Regulatory Guidance Notice – Revisions to Incident Reporting and Investigation Guideline

Effective Date:
October 20, 2025

Purpose:
This Notice revises sections 6.12, 6.13, and 7.4 of the *Incident Reporting and Investigation Guideline* (April 2018, ISBN 978-1-927098-77-6) to align with the *Canada–Newfoundland and Labrador Offshore Area Petroleum Operations Framework Regulations* (Framework Regulations).

Scope and Applicability:
Applicable to all Canada-Newfoundland and Labrador Offshore Energy Regulator authorized petroleum-related works or activities.

Summary of Revisions:

Framework Regulation Requirement	**Previous Regulatory Requirement**
All authorized activities require an Environmental Protection Plan (EPP) *(s.8 and 10).*	EPP was only required for drilling programs and production projects. *(Drilling and Production Regulations, s.6 and 9)*.
Definition of "pollution" applies to all works and activities. "Pollution means the introduction into the environment of any substance or form of energy outside the limits applicable to an authorized work or activity." *(s.1).*	Previously only applied to drilling programs and production projects. *(Drilling and Production Regulations, s.1)*.
Definition of "reportable incident" applies to all authorized works and activities. It includes pollution and the narrow avoidance of pollution *(s.1).*	The definition of "pollution" did not apply to all authorized works or activities *(Drilling and Production Regulations, s.1)*.
Environmental incident investigation report due within 14 days, applicable to all authorized works or activities *(ss. 179(1)).*	Environmental incident investigation reports were due within 21 days for drilling programs and production projects. Safety-related investigation reports were due within 14 days. *(Drilling and Production Regulations, s.76)*.

The *Incident Reporting and Investigation Guideline* has been updated as follows:

Revision 1: Section 6.12 – Pollution

Pollution occurs when, in association with an authorized work or activity:

- any substance or form of energy outside the limits applicable to an authorized work or activity – that is, in an amount, or at an intensity or concentration in excess of the limits described in the operator's Environmental Protection Plan (EPP) – is introduced into the environment;
- any substance or form of energy for which a discharge is not described in the operator's EPP is introduced into the environment; and
- the manner of discharge for any substance or form of energy introduced to the environment is not as described in the operator's EPP.

All pollution and occurrences in which pollution was narrowly avoided must be reported and investigated. If pollution includes a spill (petroleum), refer to section 6.13 of this Guideline.

Pollution exceeding the following thresholds should be reported via the immediate verbal notification process as described in Section 5.3.1:

- A discharge with an amount, intensity or concentration greater than two times the limit described in the EPP; and
- A discharge of a substance for which a discharge is not described in the EPP, or in a manner not as described in the EPP, and which is greater than 100 litres in volume.

In addition to the above, all pollution should also be reported via the written notification process as described in Section 5.3.2 and an investigation report must be provided to the Regulator as described in Section 7.4.

Revision 2: Section 6.13 – Spill

A spill occurs when, in association with an authorized work or activity, there is any discharge of petroleum (including but not limited to crude oil, natural gas, condensate, lubricants, hydraulic oils, fuels, petroleum-based synthetic drilling fluids, or any other refined petroleum product) to the environment in a manner that has not been authorized by the Regulator (i.e., not described in the operator's EPP).

All spills are considered pollution. Any spills and occurrences in which a spill was narrowly avoided must be reported and investigated.

Spills exceeding the following thresholds should be reported via the immediate verbal notification process as described in Section 5.3.1:

- Mixtures containing petroleum at a concentration greater than two times the maximum authorized concentration limit;
- Liquids with a volume greater than 25 litres; and
- Gases with a mass greater than 25 kg.

In addition to the above, all spills should also be reported via the written notification process as described in Section 5.3.2 and an investigation report must be provided to the Regulator as described in Section 7.4.

Revision 3: Section 7.4 – Documentation Submitted to the Regulators

A. The operator must submit a completed Incident Investigation Report with all the required information to the respective Regulator as soon as possible, no later than fourteen days following an Incident.

B. Regardless of any ongoing analysis (e.g., metallurgical analysis of a failed component), an Incident Investigation Report must be submitted within fourteen days following an Incident.

Duration and Next Steps:
This Notice will be in effect until the *Incident Reporting and Investigations Guideline* has been fully updated and posted to the Regulator's website.

Incident Reporting and Investigation Guideline

April 2018

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Foreword

The Canada-Nova Scotia Offshore Petroleum Board and Canada-Newfoundland and Labrador Offshore Petroleum Board (the Boards) have issued this Guideline to assist operators, employers and other workplace parties in complying with the requirements of the *Accord Acts* and the associated Regulations for the reporting and investigation of Incidents and other events that occur in the offshore area.

Guidelines are developed to provide assistance to those with statutory responsibilities (including operators, providers of service, suppliers, employers, employees, etc.) under the *Accord Acts* and Regulations. Guidelines provide an understanding of how regulatory requirements can be met. In certain cases, the goals, objectives and requirements of the legislation are such that no guidance is necessary. In other instances, guidelines will identify a way in which regulatory compliance can be achieved.

Guidelines outline the Boards' reasonable expectations on how those with statutory responsibilities can achieve compliance with *Accord Acts* and Regulations. The onus is on those with statutory responsibilities to comply with the legislation and to demonstrate to the Board the adequacy and effectiveness of the methods employed to achieve compliance.

Guidelines are not statutory instruments; however, the information set out in guidelines does not prevent the Boards from imposing additional requirements.

The authority to issue Guidelines and Interpretation Notes with respect to legislation is specified by subsection 156(1) and 210.068 of the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act (CNSOPRAIA),* subsection 148 and 202BQ(1) of the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act,* subsection 151.1 and 205.067 of the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Act (C-NLAAIA)* and subsection 147 and 201.064 of the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act.* For the purposes of this Guideline, these Acts are referred to collectively as the *Accord Acts*. Any references to the C-NLAAIA or CNSOPRAIA in this Guideline are to the federal versions of the *Accord Acts*.

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1.0 Acronyms and Abbreviations

CAPP	Canadian Association of Petroleum Producers
C-NLAAIA[1]	*Canada-Newfoundland and Labrador Atlantic Accord Implementation Act*
C-NLOPB	Canada-Newfoundland and Labrador Offshore Petroleum Board
CNSOPB	Canada-Nova Scotia Offshore Petroleum Board
CNSOPRAIA[2]	*Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act*
CSA	Canadian Standards Association
DPR	*Newfoundland Offshore Petroleum Drilling and Production Regulations, 2009* and *Nova Scotia Offshore Petroleum Drilling and Production Regulations, 2009*
DVR	*Canada-Newfoundland and Labrador Offshore Area Diving Operations Safety Transitional Regulations, 2014* and *Canada-Nova Scotia Offshore Area Diving Operations Safety Transitional Regulations, 2014*
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*
IOGP	*International Association of Oil & Gas Producers*
IRF	International Regulators' Forum
ISO	International Organization for Standardization
MODU	Mobile Offshore Drilling Unit

[1] References to the C-NLAAIA in this Guideline are to the federal version of the Accord Act
[2] References to the CNSOPRAIA in this Guideline are to the federal version of the Accord Act

NEB	National Energy Board
NL	Newfoundland and Labrador
NS	Nova Scotia
OHS	*Canada - Newfoundland and Labrador Offshore Marine Installations and Structures Occupational Health and Safety Transitional Regulations, December 31, 2014 and Canada – Nova Scotia Offshore Marine Installations and Structures Occupational Health and Safety Transitional Regulations, December 31, 2014*
TQSP	*Atlantic Canada Offshore Petroleum Industry: Standard Practice for the Training and Qualifications of Personnel*

2.0 Definitions

In this Guideline, "authorization" [3], "coordinator", "declaration", "employee", "employer", "hazardous substance", "marine installation or structure", "offshore area", "operator", "passenger craft", "serious injury", "workplace" and "workplace committee" have the same meaning as in the *Accord Acts*. [4]

In this Guideline, "disabling injury" [5], "environmental conditions" [6], "minor injury" [7] and "support craft" [8] have the same meaning as in the *OHS Regulations*.

In this Guideline, "lost or restricted workday injury" [9] and "safety zone" [10] have the same meaning as in the *Drilling and Production (DPR) Regulations.*

In this Guideline, "installation" when not used within the term "marine installation or structure" has the same meaning as in the *Installation (INST) Regulations.* [11]

For the purposes of this Guideline, the following definitions have been capitalized. The following definitions apply:

[3] C-NLAAIA 205.001(1); CNSOPRAIA 210.001(1)
[4] C-NLAAIA 2, 205.001(1), 205.017(5) and CNSOPRAIA 2, 210.001(1), 210.017(5)
[5] OHS 262
[6] OHS 1
[7] OHS 262
[8] OHS 1
[9] DPR 1(1)
[10] DPR 71(1)
[11] INST 2(1)

Barrier	means the technical/physical, human or organizational safeguard that is put in place to avoid, prevent, reduce or manage health, safety or environmental risks.[12]
Critical Equipment	means the components and systems of a marine installation or structure, passenger craft, vessel or aircraft, the failure of which could cause or contribute substantially to an Incident, or is put in place to avoid, prevent, reduce or manage the effect of an Incident.[13]
Incident	means any event that caused or, under slightly different circumstances, would likely have caused harm to personnel, an unauthorized discharge or spill or an imminent threat to the safety of a marine installation or structure, passenger craft, vessel or aircraft. It also includes any event that impairs the function of any Critical Equipment[14]
Major Injury[15]	means an 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 or spine. They do not include fractures to fingers, toes, or a 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)

[12] Preventative measures and hazard control measures as per 205.009(2) of the C-NLAAIA and 210.009(2of CNSOPRAIA

[13] Refer to Section 6.17 and Appendix A for examples of Critical Equipment

[14] The term "Incident" includes events and occurrences as identified in the following provisions of the Accord Acts and Regulations: C-NLAAIA 160, 161 & 205.015; CNSOPRAIA 165, 166 & 210.015; OHS Part 15; INST 70; DPR 1(1) definition of "incident" and "near-miss"; GR 27 & 28; DVR 1, definition of "accident" and "incident" and 5(1)(i)&(j)

[15] The term "Major Injury" is an umbrella term that includes "serious injury", "disabling injury", "lost or restricted workday injury" and reference to injury in general as identified in the following provisions of the Accord Acts and Regulations: C-NLAAIA 205.017(5) definition of "serious injury" and CNSOPRAIA 210.017(5) definition of "serious injury"; OHS definition of "disabling injury"; INST 70 refers to serious injury; DPR definition of "incident" and "lost or restricted workday injury"; DVR definition of "accident" and "incident"; GR 27 refers to injury

- 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 chemicals or biological agents or anything that produces a significant negative physiological effect e.g. decompression illness, loss of hearing, and radiation sickness
- Hypothermia or heat induced illness (unconsciousness)
- Any injury which places life in jeopardy or results in unconsciousness, substantial loss of blood, resuscitation or admittance to the hospital

Management System includes for the purposes of this Guideline, as an umbrella term, both "Occupational Health and Safety Management System" as defined in Part III.I of the *Accord Acts*[16] and the "management system" as defined in the Drilling and Production Regulations[17]

Occupational Illness[18] includes but is not limited to any abnormal condition or disorder caused by prolonged or repeated exposure to environmental factors associated with employment at the workplace. Occupational Illnesses may be caused by inhalation, absorption, ingestion, injection 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. Cases resulting from anything other than instantaneous events are also considered Occupational Illnesses. Occupational Illnesses are different from Occupational Injuries (refer to Section 6.4) in that Occupational Injuries are caused by instantaneous events in the work environment or events close in time

Occupational Injury means any injury which results from an Incident or from a single instantaneous exposure in the workplace, or on a passenger craft going to or from any of those workplaces. Conditions resulting from exposure over the allowable limits to chemicals are considered to be Occupational Injuries. The aggravation of a previous

[16] C-NLAAIA 205.015; CNSOPRAIA 210.015

[17] DPR 5

[18] The umbrella term "Occupational Illness" includes both "occupational disease" and "disabling injury" as identified in the following provisions of the Accord Acts and Regulations: C-NLAAIA 205.017(1)(a); CNSOPRAIA 210.017(1)(a); OHS 262; definitions of "disabling injury" and "minor injury" and OHS 265(1)(c)

	injury, whether or not the original injury occurred at the workplace, is also considered to be an Occupational Injury. Injuries that occur while the worker is at the workplace or onboard the passenger craft and are off duty/off-shift are included. Intentional self-inflicted injuries are not included.
Officer	means the Chief Conservation Officer and the Chief Safety Officer as designated by the Boards and a Conservation Officer, and an Operational Safety Officer or a Health and Safety Officer as designated by the Minister(s) pursuant to the *Accord Acts*[19]

3.0 Purpose and Scope

This Guideline is intended to assist operators, employers and others with responsibilities under Part III and Part III.I of the *Accord Acts* in the reporting and investigation of Incidents and other events, and submission of associated reports in a manner that complies with the requirements of the *Accord Acts* and Regulations and the terms and conditions of Board approvals and authorizations.

This Guideline describes the Boards' expectations respecting:

- what constitutes an Incident and other events that are reportable to the Boards;
- the process for reporting an Incident and other events;
- the Boards' expectations for Incident investigations; and
- the process for submitting associated reports

This Guideline applies to all work or petroleum-related activities in the offshore area conducted pursuant to an authorization.[20] This includes, but is not limited to, all operations on:

- Marine Installation or Structure[21], which includes
    - Production Installations, inclusive of subsea installations, flowlines, pumping stations, pipelines related to
        - Fixed production platforms (manned and unmanned)
        - Floating production platforms (e.g. floating production, storage and offloading vessels)
    - Drilling Installations, including

[19] C-NLAAIA 140 and 205.071; CNSOPRAIA 144 and 210.072
[20] C-NLAAIA 205.001(1); CNSOPRAIA 210.001(1); definition of "marine installation or structure"; DPR; INST; GR; DVR; In Nova Scotia, support vessels are listed under the Operator's *Declaration of Fitness*
[21] C-NLAAIA 205.001(1); CNSOPRAIA 210.001(1); definition of "marine installation or structure"; DPR; INST; GR; DVR; In Nova Scotia, support vessels are listed under the Operator's *Declaration of Fitness*

        - Mobile Offshore Drilling Units (MODU) (e.g. drill ships)
        - Column-stabilized MODU's (i.e. semi-submersible drill rigs)
        - Self-elevating MODU's (i.e. jack-up drill rigs)
        - Well intervention vessels
    - Diving Installations
    - Accommodation Installations
    - Storage structure
    - Loading or Landing Platform
    - Any ship conducting geophysical or other data gathering activities (e.g. geotechnical, geological, environmental monitoring)
    - Any ship conducting construction activities e.g. installation of offshore installations or equipment, rock dumping, dredging, pipe laying, in support of an authorization
- Passenger Craft
- Vessels
    - Support vessels, including but not limited to standby, supply and ice management vessels used in support of an authorization, but does not include a passenger craft
- Aircraft
    - Aircraft conducting geoscientific activities or conducting other activities in the vicinity of a workplace, but does not include a passenger craft

Clarification on reporting of Incidents is provided in Section 5.0.

4.0 Management System

Prior to being issued an authorization, operators are required to develop, implement and maintain a Management System. This Management System must be effective and include the processes for the internal reporting and analysis of hazards, minor injuries, Occupational Illnesses, Incidents and near-misses and for taking corrective actions to prevent their recurrence.[22] The processes must be documented[23] and should be designed such that personnel are encouraged to report hazards and Incidents. The processes for the investigation of Incidents should[24] [25]:

- Establish the roles and responsibilities of personnel, including those of workers and worker representatives, involved in the incident investigation process and the subsequent review of incident investigation reports[26]

[22] C-NLAAIA 205.015, 205.019, 205.02; CNSOPRAIA 210.015, 210.019, 210.02; DPR 5; C-NLOPB/CNSOPB Drilling and Production Guidelines
[23] C-NLAAIA 205.015; CNSOPRAIA 210.015; DPR 5
[24] Not all the requirements listed here are mandatory. Those that are mandatory legislated requirements are denoted with footnotes with the source of the applicable legislation.
[25] C-NLOPB/CNSOPB Drilling and Production Guidelines, ISO 9001, CSA Z1000 and ISO 14001
[26] C-NLAAIA 205.015(2)(b-c), 205.02(2)(d-e); CNSOPRAIA 210.015(2)(b-c); 210.02(2)(d-e)

- Specify qualifications, training and competency requirements for personnel involved in incident investigations or the subsequent review of incident investigation reports[27]
- Specify the composition and requirements for investigation teams[28]
- Provide clear criteria for the internal and external communication of incidents and investigation results[29]
- Specify requirements for conducting incident investigations and outline expected outcomes, such as the identification of root cause(s), corrective and preventive actions[30]
- Specify how incidents and subsequent corrective and preventive actions are tracked and communicated to all levels of the organization
- Specify performance monitoring criteria for incidents, such as measures for ensuring corrective and preventive actions are implemented in a timely manner
- Specify a mechanism for assessing the effectiveness of any preventative and corrective actions taken
- Specify how results from incident investigations are utilized for the continual improvement of quality, health, safety and environmental Management Systems; and
- Describe the monitoring, auditing and review of the effectiveness of the incident investigation process. [31]

5.0 Reporting of Incidents and Other Events

Those with statutory responsibilities, including operators, are required to have processes for internal and external reporting of hazards, Incidents and other events.[32]

5.1 Reporting by an Employee

Operators and employers should ensure their reporting processes include employee obligations to report hazards and Incidents and how to report them in accordance with Part III.I of the *Accord Act* and regulations. These obligations include:

- When an employee becomes aware of a hazard or Incident, the employee must report the hazard or Incident to their supervisor[33]

[27] C-NLAAIA 205.015(2)(b & d); CNSOPRAIA 210.015(2)(b & d); OSH 264(1)(b), 118(1)(a-b)
[28] C-NLAAIA 205.015(2)(b & d), 205.02(2)(d-e); CNSOPRAIA 210.015(2)(b & d), 210.02(2)(d-e); OSH 264(1)(b)
[29] C-NLAAIA 205.015(2)(f); CNSOPRAIA 210.015(2)(f); OSH 264(1)(c) & (3), OSH 265-266; DPR 5
[30] DPR 5 and 76(2)
[31] C-NLAAIA 205.015(2)(g-h) & (3); CNSOPRAIA 210.015(2)(g-h) & (3); DPR 5
[32] C-NLAAIA 205.015(2)(f); CNSOPRAIA 210.015(2)(f); DPR 5(2)(c)(f); INST 70; GR 27 & 28
[33] C-NLAAIA 205.049(1); CNSOPRAIA 210.049(1); OHS 263

- If an employee's concern that a hazard or Incident is not resolved, they may notify their employer and the employer must in turn notify the workplace committee (or coordinator) and the operator[34]
- If a hazard or Incident is not being dealt with after they notify their employer, the employee may report it directly to an Officer of the respective Board:[35]

    - C-NLOPB Duty Officer (709) 682-4426 or incident@cnlopb.ca
    - CNSOPB Duty Officer (902) 496-4444 or incident@cnsopb.ns.ca

The operator and employers are responsible for defining the reporting processes and to ensuring that employees are trained and encouraged to report accordingly.[36]

5.2 Reporting to the Workplace Committee or Coordinator

Operators and employers must ensure that the workplace committee or coordinator are notified without delay of all health and safety related Incidents and the name of the person that has been appointed to investigate it such that the workplace committee or coordinator can carry out their obligations with regard to health and safety related Incidents[37]. Notification is to be provided to the workplace committee or coordinator as soon as reasonably practicable but no later than 24 hours after the operator or employer becomes aware of an Incident.[38]

5.3 Operator Reporting to the Board

Under the *Accord Acts* and associated regulations, operators must notify the respective Board of all reportable Incidents and events, which occur on any marine installation or structure, passenger craft, vessel or aircraft in the course of conducting any work or activity related to an authorization. The classifications of incidents and other events to be reported are further defined in Section 6.0[39] Refer to Section 3.0 for additional clarification on the types of marine installation or structures, passenger crafts, vessels or aircrafts.

[34] C-NLAAIA 205.049(3); CNSOPRAIA 210.049(3)
[35] C-NLAAIA 205.037(1)(b) & 205.049; CNSOPRAIA 210.037(1)(b) & 210.049
[36] C-NLAAIA 205.013, 205.015(2)(f), 205.019, 205.02(2)(g) & 205.059; CNSOPRAIA 210.013, 210.015(2)(f), 210.019, 210.02(2)(g) 210.059 &DPR 5(2)(f)(g)
[37] C-NLAAIA 205.043(4)(a)(b) & (5)(a)(d); 205.045; 210.043(4)(a)(b) & (5)(a)(d); 210.045; OHS 118(b), 264(1)(c), 265(1)
[38] C-NLAAIA 205.043(4)(a)(b); 205.045; CNSOPRAIA 210.043(4)(a)(b) 210.045; OHS 264(1)(c), 265(1)
[39] C-NLAAIA 205.017; CNSOPRAIA 210.017; OHS 262, 264 and 265;INST 70; DPR 76(1); DVR 1, definition of "accident" and "incident" and 5(1)(i)&(j); GR 27

Prior to a press release or press conference related to an Incident on a production or drilling installation or associated support craft, the appropriate Board must be notified without delay.[40]

The following subsections describe what should be reported and how.

5.3.1 Immediate Verbal Notification

Immediately after the operator and employer have taken actions to ensure the safety of personnel and the environment, the operator must contact the respective Board's on-call Duty Officer for Incidents or events that require immediate verbal notification as described in Section 6.0 to the respective Board:

- **C-NLOPB Duty Officer at (709) 682-4426**
- **CNSOPB Duty Officer at (902) 496-4444**

Duty Officers are on call 24 hours a day, seven days a week.

Upon request, the operator must provide the Duty Officer with their contact information, a brief description of the Incident and the consequences of the incident, immediate (and ongoing) response efforts, any further actions planned, and any other relevant information the Duty Officer requests.[41]

As soon as reasonably practicable following all verbal notifications, the operator must provide written notification to the C-NLOPB or to the CNSOPB as described in Section 5.3.2. [42]

5.3.2 Written Notification

For all Incidents or events, the operator must provide a written notification to the respective Board as soon as reasonably practicable but no later than 24 hours after the operator becomes aware of any Incident.[43] The written notification may be submitted to the C-NLOPB by email to incident@cnlopb.ca or to the CNSOPB by email to incident@cnsopb.ns.ca.

E-mailed notifications should contain a short descriptive title and any reference number assigned by the operator. In accordance with the

[40] DPR 76(1)(b)
[41] OHS 265; INST 70; DPR 76(1); GR 27; DVR 5(1)(i)&(j); C-NLAAIA 191-192, 205.017, 205.073, 205.077 & 205.078; CNSOPRAIA 196-197, 210.017, 210.074, 210.078 & 210.079
[42] C-NLAAIA 205.017; CNSOPRAIA 210.017; OHS 265; DPR 76, INST 70, DVR 5(1)(i)&(j), GR 27
[43] C-NLAAIA 205.017; CNSOPRAIA 210.017; OHS 265; DPR 76, INST 70, DVR 5(1)(i)&(j), GR 27

Accord Acts, the Boards have prescribed the form of the written notification to include the following information[44]:

- Date and time of the Incident or event
- Operator
- Operator's contact name and phone number
- Operator's internal reference number
- The name of the marine installation or structure, passenger craft, vessel or aircraft
- Location (latitude and longitude)
- Well/Field (if applicable)
- List of other agencies notified
- Actual and potential Incident classifications (as per Section 6.0)
- Description of the Incident or event (including events prior to and any other relevant information)
- Description of site operations and relevant environmental conditions at time of Incident or Event
- Immediate response action(s) taken, including statement regarding implementation of emergency response procedures
- Planned response action to be taken
- For injuries/illnesses and non-occupational medevacs, the name of affected worker[45], nationality[46], occupation and employer. For injuries/illnesses details of the nature and severity of injury/illness is to be provided and 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), a statement to this effect and the individual's name is to be provided.
- For hydrocarbon releases, leaks of hazardous substances, unauthorized discharges and spills, information on materials released, volumes released and information / observations of environmental impact
- For Incidents onboard diving installations, the supplementary Diving Incident Report Form[47] is required to be completed and submitted[48]

An operator must use the Written Notification Form[49] posted on the C-NLOPB website (www.cnlopb.ca) and the CNSOPB website

[44] C-NLAAIA 49, 126, 189-192, 205.017, 205.073 & 205.077; CNSOPRAIA 52, 129, 194-197, 210.017, 210.074 & 210.078
[45] Pursuant to C-NLAAIA 119 and CNSOPRAIA 122, providing the name of the affected worker is not a violation of privacy legislation, and it is necessary to allow the Board to monitor and follow-up on reported injuries and potential injuries. All injury reports are privileged pursuant to the Accord Acts. If the operator has concerns of internet security, the names of affected workers may be submitted to the Board via means other than email. Pursuant to C-NLAAIA 205.041(2) and CNSOPRAIA 210.041(2), operators must edit the report to protect medical information before providing it to the workplace committee.
[46] Applicable jurisdiction for workers compensation
[47] https://www.cnlopb.ca/wp-content/uploads/forms/diving_incident.doc
[48] DVR 1, definition of "accident" and "incident" and 5(1)(i)&(j), SCHEDULE III
[49] https://www.cnlopb.ca/wp-content/uploads/forms/incident_notification.doc

(www.cnsopb.ns.ca) for this purpose.[50] Further information on the classification of Incidents and other reportable events is located in Section 6.0.

5.4 Reporting to Other Authorities

The Boards enforce the Acts in respect of the exploration and drilling for and the production, conservation, processing and transportation of petroleum in the offshore area and employees and passengers being transported to, from or in the offshore. The Boards assume the role of lead regulatory agency for most incidents related to the above activities in the offshore area and typically coordinate communications with other regulatory and response agencies regarding Incidents in accordance with Memoranda of Understanding or other arrangements. Where a written notification is submitted to the respective Board, it should specify any other authorities that have been notified.

In some instances, direct contact by an operator or employer with other authorities may be required (e.g. federal or provincial departments or other regulatory agencies). The operator and in some instances, also the employer, are responsible for ensuring that all authorities are appropriately contacted. If a health, safety, or environmental occurrence does not directly trigger reporting to the respective Board, but requires written notification to another authority, the operator should notify the respective Board and provide a copy of the written notification.

A list of some of the common authorities is included below; however, this list is provided for convenience only and should not be relied upon definitively for the contact information for these entities. Operators and employers, as applicable, should regularly engage with these agencies to ensure contact information is current at all times.

5.4.1 Joint Rescue Coordination Centre

If the Incident involves, or has the potential to involve, any element of marine/aviation search and rescue or a medevac, the operator and/or employer must ensure that immediate notification is made to the 24-hour contact number for the Joint Rescue Coordination Centre (JRCC) in accordance with their requirements.

[50] C-NLAAIA 49, 126, 189-192, 205.017, 205.073 & 205.077; CNSOPRAIA 52, 129, 194-197, 210.017, 210.074 & 210.078

5.4.2 Canadian Coast Guard

For marine pollution Incidents, the Operator and/or employer must ensure that immediate notification is made to the applicable 24 hour regional contact number of the Canadian Coast Guard in accordance with their requirements.

5.4.3 Transport Canada Marine Safety

The operator and/or employer must 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 accordance with their requirements. In addition, the master or owner of a Canadian flagged vessel, which has sustained damage affecting the seaworthiness or efficiency of that vessel, must report the matter directly to the regional director of Transport Canada Marine Safety in accordance with their requirements.[51]

5.4.4 Transport Canada Civil Aviation

The operator must ensure that all aviation emergencies and incidents are reported to Transport Canada Civil Aviation in accordance with their requirements.

5.4.5 Royal Canadian Mounted Police

The operator and/or employer must ensure that all Incidents involving criminal activity (including serious injuries), terrorism, fatalities or missing persons are reported to the Royal Canadian Mounted Police (RCMP) in accordance with their requirements.

5.4.6 Environment and Climate Change Canada

Environment and Climate Change Canada (ECCC) administers regulations concerning various chemical substances and classes of substances under the *Canadian Environmental Protection* Act, *Species at Risk Act* and the *Fisheries Act.* The operator and/or employer must ensure that all Incidents are reported to ECCC in compliance with their requirements (e.g. federal regulation (such as for halocarbon releases)) and that they are also reported in writing to the respective Board.

[51] Canada Shipping Act, 2001

5.4.7 Workplace/Workers' Compensation

Employers' obligations under the *Workplace Health, Safety and Compensation Act* of Newfoundland and Labrador (WHSCA) and *Worker's Compensation Act* of Nova Scotia (WCA) include mandatory reporting of injuries and illnesses to Workplace NL (Workplace Health, Safety & Compensation Commission of Newfoundland and Labrador) or to the Workers' Compensation Board (WCB) of Nova Scotia where circumstances may entitle a worker to compensation.[52] The legislation, guidelines, reporting information and standardized report forms are available from Workplace NL at www.whscc.nf.ca or from the WCB at www.wcb.ns.ca. Reporting of injuries or illnesses to these agencies should be in accordance with their relative requirements.

5.4.8 Certifying Authority

In accordance with the respective *Petroleum Installation Regulations*, the holder of a certificate of fitness in respect of an installation must ensure that any deterioration of the installation or any impairment or damage to Critical Equipment that could impair the safety of the installation or damage the environment are reported to the certifying authority and to the respective Board.[53] Reporting of impairments/damages to Critical Equipment are described in Section 6.17.

6.0 Classification of Incidents or Events Reported to the Boards

This section describes the classification of Incidents or events that an operator must report to the respective Board and provides clarity on the manner in which these Incidents or events must be reported. An "**Incident**" has been defined in Section 2.0 of this Guideline and the classifications under Section 6.0 include specific regulatory references to the types of Incidents to be reported.

As a single Incident may have multiple consequences (e.g., hydrocarbon release combined with a spill), the actual Incident classifications that apply should be specified for each Incident. In addition, each incident should be assessed and assigned potential Incident classifications where there may have been no actual consequences, or where the actual consequences were less serious than they might have been under similar circumstances.

[52] C-NLAAIA 205.001(1) definition of "Newfoundland and Labrador social legislation" & 205.007; CNSOPRAIA 210.001(1), definition of "Nova Scotia social legislation" & 210.007; WHSCA 56; WCA 86
[53] INST 67 & 70; DPR 76

If a **support craft** is in a respective offshore area and conducting any work or activity related to an authorization then it is considered to be operating in support of an authorization. For further clarification when support craft is referenced within an incident reporting classification the following applies[54]:

- Any loss or damage to a support craft while operating in support of an authorization must be reported to both the Board and the other authorities having jurisdiction.[55]
- Any Incident with a support craft which is transferring employees to and from a workplace (i.e. passenger craft) must be reported to both the Board and the other authorities having jurisdiction.[56]
- Any Incident involving a support craft while on standby duty must be reported to both the Board and the other authorities having jurisdiction.[57]
- Any Incident with a support craft which occurs inside the safety zone of a marine installation or structure must be reported to both the Board and the other authorities having jurisdiction.[58]
- All other Incidents involving a support craft (except for those involving a passenger craft) need only be reported directly to the other authorities having jurisdiction.

6.1 Fatality

All fatalities on a marine installation or structure, passenger craft, vessel (for support craft refer to Section 6.0) or aircraft as described in Section 3.0 must be reported via the immediate verbal notification process described in Section 5.3.1[59] and must also be reported to the RCMP and the Province's Chief Medical Examiner in accordance with their requirements. This includes all fatalities which occur when a person is off duty/off-shift. 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 must be reported via the written notification process described in Section 5.3.2 as a fatality. [60] In addition, any Incident where a fatality was narrowly avoided must be reported via the immediate verbal

[54] C-NLAAIA 205.017; CNSOPRAIA 210.017; OHS 264 & 265; DPR 1(1) definition of "incident" and "near-miss" and DPR 76; In Nova Scotia, support vessels are listed under the Operator's *Declaration of Fitness*
[55] OHS 264 & 265; DPR 1(1) definition of "incident" and "near-miss" and DPR 76
[56] C-NLAAIA 205.017; CNSOPRAIA 210.017; OHS 264 & 265; DPR 1(1) definition of "incident" and "near-miss" and DPR 76; In Nova Scotia, support vessels are listed under the Operator's *Declaration of Fitness*
[57] OHS 264 & 265; DPR 1(1) definition of "incident" and "near-miss" and DPR 76
[58] OHS 264 & 265; DPR 1(1) definition of "incident" and "near-miss" and DPR 76
[59] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 265(1)(a); INST 70; DPR 1(1) definition of "incident" & 76(1); DVR 1 definition of "accident" and "incident" and 5(1)(i)&(j); GR 27; This definition of fatality is generally consistent with the definition adopted by IRF (https://irfoffshoresafety.com/country-performance/)
[60] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 265(1)(a); INST 70; DPR 1(1) definition of "incident" & 76(1); DVR 1 definition of "accident" and "incident" and 5(1)(i)&(j); GR 27; This definition of fatality is generally consistent with the definition adopted by IRF (https://irfoffshoresafety.com/country-performance/)

notification process described in Section 5.3.1.[61] For Incidents at a workplace, or involving a passenger craft, that results in death, no person, unless authorized to do so by a health and safety Officer of the Board, is permitted to disturb anything related to the Incident except to the extent necessary to attend to any individuals who are injured or killed, to prevent further injuries or to prevent damage to or loss of property.[62]

6.2 Missing Person

All missing persons on a marine installation or structure, passenger craft, vessel (for support craft refer to Section 6.0) or aircraft as described in Section 3.0 must be reported via the immediate verbal notification process described in Section 5.3.1[63] and must also be reported to the RCMP and JRCC in accordance with their requirements.

6.3 Occupational Illness

All Occupational Illnesses on a marine installation or structure and passenger craft must be reported via the written notification process described in Section 5.3.2 as soon as it becomes known to the operator.[64]

6.4 Occupational Injuries

There are three classifications of Occupational Injury for the purpose of this Guideline. All Occupational Injuries on a marine installation or structure and passenger craft must be reported as follows:

6.4.1 Major Injury

An Occupational Injury that results in a Major Injury[65] must be reported via the immediate verbal notification process described in Section 5.3.1. In addition, any Incident where a Major Injury was narrowly avoided or for which an employee is sent onshore for further medical assessment must be reported via the immediate verbal notification process described in Section 5.3.1. For Incidents at a workplace or involving a passenger craft, that

[61] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 265(1)(a); INST 70; DPR 1(1) definition of "incident" & 76(1); DVR 1 definition of "accident" and "incident" and 5(1)(i)&(j); GR 27; This definition of fatality is generally consistent with the definition adopted by IRF (https://irfoffshoresafety.com/country-performance/)
[62] C-NLAAIA 205.082; CNSOPRAIA 210.083
[63] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 265(1)(b); INST 70; DPR 1(1) definition of "incident" & 76(1); DVR 1 definition of "accident" and "incident" and 5(1)(i)&(j); GR 27
[64] C-NLAAIA 205.017(1)(a); CNSOPRAIA 210.017(1)(a); OHS 262; definitions of "disabling injury" and "minor injury" and OHS 265(1)(c)
[65] C-NLAAIA 205.017(5) definition of "serious injury" and 205.017(1)(b) & (5)(a)(b); CNSOPRAIA 210.017(5) definition of "serious injury" and 210.017(1)(b) & (5)(a)(b); OHS definition of "disabling injury" and 262(b)&(c) & 265(1)(c); INST 70, DPR 1(1); definition of "incident" and "lost or restricted workday injury" & 76(1); DVR 1, definition of "accident" and "incident" and 5(1)(i)&(j); GR 27; This definition is generally consistent with the definition adopted by IRF (https://irfoffshoresafety.com/country-performance/)

result in a Major Injury, no person, unless authorized to do so by a health and safety Officer of the Board, is permitted to disturb anything related to the Incident except to the extent necessary to attend to any individuals who are injured, to prevent further injuries or to prevent damage to or loss of property.[66]

6.4.2 Lost/Restricted Workday Injury

An Occupational Injury other than a "Major Injury" which prevents an employee from reporting to work or from effectively performing all the duties connected with the employee's regular work on any day subsequent to the day on which the injury occurred, whether or not that subsequent day is a working day for that employee must be reported.[67] Any day includes rest days, weekend days, leave days, public holidays, or days after ceasing employment. Lost/restricted workday injuries must be reported via the written notification process described in Section 5.3.2. The number of lost/restricted workdays associated with an injury are to be reported on the quarterly statistics report described in Section 0.

6.4.3 Minor Injury

Employment injuries or an Occupational Illness for which medical treatment is provided but is not a Major Injury or lost/restricted workday injury is considered to be a minor injury.[68] Injuries involving medical treatment are to be reported on the quarterly statistics report described in Section 0. If the injury had the potential for at least a lost/restricted workday injury it must be reported via the written notification process described in Section 5.3.2. [69]

6.5 Medical Evacuation (MEDEVAC)

A medical evacuation is required when the injury or illness is such that a person requires immediate medical attention at an onshore medical

[66] C-NLAAIA 205.082; CNSOPRAIA 210.083
[67] C-NLAAIA 205.017(5) definition of "serious injury" and 205.017(1)(b) & (5)(c); CNSOPRAIA 210.017(5) definition of "serious injury" and 210.017(1)(b) & (5)(c); This definition is generally consistent with the definition adopted by IRF (https://irfoffshoresafety.com/country-performance/); OHS 262(a); definition of "disabling injury" & OHS 265(1)(c); INST 70, DPR 1(1); definition of "incident" and "lost or restricted workday injury" & 76(1); DVR 1, definition of "accident" and "incident" and 5(1)(i)&(j); GR 27
[68] C-NLAAIA 205.017(1),(3)&(4); CNSOPRAIA 210.017(1),(3)&(4); This definition is generally consistent with the definition adopted by IRF (https://irfoffshoresafety.com/country-performance/); OHS 262 definition of "minor injury"
[69] C-NLAAIA 205.017(5) definition of "serious injury" and 205.017(1)(b) & (5)(c); CNSOPRAIA 210.017(5) definition of "serious injury" and 210.017(1)(b) & (5)(c); This definition is generally consistent with the definition adopted by IRF (https://irfoffshoresafety.com/country-performance/); OHS 262(a); definition of "disabling injury" & OHS 265(1)(c); INST 70, DPR 1(1); definition of "incident" and "lost or restricted workday injury" & 76(1); DVR 1, definition of "accident" and "incident" and 5(1)(i)&(j); GR 27

facility. Normally this involves the use of a dedicated helicopter, but may involve the use of a helicopter or other support craft currently in the field. Any medical evacuations from a marine installation or structure, passenger craft or vessel (for support craft refer to Section 6.0) must be reported via the immediate verbal notification process described in Section 5.3.1 whether they are occupational or non-occupational[70]. Non-occupational medevacs do not give cause to undertake an investigation in accordance with Section 7.0.

6.6 Fire/Explosion

If a fire or explosion occurs on a marine installation or structure, passenger craft, vessel or aircraft as described in Section 3.0 and results in an injury to personnel, impairment to Critical Equipment as described in Section 6.17, if the fixed fire suppression systems are activated manually or automatically, or otherwise poses a threat to the health and safety of personnel, the event must be reported via the immediate verbal notification process described in Section 5.3.1.[71] All other fires or explosions that occur without these consequences, or an event which under slightly different circumstances, had the potential to result in a fire or explosion must be reported via the written notification process described in Section 5.3.2.

6.7 Collision

Any collision with a marine installation or structure, passenger craft, vessel or aircraft which results in an injury to personnel, spill or unauthorized discharge or impairment to Critical Equipment as described in Section 6.17 must be reported via the immediate verbal notification process described in Section 5.3.1.[72] All other collisions that occur without these consequences, or Incidents, which under slightly different circumstances, had the potential to result in a collision, must be reported via the written notification process described in Section 5.3.2.

6.8 Loss of Well Control

Loss of well control is any Incident where the duration of the uncontrolled or diverted flow is greater than 5 minutes and results in:

- An uncontrolled release of formation or other well fluids

[70] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 265(1)(d); DPR 1(1), definition of "incident", subsection (a)(v); DPR 76(1); INST 70

[71] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 265(1)(e)(h); DPR 1(1), definition of "incident" and "near miss"; DPR 76(1); INST 70

[72] C-NLAAIA 205.017(1)(b) & 205.068(3); CNSOPRAIA 210.017(1)(b) & 210.069(3); OHS 265(1)(d); DPR 1(1), definition of "incident" and "near miss"; DPR 76(1); INST 70; Additional Health and Safety Requirements in the Canada-Newfoundland and Labrador Offshore Area, December 31, 2014, Section 9; Canada-Nova Scotia Offshore Petroleum Board Safety Directive, Additional Occupational Safety and Health Requirements, December 31, 2014, Section 9

- 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
- A flow of formation or other well fluids through a diverter

All losses of well control must be reported to the respective Board via the immediate verbal notification process described in Section 5.3.1.[73]

6.9 Well Control Incident

Any loss of well control as described in Section 6.8, including the events listed below, must be reported to the respective Board via the immediate verbal notification process described in Section 5.3.1.[74] This includes:

- Any unintended entry of water, gas, oil, or other formation fluid into the wellbore (e.g. a kick);
- An increase in well pressure with closed blowout preventer; or
- Implementation of well kill procedures

6.10 Hydrocarbon Release

Hydrocarbon release refers to an unintentional or uncontrolled release of gas or liquid hydrocarbons from the processing, storage or offloading systems on a production or drilling installation. A hydrocarbon release does not include releases that result from processes designed into the production and processing systems to respond to upset conditions (e.g. blowdown system).[75] All hydrocarbon releases must be reported as follows:

- 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 500 L

[73] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 264, 265(1)(g); INST 70; DPR 1(1), definition of "incident" – subsection (a)(iv), DPR 36 - 38 and 76(1); This definition is generally consistent with the definition adopted by IRF (https://irfoffshoresafety.com/country-performance/)

[74] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 264, 265(1)(g); INST 70; DPR 1(1), definition of "incident" – subsection (a)(iv), DPR 36 - 38 and 76(1); This definition is generally consistent with the definition adopted from Norwegian Risk Trends Project, http://www.osha.gov/SLTC/etools/oilandgas/glossary_of_terms/glossary_of_terms_k.html and http://www.iadclexicon.org/loss-of-well-control-lwc/

[75] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 265(1)(g); INST 70; DPR 1(1), definition of "incident" – subsection (a)(iv) and 76(1); This definition is generally consistent with the definition adopted by IRF (https://irfoffshoresafety.com/country-performance/) and Appendix B of IOGP 456: Process Safety – Recommended Practice on Key Performance Indicators, November 2011

Major hydrocarbon releases must be reported via the immediate verbal notification process described in Section 5.3.1.

- 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 50 L and 500 L

  Significant hydrocarbon releases must be reported via the written notification process described in Section 5.3.2.

In addition, all Incidents that, if under slightly different circumstances, would have had the potential to result in at least a significant hydrocarbon release are to be reported via the written notification process described in Section 5.3.2.[76] If a hydrocarbon release enters the sea, it must also be reported as a Spill under Section 6.13.

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

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

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)

6.11 Leak of Hazardous Substance

An accidental accumulation, spill or leak of a hazardous substance (such as but not limited to a release of a chemical in exceedance of the threshold limit value as adopted by the latest version of *American Conference of Governmental Industrial Hygienists Threshold Limit Values and Biological Exposure Indices*, a loss of containment of flammable or combustible materials with potential for ignition or a loss of containment of material operating at high temperature or high pressure, etc) with potential for harm on a marine installation or structure or passenger craft as described in Section 3.0 must be reported via the written notification

[76] C-NLAAIA 160, 161; CNSOPRAIA 165, 166; OHS 265(1)(g); INST 70; DPR 1(1); definition of "incident" – subsections (a)(iv)&(vi) and definition of "near-miss"; DPR 76(1)

process described in Section 5.3.2.[77] Leaks of hazardous substances are to be reported if personnel could have been present in the area at that time but due to particular circumstances were not. Any Incident where a Major Injury was narrowly avoided must be reported via the immediate verbal notification process described in Section 5.3.1.

6.12 Pollution (Updated per Regulatory Guidance Notice)

Pollution occurs when, in association with an authorized work or activity:

- any substance or form of energy outside the limits applicable to an authorized work or activity – that is, in an amount, or at an intensity or concentration in excess of the limits described in the operator's Environmental Protection Plan (EPP) – is introduced into the environment;
- any substance or form of energy for which a discharge is not described in the operator's EPP is introduced into the environment; and
- the manner of discharge for any substance or form of energy introduced to the environment is not as described in the operator's EPP.[78]

All pollution and occurrences in which pollution was narrowly avoided must be reported and investigated. If pollution includes a spill (petroleum), refer to section 6.13 of this Guideline.

Pollution exceeding the following thresholds should be reported via the immediate verbal notification process as described in Section 5.3.1:

- A discharge with an amount, intensity or concentration greater than two times the limit described in the EPP; and
- A discharge of a substance for which a discharge is not described in the EPP, or in a manner not as described in the EPP, and which is greater than 100 litres in volume.

In addition to the above, all pollution should also be reported via the written notification process as described in Section 5.3.2 and an investigation report must be provided to the Regulator as described in Section 7.4.

6.13 Spill (Updated per Regulatory Guidance Notice)

[77] C-NLAAIA 205.001(1) – definition of "hazardous substance", 205.017(1)(b); CNSOPRAIA 210.001(1) – definition of "hazardous substance", 210.017(1)(b); OHS 265(1)(g); INST 70
[78] C-NLAAIA 160, 161; CNSOPRAIA 165, 166; Sections 10, 179 and 205 of the *Framework Regulations*

A spill occurs when, in association with an authorized work or activity, there is any discharge of petroleum (including but not limited to crude oil, natural gas, condensate, lubricants, hydraulic oils, fuels, petroleum-based synthetic drilling fluids, or any other refined petroleum product) to the environment in a manner that has not been authorized by the Regulator (i.e., not described in the operator's EPP). [79]

All spills are considered pollution. Any spills and occurrences in which a spill was narrowly avoided must be reported and investigated.

Spills exceeding the following thresholds should be reported via the immediate verbal notification process as described in Section 5.3.1:

- Mixtures containing petroleum at a concentration greater than two times the maximum authorized concentration limit;
- Liquids with a volume greater than 25 litres; and
- Gases with a mass greater than 25 kg.

In addition to the above, all spills should also be reported via the written notification process as described in Section 5.3.2 and an investigation report must be provided to the Regulator as described in Section 7.4.

6.14 Adverse Environmental Conditions

A forecast of or actual environmental conditions or icebergs/pack ice that may result in or have resulted in loads or load effects in excess of the maximum operating conditions of a marine installation or structure, passenger craft, vessel or aircraft must be reported to the respective Board via the immediate verbal notification process described in Section 5.3.1. The respective Board must also be notified via the immediate verbal notification process described in Section 5.3.1 if precautionary measures, such as reduction of the number of personnel on board, securing the well or depressurization of flow lines, is initiated due to threatening Environmental Conditions.[80] These instances do not give cause to undertake an investigation in accordance with Section 7.0 of this Guideline, unless an issue was identified with the procedures that were in place or the actions taken in response to dealing with this type of event.

6.15 Security

A security Incident means any suspicious act or circumstance that threatens the security of a marine installation or structure or vessel or an interface between any of them (e.g. cargo or personnel transfer). If there

[79] C-NLAAIA 160, 161; CNSOPRAIA 165, 166; Section 179 of the *Framework Regulations*
[80] OHS 265(1)(d); INST 70; DPR 1(1); definition of "incident"- subsection (a)(v) & DPR 76(1)

is a significant threat, breach or Incident regarding security which poses a threat to the safety of the marine installation or structure or to employees at a workplace or passenger craft, the Chief Safety Officer must be notified as soon as possible. Security issues must be reported via the immediate verbal notification process described in Section 5.3.1.[81]

6.16 Implementation of Emergency Response Plans

The implementation of emergency response plans in response to an imminent threat to the safety of personnel, the safety of the marine installation or structure, passenger craft, vessel or aircraft or to the environment must be reported to the Boards via the immediate verbal notification process described in Section 5.3.1.[82] This would include, but not be limited to the following events:

- Overdue contact with a marine installation or structure, passenger craft, vessel or aircraft
- Person overboard
- Unauthorized vessel entering the safety zone of a marine installation or structure that is unable to be reached by radio or for which a support craft is sent to intercept
- Precautionary evacuation or reduction of the number of personnel on board
- Securing the well or depressurization of flow lines
- Emergency landings of helicopters
- Alert to search and rescue resources
- Deployment of search and rescue helicopter or requesting emergency response standby for landing in response to in-flight issue with a helicopter

Any other unplanned musters are required to be reported via the written notification process described in Section 5.3.2.

These instances do not always give cause to undertake an investigation in accordance with Section 7.0 of this Guideline, unless an issue was identified with the procedures and/or equipment that were in place or the actions taken in response to dealing with this type of event.

6.17 Impairment/Damage to Critical Equipment

Impairments/damages to safety or environmentally Critical Equipment on a marine installation or structure, passenger craft, vessel (for support

[81] INST 70; DPR 1(1); definition of "incident"- subsection (a)(v) & DPR 76(1); CNSOPB Safety Directive - Security of Offshore Installation and Facilities (under CNSOPRAIA 210.069(3))
[82] OHS 265(1)(d); INST 70; DPR 1(1); definition of "incident"- subsection (a)(v) & DPR 76(1)

craft refer to Section 6.0) or aircraft must be reported to the respective Board and for installations, must be reported to the respective Certifying Authority, as follows:

- **Immediate Verbal Notification**

  All damages or impairments to Critical Equipment which meet the following criteria must be reported via the immediate verbal notification process described in Section 5.3.1[83]:
  - The damage or impairment poses an immediate and ongoing threat to the integrity or emergency preparedness (from a safety or environmental protection perspective) of a marine installation or structure, passenger craft, vessel or aircraft
  - The damage or impairment resulted in a fatality or Major Injury, or a fatality or Major Injury was narrowly avoided

- **Written Notification**

  All damages or impairments to Critical Equipment of a marine installation or structure, passenger craft, vessel or aircraft that meet the following criteria must be reported via the written notification process described in Section 5.3.2[84]:
  - The Critical Equipment or system is not able to meet minimum requirements as prescribed by the associated Regulations
  - For drilling and production installations:
    - The impairment results in production shut-in or drilling suspension
    - The Critical Equipment or system is required as a Barrier to prevent an Incident, including a pollution event
    - The Critical Equipment or system is not able to meet its performance requirement for meeting its functionality, availability/reliability or survivability criteria in accordance with the installation's safety plan or environmental protection plan (i.e. the equipment or system is required to meet the installation's target levels of safety)[85]
  - For Support Craft and Passenger Craft:

[83] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 265(1)(e),(f),(g)&(h); INST 67 and 70; DPR 1(1), definition of "incident" - subsections (a)(i)(ii)(iii)(iv)(v)&(vi) and section(c) and "near-miss" & DPR 25(a), 45, 76; DVR 1, definition of "accident" and "incident" and 5(1)(i)&(j); GR 27

[84] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 265(1)(e),(f),(g)&(h); INST 67 and 70; DPR 1(1), definition of "incident" - subsections (a)(i)(ii)(iii)(iv)(v)&(vi) and section(c) and "near-miss" & DPR 25(a), 45, 76; DVR 1, definition of "accident" and "incident" and 5(1)(i)&(j); GR 27

[85] C-NLAAIA 205.013(g); CNSOPRAIA 210.013(g); INST 43 & 70; DPR 8, 9, 19(i); 25(a)

- In accordance with the functional specification that has been outlined for support craft used in support of a drilling or production installation[86]
- For other support craft used in support of other operations, if there is an impairment to equipment that is required by the regulations to be operational.[87]

An impairment to safety or environmentally Critical Equipment which was identified during planned inspection, testing and/or maintenance, need not be reported unless it is identified that the impairment existed while the equipment was in operation or the equipment is out of service for a period longer than its expected unavailability period as determined by the installation's safety plan. Examples of what types of impairments to safety and environmentally Critical Equipment require immediate verbal notification and written notification to the Boards is included in Appendix A.

6.18 Contact with Fishing Gear, Marine Mammals or Sea Turtles

For geophysical, geological, environmental or geotechnical programs, any contact with fishing gear or any contact or entanglement of equipment with, a marine mammal or sea turtle must be reported via the written notification process described in Section 5.3.2.[88] In addition to the information requirements described in 5.3.2, the Incident description should include the exact time and location of the Incident, a description of any identifying markings which may be observed on affected gear, a description of any injuries to the marine mammal or sea turtle, and the species of the marine mammal or sea turtle, if possible. These instances do not always give cause to undertake an investigation in accordance with Section 7.0 of this Guideline.

6.19 Helicopter Occurrences

All occurrences where a helicopter (i.e. passenger craft) has to return to base or suspend operations upon landing at a marine installation or structure, as a result of an issue with the aircraft or the flight crew or cases where the dedicated[89] search and rescue helicopter becomes unavailable must be reported to the Boards as outlined below.

[86] C-NLAAIA 205.014(2); CNSOPRAIA 210.014(2); OHS 265(1)(h); DPR 1(1), definition of "incident"-subsection (a)(v) & section(c) and "near-miss", DPR 69 & 76
[87] C-NLAAIA 205.014(2); CNSOPRAIA 210.014(2); OHS 265(1)(h)
[88] GR 27, 28
[89] Dedicated search and rescue (SAR) helicopter resources are those which are exclusively allocated as a service provider for offshore petroleum related activities (i.e. air operators may provide this service). In contrast, JRCC is not a dedicated SAR resource, but may be sent to respond as a resource if assets are available at the time.

- **Immediate Verbal Notification of an Incident involving a Helicopter**

  The following Incidents require immediate verbal notification as described in Section 5.3.1 and must be investigated in accordance with Section 7.0: [90]
  - An accident as defined under Aviation Occurrences as per paragraph 2(1)(a) of the Transportation Safety Board Regulations[91]
  - Fatality, missing person or Major Injury as per Sections 6.1, 6.2 or 6.4.1
  - Fire/explosion or collision meeting criteria for immediate verbal notification as per Sections 6.6 and 6.7
  - Adverse environmental conditions as per Section 6.14
  - Implementation of emergency response plans in response to an imminent threat to the safety of personnel or the helicopter as per Section 6.16 (e.g. helicopter SAR or airport emergency response resources are deployed for a helicopter flight occurrence or as a precaution)
  - Impairment/damage that compromises the ongoing integrity or emergency preparedness of the helicopter as per Section 6.17 (e.g. loss of engine, loss of communication systems, impairment to liferafts, etc)
  - Hazardous occurrence with potential for a fatality or Major Injury (i.e. potential for loss or damage of the helicopter)

- **Written Notification of an Incident involving a Helicopter**

  The following Incidents involving helicopters must be reported via the written notification process described in Section 5.3.2 and as described in the sections noted below. They must be investigated in accordance with Section 7.0[92]:
  - An incident as defined under Aviation Occurrences as per paragraph 2(1)(b) of the Transportation Safety Board Regulations[93]
  - Occupational Illness or lost/restricted workday injury as per Sections 6.3 and 6.4.2
  - Fire/explosion or collision meeting criteria for written notification as per Section 6.6 and 6.7
  - Leak of hazardous substance as per Section 6.11

[90] C-NLAAIA 205.014(2) & 205.017(1)(b); CNSOPRAIA 210.014(2) & 210.017(1)(b); OHS 265(1)(h); DPR 1(1), definition of "incident"-subsection (a)(v) & section(c) and "near-miss", DPR 69 & 76
[91] http://www.tsb.gc.ca/eng/incidents-occurrence/aviation/index.asp
[92] C-NLAAIA 205.014(2) & 205.017(1)(b); CNSOPRAIA 210.014(2) & 210.017(1)(b); OHS 265(1)(h); DPR 1(1), definition of "incident"-subsection (a)(v) & section(c) and "near-miss", DPR 69 & 76
[93] http://www.tsb.gc.ca/eng/incidents-occurrence/aviation/index.asp

- Impairment/damage to Critical Equipment as per Section 6.17 (e.g. impairment of safety critical sensors)
- Near Miss as per Section 6.20 (e.g. small leaks from lubrication systems for safety Critical Equipment, improper loading/manifesting of a helicopter, improper carrying of freight in a passenger cabin, flying with impaired personal protective equipment)
- A helicopter has to return to base or suspend operations upon landing at an offshore facility, as a result of an issue with the aircraft or the flight crew
- The dedicated SAR helicopter resources become unavailable

- **Written Notification of a Helicopter Occurrence (not associated with an Incident)**

  The following must be reported via the written notification process described in Section 5.3.2[94]:
  - Passengers are debriefed following a flight
  - The helicopter contractor notifies the operator (e.g. notice to operators) in relation to a helicopter flight occurrence
  - Prior to a press release or press conference related to a helicopter flight occurrence involving a production or drilling installation[95]

  These instances do not give cause to undertake an investigation in accordance with Section 7.0 of this Guideline, unless an issue was identified with the procedures that were in place or the actions taken in response to dealing with this type of event.

Any correspondence issued by the helicopter service provider should accompany the written notification (e.g. customer flight notifications).

6.20 Near Miss

Any event that, under slightly different circumstances, would likely have caused harm to personnel, an unauthorized discharge or spill or an imminent threat to the safety of a marine installation or structure, passenger craft, vessel (for support craft refer to Section 6.0) or aircraft as described in Section 3.0 must be reported to the respective Board as per below. In making the determination of potential classification, operators and employers should take into consideration the severity of the Incident in conjunction with which health, safety or environmentally critical Barriers may have been missing or ineffective.

[94] C-NLAAIA 205.014(1) & 205.018(c); CNSOPRAIA 210.014(1) & 210.018(c); Recommendation # 8 of the "Offshore Helicopter Safety Inquiry"
[95] DPR 76(1)(b)

Incidents must be reported to the respective Board as follows:

- If the event had a potential for a fatality or Major Injury, it must be reported via the immediate verbal notification process described in Section 5.3.1.[96]
- If the event had a potential for a lost/restricted workday injury or Occupational Illness, pollution, fire, explosion, loss of containment of any fluid from a well or posed an imminent threat to the safety of a person, marine installation or structure, passenger craft, vessel or aircraft must be reported via the written notification process described in Section 5.3.2[97].

The Board considers the following as examples of near misses which includes, but is not limited to the following:

- Dropped objects[98]
- Use of personal protective equipment that was defective or not using personal protective equipment when required that is immediately dangerous to life and health
- Not implementing a control identified or required as part of the permit to work process that is immediately dangerous to life and health
- Changes which could affect the safety of personnel, protection of the environment or the integrity of a marine installation or structure, passenger craft, vessel or aircraft being implemented without going through the management of change process
- A large object drifting in an uncontrolled manner in dangerous proximity to a marine installation or structure, passenger craft or vessel
- The free fall of an elevator, basket or other device for moving passengers or freight

7.0 Investigation of Incidents and Reporting to the Boards

7.1 Investigation Team

The investigation team should include, as appropriate, representatives of the operator, the employer, an employee representative from the workplace committee (or the coordinator) and other expertise as

[96] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 264 and 265(1); INST 70; DPR 1(1), definition of "incident" and "near-miss" & DPR 76; DVR 1, definition of "accident" and "incident" and 5(1)(i)&(j); GR 27

[97] C-NLAAIA 205.017(1)(b); CNSOPRAIA 210.017(1)(b); OHS 264 and 265(1); INST 70; DPR 1(1), definition of "incident" and "near-miss" & DPR 76; DVR 1, definition of "accident" and "incident" and 5(1)(i)&(j); GR 27

[98] Guidance for calculation of the potential of a dropped object can be found online at http://www.dropsonline.org/resources-and-guidance/drops-calculator/e-drops-calculator/. Other tools can be utilized.

required. The lead investigator should have formal training in the conduct of an investigation and the investigation process, should have formal Management System training and should not have been involved with or contributed directly or indirectly to the Incident. Formal Incident investigation and Management System training is also recommended for all members of an investigation team.[99] Dependent on the nature of the Incident, consideration should be given to ensuring that personnel with particular expertise (i.e. technical, human and organizational) are engaged as part of the Incident investigation.

7.2 Participation by the Workplace Committee or Coordinator

It is the operator's and employer's responsibility to ensure workplace committees or coordinators can carry out their obligations with regard to health and safety related Incidents under Part III.I of the *Accord Acts*. In accordance with the *Accord Acts*[100], the Chief Safety Officer of the Boards require operators to involve the workplace committee or coordinator in investigations of all Incidents relative to the workplace committee or coordinator's mandate and workplace committee's can request to be involved in all or certain Incident investigations under its mandate, including those involving passenger craft.[101]

In order that the workplace committee or coordinator are effective in reviewing investigation reports and participating in Incident investigations, the operator should provide appropriate Management System training and Incident investigation training to these individuals.[102] Once the investigation has been completed, the workplace committee or coordinator must be provided with a copy of the associated investigation report. The committee or coordinator may make recommendations in respect to any incident investigation that is related to their mandate.[103]

7.3 Conduct of the Investigation

Operators who are authorized by the Boards to conduct activities in the respective offshore area are required to submit investigation reports for all Incidents, unless specified otherwise in Section 6.0. [104]

[99] C-NLAAIA 205.013(k); 205.013(o); 205.015(2)(f); 205.019(1)(j); CNSOPRAIA 210.013(k); 210.013(o); 210.015(2)(f); 210.019(1)(j); TQSP 4.11; DPR 72(a); TQSP
[100] C-NLAAIA 205.013(p); 205.019(1)(n); 205.02(2)(c); 205.022(f); 205.045; CNSOPRAIA 210.013(p); 210.019(1)(n); 210.02(2)(c); 210.022(f); 210.045
[101] C-NLAAIA 205.022(f); 205.043(4)(a)(b)(e) & (5)(a)(d), 205.045; CNSOPRAIA 210.013(p); 210.019(1)(n); 210.02(2)(c); 210.022(f); 210.043(4)(a)(b)(e) & (5)(a)(d), 210.045; OHS 118(1)(b), 264(1)(c)&(3), 265(1)
[102] C-NLAAIA 205.013(p); 205.019(1)(n); 205.02(2)(c); 205.022(f); 205.043(4)(a)(b)(e) & (5)(a)(d); 205.045; CNSOPRAIA 210.013(p); 210.019(1)(n); 210.02(2)(c); 210.022(f); 210.043(4)(a)(b)(e) & (5)(a)(d); 210.045; WHSCC Occupational Health and Safety Committees Handbook, July 2004; TQSP
[103] C-NLAAIA 205.043(4)(a)(b)(e) & (5)(a)(d); 205.045; CNSOPRAIA 210.043(4)(a)(b)(e) & (5)(a)(d); 210.045; OHS 264(1)(c)&(3), 265(1)
[104] C-NLAAIA 205.009, 205.015(2)(f), 205.017, 205.02(2)(g); CNSOPRAIA 210.009, 210.015(2)(f), 210.017, 210.02(2)(g); OHS 264 & 265(2) & (3); DPR 5(2)(f) & 76(2)(a); INST 70; GPR 28; DVR 5(1)(i)&(j)

All Incidents should be investigated to a level appropriate to the potential consequences and not solely based on the actual consequences. Investigations must identify the underlying root causes of an Incident and not stop at the immediate or noticeable causes.[105] The following outlines the Board's expectations with respect to all Incident investigations:

7.3.1 Preservation of Evidence

For serious Incidents, operators and employers should have procedures in place for securing the scene, which may include the suspension of operations, until such time as the operator, employer, respective Board and other authorities, as applicable, allow the scene to be disturbed.[106] In particular, for Incidents at a workplace, or involving a passenger craft, that results in serious injury or death, no person, unless authorized to do so by a health and safety Officer of the Board, is permitted to disturb anything related to the Incident except to the extent necessary to attend to any individuals who are injured or killed, to prevent further injuries or to prevent damage to or loss of property.[107]

7.3.2 Sequence of Events

Once it is determined it is safe to do so and an Incident investigation team has been assembled, the Incident investigation team should collect all relevant evidence and facts related to the occurrence of an Incident. This may include but not be limited to collection of physical evidence (such as procedures and work instructions, applicable policies, photographs, paper and digital records, technical specifications, vendor manuals, training and competency records, failed components, environmental conditions, quality assurance reports, audit/observation records, Incident reports from similar Incidents, etc), interviews with personnel that were directly involved in the Incident or may have information to contribute and any other relevant information. Based on the information collected, the Incident investigation team should reconstruct the sequence of events that led up to the Incident, the Incident itself and the response which was taken following the Incident. The sequence of events should be used in interviews with personnel who were directly or indirectly involved with an Incident. Incident descriptions should cover the who, what, when, where and why of an Incident occurrence. [108]

[105] C-NLAAIA 205.009; CNSOPRAIA 210.009; DPR 5(2)(f) & 76(2)(a); OHS 264(1)(a)
[106] C-NLAAIA 189(1)(g), 205.073(1)(e); CNSOPRAIA 194(1)(g), 210.074(1)(e)
[107] C-NLAAIA 205.082; CNSOPRAIA 210.083
[108] C-NLAAIA 205.017(2); CNSOPRAIA 210.017(2); OHS 265(2); DPR 76(2)

7.3.3 Causal Factor(s)

Typically, a causal factor is defined as any issue or element associated with the Incident that, if corrected, could have prevented the Incident from occurring or would have significantly mitigated its consequences. It could also be a Barrier or safeguard that was either not in place or was in place, but was ineffective at preventing the Incident.[109] By reconstructing and analyzing the sequence of events and associated evidence leading up to and following an Incident, the investigation team will be in a better position to identify the causal factors and to reinforce the measures that worked effectively in preventing or reducing the severity of an Incident. All causal factors should be identified in the body of the Incident investigation report.[110]

7.3.4 Root Cause(s)

Typically, a root cause is defined as a cause for which corrective and preventive measures will prevent or reduce the probability of a recurrence of an Incident or similar events. It is also defined, as the most basic cause (or causes) that can reasonably be identified that management has control to fix and, when fixed, will prevent (or significantly reduce the likelihood of) the problem's recurrence. [111] For each causal factor, associated root cause(s) should be identified.[112]

In every Incident investigation, the investigation team should look carefully at the Management System elements that may have contributed to the occurrence or severity of an Incident. Understanding how Management System elements contributed to an Incident is critical to the prevention of future failures as Management System problems have the potential to increase the likelihood of many types of Incidents. If a technical flaw, procedural flaw or failure by an individual is identified erroneously as a root cause, this may lead to the assignment of corrective actions that do not address underlying problems. If the root cause(s) and associated corrective actions are not appropriately identified this may eventually lead to a major accident. The incorrect assignment of root cause and associated

[109] TapRooT® The System for Root Cause Analysis, Problem Investigation and Proactive Improvement, 2000, Mark Paradies and Linda Unger, Chapter 3, pg. 45
[110] DPR 5(2)(f) & 76(2)(a); OHS 264(1)(a)
[111] TapRooT® The System for Root Cause Analysis, Problem Investigation and Proactive Improvement, 2000, Mark Paradies and Linda Unger, Chapter 3, pg. 52
[112] C-NLAAIA 205.009(2); CNSOPRAIA 210.009(2); DPR 5(2)(f) & 76(2)(a); OHS 264(1)(a)

corrective actions can lead to the potentially disastrous belief that underlying problems have been solved, when only symptoms have been addressed.[113]

For each causal factor, the investigation team should select root cause(s) using proven methods for conducting "root cause analysis" and should train personnel in the use of this method. Root cause(s) should point to making improvements to the Management System that will not only reduce the occurrence of this event, but similar events.

7.3.5 Corrective and Preventive Actions

Corrective and preventive measures should first aim at the elimination of hazards, then the reduction of the risks posed by the hazards and finally, the taking of protective measures, all with the goal of ensuring the health and safety of employees.[114] A corrective action is defined as an action taken to eliminate or mitigate the cause of a system deficiency, hazard or risk which will immediately prevent that particular Incident from occurring. A preventive action is an action taken to reduce the likelihood that an underlying system deficiency or hazard will cause a similar Incident from occurring.[115] Corrective and preventive actions should be specific, measurable, achievable, reasonable, and timely (SMART), and must be effective in preventing or reducing the likelihood of recurrence of existing and potential events.[116] Immediate corrective actions must be taken and broader preventive action(s) must be assigned that will address the root cause(s) associated with an Incident.[117] The investigation team should determine an appropriate timeline for the implementation of corrective and preventive actions. The timely implementation of corrective and preventive actions is a critical step in preventing Incident recurrence. Following a specified period of implementation, corrective and preventive actions should be followed-up to verify their effectiveness.

[113] 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; US Chemical Safety and Hazard Investigation Board Investigation Report of the April 20, 2010 Drilling Rig Explosion and Fire at the Macondo Well, Report No. 2010-10-I-OS, April 2016

[114] C-NLAAIA 205.009(2); CNSOPRAIA 210.009(2); DPR 5(2)(f) & 76(2)(a); OHS 264(1)(a)

[115] Adopted from definition of corrective and preventive actions under ISO 9001, CSA Z1000 and ISO 14001.

[116] C-NLAAIA 205.009(2); CNSOPRAIA 210.009(2); DPR 5(2)(f) & 76(2)(a); OHS 264(1)(a); TapRooT® The System for Root Cause Analysis, Problem Investigation and Proactive Improvement, 2000, Mark Paradies and Linda Unger, Chapter 3, pg. 81

[117] C-NLAAIA 205.009(2); CNSOPRAIA 210.009(2); DPR 5(2)(f) & 76(2)(a); OHS 264(1)(a); TapRooT® The System for Root Cause Analysis, Problem Investigation and Proactive Improvement, 2000, Mark Paradies and Linda Unger, Chapter 3, pg. 81

7.4 Documentation Submitted to the Boards (Updated per Regulatory Guidance Notice)

The operator must submit a completed Incident Investigation Report with all the required information to the respective Regulator as soon as possible, no later than fourteen days following an Incident.[118] In addition, the completed Incident investigation report with all the required information must be submitted to the workplace committee or coordinator as soon as possible, and in any event, no later than fourteen days following a health and safety related Incident.[119]

For the purposes of submitting investigation reports, the Boards have prescribed a standard Incident Summary[120] form, which is to be submitted in conjunction with the investigation report.[121] The Incident Summary form, combined with the investigation report, must include all of the prescribed information below and the report(s) must be submitted in an electronic format that is searchable (i.e. text can be searched, copied and pasted).[122] If the investigation report does not include all of the prescribed information then supplementary information will have to be provided. The Incident Summary form and investigation report may be submitted by electronic mail to the respective Board, to either the C-NLOPB at incident@cnlopb.ca or to the CNSOPB at incident@cnsopb.ns.ca. To ensure receipt of information sent to the above email accounts, emails should be no greater than 8 MB in size.

In addition, if the hazardous occurrence is an accident involving a ship or aircraft, the employer must investigate the accident by obtaining from the appropriate police or other investigating authority a copy of the report made by that authority in respect of the accident.[123] In addition, the employer must within 14 days after receipt of the investigation report of the accident made by the police or other investigating authority submit a copy of the report to the respective Board and to the committee or the coordinator. [124]

The Incident Summary form and the investigation report must include, but not be limited to the following information and should correct, if

[118] C-NLAAIA 205.017(2); CNSOPRAIA 210.017(2); Part 3 of the *OHS Regulations*; Section 179 of the *Framework Regulations*
[119] C-NLAAIA 205.017(2); CNSOPRAIA 210.017(2); OHS 265(2); DPR 76(2); INST 70(2); DVR 5(1)(j)
[120] https://www.cnlopb.ca/wp-content/uploads/forms/incident_investigation.doc
[121] C-NLAAIA 49, 126, 189-192, 205.016, 205.017, 205.073, 205.077 & 205.078; CNSOPRAIA 52, 129, 194-197, 210.016, 210.017, 210.074, 210.078 & 210.079
[122] C-NLAAIA 49, 126, 189-192, 205.016, 205.017, 205.073, 205.077 & 205.078; CNSOPRAIA 52, 129, 194-197, 210.016, 210.017, 210.074, 210.078 & 210.079
[123] OHS 264(2) & (3)
[124] OHS 264(2), 265(1) & 266

necessary, any erroneous information submitted in the Incident Notification report[125]:

- Date and time of the Incident
- Operator
- Operator's internal reference number
- The name of the marine installation or structure, passenger craft, vessel or aircraft
- The type of marine installation or structure, passenger craft, vessel or aircraft (e.g. MODU, fixed installation, standby/supply vessel, helicopter, etc)
- Location (e.g. field, well or subsea manifold/gathering facility)
- Operation in progress (e.g. drilling/workover, geophysical survey, hydrocarbon production, ice management, maintenance, sea transport/standby)
- Actual and Potential Incident Classifications (as per Section 6.0)
- For injuries/illnesses:
  - Name of affected worker[126]
  - Nationality
  - Occupation
  - Employer
  - Duration of lost/restricted workdays (known or anticipated). The final number of lost /restricted workdays must be reported on the quarterly statistics report
  - Nature and severity
  - Indicate if a medevac was provided
- For hydrocarbon releases, leaks of hazardous substances, unauthorized discharges and spills:
  - Material(s) spilled / released and volume and for ongoing releases, associated leakage rate
  - Source of spill/release
  - Post Incident monitoring (environmental receptors/endpoints at risk)
  - Mitigation or response measures and their effectiveness
  - Environmental impacts
- For damages:
  - Type of equipment involved

[125] C-NLAAIA 49, 126, 189-192, 205.016, 205.017, 205.073, 205.077 & 205.078; CNSOPRAIA 52, 129, 194-197, 210.016, 210.017, 210.074, 210.078 & 210.079

[126] Pursuant to C-NLAAIA 119 and CNSOPRAIA 122, providing the name of the affected worker is not a violation of privacy legislation, and it is necessary to allow the Board to monitor and follow-up on reported injuries and potential injuries. All injury reports are privileged pursuant to the Accord Acts. If the operator has concerns of internet security, the names of affected workers may be submitted to the Board via means other than email. Pursuant to C-NLAAIA 205.041(2) and CNSOPRAIA 210.041(2), operators must edit the report to protect medical information before providing it to the workplace committee. If the operator has concerns of internet security, the names of affected workers may be submitted to the Board via means other than email.

  - 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
- Description of Incident (including events leading up to the incident, the incident and events following the incident, including emergency response). The description should also include a summary of review of similar Incidents (refer to Section 7.3 for further guidance)
- Description of causal factors (refer to Section 7.3.3 for further guidance)
- Name, titles and signatures of the following:
  - Investigation Team Lead
  - Operator's representative
  - Workplace Committee member or Coordinator for a safety related incident
- Names and titles of other individuals who investigated the occurrence
- Relevant 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, fatigue, stress) for individuals involved in the Incident)
- Experience contributors (e.g. training, competency, onshore/offshore experience, collective competency) for individuals involved in the Incident)
- Description of the root cause(s) (refer to Section 7.3.4 for further guidance)
- Corrective and preventive actions taken to address root cause(s) (refer to Section 7.3.5 for further guidance)
- Identification if further investigation is required
- For Diving Incidents:
  - The supplementary Diving Incident Report[127] form is also required to be completed and submitted[128]

Regardless of any ongoing analysis (e.g., metallurgical analysis of a failed component), an Incident Investigation Report must be submitted within fourteen days following an Incident. Operators are required to submit the results of the investigation completed by that date along with details of any corrective or preventive actions that have been taken. Any information left to be investigated and the associated reason for deferral must be noted on the investigation report. Following completion of the further investigation, the final information regarding the root cause(s) and additional preventive actions to be taken must be submitted.[129]

[127] https://www.cnlopb.ca/wp-content/uploads/forms/diving_incident.doc
[128] DVR 5(1)(i)&(j), SCHEDULE III
[129] C-NLAAIA 205.017(2); CNSOPRAIA 210.017(2); OHS 265(2); DPR 76(2); INST 70(2); DVR 5(1)(j)

If a change is to be made to the investigation report following management review, workplace committee (or coordinator) review, operator or employer review, the changes should be reviewed with and accepted by either the investigation team or the workplace committee. The updated investigation report following review and acceptance by the investigation team must be provided to the respective Board and the workplace committee.[130]

8.0 Quarterly Statistics Reports for the Boards

The Board requires that Operators submit a quarterly statistics report within 15 days of the end of each quarter throughout the calendar year. In addition, the operator must submit a final statistics report within 15 days of the date of completion of work or activities under an authorization.[131] However, for diving program authorizations, operators are required to submit a monthly report.[132]

This report must contain a list of Major Injuries, lost/restricted workday injuries, Occupational Illnesses and minor injuries along with exposure hours.[133] The report must also contain a summary report of the number of lost/restricted workdays associated with a particular injury/illness by Incident date and the marine installation or structure, passenger craft, vessel or aircraft.[134] These statistics must be recorded on the report prescribed by the Boards and emailed to either the C-NLOPB at incident@cnlopb.ca or to the CNSOPB at incident@cnsopb.ns.ca.[135] The Quarterly Statistics Report[136] form is posted on C-NLOPB's website at www.cnlopb.ca and CNSOPB's website at www.cnsopb.ns.ca.

Exposure hours are to be reported as follows for each type of marine installation, structure, vessel and aircraft on the report prescribed by the Boards, including:

- Total Exposure Hours for each Marine Installation or Structure based on a normal working day (i.e. 12 hours)
- Total Exposure Hours on all vessels operating under an authorization (excluding passenger exposure hours) based on a normal working day (i.e. 12 hours)
- Total Exposure Hours for all aircraft operating under an authorization (excluding passenger exposure hours)
- Total Exposure Hours for Passengers on a vessel (excluding crew)
- Total Exposure Hours for Passengers on an aircraft (excluding pilots)

[130] C-NLAAIA 205.017(2); CNSOPRAIA 210.017(2); OHS 265(2); DPR 76(2); INST 70(2); DVR 5(1)(j)
[131] C-NLAAIA 49, 126, 189-192, 205.017(3)(4); CNSOPRAIA 52, 129, 194-197, 210.017(3)(4); MOU with Federal and Provincial Governments for Part III and Part III.I of the Accord Acts
[132] DVR 5(1)(k)
[133] C-NLAAIA 49, 126, 189-192, 205.017(3)(4); CNSOPRAIA 52, 129, 194-197, 210.017(3)(4); DVR 5(1)(k)
[134] C-NLAAIA 49, 126, 189-192, 205.017(3)(4); CNSOPRAIA 52, 129, 194-197, 210.017(3)(4); DVR 5(1)(k)
[135] C-NLAAIA 49, 126, 189-192, 205.017(3)(4); CNSOPRAIA 52, 129, 194-197, 210.017(3)(4); DVR 5(1)(k)
[136] https://www.cnlopb.ca/wp-content/uploads/forms/quarterly_stats_report.xlsx

For clarification on what constitutes a marine installation or structure, passenger craft, vessel or aircraft refer to Section 3.0.

9.0 Annual Reports

9.1 Annual Safety Reports

In accordance with the *Accord Acts*, operators must ensure that no later than March 31 of each year, an annual safety report based on the preceding year is submitted to the Chief Safety Officer and to the workplace committee.[137] The report must set out data on all Occupational Illnesses, and all accidents, Incidents and other hazardous occurrences, that have occurred at any of the operator's workplaces or on a passenger craft going to or from any of those workplaces during the calendar year covered by the report, including the number of deaths, the number of serious injuries and the number of minor injuries.[138]

Detailed guidance on the scope of this report for drilling and production installations is provided in Section 88 of the Drilling and Production Guidelines.

9.2 Annual Environmental Reports

In accordance with the Drilling and Production Regulations, operators of drilling and production installations must ensure that no later than March 31 of each year, an annual environmental report[139] based on the preceding year is submitted to the respective Board. Detailed guidance on the scope of this report is provided in Section 87 of the Drilling and Production Guidelines.

[137] C-NLAAIA 205.017(3); CNSOPRAIA 210.017(3); DPR 88
[138] C-NLAAIA 205.017(4); CNSOPRAIA 210.017(4)
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APPENDIX A: Examples of Reporting of Impairments of Safety and Environmentally Critical Equipment

Safety and/or Environmentally Critical System/Equipment	Installation/Vessel Type	Immediate Verbal Notification w/ investigation report	Written Notification w/investigation report
Failure Can Contribute to an Incident or Prevents an Incident			
Station Keeping System [POTENTIAL INCIDENT: COLLISION, LOSS OF WELL CONTROL, ENVIRONMENTAL]	F	Unable to stay on location in all foreseeable operating and environmental conditions due to loss of mooring, failure of dynamic positioning or failure of propulsion system	Can stay on location in all foreseeable operating and environmental conditions, but redundancy is lost
Towing systems [POTENTIAL INCIDENT: COLLISION, LOSS OF STABILITY, FATALITY, IMPAIRMENT DAMAGE TO OTHER CRITICAL EQUIPMENT]	F	Failure of towing system during a tow in the field which may result in an installation/vessel coming into direct contact with another installation/vessel	Failure of towing system during a tow outside of the field where no immediate threat is posed to other installations/vessels
Ballast System [POTENTIAL INCIDENT: LOSS OF STABILITY]	F	Total loss of ability to control stability of the installation/vessel due to failure in the ballast system	System is impaired, but there is enough redundancy available via crossover connections and redundant pumping systems etc to control stability of the installation/vessel

Watertight Integrity [POTENTIAL INCIDENT: LOSS OF STABILITY, IMPAIRMENT TO CRITICAL EQUIPMENT, ENVIRONMENTAL]	F	Hull structure is compromised in both the intact and damaged stability scenarios associated with a loss of control of the invading fluid	Hull structure is compromised in a damaged stability scenario (downflooding points are compromised)
Hydrocarbon Containment (Subsea) [POTENTIAL INCIDENT: ENVIRONMENTAL, HYDROCARBON RELEASE, FIRE/EXPLOSION, LOSS OF STABILITY (GAS)]	D/P	Uncontrolled flow of hydrocarbons from a well or a flowline which poses immediate risk to safety or the environment	Uncontrolled flow of hydrocarbons from a well or a flowline which does not pose immediate risk to safety or the environment
Hydrocarbon Containment (Topsides) [POTENTIAL INCIDENT: HYDROCARBON RELEASE, FIRE/EXPLOSION, ENVIRONMENTAL]	D/P	Explosion, collapse or bursting of any closed vessel or associated pipework	Closed vessel or associated pipework below minimum acceptable wall thickness and/or unable to meet functionality or survivability requirements under all foreseeable normal and emergency operating conditions. The activation of a pressure safety valve on the system is also reportable.
Structural [POTENTIAL INCIDENT: HYDROCARBON RELEASE, ENVIRONMENTAL, LOSS OF	F/D/P	Collapse or partial collapse of a primary, secondary or tertiary structure	Primary, secondary or tertiary structure below minimum acceptable corrosion or compromised (e.g. cracked) and unable to withstand all forces and loads it may be subjected to under all foreseeable

STABILITY, IMPAIRMENT TO OTHER CRITICAL EQUIPMENT, FATALITY]			normal and emergency operating/environmental conditions.
Piping Systems containing Hazardous Substances [POTENTIAL INCIDENT: LEAK OF HAZARDOUS SUBSTANCE, FATALITY, MAJOR INJURY]	F/D/P	Explosion, collapse or bursting of any closed vessel or associated pipework	Closed vessel or associated pipework below minimum acceptable wall thickness. The activation of a pressure safety valve on the system is also reportable.
Rotating Machinery [POTENTIAL INCIDENT: LEAK OF HAZARDOUS SUBSTANCE, FATALITY, MAJOR INJURY]	F/D/P	Catastrophic internal failure of rotating machinery (e.g. pump, compressor, engine) that is not contained (i.e. has immediate potential for fatality or major injury) or results in production shut-in or drilling suspension	Catastrophic internal failure of rotating machinery (e.g. pump, compressor, engine) that is contained or the failure results in production shut-in or drilling suspension
Well Barrier Elements [POTENTIAL INCIDENT: LOSS OF WELL CONTROL; SUBSEA HYDROCARBON RELEASE; IMPAIRMENT TO CRITICAL EQUIPMENT]	D/P	Any well barrier element, defined by NORSOK D-010, that has failed and is unable to function as an acceptable well barrier	Any well barrier element, as defined by NORSOK D-010, that is compromised but still able to maintain its functionality
Lifting Equipment [POTENTIAL INCIDENT: ENVIRONMENTAL, HYDROCARBON RELEASE,	F/D/P	Collapse, overturning, or failure of any load bearing part of a lift or hoist, crane or derrick, mobile powered access platform, personnel transfer device or forklift or the failure of any part of a	Compromised integrity of a lifting system or failure of a safety system of lifting equipment that does not result in an uncontrolled lowering of a load

FIRE/EXPLOSION, LEAK OF HAZARDOUS SUBSTANCE, FATALITY, IMPAIRMENT TO CRITICAL EQUIPMENT]		container, lifting device or loose lifting gear which results in an uncontrolled lowering of a load	
Failure of Equipment at Height [POTENTIAL INCIDENT: HYDROCARBON RELEASE, FATALITY, MAJOR INJURY, IMPAIRMENT TO CRITICAL EQUIPMENT]	F/D/P	Failure of both primary and secondary retention of equipment at height resulting in a dropped object	Failure of either the primary and/or secondary retention of equipment at height which does not result in a dropped object
Diving Equipment [POTENTIAL INCIDENT: FATALITY OR MAJOR INJURY]	DV	Failure of life support equipment, including control panels, hoses and breathing apparatus which has the potential for fatality or major injury of a diver.	Degraded performance of life support equipment which has the potential for at least a lost/restricted workday injury.
Hazardous Area Classification of Equipment [POTENTIAL INCIDENT: FIRE/EXPLOSION]	D/P	Failure of equipment such that it can not prevent ignition in a hazardous atmosphere and it is required for production or drilling to resume safely	Failure of equipment such it can not prevent ignition in a hazardous atmosphere but can be isolated
Heating, Ventilation and Air Conditioning System [POTENTIAL INCIDENT: FIRE/EXPLOSION]	D/P	Positive or Negative Pressure is not able to be maintained in accordance with hazardous area classification or performance requirements of temporary safe refuge	Impairment which results in personal comfort issues but does not affect ability to maintain hazardous area classification or temporary safe refuge

Physical Environmental Monitoring Equipment [POTENTIAL INCIDENT: IMPAIRMENT/DAMAGE TO CRITICAL EQUIPMENT]	F/D/P	Equipment can not measure or detect physical environmental conditions and there is no backup equipment/procedures in place or redundant systems	Equipment is unable to measure or detect physical environmental conditions but backup equipment/procedures are in place or there are redundant systems
Power Generation, Distribution and Management [POTENTIAL INCIDENT: IMPAIRMENT/DAMAGE TO CRITICAL EQUIPMENT, FATALITY, MAJOR INJURY, FIRE]	F/D/P	Failure of emergency power generator, failure of UPS system or failure of emergency lighting on demand and there is no redundancy. An electrical short circuit, ground fault or arc flash resulting in a fire or has potential for fatality or major injury.	Failure of emergency power generator, failure of UPS system or failure of emergency lighting on demand for which there is redundancy. An electrical short circuit, ground fault or arc flash with potential to result in a fire or has potential for at least a lost/restricted workday injury.
GENERAL [POTENTIAL INCIDENT: AS DETERMINED BY THE INSTALLATIONS SAFETY CASE OR IS CONSIDERED A BARRIER TO PREVENTING ANY INCIDENT]	D/P	The critical equipment or system can not meet its performance requirement for meeting its functionality, availability/reliability or survivability criteria in accordance with the installation's safety plan (i.e. the equipment or system is required to meet the installation's target levels of safety)	The critical equipment or system has degraded performance requirements but is still able to meet functionality, availability/reliability or survivability criteria.
System Which Detects an Incident			
Fire & Gas Detection System	F/D/P	Full loss of fire and/or gas detection system or full loss of fire and gas detection panel	Fire Zone Impairment or Gas Zone Impairment where system is partially unavailable and unable to perform its intended function (e.g. automatic activation

			of fire suppression and/or emergency shutdown)
Toxic or H_2S Gas Detection Systems	F/D/P	Full loss of Toxic or H_2S gas detection system	Impairment where system is partially unavailable and unable to perform its intended function
General Alarm System	F/D/P	Full loss of general alarms and alerting system	Impairment resulting in system being partially unavailable
Leak Detection Systems	F/D/P	Loss of leak detection system in an area for which there is no redundancy	Loss of leak detection system in an area for which there is redundancy
Process/Drilling Control Systems	D/P	Loss of monitoring, control or alarm systems for which there is no redundancy	Loss of monitoring, control or alarm systems for which there is redundancy
System Which Controls or Mitigates an Incident			
Passive Fire Protection	F/D/P	Impairment to an entire fire rated boundary of an area	Missing or ineffective passive fire protection where part of a system is unable to meet survivability requirements in an event of a fire
Blast Protection	D/P	Impairment which affects the overall blast rating of a wall	Degraded blast rating which affects a small portion of the overall blast protection
Pressure Relief System	F/D/P	Failure of a pressure relief valve when placed in demand in which the integrity of the system it protected is now compromised	Failure of a pressure relief valve during testing for which there is no redundancy provided

Emergency Shutdown System	D/P	Complete failure of the system to operate on demand, either automatically or manually	Failure of the system to shutdown all equipment as per design due to some technical failure
Blowdown and Flare System	D/P	Complete failure of the system to operate on demand to blowdown the entire hydrocarbon inventory and flare off the inventory	Partial failure of the system when placed on demand during operation or testing or the failure of the system to blowdown the contents in the time required
Drain System	D/P	Complete failure of the system to drain hydrocarbons to a safe location or failure of the system in preventing a spill or unauthorized discharge to the environment.	Partial failure of the system in draining hydrocarbons to a safe location or that may result in a spill or unauthorized discharge to the environment.
Active Fire Protection	F/D/P	Failure of a firewater pump or other supply system or failure of an active fire protection system in an area for which no active fire protection redundancy is provided	Degraded performance of a firewater pump, failure of a deluge skid or monitor for which other means of active fire protection redundancy is provided
Disconnect Systems	D/P	System is unable to disconnect	Partial impairment to the system where the system is able to disconnect but is unable to do so within its intended performance requirement

Helicopter Deck	F/D/P	Helideck or Refueling System is impaired	There is partial impairment to lighting, refueling or other equipment on the helideck which results in degradation but is still able to be used
Communication Systems (Public Address or External Communications)	F/D/P	Failure of a system for which no redundancy is provided	Failure of a system for which redundancy is provided
Escape (egress routes)	F/D/P	Means to provide safe escape from an area and/or to provide safe egress to evacuation stations is compromised	Normal escape/egress routes are impaired but there is sufficient other means to provide alternate access
Breathing apparatus	F/D/P		Malfunction of breathing apparatus while in use or in testing as a preliminary to use
Lifesaving Appliances	F/D/P	Impairment which results in a lifesaving appliance being taken out of service and results in additional mitigations to be put in place until repairs are undertaken	Partial impairment to the system where a lifesaving appliance is taken out of service for longer than expected to meet its target reliability.
Standby Vessel	SBV	Impairment which compromises the standby vessel's capability to perform all of its duties, taken into consideration the minimum required equipment needed for the role it is performing. (e.g. Two FRC's for vessels engaged in Dual Standby)	Impairment to critical equipment that does not affect the standby vessel's capability to perform all of its duties but in which redundancy is lost

Passenger Craft (Vessel or Helicopter)	PC	Impairment which compromises the integrity or emergency preparedness of the passenger craft	Impairment to critical equipment that does not affect the passenger's craft capability to perform all of its duties but in which redundancy is lost
Support Craft (Vessel)	SC	Impairment which compromises the vessel's capability to maintain stationkeeping	Impairment to critical equipment that does not affect stationkeeping but in which redundancy is lost or there is a power loss that may affect its capability

NOTES:

- **All other impairments to Critical Equipment (including any alarms that have been inhibited) shall be listed on the periodic (e.g. daily reports, weekly) reports to the Board and, as applicable, to the Certifying Authority.**

- **All unrevealed critical failures to detection and control systems as a result of planned or unplanned testing are to be reported in periodic reports regarding the integrity of the installation and this data should be used to validate the reliability/availability of associated safety critical systems. Systems unable to meet performance criteria must be improved or maintenance frequencies increased to meet target levels of safety.**

- **INDEX FOR INSTALLATION/VESSEL TYPE:**

    - **F – for floating installation or vessel**
    - **D – for drilling installation**
    - **P – for production installation**
    - **DV – for diving installation**
    - **SBV – for standby vessel**
    - **PC – for passenger craft**
    - **SC – for support craft**