safety and Health Regulations, 1989 (Draft)”</i>
P&C	<i>“Newfoundland Offshore Area Petroleum Production & Conservation Regulations, 1995”</i>
TQSP	<i>“CAPP Canadian East Coast Offshore Petroleum Industry Standard Practice for the Training and Qualification of Personnel, December 2005”</i>

6.0 Definitions

- “Accord Acts”** means the Canada-Newfoundland and Labrador Atlantic Accord Implementation Act and the Canada-Newfoundland and Labrador Atlantic Accord Implementation (Newfoundland and Labrador) Act.
- “Board”** means the Canada-Newfoundland and Labrador 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 Board as the Chief Conservation Officer pursuant to the Accord Acts.²
- “Chief Safety Officer”** means the person designated by the Board as the Chief Safety Officer pursuant to the Accord Acts.³
- “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. The Board also encourages the Operator to involve Committees in matters related to environmental protection.⁴
- “Conservation Officer”** means a Conservation Officer appointed by the Board under the Accord Acts.⁵
- “employee”** means a person who is employed by, or contracted to perform work under the supervision of, an employer and includes a dependent contractor.⁶
- “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.⁷
- “environmental conditions”** means meteorological, oceanographical and other natural conditions, including ice conditions that could affect an operation.⁸
- “hazard”** means any existing or potential practice or condition that may result in injury or illness to a person.
- “hazardous occurrence”** means any unplanned or unwanted incident or event that is or could reasonably be expected either to cause injury or illness to a person or damage to property or the environment.⁹
- “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.¹⁰

² AAIA 140

³ AAIA 140

⁴ AAIA 152; Section 37 of the Newfoundland and Labrador Occupational Health and Safety Act

⁵ AAIA 188

⁶ OSH 1.1

⁷ OSH 1.1

⁸ P&C 2(1), DR 2

⁹ OSH 15.4

¹⁰ OSH 1.1

- “incident”** refers to any event that caused, or under slightly different circumstances, could have caused harm to personnel or the environment. It also includes any event that impairs the function of any equipment or system critical to the safety of persons, the integrity of an installation or support craft or any event that impairs the function of equipment critical to the protection of the natural environment.¹¹
- “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 the hazard, as well as exposure to physical and psychological hazards. The effects of ordinary workplace stress are not considered to be a psychological hazard.¹²
- “occupational injury”** means any injury which results from a work accident 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 but off duty/off-shift are included. Self-inflicted injuries or fatalities are not included.¹³ 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 tour to the time they debark the support craft at the end of their tour)
- “offshore area”** means the area within the limits described in the Accord Acts.¹⁴
- “Operator”** means the holder of an authorization to carry on work or activity under the Accord Acts.¹⁵
- “risk”** means a measure of probability and severity of a hazard.

¹¹ OSH 15; INST 70; DR 145, P&C 67

¹² Definition obtained from IRF performance measures criteria. This criteria was adopted from OGP definition of occupational illness (modified) and required by OSH 15.1.

¹³ Definition obtained from IRF performance measures criteria. This criteria was adopted from OGP definition of occupational injury (modified to add clarifying statements about off-shift and self-inflicted injuries) and required by OSH 15.1.

¹⁴ AAIA 2

¹⁵ AAIA 137, 138, 138.1; DR 2; GR2; INST 2; P&C 2; DVR 2

- “Safety Officer”** means a Safety Officer appointed by the Board under the Accord Acts.¹⁶
- “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 methods.
- “support craft”** means a vessel, vehicle, aircraft, standby vessel or other craft used to provide transportation for or assistance to persons on the site where a work or activity is conducted.¹⁷
- “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.¹⁸

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.¹⁹

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.²⁰ To ensure that employees report all incidents, the Operator shall define reporting protocols and ensure that a mechanism and a culture is 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 adverse experience for employees.

¹⁶ AAIA 188

¹⁷ DR 2; P&C 2(1)

¹⁸ OSH 1.1

¹⁹ OSH 15; DR 145; P&C 67; INST 70; GR 27 & 28; DVR 6; P&C 51(1)(a); Safety Plan Guidelines

²⁰ OSH 15.2; AAIA 161(2)

7.2 Reporting to and Participation by the Committee

Operators shall notify the Committee of all incidents as soon as possible and shall be provided with a copy of the investigation report upon its completion. It is the Board's expectation that Operators involve Committee members in investigations. In order that Committee members are effective in reviewing investigation reports and participating in incident investigations, the Operator shall provide training in the investigation process to Committee members.²¹ It is the Operator's responsibility to ensure Committees are promptly notified and can carry out their obligations with regard to incidents.²²

7.3 Investigation Team

The investigation team should include representatives of the Operator, the facility owner, the Committee 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 including representatives of the Committee.²³ For investigations to be effective and objective, they must collect all facts surrounding the incident and must be unbiased. In this regard, it is recommended that incidents be investigated by individuals that could not have directly or indirectly contributed to 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 Board's expectation that investigations be aimed at correcting deficiencies within the Operator's management system, that an Operator has control to correct.

Incident investigations should identify all failed or inadequate technical, human and/or organizational barriers or safeguards associated with the occurrence of an incident and to 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.

²¹ WHSCC Occupational Health and Safety Committees Handbook, July 2004; CAPP TQSP 3.2.9

²² OSH 15.3

²³ CAPP TQSP 3.2.9

A root cause is a cause for which corrective measures will prevent or reduce the probability of a recurrence of the undesirable 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 type of corrections lead to a misguided and potentially disastrous belief that the underlying problem has been solved, when only a symptom has been addressed.²⁴

Operators must 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 must be specific, measurable, reasonable, implemented timely and effective in preventing or reducing the odds of the problem happening again. Following implementation they must be reviewed to ensure there are no unintended negative impacts.²⁵

All incidents shall be investigated to a level appropriate to the potential loss and not solely based on the actual loss. 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 the Operators management system. Operators shall effectively implement these policies, procedures and controls. Documentation should be designed such that employees are encouraged to report hazards and incidents.²⁶ 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

²⁴ 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

²⁵ TapRoot® The System for Root Cause Analysis, Problem Investigation and Proactive Improvement, 2000, Mark Paradies and Linda Unger, Chapter 3, pg. 81

²⁶ P&C 51(1)(a); Safety Plan Guidelines

- 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 and management system. (Incidents should be recorded in a centralized record keeping system (with sufficient detail) and shall be available for other safety management system activities such as incident trending, process hazard analysis (PHA) and management review)
- Describes how the results of incident investigations will contribute to continual improvement.
- Describes 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.²⁷

8.0 Incident Reporting to the Board

This section specifies which incidents Operators must report to the Board and provides clarity on when to report incidents, types of notifications and incident classifications. Operators shall report incidents based upon potential and actual consequences. All incidents with the potential to result in the following or a higher potential consequence shall be reported:

- Restricted Workday Injury
- Unauthorized Discharge to the environment
- Impairment to at least one piece of critical equipment

Incident classifications are defined in Section 8.4.

8.1 When to Report an Incident

Operators must notify the Board for all incidents, which occur on any installation, vessel and support craft engaged in any activity related to an approved work authorization as per Table I. This table provides clarity around when to report an incident to the Board. Reporting requirements to other agencies and authorities is provided in Section 8.2.

²⁷ AAIA 189

Table I: Determination of Reporting Requirements

Type of Installation or Vessel	Reporting Requirements
Fixed Production or Drilling Installation ²⁸	While installed on the seabed
Floating Production Installation ²⁹	While moored at the production location
Floating Drilling Installation (Anchored) ³⁰	While on a well site from the first anchor down to the last anchor up and during rig moves between wells
Floating Drilling Installation (Dynamically Positioned) ³¹	While over a well site maintaining station, from the time the dynamic positioning system is first engaged until the installation is released from the well site and during rig moves between wells
Self-Elevating Drilling Installation ³²	While on site from the time the installation first makes contact with the seabed to the time it leaves the seabed and during rig moves between wells
Geophysical Vessel or Aircraft ³³	From the time the geophysical equipment is initially deployed until it is retrieved at the completion of the program.
Geotechnical Vessel ³⁴	While on location executing a geotechnical program.
Construction Vessel ³⁵	While on location executing a construction program.
Accommodation Installation ³⁶	While located next to a drilling or production installation and involved in activities supporting the installation.
Diving Installation ³⁷	For saturation dives, when the first diver enters saturation until the last diver exits saturation for a diving program and for all other programs, while on location executing a dive program.
Support Craft ³⁸	<ul style="list-style-type: none"> • While within 500 meters of a drilling or production installation • When in standby for a drilling or production installation. • While active in ice management for the protection of an installation • While transporting personnel to or from the installation (via air or sea).

²⁸ OSH 15; INST 70; DR 145, P&C 2; 67; AAIA 160;

²⁹ OSH 15; INST 70, P&C 2; 67; AAIA 160

³⁰ OSH 15; INST 70, DR 145; AAIA 160

³¹ OSH 15; INST 70, DR 145; AAIA 160

³² OSH 15; INST 70, DR 145; AAIA 160

³³ OSH 15; GR 27, 28

³⁴ OSH 15; GR 27, 28

³⁵ OSH 15; INST 70

³⁶ OSH 15; INST 70; AAIA 160

³⁷ OSH 15; DVR 2 & 6; INST 70; AAIA 160

³⁸ OSH 15; DR 145; P&C 67

8.2 Reporting to Other Agencies and Authorities

The Board as the lead regulatory agency for offshore oil and gas activities typically coordinates communications regarding incidents. However, in some instances, 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 are 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

If the incident includes injury or illness to personnel working on a Canadian flagged standby or support vessel that is regulated under Part II of the Canada Labour Code, the Operator shall ensure that the employer of the affected person reports the incident, in following with the Marine Occupational Safety and Health Regulations, to the Coast Guard Regional Operations Centre who will then transfer the notification to Transport Canada, Marine Safety.

8.2.4 Royal Canadian Mounted Police

The Operator shall ensure that all fatalities are reported to the Royal Canadian Mounted Police (RCMP) and the Province's Chief Medical Examiner.

8.2.5 Workplace Health, Safety and Compensation Commission

The Act directs employers of any marine installation or structure, to comply with applicable sections of the Worker's Health, Safety and Compensation Act.³⁹ Part of this obligation includes mandatory reporting of incidents to the Workplace Health, Safety and Compensation Commission (WHSCC) of Newfoundland and Labrador in the event where circumstances may entitle a worker to compensation. Reporting information and standardized report forms are available from the WHSCC at www.whscc.nf.ca.

8.3 Types of Incident Notifications

The regulations require an Operator to notify the Board of any incident as soon as possible.⁴⁰ This section outlines two types of notifications to the Board – emergency and written (within 24 hours).

8.3.1 Emergency Notification

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

- Fatality
- Major Injury
- Medical Evacuation (MEDEVAC)
- Fire/Explosion
- Collision
- Loss of Well Control
- Hydrocarbon spill of 1 L or greater (refer to Unauthorized Discharge)
- Adverse Weather
- Security
- Major Hydrocarbon Release (refer to Hydrocarbon Release)
- Major Damage/Impairment

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

Operators should direct all Emergency Notifications to the Board Duty Officer who is on call 24 hours a day,

³⁹ Section 152 of the Act

⁴⁰ OSH 15; INST 70; DR 145, P&C 67; DVR 2 & 6; GR 27

seven days a week and can be reached at (709) 682-4426.

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.⁴¹

As soon as reasonably practicable following the verbal notification, the Operator shall provide written notification to the Board either by email to incident@cnlopb.nl.ca or fax to (709) 778-1473. The written notification shall contain the information specified in Section 8.2.2. The Operator must also notify the Committee as soon as possible but no later than 24 hours after the incident.⁴²

8.3.2 Written Notification

For all incidents, the Operator must provide a written notification to the Board and the Committee as soon as possible but no later than 24 hours after the Operator becomes aware of any incident.⁴³ The written notification may be submitted either by email to incident@cnlopb.nl.ca or fax to (709) 778-1473. 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 unauthorized discharges, information on the impact to marine life and wild life.

We encourage Operators to use the Incident Notification Form posted on the C-NLOPB website (www.cnlopb.nl.ca).

⁴¹ AAIA 160; 189; OSH 15; INST 70, DR 145; P&C 67

⁴² OSH 15

⁴³ OSH 15.4, DR 145, INST 70, DVR 6, GR 27

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 an unauthorized discharge), all classifications that apply must be specified. Operators shall use the following actual and potential classifications when reporting incidents to the Board:

8.4.1 Fatality

Fatalities include any work-related death that occurs within one year after the incident and includes missing persons.⁴⁴ All fatalities shall be reported via the emergency notification process and shall also be reported to the RCMP and the Province's Chief Medical Examiner. If the Chief Medical Examiner determines that the fatality was due to natural causes then this incident will not be classified as a fatality.

8.4.2 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

⁴⁴ Definition obtained from IRF performance measures criteria and are required by OSH 15.4, INST 70 and DR 145

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.⁴⁵

Major injuries shall be reported via the emergency notification process.

8.4.3 Lost 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. Any day includes rest days, weekend days, leave days, public holidays, or days after ceasing employment.⁴⁶ Lost workday injuries shall be reported via the written notification process. The number of lost workdays associated with an injury shall be reported on the quarterly statistics report.

8.4.4 Restricted Workday Injury

Any occupational injury other than a “Major Injury” which results in a person being 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.⁴⁷ Restricted workday injuries shall be reported via the written notification process. The number of restricted workdays associated with an injury shall be reported on the quarterly statistics report.

8.4.5 Occupational Illness

Any occupational illness caused by prolonged or repeated exposure to environmental factors associated with employment shall be reported via the written notification process.⁴⁸

8.4.6 Medical Treatment Injury

Cases that are not severe enough to be reported as lost workday cases or restricted workday cases but are more

⁴⁵ Definition obtained from IRF performance measures criteria. This criteria was adopted from the Health & Safety Executive (UK) and the Petroleum Safety Authority (Norway) and are required by OSH 15.4, INST 70, DR 145

⁴⁶ Definition obtained from IRF performance measures criteria. This criteria was adopted from OGP definition of Lost Workday Case (slightly modified) and are required by OSH 15.4, INST 70, DR 145

⁴⁷ Definition obtained from IRF performance measures criteria. This criteria was adopted from OGP definition of Restricted Workday Case (slightly modified) and are required by OSH 15.4, INST 70, DR 145

⁴⁸ OSH 15.1

severe than requiring simple first aid treatment are considered to be medical treatment injuries.⁴⁹ Medical treatment injuries shall be reported on the quarterly statistics report.

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.⁵⁰ First aid injuries shall be reported on the quarterly statistics report.

8.4.8 Medical Evacuation (MEDEVAC)

Any medical evacuations from an offshore installation or vessel shall be reported via the emergency notification process whether they are occupational or non-occupational. 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.⁵¹ These instances will be recorded as non-occupational medevacs.

8.4.9 Fire/Explosion

If a fire or explosion results in an injury to personnel or damage to an offshore installation, vessel, or aircraft, it shall be reported via the emergency notification process.⁵² Any fire or explosion that occurs without these consequences shall be reported under the classification of near miss.

8.4.10 Collision

Refers to the collision of a marine vessel, iceberg/pack ice or aircraft with an offshore installation or vessel. Any collision, which results in an injury to personnel or damage to an offshore installation, vessel, or aircraft, shall be reported via

⁴⁹ Definition obtained from IRF performance measures criteria. This criteria was adopted from OGP definition of Medical Treatment Case (slightly modified) and required by OSH 15.1.

⁵⁰ Definition obtained from IRF performance measures criteria. This criteria was adopted from OGP definition of First Aid Case (slightly modified) and required by OSH 15.1.

⁵¹ OSH 15.4

⁵² OSH 15.4, INST 70, DR 145

the emergency notification process.⁵³ Any collision that occurs without these consequences shall be reported under the classification of near miss.

8.4.11 Loss of Well Control

A loss of well control is any incident associated with drilling, completion, workover, or abandonment operations and that is either:

- An uncontrolled release of formation or other well fluids (The flow may be between two or more exposed formations or it may be at or above the mudline. This includes uncontrolled flow resulting from failures of either surface or subsurface equipment or procedures) or
- A flow of formation or other well fluids through a diverter⁵⁴

All losses of well control where the duration of the uncontrolled or diverted flow is greater than 5 minutes shall be reported to the Board via the emergency notification process.⁵⁵ Any loss of well control that occurs without this consequence shall be reported under the classification of near miss.

8.4.12 Hydrocarbon Release

A hydrocarbon release refers to an unintentional or uncontrolled release of gas or liquid hydrocarbons from the process train on or from an offshore installation that has significant hazard potential. This does not include releases that result from processes designed into the production and processing systems to respond to upset conditions.⁵⁶ 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.

⁵³ OSH 15.4

⁵⁴ Definition obtained from IRF performance measures criteria and OSH 15.4

⁵⁵ Definition obtained from IRF performance measures criteria and required by OSH 15.4, INST 70 and DR 145.

⁵⁶ Definition obtained from IRF performance measures criteria and required by OSH 15.4, INST 70

- 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 1 L and 300 L.

Significant hydrocarbon releases shall be reported via the written notification process.

For converting gas release volumes to gas release rates, the following formula can be utilized⁵⁷:

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

where

GR _{Rate}	= gas release rate (kg/sec)
d	= equivalent hole diameter (mm)
D _{Gas}	= gas density (kg/m ³)
P _{Gas}	= operating pressure (bara)

8.4.13 Unauthorized Discharge

Any escape, emission or discharge of any substance or form of energy into the natural environment, outside of the limits established in the authorization shall be reported to the Board by the most rapid means practicable. This does not include a hydrocarbon release (refer to section 8.4.12), unless hydrocarbons are spilled into the ocean. Reporting shall be as follows:

- **Hydrocarbon Spill** - An emailed written notification shall be submitted immediately to the Board for hydrocarbon spills of less than 1 L. Hydrocarbon spills of 1 L or greater must be reported via the emergency notification process.
- **Other Unauthorized Discharge** - All other escapes, emissions or discharges into the natural environment shall be reported to the Board via the written notification process.⁵⁸

8.4.14 Adverse Weather

If there is a forecast or actual physical environmental conditions that may result in or have resulted in loads or load

⁵⁷ Definition obtained from IRF performance measures criteria

⁵⁸ AAIA 160, 161; DR 145, INST 70, GR 27, 28; P&C 2, 67; Newfoundland Offshore Area Oil and Gas Operations Regulations Section 6 and CNLOPB Offshore Waste Treatment Guidelines, 2002, Section 2.3, 2.5 – 2.8

effects in excess of those for which the offshore installation was designed shall be reported to the Board via the emergency notification process. The Board shall also be notified if pre-cautionary down-manning due to weather is initiated.⁵⁹

8.4.15 Security

If there is a significant threat, breach or incident regarding security, the Chief Safety Officer and appropriate law enforcement agencies need to be notified as soon as possible. Security issues shall be reported via the emergency notification process.⁶⁰

8.4.16 Major Damage/Impairment

All damages or impairments that compromise the ongoing integrity or emergency preparedness (from a safety, environmental, or resource conservation perspective) of an offshore installation or vessel are considered reportable.⁶¹ 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. Some examples of major damage/impairments include (but are not limited to):

- Unintended collapse of any installation or any part of the installation which jeopardizes the overall structural integrity of the installation
- Subsidence or local collapse of seabed likely to affect the foundations or the overall structural integrity of an offshore installation
- Loss of stability or buoyancy
- Uncontrolled flooding
- Explosion, collapse or bursting of any closed vessel or associated pipework.

Major damage/Impairments shall be reported via the emergency notification process.

⁵⁹ OSH 15.4 and INST 70

⁶⁰ "Requirements Respecting the Security of Offshore Facilities", Subsection 3(f), 9(j)

⁶¹ INST 67, 70, OSH 15.4, DR 145 and adopted from the IRF performance measures criteria.

8.4.17 Near Miss

A near miss is any incident that does not result in actual harm to people, the environment, or property but had the potential to result in harm or a hazardous occurrence.⁶²

Some examples of near misses and hazardous occurrences are included (but not limited to):

- Uncontrolled or unintentional release of a hazardous substance (excluding “hydrocarbon releases”),
- The operation of equipment outside of its safe operating limits,
- Deviations from policies, procedures and administrative controls that could have resulted in harm to personnel, the environment or property,
- Implementation of emergency response plans in response to an event (unless it is reported in one of the above noted classifications),⁶³
- Release of a biological agent likely to cause severe human infection or illness,
- The failure or endangering of diving equipment that puts a diver at risk,
- Well kicks > 1250 kg (1562 liters or 9.8 bbls),
- Failure of any safety critical element of a well,
- Precautionary down-manning due to other emergencies,
- Unauthorized vessel entering safety zone,
- Hazardous ice entering the zones specified in the ice management plan,
- Loss or damage to a support craft,
- Failure of lifeboat release mechanism during trials, etc.,
- Failure of any load-bearing parts and critical components of cranes, containers, lifting devices or loose lifting gear,
- Free fall of elevating devices,
- Damage to structural member,
- The failure of equipment to maintain a floating offshore installation on station,
- The dropping of any object on an installation or an attendant vessel or into the water adjacent to an installation or vessel,
- Damage to an installation caused by adverse weather,

A near miss shall be reported via the written notification process.

⁶² OSH 15.4, INST 70, DR 145 and examples adopted from IRF Performance Measures Criteria for hazardous occurrence and near miss.

⁶³ P & C 51, INST 70, DR 64, OSH 15.4 & 17.9

9.0 Investigation Reports for the Board

Operators must investigate each incident reported to the Board. For more information on expectations for investigations, refer to Section 7.0⁶⁴ The Operator shall submit a completed incident investigation report with all the required information to the Board and the Committee as soon as possible, and in any event, no later than twenty-one days following an incident.⁶⁵

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 (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 environmental factors at the time of the incident (maximum combined seas, significant wave height, temperature, visibility, wind, precipitation)
- 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)
- Description of failed barriers (includes immediate causes, contributing factors and failures in emergency response procedures)
- Root cause for each failed barrier
- Actions taken to address root causes
- Identification if further investigation is required
- Name and titles of:
 - Individuals who investigated the occurrence
 - Operator's representative
 - Committee Representative
- For injuries/illnesses:
 - Name of affected worker
 - Nationality
 - Occupation
 - Employer
 - Experience in position (years)

⁶⁴ OSH 15.4, INST 70, DR 145, DVR 6, GR 27 & 28; P&C 67: AAIA 160

⁶⁵ OSH 15.4, INST 70, DR 145, DVR 6, GR 27; P&C 67

- Experience in offshore (years)
- Number of hours on shift prior to incident
- Rotation schedule for three months prior to incident
- Number of hours of sleep in past three days prior to incident
- Duration of lost time/restricted work days (known or anticipated) The final number of lost time/restricted workdays shall be reported on the quarterly statistics report.
- Nature and severity
- Indicate if a medevac or scheduled flight was provided
- For environmental incidents:
 - Substance(s) spilled / released and volume
 - Source of spill/release
 - Post incident monitoring (environmental media/endpoints at risk)
 - Mitigation or response measures and their effectiveness
- 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 Board has prescribed the report form. The investigation report form is posted on our website. The Operator is required, to submit the investigation report form by email to incident@cnlopb.nl.ca. Pursuant to the Accord Acts, 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 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.⁶⁶ If the Operator has concerns of internet security, names of the affected workers may be submitted to the 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 assigns root causes and actions to all identified failed barriers to date. 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.

⁶⁶ AAIA 119

If a change is to be made to an incident investigation report following management review, Committee review, Operator review or Board review then the changes must be acceptable to the investigation team. Updated incident investigation reports following review and acceptance by the investigation team are to be provided to the Board.

10.0 Quarterly Statistics Report

Every quarter, Operators shall submit a report within 15 days of the end of the quarter.⁶⁷ 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 workday injuries, restricted workday injuries, occupational illnesses, medical treatment injuries and first aid injuries along with exposure hours for each of the above installations, vessels or aircraft.⁶⁸ Classifications shall be in accordance with Section 8.4. The report shall also contain a summary report of the number of lost workdays/restricted workdays associated with a particular injury/illness by incident date and installation. These health and safety statistics shall be recorded on the report prescribed by the Board and emailed to incident@cnlopb.nl.ca. The quarterly statistics report form is posted on our website.

Exposure hours are calculated as follows, where N represents the number of days worked during the period, F represents flight time and C represents crew hours:

- Installation/Vessel/Aircraft (refer to Table I)

$$\text{Exposure Hours} = POB \times 12 \times N$$

- Support Craft in standby, ice management or within 500 m of the installation (refer to Table I)

$$\text{Exposure Hours} = POB \times 12 \times N$$

- Support craft (helicopter or vessel) used to transport personnel (refer to Table I)

$$\text{Exposure Hours} = (POB_{\text{MOVED}} \times F) + C$$

⁶⁷ AAIA 189; OSH 15.6

⁶⁸ OSH 15.6

11.0 References

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4. Draft Newfoundland Offshore Petroleum Drilling and Production Regulations, April 2007
5. International Regulator's Forum (IRF) Performance Measurement Final Project Description (September 24, 2006)
6. Newfoundland Offshore Area Petroleum Diving Regulations, 1988
7. Newfoundland Offshore Area Petroleum Geophysical Regulations, 1995
8. Newfoundland Offshore Area Petroleum Occupational Safety and Health Regulations, 1989 (Draft)
9. Newfoundland Offshore Area Oil and Gas Operations Regulations, 1988
10. Newfoundland Offshore Area Petroleum Production & Conservation Regulations, 1995
11. Newfoundland Offshore Petroleum Drilling Regulations, 1993
12. Newfoundland Offshore Petroleum Installation Regulations, 1995
13. Offshore Waste Treatment Guidelines, 2002, C-NLOPB
14. "Requirements Respecting the Security of Offshore Facilities", April 2007, C-NLOPB
15. TapRoot® The System for Root Cause Analysis, Problem Investigation and Proactive Improvement, 2000, Mark Paradies and Linda Unger
16. 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
17. WHSCC Occupational Health and Safety Committees Handbook, July 2004