



Atlantic Pilotage Authority

Presented to the
Board of Directors

13 June 2007

Special Examination Report



Office of the Auditor General of Canada
Bureau du vérificateur général du Canada



Office of the Auditor General of Canada
Bureau du vérificateur général du Canada

To: The Board of Directors of
the Atlantic Pilotage Authority

We have completed the special examination of the Atlantic Pilotage Authority in accordance with the plan presented to the Audit Committee of the Board of Directors on 9 February 2007. As required by Section 139 of the *Financial Administration Act (FAA)*, we are pleased to provide the attached special examination report to the Board of Directors.

We will be pleased to respond to any comments or questions you may have concerning our report at your meeting on 13 June 2007.

I would like to take this opportunity to express my appreciation to the Board members, to the Corporation's management and staff, and to the Corporation's stakeholders for the excellent cooperation and assistance offered to us during the examination.

Yours sincerely,

A handwritten signature in black ink that reads "Douglas Timmins". The signature is written in a cursive style with a large initial 'D'.

Douglas Timmins, CA
Assistant Auditor General

Attach.

Table of Contents

Special Examination Opinion	1
Main Points	3
Overview of the Atlantic Pilotage Authority	6
Mandate	6
Corporate objectives	7
Activities	7
Description of operations	7
Assignments	9
Dispatch	9
Findings	10
Management of corporate risk	10
Non-compulsory assignments	11
Major incidents related to Placentia Bay pilot boats	13
Threat and risk assessment related to the Authority's pilot boats	15
New medical examination procedures	15
Management of human resources	17
Medical examinations of pilots	17
Evaluation of pilot performance	18
Pilot boat crew health and training standards	19
Pilot boat management	20
Pilot boat maintenance	20
Pilot boat replacement strategy	20
Pilot risk management methodology	21
Strategic planning and corporate governance	23
Performance measurement	23
Governance	25
Strategic planning and decision making	27
Financial self-sufficiency	28
Conclusion	28
Appendix	
Systems, practices, and criteria for examination	29



Atlantic Pilotage Authority

Special Examination Report—2007

To: The Board of Directors of the Atlantic Pilotage Authority

Special Examination Opinion

Under Part X of the *Financial Administration Act* (FAA), the Atlantic Pilotage Authority (the Authority) is required to maintain financial and management control, information systems, and management practices that provide reasonable assurance of the following:

- its assets are safeguarded and controlled;
- its financial, human, and physical resources are managed economically and efficiently; and
- its operations are carried out effectively.

The FAA also requires the Authority to have a special examination of these systems and practices carried out at least once every five years.

Our responsibility is to express an opinion on whether there is reasonable assurance that during the period covered by the examination from 8 November 2006 to 31 March 2007, there were no significant deficiencies in the systems and practices we examined.

We based our examination plan on a survey of the Authority's systems and practices, which included a risk analysis. We submitted the plan to the Audit Committee of the Board of Directors on 9 February 2007. The plan identified the systems and practices that we considered essential to providing the Authority with reasonable assurance that its assets are safeguarded and controlled, that its resources are managed economically and efficiently, and that its operations are carried out effectively. These are systems and practices that were the subject of our examination.

The plan included the criteria that we selected specifically for this special examination, in consultation with the Authority. We based the criteria on our experience with performance auditing. Our choice of criteria was also influenced by legislative and regulatory requirements, professional literature and standards, and practices followed by the

Authority and other organizations. The systems and practices we examined and the criteria we used are listed in Appendix A.

We conducted our examination in accordance with our plan and with the standards for assurance engagements established by the Canadian Institute of Chartered Accountants. Accordingly, our examination included such tests and other procedures as we considered necessary to provide us with sufficient and appropriate evidence to reach our conclusion.

In our opinion, based on the criteria established for the examination, there is reasonable assurance that there were no significant deficiencies in the systems and practices we examined.

The rest of this report provides an overview of the Authority and detailed information on our examination findings, including, in some cases, recommendations for improvements to various systems and practices within the Authority.



Douglas Timmins, CA
Assistant Auditor General
for the Auditor General of Canada

Halifax, Canada
31 March 2007



Atlantic Pilotage Authority

Special Examination Report—2007

Main Points

What we examined

The Atlantic Pilotage Authority (The Authority) was created in 1972 under the *Pilotage Act* as a federal Crown corporation that provides pilotage services in the Atlantic region. This includes all Canadian waters in and around Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and Labrador, and certain waters of Chaleur Bay in Quebec. The Authority establishes in what areas pilotage is compulsory, what ships are subject to it, and in what circumstances exemptions from pilotage are granted. The Authority also sets out the conditions for obtaining pilotage licences and certificates. The fees paid to it for pilotage services are required to be set at levels that permit it to fund its operations and to be financially self-sustaining. The Authority cannot receive parliamentary appropriations to fund operations unless the appropriation is required to deal with an emergency.

We examined the Authority's systems and practices in the areas of corporate risk management; human resources management; designation of compulsory pilotage areas and affected ships; pilot boat management; and strategic planning and corporate governance. Our objective was to determine whether those systems and practices provide the Authority with reasonable assurance that its assets are safeguarded and controlled, its resources are managed economically and efficiently, and its operations are carried out effectively.

Why it's important

Under the *Pilotage Act*, the Authority has a monopoly on pilotage services in the Atlantic region. It provides pilot services in the 16 ports where pilotage is compulsory, using a mix of employee and independent entrepreneur pilots and owned and contracted pilot boats.

Upon request from users, the Authority also provides pilotage services in ports where pilotage is not compulsory. This has been a historical practice based on management's interpretation of the Authority's mandate.

It is important that the rates the Authority charges for pilotage services be fair and reasonable while providing the revenue needed to fund its operations. The Authority has a responsibility to deliver pilotage services economically, efficiently, and in a way that contributes to public safety by minimizing the risk of accidents and of damage to the environment. A significant deficiency in any of the systems and practices we examined could jeopardize the Authority's ability to achieve these purposes.

What we found

The systems and practices we examined had no significant deficiencies. We noted some areas for improvement and also some areas where progress has been made since our last special examination.

The Authority did not have a formal, comprehensive risk management framework that would assess the likelihood and impact of risks across the entire organization or a strategy to manage the risks. For example, it has not formally evaluated the risks to workplace safety and its potential liability when it assigns pilots to non-compulsory pilotage ports; the risk that contracted crews are not operating its pilot boats to established safety standards; and risks that pilot boats are safeguarded while they are at the dock.

The Authority did not have a system for annual or periodic appraisal to assess the performance of pilots and crews against the competencies and expectations established for each individual. Formal evaluation of pilot and crew performance is critical, given the importance of their performance to the success of the Authority and the safety of its operations. The Authority also lacks performance expectations for the management of human resources against which it could monitor actual performance, identify the cause of any variance from targets, and take appropriate corrective action. It could refer to similar organizations as benchmarks to help establish its own performance measures and targets.

The Authority uses practices to establish pilotage charges that are fair and reasonable while ensuring financial self-sufficiency. It consults regularly with stakeholders to provide information on the cost of supplying its services. In the last nine years, stakeholders have raised no objections to proposed tariff increases.

The Board has taken steps to improve its governance framework. However, it has not assessed the performance of its committees against their established terms of reference and best practices for such committees. Doing so could identify areas for improvement or new best practices. We note that the Authority needs to review its practice of

appointing employees and industry representatives to the Board of Directors, in light of new conflict-of-interest guidelines as well as provisions of the *Federal Accountability Act*.

The Atlantic Pilotage Authority has responded. *The Board and Management of the Atlantic Pilotage Authority would like to express their gratitude to the Special Examination Audit Team for their detailed and comprehensive work in undertaking this examination. We are pleased that the examiners found no significant deficiencies and noted improvements, since the last Special Examination, in several key areas.*

The Board and Management will make every effort to address the three major areas for improvement that were identified by the examiners: the development of a formal comprehensive risk management framework for internal use; the implementation of a system of performance appraisals for pilots and pilot boat crews; and improvement of the governance framework.

Management has provided more detailed comments with respect to each issue in the Findings section.

Overview of the Atlantic Pilotage Authority

- Mandate**
1. The Atlantic Pilotage Authority was established in February 1972 pursuant to the *Pilotage Act* (the Act). The Authority is a Crown corporation listed in Schedule III, Part I of the *Financial Administration Act* (FAA) and is not an agent of Her Majesty.
 2. Section 18 of the Act states that the objectives of the Authority are to establish, operate, maintain, and administer, in the interests of safety, an efficient pilotage service within the Atlantic region. It reports to the Minister of Transport and is governed by a board of directors with seven members, comprised of a part-time chair, two industry representatives, two pilots and two other members that represent the general public.
 3. The Authority is responsible for pilotage services in the Atlantic region, which includes all Canadian waters in and around the provinces of Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and Labrador, and certain waters of Chaleur Bay in Quebec south of Cap d'Espoir.
 4. The Act gives the Authority the power to make regulations, subject to the approval of the Governor in Council, for
 - establishing compulsory pilotage areas,
 - prescribing the ships or classes of ships that are subject to compulsory pilotage,
 - prescribing the circumstances under which compulsory pilotage may be waived, and
 - prescribing the qualifications required to obtain a licence or pilotage certificate.
 5. Section 33 of the Act provides the Authority with the power to make regulations prescribing tariffs of pilotage charges to be paid to the Authority. The Authority's power to make these regulations is subject to the approval of the Governor in Council. The tariffs are to be fixed at a level that permits the Authority to operate on a self-sustaining financial basis and that are fair and reasonable.
 6. Section 36.01 of the Act, which was added in 1998, states that no payment to an Authority may be made under an appropriation by Parliament to enable the Authority to discharge an obligation or liability other than an authority given under the *Emergencies Act* or any other Act in respect of emergencies.

7. The Authority has both a regulatory role and a service-delivery role.

Corporate objectives

8. The Authority's corporate objectives, as stated in its 2007–11 corporate plan, are to

- respond to the initiatives of the Minister of Transport by promoting efficient use of the Authority's facilities, equipment, and expertise, in order to provide safe navigation;
- provide pilotage services directed toward achieving and maintaining financial self-sufficiency and long-term viability within a commercially-oriented framework; and
- respond to the Government's environmental, social, and economic policies.

Activities Description of operations

9. Since 1972, in the interest of safety, the Authority has operated a marine pilotage service for all Canadian waters surrounding the four Atlantic Provinces and within certain waters in the Bay of Chaleur, Quebec. This is the only program of business for the Authority.

10. The Authority provides ships entering Atlantic Canada ports with licensed marine pilots, in order to ensure that these ships enter, leave, or transit within the pilotage area as safely as possible. The Authority organizes its operations according to the geographic location of compulsory pilotage areas (such as Halifax Harbour) and operates as a monopoly within the marine transportation sector. Certain ships or classes of ships are required by law to carry pilots if they meet defined criteria and are entering compulsory pilotage areas. Ships that are required to use compulsory pilotage include

- Canadian-registered ships over 1,500 gross tons;
- ships not registered in Canada, including floating cranes, oil rigs, tugs, and tows, if more than one unit is being towed; and
- pleasure craft over 500 gross tons.

11. Ships that are not subject to compulsory pilotage include Canadian-registered government ships, Canadian-registered offshore supply vessels of 5,000 gross tons or less, Canadian-registered fishing vessels, and ferries operating on a regular schedule between two terminals that are manned by masters and officers who hold Canadian marine credentials.

12. Pilotage service is provided to non-compulsory ports upon request. For instance, a captain who wants to bring his vessel to the port of Liverpool, Nova Scotia to take on a load of paper products may not be familiar with the navigational issues in the harbour. In such cases, the captain may request that the Authority provide a licensed and experienced pilot to help guide the ship into port. The number of non-compulsory pilot service assignments has been steadily declining over the last five years, from 718 in 2002 to 424 in 2006.

13. There are also provisions under the Act allowing any interested parties who believe that a proposed tariff increase is prejudicial to the public interest to appeal the increase to the Canadian Transportation Agency (CTA). In the event of an appeal, the CTA is required to undertake an investigation of the proposed tariff charges and render a recommendation to the Authority. The Act requires that the CTA file a copy of its recommendation with the Minister of Transport. The Authority is obliged to abide by any CTA recommendations.

14. The two major costs associated with providing the pilotage services are pilot salaries and benefits and pilot boat expenditures. The pilot boat expenses include the acquisition and operational costs for Authority owned, and the rental costs for privately owned contract pilot boats. Pilots performing Authority services are either employees of the Authority or self-employed entrepreneur pilots working on an “as required basis.” However, all pilots providing services on behalf of the Authority must have a pilot licence issued by the Authority.

15. The Authority owns six pilot boats that are used to transport pilots to and from vessels requiring the service. A seventh boat is currently under construction at an estimated cost of \$3.5 million. The planned completion date is May 2007. The construction of an eighth boat is planned for completion in October 2007. Of the six existing boats, two are stationed in Halifax, two are stationed in Saint John, and two are stationed in Placentia Bay. The two pilot boats being constructed are intended to be used to replace the boats in the Placentia Bay area. The Atlantic Pilotage Authority provides services in other compulsory ports (such as Sydney, Nova Scotia) with boats owned by private operators who have contracts with the Authority. In non-compulsory ports (such as Liverpool, Nova Scotia) pilots may hire local operators to provide pilot boat services for some assignments in small ports, or they may use Authority-owned pilot boats or contract pilot boats for non-compulsory assignments in larger ports. Historically, the Authority has used its discretion when it provided services to non-compulsory ports.

Assignments

16. The Authority categorizes its assignments into 16 compulsory areas: Halifax, Sydney, Bras d'Or, Canso, Pugwash, Saint John, Miramichi, Restigouche, St. John's, Holyrood, Placentia Bay, Humber Arm, Stephenville, Bay of Exploits, Charlottetown, and Confederation Bridge. The total number of compulsory and non-compulsory assignments for 2006 was 10,041.

Dispatch

17. The Authority provides dispatching services throughout its operational area from a dispatch centre located at its head office. The dispatching service provides significant information to pilots, customers, port authorities, and management, through controlled access web pages established for each group. The web pages are continuously updated from the Authority's Dispatch and Billing System as the dispatcher enters data. Customers and pilots are able to contact dispatch by telephone, email, facsimile, VHF radio, and telex, so pilots can be booked for service.

Findings

18. This section of the report presents our findings, and in some cases, our recommendations, for improvements to the systems and practices used to achieve the principal results expected by the Authority. These findings result from our examination of the Authority's main areas of activity, including our tests and procedures related to these systems. The systems and practices are described in Appendix A, as are the criteria we used in carrying out our examination.

Management of corporate risk

19. The Authority constantly manages risks as they arise, determining the potential impact of those risks on daily operations. For example, management held extensive consultations with pilot representatives to establish a protocol for pilots when they embark or disembark, in situations where they cannot board vessels because of adverse weather conditions. The protocol gives specific procedures to the pilots, dispatchers, and management to allow each party to manage risks as they arise. The Authority has also developed formal risk management processes, including the Occupational Health and Safety (OHS) System and the Pilotage Risk Management Methodology (PRMM), to address risks within specific areas or activities.

20. Since the 2002 special examination, management has further developed the OHS system, which identifies operational health and safety risks and their potential impact on its employees. The Authority has also prepared a manual based on the results of its risk assessments. This manual, which was distributed in the fall of 2006, provides policies and procedures that staff must follow to minimize operational health and safety risks.

21. The 1999 Canadian Transportation Agency (CTA) report on pilotage issues recommended that the Authority carry out risk assessment studies regarding compulsory pilotage areas and ships subject to compulsory pilotage. The PRMM was developed by Transport Canada and the Pilotage Authorities across Canada, based on the Q850-97 Risk Management model developed by the Canadian Standards Association. The PRMM is intended to be used as a tool for risk assessment. The Authority has conducted four risk-based assessments using the PRMM. See paragraphs 69 to 75 for findings on the PRMM.

22. During the last five years, there have been no major incidents involving ships that were piloted by Authority-licensed pilots into

Atlantic Canada ports. In addition, there have been no deaths or serious injuries to Authority staff or contract staff in the conduct of pilotage operations during that time. There have been a number of incidents involving pilot boats, which occurred as a result of normal operational conditions. However, there were two incidents that were considered as major incidents during this period. Both of these incidents had significant financial and operational impact.

23. The risk management practices being used by the Authority are intended to deal with specific issues and are designed to focus management attention on issues of the day. The Authority has not gone through a formal process of identifying and ranking the organization's internal and external risks to determine the likelihood that identified risk events will occur, and to quantify the potential impact on operations if the event does occur. This process of identification and ranking would allow the Authority to deal with risks on a larger scale than those it deals with as part of daily management.

24. There are a number of examples that illustrate the need for the Authority to conduct a comprehensive risk assessment, such as the management of non-compulsory assignments and contract pilot boat crews, the safeguarding of pilot boats, and non-compliance with regulatory requirements. These are discussed below.

Non-compulsory assignments

25. The Authority provides pilotage services for vessels operating in some non-compulsory pilotage ports and harbours in Atlantic Canada. In some busy non-compulsory areas, such as Pictou, Nova Scotia and Belledune, New Brunswick, the Authority has issued licences to entrepreneurial pilots, and the request for pilot services is assigned to these pilots. In addition, there are approximately 200 assignments per year in non-compulsory ports where there is little traffic. Because these non-compulsory areas are easily served by Authority employee pilots, such assignments are available to these pilots during their off-duty time.

26. The Authority has issued pilotage licences, based on the application of the examination requirements in the *Atlantic Pilotage Authority Regulations*, to mariners for four non-compulsory ports in Atlantic Canada. There are licensed pilots who are providing services in a number of non-compulsory ports, but who have not been examined by the Authority to determine if they are qualified under the regulations related to non-compulsory ports. These pilots do not have a licence endorsement, provided by the Authority, which

indicates that they are qualified under the regulations to perform pilotage duties in non-compulsory ports.

27. Carrying out non-compulsory port assignments during their off-duty time affords Authority employee pilots the opportunity to earn additional income. The collective agreement between the pilots and the Authority indicates that pilots performing assignments in non-compulsory areas are doing so in their capacity as employees of the Authority, and that pilots who agree to such assignments will receive a fee of 85 percent of the total pilotage charges (excluding pilot boat charges, travel expenses, and recall charges). The Authority retains the remaining 15 percent to cover administrative costs.

28. The Authority dispatches employee pilots to non-compulsory port assignments based on a duty roster that has been mutually established by the Authority and the local pilot association. For approximately 90 non-compulsory assignments in 2006, the pilots hired local operators to provide pilot boat services (local fishing boats and other commercial and private vessels).

29. We found that the Authority has not formally evaluated the risks related to non-compulsory port assignments. These risks include issues related to workplace safety and potential liability. Managers have told us that, on occasion, local operators often transport pilots to non-compulsory port assignments. Management does not know whether these boats meet the Authority's pilot boat requirements for safe operations for transport during a compulsory assignment. The Authority has indicated that pilots are responsible for safely travelling to and for carrying out non-compulsory assignments. However, the Authority has not assessed its responsibilities and requirements related to these assignments, including consideration of any legal implications.

30. Using hired boats to transport pilots to and from non-compulsory assignments poses a potential risk of injury or loss of life, due to boat crew inexperience or the use of boats that do not meet the Authority's pilot boat standards.

31. The Authority has not assessed their responsibility for employee pilots undertaking non-compulsory assignments. Nor has it identified other potential risks, or developed an appropriate strategy for mitigating these risks. In addition, the Authority has not examined the need for management practices to ensure that their pilots are safeguarded so that they can continue to meet their mandate in the future.

Major incidents related to Placentia Bay pilot boats

32. In May 2006, the Authority pilot boat *Placentia Pilot* grounded at Buffet Island and sank while transiting from Arnold's Cove, Newfoundland and Labrador to the Placentia Bay pilot station. The pilot boat was operated by a crew that was contracted through a local company that continues to hold a contract for services in that area.

33. The Authority and Transport Canada each conducted separate investigations of the incident. The Authority has not obtained the Transport Canada investigation report and has therefore missed the opportunity to learn more about the incident. A letter sent by the contractor to the Authority indicates that the launchmaster had fallen asleep prior to the vessel grounding.

34. The investigation also determined that the launchmaster was the only person in the wheelhouse (bridge) of the pilot boat when the boat grounded. This was in violation of the pilot boat standing orders that are the operating requirements provided by the Authority to its contractors. These standing orders state that there must be two people in the wheelhouse.

35. This was the second time that a pilot boat sustained significant damage while being operated in the Placentia Bay area. In December 2002, the Authority pilot boat *APA No 18* struck a shoal and sustained significant damage. The vessel was taken out of service to repair the damage and another vessel was dispatched from Halifax, Nova Scotia to provide a back-up to the remaining pilot boat in Placentia Bay.

36. The Authority conducted an internal investigation of this incident and found that the launchmaster was not at the helm, but that he had provided the deckhand with a navigation course through a narrow channel between an island and a known shoal. In addition, the internal investigation indicated that the pilot boat went off-course and that the launchmaster was not in the wheelhouse to direct the deckhand to make the appropriate course correction. The pilot boat subsequently struck the shoal.

37. In a letter sent shortly after the pilot boat *APA No 18* incident, the Authority asked the contractor to prepare a set of standing orders for pilot boat crews. These orders would clearly indicate the exact allowable range within which a pilot boat may venture in the Placentia Bay pilotage area. The orders were to be reviewed and approved by the Authority's Director of Operations, and by the local pilot committee chairman. The standing orders indicated certain operational limitations around islands and shoals within Placentia Bay, and also

required that two crew members be in the wheelhouse at all times. The Authority's investigation of the *Placentia Pilot* incident showed that it was the failure on the part of the pilot boat crew to follow the standing order that led to the grounding.

38. This case indicated a need for the Authority to clearly identify the risks related to the use of contract crews to operate Authority-owned pilot boats. The damage to *APA No 18* in 2002 indicated that there was a risk that the contract crew was not operating according to set safety requirements, and that the Authority had not specified operational limitations for the contractor to follow. There is a risk that accidents involving pilot boats could result in personal injury or loss of life and possible liability for the Authority. With this type of incident, there is also a significant risk of environmental impact, loss of significant assets, and the operational impact of not having a pilot boat available to provide stakeholders with timely and efficient service.

39. It is not clear whether the operational limitations implemented in 2002 addressed all the operational risks that were present at that time. The sinking of the *Placentia Pilot* in 2006 illustrates that the contract pilot boat crew operated without following operational procedures. The incident also raises the question of whether there were adequate mechanisms to monitor compliance with operational limitations implemented after the 2002 incident, and whether contractual penalties or other measures were considered in order to require the contractor to ensure his employees were following operational procedures.

40. Management has indicated that there have been further operational restrictions placed on contract pilot boat crews and that these have been clearly documented on a navigational chart that is posted in all pilot boats operating in Placentia Bay. The contractor has been made aware of the existence of operational guidelines for pilot boats in the Authority's OHS manual. The contractor has also been reminded of the contractual obligation, under clause 3(f), to operate the Authority's vessel in a lawful, safe, orderly, and seamanlike manner.

41. The Authority considered lessons learned from the incidents involving the pilot boats in Placentia Bay for that area. The Authority has not formally looked at all areas of the service to determine whether there are issues to be addressed in other geographical areas.

Threat and risk assessment related to the Authority's pilot boats

42. The Authority owns six pilot boats and is currently constructing two new pilot boats that will be brought into operation in 2007. The new pilot boats will be stationed in Placentia Bay, and the existing boats will be redeployed as back-up pilot boats in Saint John and Halifax.

43. The Authority has not conducted a formal risk assessment to identify the potential safety and security risks to each of the vessels while they are at berth (in various locations), nor has it put in place the management systems and practices that would correspond to such a risk assessment.

44. We found that the pilot boat stationed in Saint John had a berth in the Canadian Coast Guard Base that provides restricted public access to the boat. The pilot boats stationed in Halifax and Arnold's Cove do not have restricted public access. The Authority has not completed a risk assessment to determine if the risk related to its boats' berthing at public docks is acceptable and does not need to be mitigated.

45. The Authority has not formally evaluated and documented its consideration of risks related to safeguarding its boats and its rationale for its management practices for mitigating those risks.

New medical examination procedures

46. In 1999, the Authority signed a Memorandum of Understanding (MOU) that Health Canada would conduct annual medical examinations on its behalf. This MOU was renewed in 2006. It requires the Authority to provide Health Canada with a description of specific tasks that the employees (including pilots) are required to perform. It must also provide a description of the physical environment in which the employees work. In addition, the Authority has professionals from Health Canada observe pilotage assignments so that they will have a first-hand understanding of the working environment of the Authority's employees. This gives the examining physician a clear working definition of fitness for duty. In the past, employees could go to their own physicians to get an annual medical examination, but the Authority did not know whether the employees' physicians understood the physical requirements of the job. Management has indicated that the MOU provides them with greater assurance that employees are being evaluated by physicians in a consistent manner.

47. Client-physician confidentiality requirements prevent physicians from providing the Authority with an employee's medical information. The physician instead provides a medical certificate that indicates whether the employee is "fit for duty" or "not fit for duty." The *General Pilotage Regulations* require physicians to set out an assessment of the applicant or holder, in the medical report, indicating whether they are "unfit for pilotage duties," "fit for pilotage duties with limitations," or "fit for pilotage duties without limitations." Without more detailed information, the Authority cannot ensure compliance with some of the regulations' medical requirements for pilots. Specifically, the Authority cannot identify those pilots who require, for example, glasses or hearing aids. Under the regulations, pilots must carry a second pair of glasses and spare hearing aid batteries, in case they need them when on duty.

48. The Authority has not carried out a formal risk assessment of non-compliance with this regulatory requirement or with any other. The Authority has not assessed or documented the current practice of relying solely on pilots to self-administer the regulatory requirements.

49. **Recommendation.** The Authority should develop its use of risk-assessment practices to allow it to undertake a complete assessment of risk factors, by implementing a formal comprehensive risk management framework that covers the entire organization and supports the realization of the Authority's mandate, business goals, and objectives.

The Authority has responded. The Authority will undertake to develop a risk assessment framework to formalize and document its risk assessment practices.

With respect to the specific findings, management has the following comments:

- *The Authority agrees that pilots performing non-compulsory assignments should be licensed for the non-compulsory ports to which they provide service. Regarding pilot boat service for non-compulsory assignments, we note that only 90 of the 424 assignments in 2006 utilized boats other than APA owned or contracted boats. These were concentrated in two areas. Fully 31 percent of the non-compulsory assignments utilized the Halifax pilot boat. Approximately 37 percent used other APA boats or boats under contract to APA to provide service in compulsory ports. Approximately 10 percent of assignments used no boat at all, as the assignments were from one port to another or from a compulsory port to the non-compulsory port. The remaining 90 pilot boat transfers, 22 percent of non-compulsory assignments, and*

less than one percent of the Authority's annual assignments are carried out by other boat operators.

- *Management notes that pilots are vigilant about bringing safety issues forward with respect to APA owned or contracted boats, and it is confident that the pilots apply the same standard to boats over which they have total discretion to use or not to use. The pilots are in the best position to judge the suitability of the vessel and the capabilities of crews on non-compulsory assignments.*
- *Regarding the two incidents in Placentia Bay, management will be vigilant to ensure that standing orders are being followed and that all precautions are being taken to avoid further incidents. The Authority will perform a risk assessment in other areas to determine whether there are issues that need to be addressed.*
- *The Authority will evaluate the risks related to safeguarding our pilot boats and will document the rationale for mitigating risks.*
- *The Authority notes that the relevant section on Aids to Vision and Hearing in the General Pilotage Regulations places the onus on the holder of the licence to ensure that they comply with the regulation. The Authority will include a reminder to the pilots in its annual request that they undergo the medical examination. The Authority will also review all regulations to assess other compliance risks.*

Management of human resources

Medical examinations of pilots

50. There are 54 licensed pilots providing pilotage services on behalf of the Atlantic Pilotage Authority throughout Atlantic Canada. The Authority has 44 employee pilots to service the larger compulsory ports and 10 contract pilots providing services in smaller compulsory and non-compulsory ports. We examined the systems and practices that the Authority has in place to ensure that pilots are competent and in good health.

51. The *General Pilotage Regulations* clearly articulate the health qualifications that each pilot is required to meet in order to maintain their pilot licence. These qualifications include physical and mental fitness for pilotage duties, annual medical examinations, the content of medical reports, criteria for re-examination, procedures for disagreements with medical reports, and the procedures to follow in using visual and hearing aids.

52. The Authority has developed a system that automatically informs management three months in advance that a pilot's medical certificate is due to expire. This system is used to send letters to pilots

asking them to schedule their annual medical examination with a physician. We found that all the employee pilots and nine of ten contract pilots had up-to-date medical examinations.

Evaluation of pilot performance

53. The 1999 *Ministerial Review of Outstanding Pilotage Issues* recommended that pilotage authorities be required to develop and to implement, after consultation with interested parties, a fair and reasonable system for assessing pilots' competence and quality of services. In our 2002 special examination, we reported that the Authority had made little progress in developing a process to regularly evaluate pilot performance.

54. During this examination, we found that the Authority had developed a Pilot Proficiency Report that documents and tracks the qualifications and training activity for each pilot. The system was still being populated with information during the examination phase of our audit. We found that some of the pilot's certificates of continued proficiency, which were required to maintain Transport Canada navigation certificates, had expired. Management indicated that it was the responsibility of the pilots to maintain their navigation certificates, and that these certificates were not required once a pilot had been issued a licence. They indicated that pilots would not be advised that their certificates were about to expire.

55. Section 14(1)(h) of the Atlantic Pilotage Authority Regulations indicates that pilots must maintain all certificates, including certificates of continued proficiency, that were required to obtain their initial licence or pilotage certification. Under these Regulations, pilots who allow their navigation certificates to lapse no longer qualify to hold a pilot licence.

56. The Authority does not have a system in place to conduct pilot appraisals on an ongoing basis, annual or otherwise. There are issues that need to be resolved if an appraisal system is to be implemented, including determining

- who would set the standards and criteria for the performance evaluation,
- who would conduct the evaluation,
- how frequently there would be a review, and
- whether the evaluation would be done on the job or through a simulation.

57. Without this system, the Authority is not able to determine pilots' actual performance, and cannot base its evaluation on pilot competency or on its expectations for each pilot. Individual performance evaluation is a key part of managing human resources in most organizations, and the Authority needs to make progress on this in a timely manner. In the 2002 special examination, we found that all of the Authorities had been working in consultation with the Canadian Marine Pilot's Association to develop a process for evaluating pilot performance. However, we also found that progress had been minimal. In the current special examination, we found that the Authority's progress in implementing individual performance evaluation in the past five years continues to be minimal.

Pilot boat crew health and training standards

58. During our 2002 special examination, we found that the Authority had not set standards for pilot boat crew health and training. In this special examination, we found that the Authority had established health and training standards for employee pilot boat crews and was in the process of implementing such standards for contract boat crews. However, the information that was used to track the status of employee medical certificates, navigation certificates, and training was not up-to-date. We found that four employees (three deckhands and a launchmaster) did not have an operator certificate on file. In addition, we found that twelve casual pilot boat crew members had annual medical certificates which had expired.

59. The Authority has systems and practices in place to ensure that all contract pilot boat crews hold certificates showing them to be medically fit and qualified to work when they are first hired. However, the Authority's system uses outdated information to monitor certificate expiry dates. It does not automatically alert management that a crew member's certificate has expired, and it does not send reminders to contract crew members to provide copies of their renewed certificates.

60. We found that the Authority did not review the information in its system in order to monitor contract and employee pilot boat crew medical and navigation certificates, nor did it ensure that the information was current and accurate.

61. We found that there was no formal system in place that would regularly (annually or semi-annually) evaluate on-the-job performance of pilot boat crews. Management indicated that a crew's performance

is evaluated by pilots on a daily basis and that if there are concerns raised by pilots, then corrective action is taken.

62. Recommendation. The Authority should use the information obtained from monitoring pilot proficiency to develop a system for employee appraisals. Such a system would function on an ongoing (annual or semi-annual) basis to allow management to determine the actual performance of the pilots, based on competencies and expectations set for each individual. In addition, the Authority should have a system in place to ensure that contract and employee pilot boat crew medical and navigational certificates are up-to-date, and to evaluate on-the-job performance of pilot boat crews on a regular (annual or semi-annual) basis.

The Authority has responded. The Authority is committed to implementing a system of performance appraisals for pilots and pilot boat crews. The Authority will also improve or implement a system to ensure that contract and employee pilot boat crew medical and navigational certificates are up-to-date.

Pilot boat management

Pilot boat maintenance

63. In the 2002 special examination, we found that there was no documented planned maintenance for pilot boats. During this special examination, we found that the Authority had developed a long-term maintenance plan for each of the six vessels that were in operation. This maintenance plan includes a vessel's repair history and planned maintenance over the next five years. The maintenance plan is designed to ensure that critical components are examined on a regular basis and are scheduled for regular replacement. This reduces the number of unplanned repairs and provides greater assurance that the pilot boats will be maintained and available for the remainder of their estimated useful life.

Pilot boat replacement strategy

64. In the 2002 special examination, we found that the Authority did not have a long-term pilot boat replacement strategy based on a formal needs assessment, a documented cost analysis, feasibility solutions, and timetables that would take into account its financial capability. When we did this special examination, we found elements of the long-term pilot boat replacement strategy in the strategic plan, the Corporate Plan, and the minutes of the Pilot Boat Committee of the Board of Directors. In addition, we found that the current pilot

boat construction program and the acquisition of a used pilot boat for the Port of Saint John were consistent with the strategy.

65. The Authority hired a contractor to implement a project management process for the construction of two new pilot boats. The project management process included the development of a pilot boat design based on an assessment of user needs, and preparation of a comprehensive request for proposals. It also included a requirement that the Authority meet both Transport Canada guidelines on the construction of pilot boats and the construction standards set by an international ship classification society. Furthermore, the project management process included preparing a bidding competition, assessing the bids, and designating inspectors to act on behalf of the Authority. This process is designed to give management assurance that the Authority will construct pilot boats that meet user needs, comply with Transport Canada safety guidelines for the construction of pilot boats, and follow construction practices that meet the recognized quality standards of the Lloyd's Registry.

66. We found that the Authority's system and practices for pilot boat construction, acquisition, and replacement planning ensure that Transport Canada's safety regulations are being met, and that the vessels are being constructed to meet the Authority's operational requirements.

Pilot risk management methodology

67. The 1999 *Ministerial Review of Outstanding Pilotage Issues* recommended that pilotage authorities should take a risk-based approach when designating compulsory pilotage areas and vessels that are subject to pilotage services. The Pilotage Risk Management Methodology (PRMM) was subsequently developed by a Pilotage Steering Committee comprised of the Chief Executive Officers of the pilotage authorities and Transport Canada personnel from the Marine Personnel Standards and Pilotage Branch. In April 2002, guidelines for the preparation of a PRMM were approved by Transport Canada.

68. The Authority has completed four PRMM reviews since the last special examination. We reviewed the PRMMs and one regulatory change that was made based on the findings of the PRMM. We found that all of the PRMM reviews included the full participation of key stakeholders. However, we also found that during two of the four PRMM reviews, the risk assessment matrix, which is a key part of the process, was not completed in accordance with the guidelines.

69. The first PRMM review, which was related to changes in the size and type of vessels that are subject to compulsory pilotage in Atlantic

Canada ports, began in November 1999 and was completed in May 2003. The results of that PRMM were used by the Authority to draft proposed regulatory changes that were published in Part 1 of the *Canada Gazette* in April 2004. However, an objection to the regulatory change was filed with the Canadian Transportation Agency by a stakeholder. In October 2004, the Minister of Transport appointed an independent investigator to examine the objection and the proposed regulatory change. The investigator completed his examination in January 2005, and recommended that the Minister uphold the proposed regulatory change. However, the investigator was critical of the risk assessment process followed in the PRMM review. The Authority submitted the regulatory change to the *Canada Gazette*. No objections were subsequently filed. The regulatory changes came into force in May 2006.

70. The third PRMM was conducted to determine if Voisey's Bay and its approaches should be designated as a compulsory pilotage area. The PRMM process began in August 2004 and was completed in June 2005. The facilitator, a marine consultant hired by the Authority, recommended that, based on the results of the PRMM, the area continue to be designated non-compulsory. The PRMM Committee of the Authority's Board of Directors interviewed the facilitator to determine how he had arrived at his decision. The PRMM Committee members determined from this interview that the facilitator had modified the risk assessment process in the PRMM to accommodate concerns raised by stakeholders, and that the PRMM had therefore not been completed in accordance with Transport Canada guidelines.

71. The PRMM Committee members decided to have the Voisey's Bay PRMM and supporting documents reviewed by an independent consultant, to determine if the decision to keep the area non-compulsory could be supported. The review began in September 2005 and was completed in May 2006. The review found that that the risk to navigation had not been properly evaluated. The Committee found, through discussions with stakeholders, that they agreed that the navigation risk warranted designation as a compulsory pilotage area. The Authority is now working with stakeholders to determine options for providing pilotage services in this remote location. The Authority will then propose regulatory changes.

72. We found that the Authority's designation of the compulsory pilotage areas and vessels that are subject to pilotage is based on an assessment of the navigational risks for safe movement of vessels in the Atlantic region, as outlined in the PRMM process.

73. However, the Authority has identified problems with the PRMM process and has requested that Transport Canada and other authorities across Canada conduct a review to address the problems. The Authority has encouraged all participants in the PRMM process to formally meet and discuss steps to improve the process. In addition, the Authority has taken steps to ensure that all PRMM reports are subject to an independent review before the results are presented to the PRMM Committee of the Board of Directors for a final decision.

Strategic planning and corporate governance

Performance measurement

74. We found that the Authority has a good process for tracking various types of cost information. However, the Authority does not have a performance measurement framework in place. The Authority has not established a formal performance measurement framework that includes the required systems for providing performance information on the effectiveness and efficiency of operations, both for internal management purposes and for external reporting.

75. The Authority has systems and practices in place to monitor the use of human resources on a day-to-day basis. A key system is its Dispatch and Billing System (DABS), which is used to dispatch pilots according to an automated roster. DABS maintains key information on assignments, such as the time the pilot was called, the time that the pilot boarded the ship, the elapsed time for the assignment, and the time that the pilot booked off. The information in DABS is used by the dispatcher to manage the balance between industry demands for services with the requirements for limits on duty time to ensure pilots are not fatigued. In addition, the dispatcher uses this and other information to identify cases where the collective agreement and local dispatching rules are not being followed.

76. The Authority assigns individual pilots to ports. It has developed a standard number for these assignments. The Authority is also monitoring actual assignment trends over a ten year period. This analysis allows management to identify ports at which permanent changes in traffic have occurred, where such changes have resulted in significant variations from the standard number of assignments per pilot. When warranted, steps are taken to adjust the number of pilots at the port. Trends in assignments by port are also provided in quarterly reports to the Audit Committee of the Board of Directors.

77. The Authority assesses its financial performance at a basic level, by measuring actual operating revenue to budget. However, there are

only a limited number of non-financial performance indicators in place. The Authority tracks the following output measures:

- recalls on assignments,
- number of assignments per day,
- number of shipping incidents, and
- non-compliance reports.

78. The Authority has more work to do to put a robust performance management framework in place that includes the overall management of human resources. Such a management framework would allow it to systematically identify performance expectations, so as to assess results (financial and non-financial) related to the management of human resources. These performance measures would be specific to the operations of the Authority and to pilot performance. For example, the Authority could develop various additional performance measures related to human resource management. In addition, the Authority could continue to develop its overall performance framework to measure its performance and progress in assisting decision makers, in evaluating services provided, and in developing long-term plans to improve services provided.

79. A key aspect of accountability in today's business environment is the comparison of actual results with expected results for non-financial and financial performance indicators. Such a comparison would focus on results, rather than on activity-based information. Once the performance measures and targets are in place, the Authority could monitor actual performance against the targets, identify the cause of variances from the targets, and take the appropriate corrective action.

80. Recommendation. Based on its knowledge of the organization, the Authority should put in place additional performance measures related to its human resource management. The Authority should also consider adopting benchmarks used by other organizations. In addition, the Authority should set additional performance measures and establish targets to monitor how well it is delivering on its mandate to deliver safe and efficient pilotage services.

The Authority has responded. The Authority will put additional performance measures in place. The Authority faces a challenge because of the diversity of its operation. There is a great variety of ports within Atlantic Canada. In one port, there is the bare minimum of two pilots employed. In order to maintain a 24-hour, 365-day operation, the Authority cannot

reduce the number of pilots to below this level in spite of the fact that there are only approximately 100 assignments in this compulsory area. In another area, three pilots provide coverage for a district spanning more than 400 kilometres. The Authority will attempt to further develop meaningful performance measures that take into account the disparity in its operation.

Governance

81. We found that the Authority has established clear roles and responsibilities for all participants involved in the management of the Authority. Senior managers and Board members have a clear understanding of their respective responsibilities and accountabilities.

82. The *Federal Accountability Act* has resulted in amendments to Part X of the *Financial Administration Act* (FAA) pertaining to the operation of federal crown corporations. Section 148(1) of the FAA now states that each parent Crown corporation that has four or more directors shall establish an audit committee composed of no fewer than three directors of the corporation, none of whom may be officers or employees of the corporation or any affiliate. We found that the Authority's Audit Committee has, by convention, included a pilot who sits on the Board of Directors. Inclusion of an employee on the Audit Committee contravenes the recently amended Section 148(1) of the FAA.

83. According to the FAA, directors of Crown corporations are required to disclose the nature and extent of interest in any material contract with the corporation. There are a number of government initiatives underway to improve governance in Crown corporations that have resulted in new guidance to members of the Board of Director on the avoidance of actual or perceived conflict of interest.

84. The Authority's current practice is to have six members on the Board of Directors, which is comprised of two pilot [employee] representatives, two shipping industry representatives and two representatives who are members of the general public. The inclusion of employee and industry representatives on the Board creates inherent conflict-of-interest. The Authority needs to assess the composition of its Board of Directors and Committees against the requirements of the *Federal Accountability Act*, the *Financial Administration Act*, and new conflict of interest guidance.

85. We found that all new Board members had received orientation training. This training was primarily comprised of background documentation on the Authority (policies, procedures, the

Pilotage Act, and so on). In addition to orientation training, Board members indicated that they received additional training related to governance, financial literacy, and personality assessment. We did not find any formal assessment for Board members. Training appears to be identified and provided on an ad hoc basis.

86. The Board has an effective working relationship with the management of the Authority. All parties indicated that they are receiving the necessary information required to make decisions.

87. We found that the Authority has regular Board and Committee meetings with virtually full attendance. To manage the activities of the Board and the Authority, the Board has established four committees:

- the Pilot Boat Committee,
- the Regulation and Governance Committee,
- the Audit Committee, and
- the PRMM Committee.

88. All four committees have clear terms of reference. Minutes are maintained for each Committee and Board meeting.

89. When we reviewed the Audit Committee minutes we found that, in addition to fulfilling its primary role as an oversight body for the Authority, the Audit Committee has been reviewing business decisions that relate to the ongoing management of the Authority and making recommendations to the Board of Directors. Maintaining the independence and objectivity of the Audit Committee is important and, to a certain extent, depends on minimizing its involvement in management decisions. We recognize that the Authority is relatively small, which means that Board members must sit on multiple committees. However, the Audit Committee must respect and adhere to its terms of reference. Its oversight role is particularly important since the Authority has recently engaged internal auditors, on a contract basis, to review operations as well as internal controls.

90. Recommendation. The Authority should assess the performance of its committees against the established terms of reference and best practices for such committees. This may identify areas for improvement or new best practices. The Authority should review the current practice of appointing employees and industry representatives to the Board of Directors, given new conflict of interest guidelines and the *Federal Accountability Act*. The Authority should also review the practice of appointing employee Board members to the

Audit Committee, given the changes in the *Financial Administration Act* related to audit committee members for Crown corporations.

The Authority has responded. *The Board and Management continue to maintain good governance procedures through regular and consistent attendance at various workshops provided by the Treasury Board Secretariat and the Privy Council Office, as well as participation in seminars provided by outside parties such as the Association of Canadian Pilot Authorities and Renaud Foster.*

The Board and Management of the Authority fully support the current Board structure of two representatives each from the general public, the shipping industry, and employee pilot sectors. This Board composition has functioned effectively in the past and continues to function well. The knowledge and experience that Board members from each sector have contributed has made the Board stronger and has allowed for comprehensive and considerable debate.

The Board is committed to using self assessment and peer assessment of its committees and individual members in order to achieve the best possible governance framework.

Strategic planning and decision making

91. The Authority has established a tariff model to assist its decision making. The tariff model is a spreadsheet-based management tool used primarily by the Authority's finance officers. The officers use the model as a basis for setting tariffs port by port and for determining the Authority's overall budget. The model allows the officers to take the past six years of activity into consideration when they forecast vessel traffic, in preparation for planning and projecting future activity for the next three fiscal years. The traffic forecast information is adjusted based on actual performance for the seven months immediately preceding the forecast.

92. The Authority's budget is determined using the model, which feeds directly into the Authority's Corporate Plan. The model also aids in strategic planning and provides a benchmark for pilotage services. Management uses the model to consider potential regulatory changes that would affect compulsory pilotage services.

93. We found that the Authority continually evaluates and refines the tariff model, as necessary, to improve the reliability of projected traffic levels, which are a key element in planning the future activities of the organization.

Financial self-sufficiency

94. The Authority operates in a rate-regulated environment. Under the *Pilotage Act*, interested parties who believe that any proposed tariff increase is prejudicial to the public interest may appeal the increase to the Canadian Transportation Agency (CTA). The Authority is obliged to abide by any CTA recommendations.

95. For a number of years, the Authority has been holding semi-annual consultations on a port-by-port basis with stakeholders and with organizations representing the shipping industry, to try to resolve issues before rate increases are submitted and published in the *Canada Gazette*. This consultation includes discussion of financial information on pilotage services delivered in the port in the past fiscal year. The discussion also covers trends in traffic, estimates of future traffic, the potential impact on the cost of operations, and potential rate changes. The Authority and stakeholders have indicated that this consultative process has resulted in improved communication on the cost of providing services, on the issues facing their ports, and on the strategy that the Authority will follow to address the issues. Stakeholders have raised no objections to proposed tariff increases in the last nine years. The Authority believes that it is a leader when it comes to engaging stakeholders in the tariff-setting process.

96. We found that the Authority has in place systems and practices for establishing pilotage charges that are fair and reasonable to stakeholders and that ensure financial self-sustainability.

Conclusion

97. Based on the criteria established for this examination, there is reasonable assurance that there were no significant deficiencies in the system and practices that we examined. We have also pointed out, throughout this report, various opportunities for improving the quality of these systems and practices. Such improvements would enable the Authority to continue to provide safe pilotage services in Atlantic Canada, and to manage its operations economically and effectively.

Appendix Systems, practices, and criteria for examination

The table below summarizes the Atlantic Pilotage Authority's expected corporate results. For each expected corporate result we have identified: risks that could prevent the Authority from achieving the expected corporate result; systems and practices that are essential to providing the Authority with reasonable assurance that it is meeting the expected corporate result by safeguarding and controlling its assets, managing its resources efficiently and economically, and carrying out its operations effectively; and the criteria used to assess if there were significant deficiencies in the systems and practices.

Expected corporate results			
	Operating safe pilotage services that contribute to safe navigation within the Atlantic region	Operating economic and efficient pilotage services that meet the needs of its users	Operating on a self-sustaining basis while ensuring fair and reasonable tariffs for users
Risks	<ul style="list-style-type: none"> Pilotage areas and vessels may not be appropriately designated. The designation of compulsory pilotage may not be supported by a formal risk-based assessment. There may be no system in place to assess pilot and certificate holder competence and quality of service. Pilot Boat crews may not be sufficiently competent in man-overboard recovery procedures. Pilot boats may not meet Transport Canada safety requirements under the <i>Canada Shipping Act</i> as detailed in the guideline for the construction and inspection of pilot boats, and may not contain life-saving equipment specified in APA operational procedures. Safety risks in the provision of pilotage services may not be fully evaluated, identified, and managed. 	<ul style="list-style-type: none"> The Atlantic Pilotage Authority may not have a strategic planning process that identifies key business risks, and may not develop strategies and plans to mitigate these risks. The Board of Directors may not have the competence and objectivity to effectively govern the Authority. The Authority may not be managing human resources in the most efficient manner in both the short and long term. Local labour practices may be resulting in the inefficient use of pilot time on assignments. The Authority may not have an emergency plan to deal with a catastrophic incident. The Authority may not have deployed their pilot boats in locations that result in the efficient use of the asset. The Authority may not have a system in place to assess quality of service. Many of the Pilot boats are aging, and the Authority may not have a formal structure to ensure economic and efficient acquisition, construction, maintenance, and disposal of pilot boats. 	<ul style="list-style-type: none"> If stakeholders find operating costs unreasonable and unjustifiable, and if they file objections with the Canadian Transportation Agency, then the Authority may not be able to recover all its operating costs through tariff increases, and may not be financially self-sufficient.

Expected corporate results			
	Operating safe pilotage services that contribute to safe navigation within the Atlantic region	Operating economic and efficient pilotage services that meet the needs of its users	Operating on a self-sustaining basis while ensuring fair and reasonable tariffs for users
Systems and practices	<ul style="list-style-type: none"> • Pilotage Risk Management Methodology (PRMM) • Dispatch and Billing System • Management information systems • Human resources management systems • Collective agreement negotiating strategy • Pilot licensing examination and assessment process • Systems and practices to assess proficiency of pilots, certificate holders, and pilot boat crews • Incident reporting system • Pilot boats logbooks and summary reports • Pilot boat operating and inspection procedures • Safety Risk Management Framework 	<ul style="list-style-type: none"> • Governance, planning, and accountability processes • Strategic Planning process • Risk Management Framework • Consultation and communication with various stakeholders • Collective Agreement Negotiating Strategy • Recruitment, training, and assessment processes • Conflict of interest guidelines • Dispatch and Billing System • Pilot Boat Logbook or summary reports • Performance measurement and reporting • Assignment non-conformance report system • Pilot boat life cycle management system 	<ul style="list-style-type: none"> • Tariff-setting practices

Expected corporate results			
Operating safe pilotage services that contribute to safe navigation within the Atlantic region		Operating economic and efficient pilotage services that meet the needs of its users	Operating on a self-sustaining basis while ensuring fair and reasonable tariffs for users
Criteria	<ul style="list-style-type: none"> The Authority's designation of compulsory pilotage areas and vessels subject to pilotage is based on an assessment of the navigational risks for safe movement of vessels in the Atlantic region. The Authority ensures that pilots, certificate holders, and pilot boat crews are competent and in good health. The Authority's pilot boat acquisition, utilization, replacement planning, and maintenance strategies meet operational needs, ensure the safety of users, and are based on the most cost effective full-life cycle cost. 	<ul style="list-style-type: none"> When developing strategies and plans to meet its mandated objectives, the Authority uses a risk management framework to identify business risk, establishes and implements effective strategies and practices, and has an appropriate governance structure. Using appropriate performance indicators, the Authority establishes measures and reports that evaluate the effectiveness and efficiency of operations, that assist in decision making, and that help ensure accountability. The Authority employs or contracts pilots based on expected traffic volume and reasonable utilization standards, to provide quality pilotage services at a reasonable cost. The Authority's pilot boat acquisition, utilization, replacement planning, and maintenance strategies meet operational needs, ensure the safety of users, and are based on the most cost effective full life-cycle cost. 	<ul style="list-style-type: none"> The Authority ensures financial self-sustainability by establishing pilotage charges that are fair and reasonable to the stakeholders.

