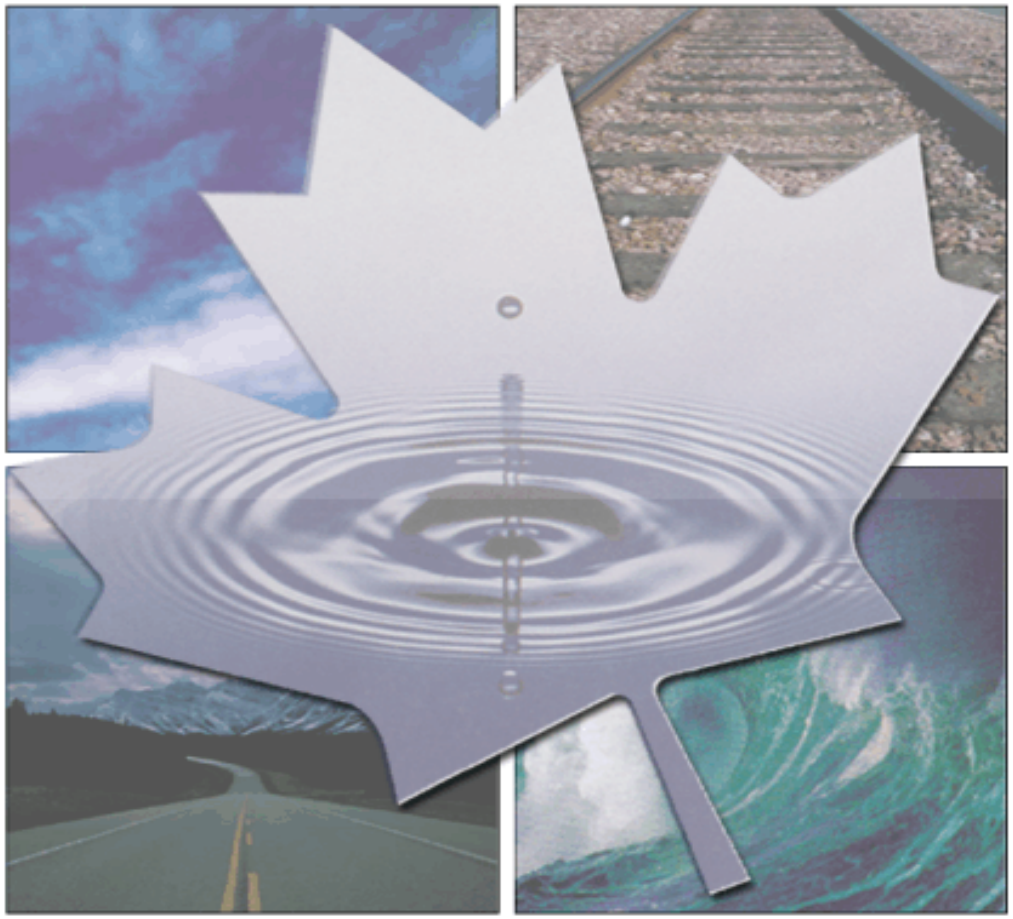
Audit and Advisory Services

Integrity, Innovation and Quality



Follow-Up Audit of Ship-Source Spills

June 2017

EXECUTIVE SUMMARY I
Introduction i
Audit Objective and Scope ii
Conclusion iii
Statement of Conformance iii
1. **INTRODUCTION 1**
1.1. Purpose 1
1.2. Background 1
1.3. Audit Objectives and Scope 5
1.4. Criteria and Approach 5
1.5. Report Structure 6
2. **FINDINGS 7**
2.1. Risk Assessments 7
2.2. Response Readiness 9
2.3. Hazardous and Noxious Substance Data 12
2.4. Long-Term Vision and Strategy for the Arctic 16
3. **CONCLUSION 18**
4. **APPENDIX "A": SUMMARY OF KEY LEGAL OBLIGATIONS FOR DISCLOSING THE MOVEMENT OF CARGO, INCLUDING HNS 19**

EXECUTIVE SUMMARY

INTRODUCTION

Maritime shipping is an important part of the Canadian economy. Increased vessel traffic may bring a greater risk of damage to the marine environment through spills that can have significant impacts on both the environment and local coastal communities. Substances of concern include oil as well as hazardous and noxious substances[1] (HNS). Because the properties of oil and HNS are different, they require specific response plans designed for each. This has been recognized both domestically and internationally with the separation of the two response regimes (one dealing with oil and the other with HNS) under the International Maritime Organization's (IMO) International Convention on Oil Pollution Preparedness, Response and Co-operation. The IMO is the United Nations specialized agency responsible for the safety and security of shipping and the prevention of marine pollution by ship.

Under federal legislation and international agreements, the federal government is responsible for implementing measures to prevent, detect, prepare for, and respond to spills from ships in Canada's marine environment. Transport Canada (TC) is the lead regulatory agency for the Marine Oil Spill Preparedness and Response Regime. TC sets guidelines and establishes the regulatory framework for preparedness and response to ship-source spills. TC is also responsible for developing the regime for HNS. Fisheries and Oceans Canada's Canadian Coast Guard is the lead federal agency for responding to spills and is responsible for ensuring an appropriate response takes place. Canada Border Services Agency provides integrated border services that support national security and public safety priorities and facilitate the free flow of legitimate persons and goods, such as oil and HNS, so that their transport meets all legislative requirements.

Since 2010, the Commissioner of the Environment and Sustainable Development (CESD) has conducted four audits involving maritime spills of oil, hazardous materials, and noxious materials. The 2010 CESD Audit of Oil Spills from Ships found that Canada does not have a Marine HNS Incident Preparedness and Response Regime in place.

The management of ship-source spills has been continually evolving. In 2010, the management of ship-source spills was divided into four phases, namely Prevention, Detection, Preparedness and Response.

In 2012, the federal government approved a multi-year initiative, titled the World Class Tanker Safety System (WCTSS), to elevate Canada's current prevention, preparedness and response regime to world-class status.

---

[1] Hazardous and noxious substances (HNS), according to the Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances, is a substance other than oil that, if introduced into the marine environment, is likely to create hazards to human health, to harm living resources and marine life, to damage amenities, or to interfere with other legitimate uses of the sea.

With the change in government in 2015, TC began developing legislation to put in place a moratorium on crude oil tankers on British Columbia's north coast. Additionally, building on previous work under the WCTSS initiative, expert reports, and stakeholder feedback, TC committed to strengthen marine safety across Canada's coastlines through the announcement of the Oceans Protection Plan in 2016.

AUDIT OBJECTIVE AND SCOPE

The Follow-Up Audit of Ship-Source Spills was included in Internal Audit's 2016/19 Audit Plan. The objective of the internal audit was to ensure that recommendations from the four CESD audits, either directed at TC or directed at others but requiring TC input, have been addressed.

For the five audit recommendations directed at TC that have been reported as complete, the objective was to provide assurance that TC's management action plans (MAPs)

- have been implemented,
- are working as designed, and
- are addressing the original audit finding.

For the one audit recommendation directed at TC that had not yet been reported as complete, this follow-up audit confirmed its current status.

There were three audit recommendations directed at other stakeholders that required TC's input. TC was not required to provide MAPs to address these audit recommendations. The audit objective in these cases was to confirm that TC had provided the necessary input to the other stakeholders.

CONCLUSION

We found that the Department has fully implemented its MAPs regarding all audit recommendations directed at TC.

For the three recommendations directed to other stakeholders, with input required from TC, the Department has either provided or is prepared to provide whatever information and assistance that is ultimately requested.

STATEMENT OF CONFORMANCE

This Audit conforms to the Internal Auditing Standards for the Government of Canada, as supported by the results of an external assessment of Internal Audit's *Quality Assurance and Improvement Program*.

Dave Leach (CIA, MPA) Director, Audit and Advisory Services

Martin Rubenstein (CPA, CIA, CFE) Chief Audit and Evaluation Executive

1. INTRODUCTION

1.1. PURPOSE

The Follow-Up Audit of Ship-Source Spills was included in Internal Audit's 2016/19 Audit Plan. The objective of the internal audit was to ensure that recommendations from the following Commissioner of the Environment and Sustainable Development (CESD) audits, directed at Transport Canada (TC) or directed at others but requiring TC input, have been addressed:

- 2010 Fall Report – Chapter 1 – Oil Spills from Ships
- 2012 Fall Report – Chapter 1 – Atlantic Offshore Oil and Gas Activities
- 2012 Fall Report – Chapter 2 – Financial Assurances of Environmental Risks
- 2014 Fall Report – Chapter 3 – Marine Navigation in the Canadian Arctic

1.2. BACKGROUND

International Requirements

Maritime shipping is an important part of the Canadian economy. Increased vessel traffic may pose a greater risk to the marine environment through spills that can have significant impacts on both the environment and local coastal communities. Substances of concern include oil as well as hazardous and noxious substances (HNS). Because the properties of oil and HNS are different, they require specific response plans designed for each substance. This has been recognized both domestically and internationally with the separation of the two response regimes—one dealing with oil and the other with HNS—under the International Maritime Organization's (IMO) *International Convention on Oil Pollution Preparedness, Response and Co-operation*. The IMO is the United Nations specialized agency responsible for the safety and security of shipping and the prevention of marine pollution by ship. In 2000, the IMO adopted a *Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances* (OPRC-HNS Protocol) that provides a high-level framework for international cooperation on preparing for and responding to HNS incidents in the marine environment. Canada will be able to seek accession to the OPRC-HNS Protocol after it has developed a HNS Preparedness and Response Regime that addresses the requirements of the Protocol.

Under federal legislation and international agreements, the federal government is responsible for implementing measures to prevent, detect, prepare for, and respond to spills from ships in Canada's marine environment. TC is the lead regulatory agency for the Marine Oil Spill Preparedness and Response Regime. TC sets guidelines and establishes the regulatory framework for preparedness and response to ship-source spills. TC is also responsible for developing a Preparedness and Response Regime for HNS. Fisheries and Oceans Canada's Canadian Coast Guard is the lead federal agency for responding to spills and is responsible for ensuring an appropriate response takes place. Canada Border Services Agency provides integrated border services that support national security and public safety priorities and facilitates the free flow of legitimate persons and goods, such as oil and HNS, so that their transport meets all legislative requirements.

In 2014, Bill C-3, *Safeguarding Canada's Seas and Skies Act* became law wherein Canada adopted IMO's *International Convention on Liability and Compensation for Damage in*

Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention). The HNS Convention establishes a liability scheme to compensate victims in the event of a spill of HNS at sea.

CESD Audits
The Commissioner of the Environment and Sustainable Development (CESD) conducted four audits involving maritime spills of oil, hazardous materials, and noxious materials from 2010 to 2014. The following highlights audit findings and recommendations, including the general theme of each audit finding.

2010 Fall Report – Chapter 1 – Oil Spills from Ships

The audit was concerned only with ship-source pollutants and did not include other sources such as oil drilling rigs, ports, oil-handling facilities, and land based sources. In addition, the audit focused only on preparedness and response activities and did not address either prevention or detection activities.

Audit recommendations 1.32[2], 1.42 and 1.79 were directed at TC while recommendation 1.61 was directed at the Canadian Coast Guard but requiring TC input.

- FINDING - Some risk assessments need updating. (Theme - Risk Assessments)
  - RECOMMENDATION 1.32

    Building on the risk assessments conducted to date, Transport Canada and the Canadian Coast Guard should conduct a risk assessment related to ship-source oil spills covering Canada's three coasts. The risk assessment should be conducted in consultation with Environment Canada and the shipping industry.

    Transport Canada and the Canadian Coast Guard should put in place processes so that risks are reviewed on an ongoing basis and the risk assessment is updated as required.

- FINDING – Emergency management plans are not all up to date. (Theme – Response Readiness)
  - RECOMMENDATION 1.42

    To ensure that emergency management plans remain up to date, Transport Canada, the Canadian Coast Guard, and Environment Canada should establish processes for reviewing their national and regional plans on a regular basis and updating them as required (for example, due to changes in risks, legislation, roles and responsibilities, and/or lessons learned from significant incidents or exercises).

- FINDINGS – There is no national regime for ship-source chemical spills; Canada lacks a formal framework for responding to ship-source chemical spills including

[2] Represents the number assigned in the original CESD audit report to each audit recommendation.

clear roles and responsibilities; and, data on the type and quantity of hazardous and noxious substances transported by ship is not at a level of detail appropriate for the Department's [TC's] needs. (Theme – Hazardous and Noxious Substance Data)

- RECOMMENDATION 1.79

  In order to facilitate the development of a hazardous and noxious substance regime in Canada, Transport Canada should take the necessary steps to ensure that it has adequate data on the type and quantity of hazardous and noxious substances transported by ship in Canada.

- FINDING – Procedures for verifying preparedness of the Canadian Coast Guard are not in place. (Theme – Response Readiness)
  - RECOMMENDATION 1.61

    In order to ensure the readiness of the Government of Canada's operational response capacity, the Canadian Coast Guard, with input from Transport Canada, should periodically verify its preparedness to respond to ship-source oil spills (based on predetermined procedures and criteria).

2012 Fall Report – Chapter 1 – Atlantic Offshore Oil and Gas Activities

The audit focused on offshore oil and gas exploration in the Atlantic. Audit recommendation 1.85 was directed at TC. Audit recommendation 1.72 and 1.84 required TC input.

- FINDING – The Newfoundland–Labrador Board has not obtained adequate assurance that operators are ready to respond effectively to a spill. (Theme – Response Readiness)
  - RECOMMENDATION 1.72

    The boards [Canada-Newfoundland and Labrador Offshore Petroleum Board and the Canada-Nova Scotia Oil Petroleum Board] should seek the advice of Transport Canada, the Canadian Coast Guard, and international partners to design an approach for third party verification of the capacity of organizations that would respond to spills from offshore oil and gas facilities.

- FINDING – The boards and supporting federal departments need to do more to prepare for a major oil spill. (Theme – Response Readiness)
  - Poorly coordinated plans
  - Incomplete board agreements with federal entities
  - Unresolved jurisdictional issues between entities
  - Inadequate testing
  - Insufficient oil spill response tools

  - RECOMMENDATION 1.84

    The boards [Canada-Newfoundland and Labrador Offshore Petroleum Board and the Canada-Nova Scotia Oil Petroleum Board] should work with appropriate federal departments and agencies, and other

organizations as necessary, to ensure that individual and collective response plans for a major oil spill are adequately resourced and coordinated, well defined, and regularly tested, individually and collectively. The plans should be supported by up-to-date and effective memoranda of understanding between all involved parties.

- RECOMMENDATION 1.85

  Natural Resources Canada, the Canadian Coast Guard, Transport Canada, and Environment Canada should work with the boards and others, as necessary, to establish and clarify the roles and responsibilities of federal government departments and agencies in the event of a major oil spill, as well as the resources that would be available. This should include a coordinated response plan.

2012 Fall Report – Chapter 2 – Financial Assurances of Environmental Risks

The audit focused on managing the risks of financial impact resulting from environmental damages caused, in part, by offshore oil and gas exploration and marine transportation (ship spills). Recommendation 2.66 was directed at TC.

- FINDING – Transport Canada has not updated its maritime transport risk assessment. (Theme – Risk Assessments)
  - RECOMMENDATION 2.66

    Transport Canada should carry out a comprehensive risk review of the maritime transportation liability and compensation system. The review should take into consideration the limited ship-based oil spill response capacities and the projected increase in tanker size and traffic transporting environmentally harmful substances in Canadian waters.

2014 Fall Report – Chapter 3 – Marine Navigation in the Canadian Arctic

The audit focused on ship spills in the Arctic and Hazardous and Noxious Substances (HNS) from ships nationally. The audit specifically excluded preparedness and response activities as they were included in the CESD 2010 Audit. The audit did however include "surveillance and monitoring of marine traffic and spills". Recommendation 3.73 was directed at TC.

- FINDING – No department has a coordinated strategy for safe marine transportation in the Arctic. (Theme – Long-Term Vision and Strategy for the Arctic)
  - RECOMMENDATION 3.73

    Transport Canada, in consultation with Fisheries and Oceans Canada, Environment Canada, other federal departments and agencies, as well as partners and other stakeholders as appropriate, should lead the development of a long-term vision and strategy for safe Arctic marine transportation. This could be aligned with Canada's Northern Strategy and could build on the work already underway by departments such as the Northern Marine Transportation Corridors Initiative and the Northern Transportation Action Plan.

Since 2010, the management of ship-source spills has been continually evolving. In 2012, the federal government approved a multi-year initiative to elevate Canada's current prevention, preparedness and response regime to world-class status. This horizontal initiative included Environment and Climate Change Canada, Fisheries and Oceans Canada, Natural Resources Canada and TC. The name has changed over time with the current name of the overall initiative being World Class Tanker Safety System (WCTSS) with over 30 initiatives.

One of the initiatives under the WCTSS was the convening of a Tanker Safety Expert Panel which issued two reports. The first report, issued in 2013, reviewed the Ship-Source Oil Spill Preparedness and Response Regime south of the 60th parallel north. The second report, issued in 2014, reviewed ship-source spill prevention, preparedness and response requirements for the Arctic (north of the 60th parallel north) as well as requirements for a hazardous and noxious substances (HNS) system nationally.

With the change in government in 2015, TC started developing legislation to put in place a moratorium on crude oil tankers on British Columbia's north coast. Further, building on previous work under the WCTSS initiative, expert panel reports, and stakeholder, Indigenous communities and public feedback, TC has developed a new strategy to strengthen marine safety across Canada's coastlines. In 2016, the Minister of Transport, together with the Prime Minister, announced an Oceans Protection Plan. The plan is to improve marine safety and responsible shipping; protect Canada's marine environment; and strengthen partnerships with Indigenous and coastal communities.

1.3. AUDIT OBJECTIVES AND SCOPE

For the five audit recommendations directed at TC that have been completed, the follow-up audit's objective was to provide assurance that TC's management action plans (MAPs)

- have been implemented,
- are working as designed, and
- are addressing the original audit findings.

For the one audit recommendation directed at TC that had not been reported as completed, the audit confirmed the current status of the actions taken to address the recommendation.

In addition, there were three audit recommendations directed at other stakeholders that required TC's input. TC was not required to provide MAPs to address these audit recommendations. The follow-up audit's objective in these cases was to confirm that TC had provided the necessary input to the other stakeholders.

1.4. CRITERIA AND APPROACH

The nine CESD audit recommendations involving TC represented the criteria for this audit.

The general audit approach was through interviews and document reviews.

It is important to note TC's Evaluation team led a government-wide implementation review of the World Class Tanker Safety System initiative, and the Audit and Evaluation teams collaborated and worked together. The follow-up audit findings combined with the evaluation results provide the Department with a holistic assessment of ship-source spills in Canada.

1.5. REPORT STRUCTURE

The nine CESD audit recommendations have been grouped into the following themes:

- Risk assessments
- Response readiness
- Hazardous and noxious substance data
- Long-term vision and strategy for the Arctic

As a result, more than one CESD report may be reflected in a theme. We describe each recommendation as it originally appeared in the relevant CESD report along with the Department's original action plan. We also describe our expectations and assessment, along with some context around our assessment, and a summary of areas requiring further attention, when applicable.

The status according to Marine Safety or Marine Policy reflects the current state of the management action plan as reported by Marine Safety or Marine Policy.

Internal Audit assessed the status as reported by Marine Policy or Marine Safety using the following scale:

Implementation Assessment	**Description**
Complete	All aspects of the audit recommendation have been met.
On Track	Some aspects of the audit recommendation have been met and the remainder of actions to be taken will be implemented by the targeted completion date.
Not on Track	Implementation of the recommendation is not progressing as anticipated and the targeted completion date may not be met.

2. FINDINGS

2.1. RISK ASSESSMENTS

Recommendations

1.32 - Oil Spills from Ships: Building on the risk assessments conducted to date, Transport Canada and the Canadian Coast Guard should conduct a risk assessment related to ship-source oil spills covering Canada's three coasts. The risk assessment should be conducted in consultation with Environment Canada and the shipping industry.

Transport Canada and the Canadian Coast Guard should put in place processes so that risks are reviewed on an ongoing basis and the risk assessment is updated as required.

2.66 - Financial Assurances of Environmental Risks: Transport Canada should carry out a comprehensive risk review of the maritime transportation liability and compensation system. The review should take into consideration the limited ship-based oil spill response capacities and the projected increase in tanker size and traffic transporting environmentally harmful substances in Canadian waters.

	Status as per	
	Marine Safety or Marine Policy	**Internal Audit**
Department's Action Plan for Recommendation 1.32		
• Transport Canada will provide input to the Canadian Coast Guard to ensure the federal government's preparedness and response to ship-source spills is satisfactory. This will be done through avenues such as meetings of the Regional and National Advisory Councils on the oil spill preparedness and response regime.	**Complete**	**Complete**
• The proposed risk assessment recommended in 1.31 will also take into account the federal government's preparedness and response to ship-source spills. Preliminary scoping of this risk assessment will commence by fiscal year-end.	**Complete**	**Complete**
Department's Action Plan for Recommendation 2.66		
• 1) Define scope of review and develop project plan. 2) Hold discussions with administrations in other countries with similar regimes, such as the U.S. and produce an analytical report of international comparisons. 3) Draft preliminary discussion paper for potential industry consultations. 4) Consult with key industry stakeholders. 5) Draft report on industry consultations. 6) Draft policy options paper. 7) Finalize policy options.	**Complete**	**Complete**

Internal Audit expected:

- *Marine Safety would conduct a risk assessment related to ship-source oil spills covering Canada's three coasts.*
- *Marine Safety would have processes in place so that risks are reviewed on an ongoing basis and that a national risk assessment is conducted at a minimum every 10 years.*
- *Marine Policy would carry out a comprehensive risk review of the maritime transportation liability and compensation system.*

Internal Audit's assessment

Marine Safety completed a risk assessment related to ship-source oil spills covering Canada's three coasts. Marine Safety has a policy in place to ensure that risks are reviewed on an ongoing basis and that a national risk assessment will be conducted a minimum every 10 years. Marine Policy completed a comprehensive risk review of the maritime transportation liability and compensation system. As a result, the management action plans have worked as intended and have addressed the original CESD audit findings pertaining to risk assessments.

Observations to support Internal Audit's assessment of recommendation 1.32

TC took the lead on recommendation 1.32 and contracted out the national risk assessment related to ship-source oil spills covering Canada's three coasts to a professional firm, with consultation with the Canadian Coast Guard throughout the process. The national risk assessment was broken down in two phases (to mirror the two phases of the Tanker Safety Expert Panel review): South of 60 degrees north latitude and north of 60 degrees north latitude. The two risk assessments focused on all ship-source oil spills, as well as spills of HNS, on Canada's three coasts and were released in November 2013 and April 2015 respectively.

The recommendation also called for consultations with Environment Canada and the shipping industry. In order to ensure the risk assessment was completed in time to serve as input into the Tanker Safety Expert Panel in its review of Canada's Ship-Source Preparedness and Response Regime, a full consultative process did not occur. In its place, the Department engaged marine experts, select Port Authorities as well as several government departments in the development of the national risk assessment.

The recommendation also called for risks to be reviewed on an ongoing basis and at that a national risk assessment be conducted at a minimum every ten years. TC established a policy in 2015 requiring the review of risks on an on-going basis and the conduct of a national risk assessment at least every ten years, starting from the date of the last national risk assessment. The last national risk assessment was completed in 2013. Marine Safety will review the policy in 2018 (5 years prior to the deadline) at which point decisions will be made as to the current state of the oil regime and the funding to undertake a national risk assessment.

Observations to support Internal Audit's assessment of recommendation 2.66

A review of the liability and compensation regime was completed in February 2014. The review focused on the domestic Ship-Source Oil Pollution Fund (SOPF) and what enhancements were

necessary to make Canada's liability and compensation regime world-class. The review also considered the results of the overall risk assessment. The results of the work on the comprehensive risk review of the maritime transportation liability and compensation system are reflected in the Oceans Protection Plan announced by the Federal Government on November 7, 2016.

2.2. RESPONSE READINESS

Recommendations

1.42 - Oil Spills from Ships: To ensure that emergency management plans remain up to date, Transport Canada, the Canadian Coast Guard, and Environment Canada should establish processes for reviewing their national and regional plans on a regular basis and updating them as required (for example, due to changes in risks, legislation, roles and responsibilities, and/or lessons learned from significant incidents or exercises).

1.61 - Oil Spills from Ships: In order to ensure the readiness of the Government of Canada's operational response capacity, the Canadian Coast Guard, with input from Transport Canada, should periodically verify its preparedness to respond to ship-source oil spills (based on predetermined procedures and criteria).

1.72 - Atlantic Offshore Oil and Gas Activities: The boards [Canada-Newfoundland and Labrador Offshore Petroleum Board and the Canada-Nova Scotia Oil Petroleum Board] should seek the advice of Transport Canada, the Canadian Coast Guard, and international partners to design an approach for third party verification of the capacity of organizations that would respond to spills from offshore oil and gas facilities.

1.84 - Atlantic Offshore Oil and Gas Activities: The boards [Canada-Newfoundland and Labrador Offshore Petroleum Board and the Canada-Nova Scotia Oil Petroleum Board] should work with appropriate federal departments and agencies, and other organizations as necessary, to ensure that individual and collective response plans for a major oil spill are adequately resourced and coordinated, well defined, and regularly tested, individually and collectively. The plans should be supported by up-to-date and effective memoranda of understanding between all involved parties.

1.85 - Atlantic Offshore Oil and Gas Activities: Natural Resources Canada, the Canadian Coast Guard, Transport Canada, and Environment Canada should work with the boards and others, as necessary, to establish and clarify the roles and responsibilities of federal government departments and agencies in the event of a major oil spill, as well as the resources that would be available. This should include a coordinated response plan. (1.78–1.83)

	Status as per	
	Marine Safety	**Internal Audit**
Department's Action Plan for Recommendation 1.42		
• Transport Canada recognizes the need for up-to-date management plans and, in 2010, updated its Environmental Prevention and Response National Preparedness Plan (TP #13585).	**Complete**	**Complete**
• It is Transport Canada's intention to review and update this plan annually to include changes in risks, legislation, roles and responsibilities, and/or lessons learned from significant incidents or exercises.	**Complete**	**Complete**
Department's Action Plan for Recommendation 1.61	**N/A**	**N/A**
• This recommendation was directed to Canadian Coast Guard. Transport Canada was to provide input to Canadian Coast Guard when requested and it has done so.		
Department's Action Plan for Recommendation 1.72		
• This recommendation was directed to Petroleum Boards. Transport Canada was to provide input to Boards when requested. The department is ready to provide this information when requested.	**N/A**	**N/A**
Department's Action Plan for Recommendation 1.84		
• This recommendation was directed to Petroleum Boards. Transport Canada was to provide assistance to Boards when requested and it has done so.	**N/A**	**N/A**
Department's Action Plan for Recommendation 1.85	**Complete**	**Complete**
• Natural Resources Canada is the lead government agency for Offshore Oil and Gas activities. Transport Canada is experienced in the Oil Spill Preparedness and Response Regime as it relates to ship-source oil spills. Transport Canada will continue to work with key federal partners and the Boards to define clear roles and responsibilities with regards to spills from offshore operations as well as reviewing emergency response plans. This collaboration takes place within the mandate of the Director General's Interdepartmental Marine Pollution Committee (DG IMPC).		
• Transport Canada commits to participating at Natural Resources Canada's and the Board's exercises providing assistance, if requested, in exercise design and conduct, and also providing operational input to the lead department's On-Scene Commander.	**Complete**	**Complete**

Internal Audit expected:

- *Marine Safety would establish processes for reviewing their national and regional plans on a regular basis and updating them as required.*
- *Marine Safety would provide input and advice to the Canadian Coast Guard and to the Petroleum Boards.*
- *TC would work with the Petroleum Boards to ensure that individual and collective response plans for a major oil spill are adequately resourced and coordinated, well defined, and regularly tested and that memorandums of understanding are up-to-date.*
- *TC would work with the boards and others, as necessary, to establish and clarify the roles and responsibilities of federal government departments and agencies in the event of a major oil spill, as well as the resources that would be available.*

Internal Audit's assessment

Since 2010, TC has updated its Environmental Prevention and Response National Preparedness Plan as required. TC has worked with Petroleum Boards to strengthen its response plans. Memorandums of Understanding with the Boards are up-to-date. TC has also worked with key federal departments to clarify roles and responsibilities and provide operational input.

As highlighted in the above table, official MAPs from TC were not required for recommendation 1.61and 1.72. TC has provided input to the Canadian Coast Guard and is ready to provide information to the Petroleum Boards when requested.

Overall, the MAPs that were prepared have worked as intended and have addressed the original CESD audit findings related to response readiness.

Observations to support Internal Audit's assessment of recommendation 1.42

The Department's Environmental Prevention and Response National Preparedness Plan created in 2012 is an evergreen document that is reviewed annually and updated as required. Based on changes identified by Environment Canada, the plan should have been updated again in 2014 but it was not. The omission, however, has since been identified and the plan was updated in June 2016. The Department has also identified the potential future need to update the plan again based on Area Response Planning which was piloted in four locations across Canada[3] and completed on March 31, 2017. Under the Oceans Protection Plan, TC will review the lessons learned from the Area Response Planning pilot project and participate in a new regional response planning pilot project in northern British Columbia. Once this analysis is complete, the Department will be in a position to determine whether or not a further update to the plan is required.

Observations to support Internal Audit's assessment of recommendation 1.61

TC has provided input into the Canadian Coast Guard's periodic verification of its preparedness to respond to ship-source oil spills (based on predetermined procedures and criteria). Both

[3] Area Response Planning Initiative: http://www.tc.gc.ca/eng/marinesafety/oep-ers-arp-4473.html

departments worked closely together in the development and investments to be made as part of the Oceans Protection Plan.

Observations to support Internal Audit's assessment of recommendation 1.72
The department is ready to provide information to the Boards on how to design an approach for third party verification of the capacity of organizations that would respond to spills from offshore oil and gas facilities when requested.

Observations to support Internal Audit's assessment of recommendation 1.84
TC has worked with Petroleum Boards to strengthen their response plans. Memorandums of Understanding are up-to-date for the Canada-Newfoundland and Labrador Offshore Petroleum Board and Canada-Nova Scotia Oil Petroleum Board.

Observations to support Internal Audit's assessment of recommendation 1.85
TC has participated in information sessions/exercises on the roles and responsibilities of the federal government in the event of spills and on planned approaches to dealing with emergency events in the offshore areas.

2.3. HAZARDOUS AND NOXIOUS SUBSTANCE DATA

Recommendation

1.79 - Oil Spills from Ships: In order to facilitate the development of a hazardous and noxious substance regime in Canada, Transport Canada should take the necessary steps to ensure that it has adequate data on the type and quantity of hazardous and noxious substances transported by ship in Canada.

Department's Action Plan	**Status as per**	
	Marine Safety	**Internal Audit**
The need for accessing detailed and up-to-date information on products transported by ship is essential for preparing in the event of a ship-source incident. Access to such information allows for a prompt and effective response, which minimizes the adverse impact on the environment and the surrounding population. At the present time, information on the movement of hazardous and noxious substances in Canadian waters is not readily available and, hence, limits Transport Canada's ability to deal effectively with a release of hazardous materials in the marine environment.		
• Transport Canada intends to work with key departments and agencies (including the Canada Border Services Agency, Statistics Canada and the	**Complete**	**Complete**

Canadian Coast Guard) to develop the necessary procedures and systems so emergency responders have access to near real-time information for all hazardous and noxious products transported by ships in Canadian waters. • Considering that the Canada Border Services Agency and the Canadian Coast Guard already have systems and procedures in place for obtaining vessel cargo manifest and data, Transport Canada will initiate discussions no later than spring 2011 and seek their collaboration to adapt the data and make it available for the proposed Marine HNS Incident Preparedness and Response Regime.	**Complete**	**Complete**

Internal Audit expected:

- *TC would take the necessary steps to ensure that it has adequate data on the type and quantity of HNS transported by ship in Canada.*

Internal Audit's assessment

The management action plan written in 2010 as a response to recommendation 1.79 does not clearly distinguish TC's role and responsibilities in the event of an incident versus its role in building a HNS Preparedness and Response Regime.

TC, in collaboration with other government departments, has developed the necessary regulatory framework so that emergency responders have access to near real-time information for all hazardous and noxious products transported by ship in Canadian waters.

TC has developed the necessary regulatory framework and processes to ensure it has adequate data on the type and quantity of HNS transported by ship in Canada. While processes to acquire data have been developed, they have not been fully implemented. Moving forward, as part of the new Oceans Protection Plan, the Department intends to reassess its data needs to support the development and implementation of a HNS Preparedness and Response Regime.

Observations to support Internal Audit's assessment of recommendation 1.79

General Intent of the Original Management Action Plan

TC officials acknowledge that the 2010 management action plan did not distinguish between TC's role in the event of an incident versus its role in setting the requirements for data to support building a HNS Preparedness and Response Regime.

The action plan should have highlighted that the Department's role is regulatory in nature and not as a first responder. The role of first responder is fulfilled by the Canadian Coast Guard, who

require incident information on an urgent basis in order to respond. The Canadian Coast Guard does not receive incident-related information from TC as TC is not responsible for providing incident-related information to emergency responders. However, when incidents occur, TC senior management does need to be informed in a timely manner.

Marine Safety management informed the audit team that the intent of the 2010 action plan was to ensure that all necessary legal obligations be put in place in order to capture data on the movement of HNS cargo.

The action plan should have also explained that in order to build and maintain a HNS Preparedness and Response Regime, the Department only requires HNS data on a regular but non-urgent basis. Also, it was not TC's intention to establish a single information system for all parties. Instead, the primary objective was for TC to have access to data on a regular basis to help build a HNS Preparedness and Response Regime.

Accessing Near Real-time Information for Emergency Responders and for TC's Senior Management

The master of a vessel, his agent, an authorized representative or shipper must disclose the movement of all cargos, including HNS, in Canadian waters, according to prescribed legislation. Refer to Appendix "A" for a list of key legal obligations.

Emergency Responders
First responders in an emergency situation, can access the information in several ways:

- First and foremost, from the crew of the vessel (on-scene reports), under any circumstance (unless of course there is some massive incident with no surviving crew).
- From the port authority if a vessel is in port.
- The Canadian Coast Guard has immediate access to the information through the Vessel Traffic Services[4] (VTS) system. It is mandatory for vessels to provide this information in advance of departing from or arriving at a Canadian port.

Timely Information to TC Senior Management
Communication and information sharing is a critical element in the management of any incident. In order to deal effectively with the release of hazardous material or any other substances, TC has put in place an internal notification process[5] to access near-real time the information on the nature and quantity of HNS involved. The notification process is divided into two streams: When information originates from the Canadian Coast Guard's Marine Communication and Traffic Services or information from various other sources[6], or from TC's Situation Centre. TC also has

[4] http://laws-lois.justice.gc.ca/eng/regulations/SOR-89-98/ and more specifically, http://laws-lois.justice.gc.ca/eng/regulations/SOR-89-99/ and http://laws-lois.justice.gc.ca/eng/regulations/SOR-2010-127/

[5] Draft of Marine Safety General Notification Process, October 2014

[6] Various other sources could include the crew of the vessel, the port authority, and the Marine Security Operations Centre (MSOCs) operated by the Canadian Coast Guard. The three MSOCs collect and analyze vast amounts of information including information regarding the nature, quantity and description of HNS on board vessels. All the

established notification criteria for marine incidents requiring immediate or non-urgent notification.[7] Despite having these processes in place, recent events have highlighted that the incident notification procedures are not always being followed. There have been a few reoccurring issues that impact the provision of timely situational awareness to senior executives responsible for strategic decision making. As a next step, senior management has requested that a review of the notification process and related activities takes place.[8]

Accessing Information for TC to Build a HNS Preparedness and Response Regime

As mentioned above, the intent of the management action plan in 2010 was to ensure that all necessary legal obligations were put in place in order to capture adequate data on the type and quantity of HNS (as defined in the 2010 HNS Convention[9]) transported by ship in Canada.

The Department elected to rely in part on information to be collected through the *Transportation Information Regulations*[10] (TIR) on vessel and cargo movements in Canadian waters.

To support the reporting requirements of TIR, TC is developing a new electronic reporting system called the Marine Origin-Destination Statistics (MODS) database that is designed as an economic survey of the marine sector in Canada. The MODS database receives its information either from Canada Border Services Agency (in the case of imports and exports) or directly from the marine operators (in the case of domestic vessel and cargo movements).

Management has advised that the MODS database is currently not fully implemented since not all parties are reporting. As a part of the new Oceans Protection Plan, the Department intends however to reassess its data needs to support the development and implementation of a HNS Preparedness and Response Regime. Management advised that once its data requirements are confirmed, it will ensure that all processes are fully operational to collect the required information.

information on vessels is collected and kept by the MSOCs for further distribution. http://www.tc.gc.ca/eng/marinesecurity/operations-269.html

[7] Marine Safety Immediate and Incident Notification Criteria, February 2015

[8] Emergency Response at Transport Canada, Presentation to TMX, February 6, 2017

[9] International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 2010

[10] *Transportation Information Regulations*, last amended April 1, 2015, subsection 15.1 and Schedule III http://laws-lois.justice.gc.ca/eng/regulations/SOR-96-334/ and it's amendment http://gazette.gc.ca/rp-pr/p2/2014/2014-12-17/html/sor-dors285-eng.php

TC also brought into force the mandatory reporting by receivers of bulk HNS cargo by sea through the *Marine Liability and Information Return Regulations*[11] (MLIRR) in 2016. As the MLIRR just came into force in December 2016, the first reports will only be received in February 2018.

With the mandatory reporting required by the TIR and MLIRR, the Department has implemented the necessary legal obligations to ensure it can capture adequate data on HNS transported by ship in Canada.

2.4. LONG-TERM VISION AND STRATEGY FOR THE ARCTIC

Recommendation

3.73 - Marine Navigation in the Canadian Arctic: Transport Canada, in consultation with Fisheries and Oceans Canada, Environment Canada, other federal departments and agencies, as well as partners and other stakeholders as appropriate, should lead the development of a long-term vision and strategy for safe Arctic marine transportation. This could be aligned with Canada's Northern Strategy and could build on the work already underway by departments such as the Northern Marine Transportation Corridors Initiative and the Northern Transportation Action Plan.

Department's Action Plan	**Status as per**	
	Marine Policy	**Internal Audit**
1. Federal departments (Transport Canada (TC), the Department of Fisheries and Oceans (DFO) and Environment Canada) will assess the recommendations of the Audit of Marine Navigation in the Canadian Arctic undertaken by the Commissioner of the Environment and Sustainable Development together with those of the Tanker Safety Expert Panel Report North of 60°.	**Complete**	**Complete**
2. TC and DFO will complete analytical work and engagement with stakeholders and Aboriginal organizations to inform the development and operationalization of the Northern Marine Transportation Corridors Initiative.	**Complete**	**Complete**
3. Taking into consideration the findings from the above steps and building on the existing work of the Northern Marine	**Complete**	**Complete**

[11] Marine Liability and Information Return Regulations, http://laws.justice.gc.ca/eng/regulations/SOR-2016-307/FullText.html

Transportation Corridor Initiative, TC will collaborate with other departments in identifying potential regulatory, service, environmental information and infrastructure improvements that will support the development of an integrated, long-term approach for marine transportation in Canada's Arctic waters.		

Internal Audit expected:

- *TC would lead the development of a long-term vision and strategy for safe Arctic marine transportation.*

Internal Audit's assessment

TC has led the development of a long-term vision and strategy for safe marine transportation on all of Canada's coasts with the announcement of the Oceans Protection Plan. This includes a long-term vision and strategy for safe Arctic shipping, including the implementation of shipping corridors in the Arctic and important new investments to make community resupply of Arctic communities safer, more efficient, and more protective of the environment. Importantly, the strategy also envisions the marine shipping regime in the Arctic will include a meaningful role for Inuit communities. As a result, the MAPs have worked as intended and have addressed the original CESD audit finding pertaining to the development a long-term vision and strategy for the Arctic.

Observations to support Internal Audit's assessment of recommendation 3.73

The last status update was completed in April 2016 when Marine Policy indicated the status of this MAP was "On Track". During the course of the audit, Marine Policy advised that the MAP was now complete. Recommendations of the Tanker Safety Expert Panel Report North of 60° informed the development of the Oceans Protection Plan. Engagement with other levels of government and stakeholders (including Indigenous organizations) was undertaken in March 2016 to validate the findings and recommendations of the Panel's second report. These engagement sessions were held across Canada, including the North (Iqaluit and Yellowknife), and also validated the concept of northern marine transportation corridors. The information received at the engagement sessions in March 2016 has informed the development of a long-term approach for Arctic Marine Transportation.

TC has completed the preliminary identification of northern marine transportation corridors. The Department of Fisheries and Oceans (DFO) has engaged territorial representatives and members of the marine transportation community on the preliminary corridors.

TC has collaborated with other government departments to inform the development of an integrated, long-term approach for marine transportation in Canada's Arctic waters. The Department announced the Oceans Protection Plan in November 2016 .The Oceans Protection Plan includes an initiative to create a safe shipping regime for the Arctic and increase involvement of Indigenous and local populations. The Oceans Protection Plan was developed based on work done over the past two years between Indigenous and coastal communities and various government programs, and will start to be implemented in 2017.

3. CONCLUSION

We found that the Department has fully implemented its MAPs regarding all audit recommendations directed at TC.

For the three recommendations directed to other stakeholders, with input required from TC, the Department has either provided or is prepared to provide whatever information and assistance that is ultimately requested.

4. APPENDIX "A": SUMMARY OF KEY LEGAL OBLIGATIONS FOR DISCLOSING THE MOVEMENT OF CARGO, INCLUDING HNS

I. Under the Marine Pre-load/Pre-arrival and Reporting Requirements, all goods that are imported, moving in transit through Canada, or freight remaining on board must be reported to the Canada Border Services Agency at the first port of arrival in Canada. In accordance with the *Reporting of Imported Goods Regulations* (section 14(1)), the carrier shall give the information

a. at least 96 hours before the vessel is scheduled to arrive at its port of arrival if there is a cargo container on board the vessel; and

b. At least 24 hours before the vessel is schedule to arrive at its port of arrival in any other case.[12]

II. Under the *Cargo, Fumigation and Tackle Regulations* published under the *Canada Shipping Act*, 2001 (CSA, 2001); every shipper of cargo to be loaded in Canadian waters shall provide the appropriate information on the cargo. Such information is confirmed in writing by the appropriate shipping document.[13]

III. Under Part V (Navigation Services), section 126 of the CSA, 2001, no vessel shall enter, leave or proceed within the Vessel Traffic Services (VTS) zone without having previously obtained a clearance.[14]

IV. Where a clearance is required to enter a VTS zone it shall be done 24 hours before entering that zone.[15]

V. Under the *Transportation Information Regulations*, a marine operator must provide to the Minister of Transport information about:

(a) the nature and type of its operations, including

(i) the mass and a description of the cargo transported,

(ii) in the case of the transportation of dangerous goods, the UN number assigned to the goods by the United Nations Committee of Experts on the Transport of Dangerous Goods, etc.[16]

All Canadian carriers must report this information using TC's electronic reporting system.

---

[12] http://www.cbsa-asfc.gc.ca/publications/dm-md/d3/d3-5-1-eng.html

[13] http://laws-lois.justice.gc.ca/eng/regulations/SOR-2007-128/

[14] http://laws-lois.justice.gc.ca/eng/acts/c-10.15/page-15.html#h-69

[15] http://laws-lois.justice.gc.ca/eng/regulations/SOR-89-98/ and more specifically, http://laws-lois.justice.gc.ca/eng/regulations/SOR-89-99/ and http://laws-lois.justice.gc.ca/eng/regulations/SOR-2010-127/

[16] http://laws-lois.justice.gc.ca/eng/regulations/SOR-96-334/ and it's amendment http://gazette.gc.ca/rp-pr/p2/2014/2014-12-17/html/sor-dors285-eng.php

VI. Under the *Marine Liability and Information Return Regulations*, a receiver who receives, in a calendar year, the following types and quantities of contributing cargo must file with the Minister, no later than February 28 of the following calendar year, an information return respecting that cargo:

a. liquefied natural gases referred to in paragraph 2(b) of Article 16 of the Hazardous and Noxious Substances Convention, in any quantity;
b. liquefied petroleum gases referred to in paragraph 2(c) of Article 16 of the Hazardous and Noxious Substances Convention, in a quantity exceeding 17 000 metric tons; or
c. any hazardous and noxious substances referred to in paragraphs 5(a)(ii), (iii), (v), (vi) and (vii) of Article 1 of the Hazardous and Noxious Substances Convention, in a quantity exceeding 17 000 metric tons.

A receiver who receives, in a calendar year, contributing cargo in the form of oils referred to in paragraph 1(a)(ii) of Article 19 of the Hazardous and Noxious Substances Convention, in a quantity exceeding 17 000 metric tons, must file with the Administrator, no later than February 28 of the following calendar year, an information return respecting that cargo.

The information return referred to above must include

a. the name, mailing address, email address, phone number and fax number of the receiver;
b. the type of contributing cargo, and the total quantity of each type of contributing cargo received in that calendar year;
c. if the receiver received contributing cargo as an agent or mandatary for a principal or mandator, the name of the principal or mandator, and the type and quantity of cargo received;
d. if the receiver received contributing cargo from an agent or mandatary, the name of the agent or mandatary and the type and quantity of cargo received; and
e. where applicable, the name and address of associated persons that have received contributing cargo.[17]

[17] http://laws.justice.gc.ca/eng/regulations/SOR-2016-307/FullText.html