





CANADA-NOVA SCOTIA OFFSHORE PETROLEUM BOARD

DRAFT Environmental Protection Plan Guideline

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Foreword

The Canada-Nova Scotia Offshore Petroleum Board and Canada-Newfoundland and Labrador Offshore Petroleum Board (the *Regulators*) have issued this Guideline to assist operators in the development of an Environmental Protection Plan (EPP) to meet the requirement of section 10 of the *Canada-Newfoundland and Labrador* and the *Canada-Nova Scotia Offshore Area Petroleum Operations Framework Regulations*. This Guideline applies to all works and activities conducted in the *Offshore Area*.

Guidelines are developed to provide assistance to those with statutory responsibilities (including operators, employers, employees, supervisors, providers of services, suppliers, etc.) under the *Accord Acts* and regulations. Guidelines provide an understanding of how legislative 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.

The authority to issue Guidelines and Interpretation Notes with respect to legislation is specified by subsection 151.1 and 205.067 of the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Act, S.C. 1987, c.3 (C-NLAAIA),* subsection 147 and 201.064 of the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act, RSNL 1990 c. C-2, subsection 156(1) and 210.068 of the <i>Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act, S.C. 1988, c.28 (CNSOPRAIA)* and subsection 148 and 202BQ(1) of the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act.* The *Accord Acts* also state that Guidelines and Interpretation Notes are not deemed to be statutory instruments.

For the purposes of this Guideline, these Acts are referred to collectively as the Accord Acts. Any references to the C-NLAAIA, the CNSOPRAIA or to the regulations in this Guideline are to the federal versions of the Accord Acts and the associated regulations.





TABLE OF CONTENTS

1.0 ACRONYMS AND ABBREVIATIONS	5
2.0 DEFINITIONS	5
3.0 PURPOSE AND SCOPE	6
4.0 SUBMISSION OF THE EPP	6
5.0 AMENDMENTS TO THE EPP	7
6.0 CONTENTS	7
6.1 Management System	7
6.1.1. Management System Standards	7
6.1.2. Scope 6.1.3. Legal Requirements	8 8
6.1.4. Policies and Objectives	8
6.1.5. Leadership Commitment and Culture	8
6.1.6. Contractors, Providers of Service and Suppliers	9
6.1.7. Communication	9
6.1.8. Control of Documents	9
6.1.9. Control of Records	9
6.1.10. Management of Change	10
6.2 Hazard Identification and Risk Assessment	10
6.2.1. All Works or Activities	10
6.2.2. Production Projects	11
6.2.3. Production, Drilling and Accommodations Installations	11
6.3 Facility Description	12
6.3.1. All Marine Installations and Structures	12
6.3.1.1. General	12
6.3.1.2. Discharges - General	13
6.3.1.3. Equipment for Monitoring Compliance to Discharge Limits	13
6.3.1.4. Mechanical Equipment	14
6.3.1.5. Pressure Systems	14
6.3.1.6. Ventilation Systems	14
6.3.1.7. Fire Protection Systems	14
6.3.1.8. Storage Areas for Hazardous Substances	15
6.3.1.9. Lighting - General	15
6.3.1.10. Sound - General	15
6.3.2. Production, Drilling and Accommodations Installations	15
6.3.2.1. Physical and Environmental Conditions Monitoring Equipment	15
6.3.2.2. Bulk Transfer System	15
6.3.2.3. Gas Release System	16
6.3.2.4. Control and Monitoring System 6.3.2.5. Third Party and Temporary Equipment	16
6.3.2.5. Spill Response Equipment	16 16
6.3.3. Production	16 16
6.3.3.1. Subsea Production Systems	10
6.3.3.2. Surface Production Systems	17
6.3.3.3. Pipelines	17
6.3.4. Well Operations	17
6.3.4.1. Drilling Fluid System	17
6.3.4.2. Well Control Equipment	18
6.3.4.3. Drilling Riser System	18
6.3.4.4. Wellheads and Trees	18
6.3.4.5. Formation Flow Test Equipment	18
6.3.5. Diving	19



6.3.6.	Construction	19
6.3.7.	Geoscientific, Geotechnical and Environmental	19
6.4 Ass	et Integrity	19
6.4.1.	All Works or Activities	20
6.4.2.	Production, Drilling or Accommodations Installations	20
6.5 Ope	erations and Maintenance Procedures	21
6.5.1.	All Works or Activities	21
6.5.1.	1. General	21
6.5.1.		22
6.5.1.		22
6.5.1.	•	22
6.5.1.		22
6.5.1.	J J	23
6.5.1.		23
6.5.1.		23
6.5.1.		23
6.5.1.	·	23
6.5.1.		24
6.5.2.	Support Craft	24
6.5.2.		24
6.5.2.	2. Shuttle Tanker Operations	25
6.5.3.	Production, Drilling and Accommodations Installations	25
6.5.3.	1. System Operating Procedures	25
6.5.3.	2. Specific Operating Procedures	26
6.5.3.	3. Chemical Selection, Evaluation and Use	26
6.5.4.	Production	27
6.5.5.	Well Operations	27
6.5.5.	1. System Operating Procedures	27
6.5.5.	2. Drilling and Well Operation Procedures	28
6.5.6.	Diving	28
6.5.7.	Construction	29
6.5.8.	Geoscientific, Geotechnical and Environmental	29
6.6 Org	anizational Structure and Roles, Responsibilities and Authorities	29
6.7 Tra	ining and Competency Assurance	30
6.7.1.	All Works or Activities	30
6.7.2.	Production Projects and Drilling Programs	31
6.8 Cor	npliance Monitoring, Performance Measurement and Continual Improvement	31
6.8.1.	Performance Indicators	32
6.8.2.	Monitoring	32
6.8.3.	Audits and Inspections	32
6.8.4.	Incident Reporting and Investigation	32
6.8.5.	Lessons Learned	33
6.8.6.	Management Review	33
6.8.7.	Reporting to the Regulator and Other Authorities	33



1.0 Acronyms and Abbreviations

ссо	Chief Conservation Officer
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
EPP	Environmental Protection Plan
HSE	Health, Safety and Environment

2.0 Definitions

In this Guideline, the terms such as "authorization", "development plan", "employee", "employer", "marine installation or structure", "operator", "providers of services", "spill", "spill-treating agent", "supervisor", "supplier" and "waste", referenced herein have the same meaning as in the Accord Acts.

Refer also to defined terms in both the Framework Regulations and OHS Regulations.

For the purposes of this Guideline, the following terms have been capitalized and italicized when used throughout. The following definitions apply:

Accord Acts	means the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act and Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act, Canada-Newfoundland Atlantic Accord Implementation Act and the Canada-Newfoundland and Labrador Atlantic Accord Implementation (Newfoundland and Labrador) Act
Framework	means the Canada-Newfoundland and Labrador Offshore Area
Regulations	Petroleum Operations Framework Regulations, SOR/2024-25 and

 $^{^1}$ 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



	the Canada-Nova Scotia Offshore Area Petroleum Operations Framework Regulations, SOR/2024-26
Marine Installation or Structure	means a "marine installation or structure" as defined in Part III.1 of the <i>Accord Acts</i> . For the purposes of this Guideline, it generally refers to any installation or vessel used in the conduct of authorized petroleum-related works or activities, excluding support craft.
Offshore Area	means an offshore area as defined by the Accord Acts
OHS Regulations	means the Canada-Newfoundland and Labrador Offshore Area Occupational Health and Safety Regulations, SOR/2021-247 or the Canada-Nova Scotia Offshore Area Occupational Health and Safety Regulations, SOR/2021-248
Regulator	means the Canada-Newfoundland and Labrador Offshore Petroleum Board or the Canada-Nova Scotia Offshore Petroleum Board, as the case may be

3.0 Purpose and Scope

The objective of this Guideline is to assist an operator in the development and submission of an EPP pursuant to section 10 of the *Framework Regulations* and to provide clarity on the information to be included. EPPs must accompany all applications for authorization pursuant to section 8 of the *Framework Regulations*. This includes the following types of works or activities:

- Production
- Well operations (e.g., drilling, completion, intervention, servicing, testing)
- Diving
- Construction
- Geoscientific
- Geotechnical
- Environmental

4.0 Submission of the EPP

The *Regulator* reviews the EPP submitted by an operator during its consideration of an application for an authorization. The EPP should demonstrate to both the *Regulator* and to personnel engaged in the work or activity that the operator has taken all reasonable and practicable steps to achieve protection of the environment, taking into account the interaction between the environment and among all components of the work or activity,

including structures, facilities, equipment, materials, procedures, personnel, suppliers, providers of service and other resources. The EPP may be submitted to the *Regulator* as one or several documents. All documents that constitute the EPP must be listed within the application for authorization submitted to the *Regulator*. The document or documents submitted to fulfill the requirement for an EPP should be the documents that would be used by all persons involved in the conduct of the authorized work or activity, including contractors, providers of service and suppliers.

The regulations require that the EPP form part of the application for authorization and, as such, changes to the EPP are not considered accepted for use until the *Regulator* has had an opportunity to consider the changes and amend the authorization to replace the previous version with the version that the operator has proposed.

5.0 Amendments to the EPP

If the operator proposes an amendment to the authorization to change the scope of activities under the authorization, the EPP and any associated risk assessments and measures may require amendment to reflect the changes in the scope. The revised EPP will be reviewed by the *Regulator* as part of the amendment of the authorization and prior to the changes being implemented. Some additional guidance on EPPs is provided in section 10 of the *Framework Regulations*.

6.0 Contents

6.1 Management System

Pursuant to paragraph 10(2)(a) of the *Framework Regulations*, the EPP must include specific references to and detailed descriptions of the provisions of the management system that relate to the protection of the environment. Operators should refer to the detailed guidance on management systems provided in Part 3 of the *Framework Guideline*. With respect to an installation, from design to abandonment or removal, operators should also refer to the requirements and associated guidance under section 100 of the *Framework Regulations* with respect to quality management systems.

The following should be described:

6.1.1. Management System Standards

References to the standard(s) adopted with respect to the management system. [Refer to the requirements and associated guidance for paragraph 4(1)(w) of the Framework Regulations]

6.1.2. Scope

The scope of the operator's management system should be described and should include a summary of how the management system of other contractors have been integrated. [Refer to the requirements and associated guidance for paragraphs 4(1)(b) and (c) of the Framework Regulations]

6.1.3. Legal Requirements

With respect to environmental protection, reference to the applicable requirements of the *Accord Acts*, regulations and any other legal requirements of the *Regulator* or other authorities should be included. The EPP should refer to the management system processes for ensuring compliance and should describe the processes for identifying, tracking and monitoring the close-out of any non-compliance. A reference to any associated procedures should be included. [*Refer to the requirements and associated guidance for paragraph 4(1)(u) of the Framework Regulations*]

6.1.4. Policies and Objectives

With respect to environmental protection, reference to the policies and objectives upon which the management system is based (e.g., environment, quality) and where controlled and signed copies of policies are made available to persons working onboard the *Marine Installation or Structure* should be included. [Refer to the requirements and associated guidance for paragraph 5(1)(v) of the Framework Regulations]

6.1.5. Leadership Commitment and Culture

With respect to environmental protection, a description of how the management system will ensure that the leadership of the organization – from onshore executives to supervisors at the operations site:

- provide the necessary supervision to ensure safety and the protection of the environment consistent with subsection 3(2) of *the Framework Regulations*;
- provide the necessary commitment, resources, oversight, participation and support in the execution and continual improvement of the management system; and
- foster a culture which supports ongoing and continual improvement to protection of the environment.

A reference to associated processes and procedures that have been established should be included. [Refer to the requirements and associated guidance for paragraphs 4(1)(e) and (f) and 100(1)(g), subsections 5(1) and 5(2), and section 7 of the Framework Regulations]

6.1.6. Contractors, Providers of Service and Suppliers

A description of the following is should be provided along with reference to associated procedures:

- Processes for selection, integration and monitoring of contractors and providers of service. [Refer to the requirements and associated guidance for paragraphs 4(1)(b), (c), (g) and (j) of the Framework Regulations]
- Processes for purchasing materials or equipment. [Refer to the requirements and associated guidance for paragraphs 4(1)(b), (c), (g) and (j) of the Framework Regulations]
- Administrative and logistical support including the names of contractors and providers of service. [Refer to the requirements and associated guidance paragraph 41(g) of the Framework Regulations]

6.1.7. Communication

A summary of the processes for internal and external communication of information with respect to environmental protection should be included along with reference to associated procedures. This should include the following processes:

- HSE meetings
- Shift and tour handovers
- Toolbox talks and job safety analysis
- Hazard or incident communication

Details of how language differences will be addressed, to ensure communication of information on protection of the environment is not compromised. [Refer to the requirements and associated guidance for paragraphs 4(1)(j), (k), (l) and (z) and 41(c) of the Framework Regulations]

6.1.8. Control of Documents

A description of the process for approval, review, provision and control of documents should be included along with a reference to associated procedures. [Refer to the requirements and associated guidance for paragraphs 4(1)(r) and (x) and subsection 4(2) of the Framework Regulations]

6.1.9. Control of Records

A description of the process for generation, control and retention of records should be included along with a reference to associated procedures. [Refer to the requirements and associated guidance for paragraph 4(1)(y) of the Framework Regulations]

6.1.10. Management of Change

A description of the processes in place for identifying, evaluating and managing any changes should be included along with reference to associated procedures. [Refer to the requirements and associated guidance for paragraph 4(1)(q) of the Framework Regulations]

Other elements of the management system are described in subsequent sections below.

6.2 Hazard Identification and Risk Assessment

Pursuant to paragraph 10(2)(b) of the *Framework Regulations*, the EPP must include a summary of hazards, studies, risk assessments and measures. Operators should refer to the detailed guidance on hazard identification and risk assessment which is provided for paragraphs 4(1)(m) and (o) and section 41 of the *Framework Regulations*. With respect to section 10 of the *Framework Regulations*, subparagraphs 10(2)(b)(i), (ii), (iii), (iv) and (vii) apply to all works or activities, whereas, subparagraphs 10(2)(b)(v) and (vi) only apply to production, drilling or accommodations installations.

6.2.1. All Works or Activities

Description of Processes

- A description of and reference to the formal processes in place for the ongoing identification of hazards, assessment and management of associated risks and the identification of measures should be provided. This should include a description of each type of methodology used, when it is to be used and the data used in support. In addition, a description of the qualifications of those leading and participating in the risk assessments should be included. Reference to associated procedures should be provided.
- A description of how hazards and associated measures will be monitored, audited and how changes to risk will be managed should be provided.
- A description of the processes in place for doing field identification (e.g., work permit process, job safety analysis, toolbox talks, supervision, behavioral based observations, inspections) of environmental hazards and how the information generated by these processes are captured and fed into the management system to achieve continual improvement and reduction of risk.

Summary of Results

• A summary of and reference to the studies and risk assessments that have been completed, included any assessments done in relation to the interaction of the proposed work or activity with the environment and the effect of any



adjacent or simultaneous activities taking place near the work or activity on the environmental risks.

- A summary of all measures to be maintained which either anticipate, avoid, prevent, reduce, mitigate or manage environmental risks. The following should be noted:
 - Equipment-related measures, including specific inspection, testing and maintenance and the description of particular systems or equipment can be provided as part of the facility description referred to in section 4.3 of this Guideline.
 - Procedural-related measures can be provided as part of the description of operations and maintenance procedures as referred to in section 4.5 of this Guideline.
 - Training and competency-related measures can be provided as part of the description of training and competency procedures as referred to in section 4.7 of this Guideline.

If the measures are not included with the summary of risk assessments, the section of the EPP discusses hazard identification and risk assessments should clarify where these measures are documented.

Communication of Hazards and Measures

A description of how hazards and associated measures will be communicated to all directly affected individuals, including contractors and providers of service should be provided. Hazards and measures should be documented in procedures, in associated bowtie diagrams or on associated risk registers.³

6.2.2. Production Projects

For a production project, the summary of results should also include a reference to any underlying assumptions and target levels of safety that have been made with respect to the environment in the Concept Safety Analysis and associated environmental studies and risk assessments. [*Refer to section 24 of the Framework Regulations and associated guidance*]

6.2.3. Production, Drilling and Accommodations Installations

The following risk assessments and results should also be summarized:

• Hazardous gas risk assessment(s) including factors associated with the initial release, outcomes, assumptions and measures as it relates to protection of the environment. [Refer to the requirements and associated guidance under section 107 of the Framework Regulations]

³ It is useful to maintain a risk register and to map where/how the risk has been addressed as part of the management system, however, this is not required as long as the hazards and measures are clearly identified within appropriate procedures in the management system.

• Risk and reliability analysis in relation to major accidental events and the associated assumptions, outcomes and measures as it relates to protection of the environment. [Refer to the requirements and associated guidance under section 108 of the Framework Regulations]

6.3 Facility Description

Pursuant to paragraphs 10(2)(c) and (e) of the *Framework Regulations*, the EPP must include a description of all installations or vessels that are to be used during the proposed work or activity and a description of their systems and equipment critical to the protection of the environment. This description should also include or make cross-reference to any equipment-related measures identified from risk assessments, which are also required to be included in the EPP.

Detailed guidance on requirements for systems and equipment which should be described are provided below. This list is not exhaustive and if there are other systems installed that pose a hazard to the environment (i.e., generate an emission or discharge) or are critical to the protection of the environment, those systems should also be described. Operators should also refer to the relevant cross-referenced sections of the regulations for requirements within each section and refer to the associated guidance on these systems and associated equipment.

The EPP should include a description of the following based on the types of facilities that are planned to be used:

6.3.1. All Marine Installations and Structures

6.3.1.1. General

With respect to any system or equipment critical to the protection of the environment, the following information should be included, if applicable:

- The classification of the Marine Installation or Structure along with any specific class notations to be maintained. [Refer to the requirements and associated guidance in the following sections of the Framework Regulations: vessels used in GGE programs section 56; diving vessels paragraphs 94(c) and (d); construction vessels section 117; and floating production, drilling and accommodations installations section 140]⁴
- Any related decisions and exemptions from Flag State requirements. [Refer to the requirements and associated guidance for floating production, drilling and accommodations installations under section 151 of the Framework Regulations. Other types of vessels should also submit this information in relation to any IMO Code that has been adopted or has been incorporated by reference into the Framework Regulations.]

⁴ Fixed installations are not required under marine rules to have a certificate of class issued by a classification society.



- Any regulatory exemptions or substitutions that have been approved by the CCO.
- Any environmentally-related conditions or commitments identified by the operator, *Regulator* or other authority located in any associated:
 - o Development Plan
 - Environmental Assessment (under the Accord Acts or the Canadian Environmental Assessment Act)
 - Impact Assessment (under the Impact Assessment Act)

6.3.1.2. Discharges - General

All discharges to the environment from the work or activity along with limits for those discharges to satisfy the requirement in paragraph 10(2)(f) of the *Framework Regulations* should be described. The *Regulator* considers the term "discharge" in paragraph 10(2)(f) of the *Framework Regulations* to include liquid and gaseous discharges to sea, gaseous and particulate emissions to air, and the discharges or emission of any substance or form of energy into the environment from the work or activity. All discharges not described are considered pollution as per the definition in subsection 1 of the *Framework Regulations*. In accordance with subsection 4(1) of the *Framework Regulations*, the operator's management system must prevent pollution and when pollution occurs the operator must cease any activity without delay pursuant to subsection 47(1) of the *Framework Regulations*.

This Guideline describes a number of systems that may have associated discharges (whether it be continual, periodic or occasional), but it is the responsibility of the operator seeking an authorization to ensure that every discharge and the associated limit is described in the EPP. In addition to discharges associated with drilling for and production of petroleum, the discharges may include waste material from accommodations (grey water, sewage), food wastes that have been macerated for disposal at sea, and other liquid or solid wastes. Gaseous and particulate emissions to air (i.e., products of stationary combustion, venting and flaring) should be described and any limits for those discharges included in the EPP. This requirement also applies to emissions of energy (e.g., seismic energy, light, heat, noise) into the environment. For all works or activities, systems which typically have discharges are discussed in the Offshore Waste Treatment Guideline. [Refer to the requirements under paragraph 10(2)(e) of the Framework Regulations]

6.3.1.3. Equipment for Monitoring Compliance to Discharge Limits

A description of the equipment for monitoring compliance with the discharge limits should be provided. This should include reference to monitoring and laboratory equipment. Guidance is provided in the *Offshore Waste Treatment*

Guideline. [Refer to the requirements in paragraph 10(2)(g) of the Framework Regulations]

6.3.1.4. Mechanical Equipment

All mechanical equipment in place that may produce a discharge should be described. Information should not be duplicated if the equipment is described under another section of the EPP. For production, drilling or accommodations installations, the description should include all features relevant to protection of the environment, including measures to prevent loss of containment of substances and to reduce emissions and all associated devices critical to protection of the environment. Limits for any discharges should be included. [With respect to production, drilling or accommodations installations, refer to the requirements and associated guidance under section 136 of the Framework Regulations]

6.3.1.5. Pressure Systems

All pressure systems and any measures in place for the protection of the environment should be described. Limits for any discharges should be included. [With respect to production, drilling or accommodations installations, refer to the requirements and associated guidance under section 135 of the Framework Regulations]

6.3.1.6. Ventilation Systems

A description of the ventilation systems should be provided and include limits for any discharges. In addition, where a ventilation system poses a threat to the environment due to its design or operation (e.g., refrigerant, hazardous atmospheres), a description of the measures in place to protect the environment should be provided. [Refer to the requirements and associated guidance for production, drilling and accommodations installations under section 114 of the Framework Regulations]

6.3.1.7. Fire Protection Systems

A description of the fire protection systems and equipment should be provided. Where those systems pose a threat to or are critical to the protection of the environment, the measures in place for the protection of the environment should be described. A description of the limits for any planned discharges from testing of these systems should be included. [Refer to the requirements and associated guidance for production, drilling and accommodations installations under section 134 of the Framework Regulations]

6.3.1.8. Storage Areas for Hazardous Substances

For all hazardous substances, chemical substances and waste material, including radioactive materials or devices, explosives and compressed gases, a description of the various storage arrangements should be provided and where those substances may pose a threat to or are critical to the protection of the environment, the associated protection measures for each area should be described. [Refer to the requirements and associated guidance under section 45 of the Framework Regulations]

6.3.1.9. Lighting - General

With respect to lighting, a description of the measures in place to avoid excessive light pollution and attraction of migratory birds should be provided. [Refer to the requirements and associated guidance under section 122 of the Framework Regulations]

6.3.1.10. Sound - General

With respect to sound emitted into the atmospheric and marine environment, a description of the measures in place to avoid excessive sound pollution and interference with avian and marine species should be provided.

6.3.2. Production, Drilling and Accommodations Installations

In addition to the information requirements described under section 4.3.1 of this Guideline, the following should be described with respect to production, drilling and accommodations installations:

6.3.2.1. Physical and Environmental Conditions Monitoring Equipment

The equipment used for observing and forecasting physical and environmental conditions should be described. [*Refer to the requirements and associated guidance under section 109 and 128 of the Framework Regulations*]

6.3.2.2. Bulk Transfer System

A description of the equipment in place for transferring liquids or solids from or to an installation should be included. There are no authorized discharges associated with these systems, but any potential discharges should be described, as well as, any measures put in place to reduce the potential impact of these releases into the environment. [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]

6.3.2.3. Gas Release System

A description of any gas release system (which includes flaring systems for production or well testing, pressure relief systems, depressurizing systems and cold vent systems) should be provided. Any potential discharges should be described, as well as, the limits for those discharges (e.g. methane and other volatile gases). [Refer to the requirements and associated guidance under section 131 of the Framework Regulations]

6.3.2.4. Control and Monitoring System

A description of control systems (including programmable electronic, electronic, electronic, hydraulic, pneumatic and mechanical), integrated software dependent systems and monitoring systems should be provided. A summary of key critical devices, executive actions (e.g., high level alarms, trips) and key interfaces with other systems should be provided in relation to monitoring and prevention of discharges into the environment. [Refer to the requirements and associated guidance under sections 123, 124, 125 and 169 of the Framework Regulations]

6.3.2.5. Third Party and Temporary Equipment

The minimum requirements for any third party and temporary equipment to be used or introduced onboard the installation which have the potential to result in a discharge, intended or accidental, should be described. This description should include specifics for larger pieces of equipment (e.g., mud logging units, ROV systems) and should refer to procedures for management of other types of equipment. The description should include any potential discharges which may occur from this equipment. [Refer to the requirements and associated guidance under section 139 of the Framework Regulations]

6.3.2.6. Spill Response Equipment

The location, types and quantities of spill response equipment to be maintained onboard the installation or associated support craft should be described with reference to the Contingency Plan. [Refer to the requirements and associated guidance under section 11 and 44 of the Framework Regulations]

6.3.3. Production

In addition to the information requirements described under section 4.3.1 and 4.3.2 of this Guideline, the following should also be described only with respect to production installations:

6.3.3.1. Subsea Production Systems

A description of subsea production systems should be provided and include a description of manifolds, subsea processing equipment, the production control and monitoring system, chemical injection system, umbilicals, flowlines, risers, pigging or cleaning equipment and valves. This description should include the rates and limits for the discharge of gases that are normally vented from flexible flowlines and other equipment and the normal discharge of control fluids associated with the operation of hydraulically actuated subsea valves and controls. [Refer to the requirements and associated guidance under section 138 of the Framework Regulations]

6.3.3.2. Surface Production Systems

A description of the surface production systems should be provided and should include separation systems, chemical treatment systems, gas compression systems, gas lift systems, fuel gas systems, produced water systems, water injection systems, storage systems, metering systems, inerting systems and associated utility systems. Limits for all discharges should be described including produced water, storage displacement water, produced sand, well treatment fluids, cooling water, gas vented from compressors, etc. [Refer to the requirements and associated guidance under sections 14, 77, 84, 135 and 136 of the Framework Regulations]

6.3.3.3. Pipelines

A description of pipeline(s), if applicable, and associated equipment should be provided and include a description of pigging arrangements and contingency plans for flushing if it is exposed to marine hazards (e.g., anchor dragging, iceberg scour). Limits for any discharges should be included. [Refer to the requirements and associated guidance under section 168 of the Framework Regulations]

6.3.4. Well Operations

In addition to the information requirements described under section 4.3.1 and 4.3.2 of this Guideline, the following should also be described only with respect to installations conducting well operations:

6.3.4.1. Drilling Fluid System

A description of the drilling fluid system and the associated monitoring equipment should be included. This should include the high pressure mud system, low pressure mud system, bulk system, cement system, mud conditioning system, degassing system and cuttings cleaning system. Any potential discharges and any limits in relation to those discharges, including discharge of drilling fluid, drilling fluid retained on cuttings, well treatment fluids, residual cement, test mixes, etc., should be described. [Refer to the requirements and associated guidance under section 163 of the Framework Regulations]

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6.3.4.2. Well Control Equipment

A description of the well control equipment (e.g., for drilling, coil tubing, slick line and wire line operations) should be provided. This should include blowout preventers (BOPs), diverters, choke manifold and associated control and monitoring systems. Any planned discharges and limits for those discharges should be included. Potential accidental discharges and the measures put in place to prevent or reduce the potential impact of these releases in the environment should be described. [Refer to the requirements and associated guidance under section 68 of the Framework Regulations]

6.3.4.3. Drilling Riser System

A description of the drilling riser system (including flex joints, telescopic joints, lower marine riser package, drilling (marine) riser) should be provided. Potential accidental discharges and the measures put in place to prevent or reduce the potential impact of these releases in the environment should be described. [Refer to the requirements and associated guidance under section 164 of the Framework Regulations]

6.3.4.4. Wellheads and Trees

A description of wellheads and trees and limits for any planned discharges should be provided. [Refer to the requirements and associated guidance under section 166 of the Framework Regulations]

6.3.4.5. Formation Flow Test Equipment

If formation flow testing is planned, the equipment to be used and any planned interfaces to the emergency shutdown system and other systems should be described. Any potential discharges should be described, as well as limits for those planned discharges. Potential accidental discharges and the measures put in place to prevent or reduce the potential impact of these releases in the environment should be described. In addition, the maximum amounts of reservoir fluids to be disposed of by flaring in association with testing programs should be included in the EPP associated with such a program. In addition, the timing and duration of any planned flaring should be described both in terms of time of year and time of day. [*Refer to the requirements and associated guidance under section 167 of the Framework Regulations*]

6.3.5. Diving

In addition to the information requirements described under section 4.3.1 of this Guideline, a description of the diving system should be provided. Any planned discharges and limits for those discharges should be described. Potential accidental discharges and the measures put in place to prevent or reduce the potential impact of these releases in the environment should be described. [*Refer to the requirements and associated guidance in section 94 of the Framework Regulations*]

6.3.6. Construction

In addition to the information requirements described under section 4.3.1 of this Guideline, a description of associated construction equipment should be provided. Any potential hazards to the environment associated with the use of this equipment should be summarized and reference made to the measures that have been put in place to reduce the risks to the environment. Any planned discharges and limits for those discharges should be described. Potential accidental discharges and the measures put in place to prevent or reduce the potential impact of these releases in the environment should be described. [Refer to the general requirements under section 41 of the Framework Regulations]

6.3.7. Geoscientific, Geotechnical and Environmental

In addition to the information requirements described under section 4.3.1 of this Guideline, a description of associated geoscientific, geotechnical or environmental equipment should be provided. Any potential hazards to the environment associated with the use of this equipment should be summarized and reference made to the measures that have been put in place to reduce the risks to the environment. Any planned discharges and limits for those discharges should be described. Potential accidental discharges and the measures put in place to prevent or reduce the potential impact of these releases in the environment should be described. [Refer to the requirements and associated guidance under Part 5 of the Framework Regulations and general requirements under section 41 of the Framework Regulations]

6.4 Asset Integrity

Pursuant to paragraph 10(2)(c) of the *Framework Regulations*, the EPP must include a brief description of the systems in place for inspection, testing and maintenance of systems and equipment critical to the protection of the environment. General guidance on this topic is also provided in Part 3 of the Framework Guideline.

The following should be provided:

6.4.1. All Works or Activities

A brief description of the system in place for the inspection, testing and maintenance of all structures, facilities, equipment and systems critical to the protection of the environment should be provided. This should also include a brief description of the scope of what the system applies to and the competency of personnel performing inspection, testing and maintenance activities, including third party contractors.

In the development of the above, refer to the requirements and associated guidance which pertain to the above in the *Framework Regulations*, including reference to prescribed standards or any standards that have been adopted. In particular, reference should be made to paragraph 41(e) of the *Framework Regulations* and Section 4.3.1 of this Guideline as it lists the particular equipment which should be included under this program. The asset integrity program should also cover equipment for diving projects, construction programs and geoscientific, geotechnical and environmental programs as referred to in sections 4.3.5, 4.3.6 and 4.3.7 of this Guideline, respectively.

6.4.2. Production, Drilling or Accommodations Installations

For production, drilling or accommodations installations, reference should also be made to the requirements and associated guidance under sections 153, 154, 155, 158, 159, 160 and 161 of the *Framework Regulations*. In addition to Section 4.4.1 of this Guideline, the summary of the inspection, testing and maintenance system should also include the following:

- A description of and reference to associated integrity philosophies or maintenance strategies.
- A reference to any formal assessments of failure modes (e.g., failure modes and effects analysis) and mechanisms of safety-critical elements (which includes environmentally critical equipment).
- A description of the philosophy for performance standards for safety-critical elements, including how functional requirements, assurance and verification activities and reference to standards have been incorporated.
- A list of performance standards in relation to safety-critical elements.
- A description of the processes for notifying the *Regulator* and the Certifying Authority for any replacement or modification to safety-critical elements should be provided along with reference to associated procedures. [*Refer to the requirements and associated guidance under section 162 of the Framework Regulations*]
- A description of the procedures in place for bringing onboard temporary or portable equipment and references to associated procedures. [*Refer to the requirements and associated guidance under section 139 and 162 of the Framework Regulations*]



6.5 Operations and Maintenance Procedures

Pursuant to subsection 10(1) of the *Framework Regulations*, the EPP must set out the procedures and practices necessary to protect the environment from the effects of a proposed work or activity. Operators should also refer to the requirements and associated guidance under sections 41, 48 and 49 of the *Framework Regulations*. Guidance on operations and maintenance procedures is also provided in Part 3 of the *Framework Guideline*. A brief description of and reference to all operation and maintenance procedures to be used in relation to protection of the environment should be provided including those that have been developed by contractors and accepted by the operator. The brief description should include the scope and key commitments and reference to the procedures used for normal and emergency operations. Provided below is a list of processes that should be described, but this list is not exhaustive. If there are other critical processes that pose a hazard to the environment, those processes should also be described and communicated to persons. Operators should also refer to the cross-referenced sections of the regulations for requirements and associated guidance.

The EPP should include a description of the following based on the types of works or activities that are planned to be undertaken:

6.5.1. All Works or Activities

6.5.1.1. General

With respect to any operation or maintenance procedure critical to the environment, the following information should be included, if applicable:

- Any related decisions and exemptions from Flag State requirements. [Refer to the requirements and associated guidance for floating production, drilling and accommodations installations under section 151 of the Framework Regulations. Other types of vessels should also submit this information in relation to any IMO Code that has been adopted or for which has been incorporated into either the OHS or Framework Regulations]
- Any regulatory exemptions or substitutions that have been approved by the CCO.
- Any conditions or commitments related to the environment identified by the operator, *Regulator* or other authority located in any associated:
 - o Development Plan
 - Environmental Assessment (under the Accord Acts or under the Canadian Environmental Assessment Act)
 - Impact Assessment (under the Impact Assessment Act)

6.5.1.2. Physical and Environmental Conditions Observation and Reporting

A summary of and reference to the program for observing and forecasting physical and environmental conditions should be provided along with commitments for:

- the frequency of observation of marine, aviation (as applicable) and surface weather;
- the frequency of observation of pack ice and icebergs;
- the frequency and distribution of observations and forecasts of physical and environmental conditions to individuals with responsibilities under section 42 of the *Framework Regulations*, the *Regulator* and interested parties; and
- the process for verifying the quality of the observations and forecasts of physical and environmental conditions.

[Refer to the requirements and associated guidance in section 42 of the Framework Regulations]

6.5.1.3. Waste Management

A description of and reference to procedures associated with the treatment, handling and disposal of waste should be provided. For waste that will be discharged, guidance is provided in the *Offshore Waste Treatment Guideline*.

For waste material that will not be discharged from an offshore installation, a description of and reference to the procedures for the management of waste materials during temporary storage on an installation should be provided. This description should include procedures for classifying and separating waste streams and for handling and storing waste materials at the site. [Refer to the requirements in paragraph 10(2)(e) of the Framework Regulations]

6.5.1.4. Environmental Compliance Monitoring

A description of and reference to the procedures for monitoring compliance with the discharge limits should be provided. This should include reference to procedures for the sampling and analysis of discharges, including laboratory and calibration procedures and procedures for distribution of information to individuals responsible for prevention of pollution, the *Regulator* and interested parties. Guidance is provided in the *Offshore Waste Treatment Guideline*. [Refer to the requirements in paragraph 10(2)(g) of the Framework Regulations]

6.5.1.5. Environmental Effects Monitoring

A description of and reference to the procedures for environmental effects monitoring should be provided. Refer to any associated Environmental and Impact Assessments and any requirements for follow-up programs associated with those assessments.

6.5.1.6. Wildlife Monitoring

A description of and reference to the program for monitoring and handling of wildlife (e.g., mammals, birds) that may be affected during the program should be included. Refer to any associated Environmental and Impact Assessments and any requirements for monitoring associated with those assessments. This should also refer to any permits required for the handling of wildlife under other legislation.

6.5.1.7. Archaeological Sites or Burial Grounds

A description of and reference to the procedure to be followed if an archaeological site or a burial ground is discovered during the proposed work or activity should be included. [Refer to the requirements under paragraph 10(2)(j) of the Framework Regulations]

6.5.1.8. Work Permit

A description of the work permit system should be provided. This should describe how all activities at or near or workplace will be coordinated to ensure the protection of the environment. A reference to associated procedures should be provided. [With respect to all types of Marine Installations or Structures, refer to the requirements and associated guidance under paragraph 4(1)(z) of the Framework Regulations. For production, drilling and accommodations installations, refer also to sections 101 and 102 of the Framework Regulations]

6.5.1.9. Simultaneous Operations

A description of and reference to the procedures for the management of simultaneous operations should be provided. [Refer to the requirements and associated guidance under section 4.1.2 of the Contingency Plan Guideline]

6.5.1.10. Consumables

A description of the minimum and maximum quantities of consumables required for normal operations and any reasonably foreseeable emergency situation should be provided, along with the measures in place to ensure that their storage and handling prevents pollution as referred to in section 42 and 43 of the *Framework Regulations*. The rationale used to arrive at the quantity should also be explained. Examples to be described should include:

- a. the minimum and maximum quantities to be maintained at the operations site should include, as applicable:
 - i. diesel fuel;
 - ii. aviation fuel, if required;





- iii. spill-treating agents, if required; and
- iv. spill containment products, if required;
- b. the minimum and maximum quantities to be maintained for well operations should include, as applicable:
 - i. barite;
 - ii. bentonite;
 - iii. drill water;
 - iv. cement; and
 - v. other consumables; and
- c. the minimum and maximum quantities to be maintained onboard for production operations should include, as applicable:
 - i. methanol;
 - ii. monoethylene glycol; and
 - iii. other consumables.

[Refer to the requirements and associated guidance under section 44 of the Framework Regulations]

6.5.1.11. Contingency Plans

A reference to the Contingency Plans and associated emergency response procedures should be included. [Refer to the requirements and associated guidance under section 11 of the Framework Regulations and the associated Contingency Plan Guideline]

6.5.2. Support Craft

The procedures used in relation to the protection of the environment for support craft related works or activities should be described along with references to associated procedures. Guidance on the types of procedures which should be included are provided below. [Refer to the requirements and associated guidance under paragraph 41(g) of the Framework Regulations]

6.5.2.1. Support Vessel Operations

A description of and reference to procedures in relation to environmental protection should include:

- Cargo operations
- Ice management
- Spill response
- Bulk transfer

[Refer to the requirements and associated guidance under paragraph 41(g) of the Framework Regulations]

6.5.2.2. Shuttle Tanker Operations

A description of and reference to procedures in relation to shuttle tanker operations should be provided. This should include pre-entry checks, station keeping and measures taken to prevent a discharge into the environment during the transfer of petroleum to a shuttle tanker. [*Refer to the requirements and associated guidance under section 11 (in relation to collision avoidance) and paragraph 41(g) of the Framework Regulations*]

6.5.3. Production, Drilling and Accommodations Installations

In addition to the procedures described under section 4.5.1 of this Guideline, the following should be described with respect to production or drilling activities or which use an accommodations installation in support of that activity:

6.5.3.1. System Operating Procedures

A general description of the content of system operating procedures should be provided. Guidance for system operating procedures is provided in section 73 of the *Framework Guideline*. Operating and maintenance procedures should be developed and implemented for all systems or equipment (even those not listed below). The EPP should make reference to each one of the operating and maintenance procedures, including those implemented by contractors, which may be relevant to environmental protection. System operating procedures should include the following topics, as applicable:

- General Systems
 - Blanketing systems (including inert gas, nitrogen or other systems) [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]
 - Hydraulic systems [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]
 - Aviation fuel system [Refer to the requirements and associated guidance under sections 175 and 176 of the Framework Regulations]
 - Diesel fuel system [*Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations*]
 - Bulk transfer system [*Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations*]
 - Sewage system [Refer to the requirements and associated guidance under Part 11 of the OHS Regulations and sections 135 and 136 of the Framework Regulations]



- Marine Systems
 - Ballast and bilge system [Refer to the requirements and associated guidance under section 144 of the Framework Regulations]
 - Radar system [Refer to the requirements and associated guidance under section 128 of the Framework Regulations]
 - Physical and environmental conditions monitoring equipment (including foundation monitoring equipment) [*Refer to the requirements and associated guidance under section 109 of the Framework Regulations*]
- Environmental Systems
 - Open and closed drains systems [Refer to the requirements and associated guidance under section 135 of the Framework Regulations]
 - Control and monitoring system (including offshore and onshore control rooms) [Refer to the requirements and associated guidance under sections 123, 124, 125 and 169 of the Framework Regulations]
 - Emergency shutdown system [Refer to the requirements and associated guidance under section 133 of the Framework Regulations]
 - Gas release systems (e.g., pressure relief, depressurizing, venting, flaring) [Refer to the requirements and associated guidance under section 131 of the Framework Regulations]

A reference to any other procedures critical to operations and maintenance should also be included, such as pre-start-up safety review procedures, start-up procedures or black start procedures.

6.5.3.2. Specific Operating Procedures

A description and reference to the specific operating procedures to be implemented onboard the installation in respect of protection of the environment. This should include a description of the processes in place for controlling valve positions on systems which discharge into the environment along with reference to associated procedures. [*Refer to the requirements and associated guidance under section 73 of the Framework Regulations*]

6.5.3.3. Chemical Selection, Evaluation and Use

A description of and reference to procedures associated with the selection, evaluation and use of chemical substances, including process chemicals and drilling fluid ingredients, as applicable, should be provided. Guidance on chemical selection is provided in the Offshore Chemical Selection Guidelines. [Refer to the requirements and associated guidance in paragraph 10(2)(d) and sections 44 and 45 of the Framework Regulations]

6.5.4. Production

In addition to the procedures described under section 4.5.1 and 4.5.3 of this Guideline, the following should also be described only with respect to installations conducting production-related activities, even if it is a contractor procedure. System operating procedures should include the following topics, as applicable: [Refer to the requirements and associated guidance under sections 73 and 157 of the Framework Regulations]

- Subsea production systems, including chemical injection and pigging systems [Refer to the requirements and associated guidance under section 138 of the Framework Regulations]
- Separation system [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]
- Produced water treatment system [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]
- Water injection system [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]
- Gas compression system [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]
- Fuel gas system [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]
- Gas injection and gas lift system [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]
- Crude storage system [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]
- Metering system [Refer to the requirements and associated guidance under sections 14, 77, 135 and 136 of the Framework Regulations]
- Offloading system [Refer to the requirements and associated guidance under sections 135 and 136 of the Framework Regulations]
- Pipeline system [Refer to the requirements and associated guidance under section 168 of the Framework Regulations]

6.5.5. Well Operations

In addition to the procedures described under section 4.5.1 and 4.5.3 of this Guideline, the following should also be described only with respect to installations conducting well operations-related activities: [Refer to the requirements and associated guidance under sections 73 and 157 of the Framework Regulations]

6.5.5.1. System Operating Procedures

System operating procedures should include the following topics, as applicable:



- Drilling fluid systems (including the high pressure mud system, low pressure mud system, bulk system, cement system, mud conditioning system, degassing system and cuttings cleaning system) [Refer to the requirements and associated guidance under section 163 of the Framework Regulations]
- Well control systems [Refer to the requirements and associated guidance under section 68 of the Framework Regulations]
- Drilling riser system [Refer to the requirements and associated guidance under section 164 of the Framework Regulations]
- Formation flow testing system [*Refer to the requirements and associated guidance under section 167 of the Framework Regulations*]

6.5.5.2. Drilling and Well Operation Procedures

A description and reference to associated policies and procedures for the following should be included, as applicable:

- Drilling fluid material balance and tripping management procedures [Refer to the requirements and associated guidance under sections 73 and 163 of the Framework Regulations]
- Hang-off and emergency disconnect procedures. [Refer to the requirements and associated guidance under sections 68 and 73 of the Framework Regulations]
- Source control well planning considerations, capping limitations and description of any additional analysis conducted. [Refer to the requirements and associated guidance under sections 11 and 73 of the Framework Regulations]
- Formation flow testing a description of the formation flow testing practices and associated precautions to be taken to ensure the protection of the environment. [Refer to the requirements and associated guidance under sections 63 and 167 of the Framework Regulations]

6.5.6. Diving

In addition to the procedures described under section 4.5.1 of this Guideline, any *Marine Installation or Structure* carrying out diving activities should include a description of the operating and maintenance procedures for all diving systems with the potential to emit into the air, discharge into the environment or create other environmental hazards and it should include a description of any equipment put in place to protect the environment. A reference to associated procedures should be included. [*Refer to the requirements and associated guidance under Part 9 of the Framework Regulations*]

6.5.7. Construction

In addition to the procedures described under section 4.5.1 of this Guideline, any *Marine Installation or Structure* carrying out construction activities should include a description of the operating and maintenance procedures for all diving systems with the potential to emit into the air, discharge into the environment or create other environmental hazards and it should include a description of any equipment put in place to protect the environment. A reference to associated procedures should be included.

6.5.8. Geoscientific, Geotechnical and Environmental

In addition to the procedures described under section 4.5.1 of this Guideline, any *Marine Installation or Structure* carrying out geoscientific, geotechnical or environmental activities should include a description of the operating and maintenance procedures for all diving systems with the potential to emit into the air, discharge into the environment or create other environmental hazards and it should include a description of any equipment put in place to protect the environment. A reference to associated procedures should be included. Details with respect to deployment and testing should also be included along with a description of measures in place. [*Refer to the requirements and associated guidance under Part 7 of the Framework Regulations*]

6.6 Organizational Structure and Roles, Responsibilities and Authorities

Pursuant to paragraph 10(2)(h) of the *Framework Regulations*, the EPP must include a description of the organizational structure and chain of command for the proposed work or activity. Operators should refer to the requirements and associated guidance on organizational structures provided in section 3 and Part 3 of the *Framework Regulations*.

The following information should be included:

- A description of how it has been ensured that there will be a sufficient number of personnel available to complete the authorized work or activities, including dealing with emergencies to ensure protection of the environment. This should include a description of succession planning in the event an individual becomes impaired or unavailable for work.
- The organizational structure for the operation (including onshore and offshore roles, communication interfaces to key contractors and providers of service including those in the field or onshore). This should indicate the number of positions in each role and how many are working days/night and should also be reflective of the scope associated with the mode of operation (e.g., transportation, construction, operation, decommissioning). This can be depicted on a chart.
- Unless it has been included in the contingency plan, a description of the organizational structure for emergency operations

- A description of the roles, responsibilities and authorities of critical personnel and classes of personnel (e.g., groups, departments) in respect of protection of the environment should be included. This should include onshore management, onshore roles, offshore management and key service providers. In addition, the general duties of the operator, employers, supervisors and employees should be included. This should also describe each of the parties role in implementing the EPP.
- The position of the person accountable for the EPP and person(s) responsible for implementing it.
- The roles, responsibilities and authorities of personnel with respect to the *Regulator* (inclusive of the CCO, Conservation Officers) and the Certifying Authority, if applicable, should be included.

The roles, responsibilities and authorities of personnel with respect to other agencies involved in safety matters, should be described and include:

- Other applicable regulatory agencies (e.g., Canadian Coast Guard, Impact Assessment Agency of Canada, Environment and Climate Change Canada, Department of Fisheries and Oceans)
- Classification society, if applicable
- Marine warranty surveyor, if applicable
- Flag State, if applicable

6.7 Training and Competency Assurance

Pursuant to subsection 10(1) of the *Framework Regulations*, the EPP must set out a description of practices and resources. Operators should refer to the requirements and associated guidance on experience, training, qualifications and competence provided in section 3 and Part 3 of the *Framework Regulations*.

Any equipment or process that has been described in the EPP should be linked to the competency assurance program. The description of the training and competency processes should include those that have been developed by contractors and accepted by the operator, if they are different. In addition to any requirements of the *Framework Regulations*, the training and competency program should include reference to requirements from associated standards referenced in this regulation or any standards that have been adopted. In addition, if risk assessments identify or assume that specialized training or competency requirements will be provided, this should also be reflected with reference to where the requirement was obtained.

The following information should be included:

6.7.1. All Works or Activities

• A description of and reference to the program in place for provision of qualified, trained and competent personnel should be provided. This should include:





- Selection and placement
- Qualifications
- Emergency response training
- Emergency response exercises and drills
- Competency assurance program
- Confirmation should be provided that persons are qualified, trained and competent to perform all normal or emergency duties prior to being assigned.
- A reference to specific requirements should be specified and include:
 - o Environmental awareness training
 - o Aviation, marine and ice weather observation training
 - Radar operator training
 - Regulatory awareness training (including orientation to the EPP)
 - Wildlife observation and handling training
- Confirmation should be provided that any changes to requirements for key personnel are communicated.

Short term programs may submit a detailed training matrix in lieu of including details in the EPP as long as it includes every position onboard (e.g., covers marine crew, technical crew, medic, fishery liaison officers, marine mammal observers). However, if there is a crew change during the course of the project or program, updated information (e.g., training matrix) should be provided and acknowledged by the *Regulator* prior to the crew change occurring.

6.7.2. Production Projects and Drilling Programs

In addition to the information requested under Section 4.7.1 of this Guideline, this should include:

- A reference to the procedures in place for maintaining role descriptions for each position, including those for emergency response.
- A reference to the procedures for ensuring roles and responsibilities are communicated.
- A description of the process in place for maintaining and tracking training and qualifications and ensuring that changes are appropriately managed and communicated.
- A description of the competency assurance program which describes how persons are assessed as competent on installation specific equipment and procedures in relation to their role, including dealing with upsets or emergencies. The description should also include reference to the competency program in place for competency assessors.

6.8 Compliance Monitoring, Performance Measurement and Continual Improvement

Pursuant to paragraph 10(2)(i) of the *Framework Regulations*, the EPP must describe the measures to be implemented to monitor compliance with the plan and to evaluate performance in relation to its objectives. Operators should refer to the requirements and

associated guidance on management systems provided in Part 3 of the *Framework Regulations*.

The EPP should include a description of the following:

6.8.1. Performance Indicators

A description of the performance indicators established in relation to the goals for protection of the environment should be provided along with reference to associated procedures for the collection and analysis of data. A description of the process for identifying issues and making improvements should be provided.

6.8.2. Monitoring

A description of and reference to the processes in place for monitoring compliance with procedures and standards by leadership and supervisors should be included along with reference to associated procedures. This should include behavior based observations, observation of tasks or monitoring of other critical activities, such as the management of work permits in relation to protection of the environment.

6.8.3. Audits and Inspections

A description of and reference to the processes in place for the conduct of audits and inspections should be included along with reference to associated procedures. This should include but not be limited to the following:

- Internal audits
- Audits of employers
- Audits of providers of services (e.g., including contractors, service providers)
- Audits of suppliers
- Workplace inspections
- Observation of critical processes such as the work permit process and critical tasks.

6.8.4. Incident Reporting and Investigation

A description of and reference to the incident reporting and investigation process should be provided along with reference to associated procedures. [*Refer to the requirements and associated guidance under section 179 of the Framework Regulations*]

6.8.5. Lessons Learned

A description of and reference to the processes in place for the following should be provided:

- Collection and sharing of lessons learned during programs or projects.
- Issuance of HSE alerts and bulletins
- Review and distribution of relevant HSE alerts and bulletins that have been issued by others.

6.8.6. Management Review

A description of and reference to the processes in place for conducting management reviews of performance indicators, compliance monitoring, environmental effects monitoring, audits and inspections, incidents and lessons learned and how any outcomes from these reviews will be addressed to achieve continual improvement of the management system.

6.8.7. Reporting to the Regulator and Other Authorities

In addition to the reporting requirements referred to in Part 12 of the *Framework Regulations*, there may be other reporting requirements identified as part of the Development Plan process or associated Environmental and Impact Assessments. A description and reference to procedures for submission of other types of reports and the frequency at which these reports are submitted should be provided.