1. Regulatory Requirements

   The proponent should be aware of the general applicability of Section 36(3) of the federal *Fisheries Act* to the proposed undertaking. Deleterious substances (e.g. lubricating fluids, fuels, etc.) cannot be deposited into water frequented by fish. Any operational drainage must not be harmful to fish.

   Migratory birds, their eggs, nests, and young are protected under the federal *Migratory Birds Convention Act* and the complementary regulations (Migratory Bird Regulations, Migratory Bird Sanctuary Regulations). Certain species are recognized to be at risk under the federal *Species at Risk Act* (SARA), provincial species at risk legislation, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or by the Atlantic Canada Conservation Data Centre. The proponents should be reminded that they are expected to comply with the *Migratory Birds Convention Act* and *Regulations* during all project phases. Migratory birds include those species listed in the Canadian Wildlife Service (CWS) Occasional Paper "Birds protected in Canada under the *Migratory Birds Convention Act*".

   The proponent should be reminded that the *Species at Risk Act* (SARA) amends the definition of "environmental effect" in subsection 2(1) of the CEAA to clarify, for greater certainty, that EAs must always consider impacts on a listed wildlife species, its critical habitat or the residences of individuals of that species.

   The proponent should also be aware of the potential applicability of the *Canadian Environmental Protection Act* (CEPA). The *Canadian Environmental Protection Act* enables protection of the environment, and human life and health, through the establishment of environmental quality objectives, guidelines and codes of practice, and the regulation of toxic substances, emissions and discharges from federal facilities, international air pollution, and ocean dumping.

2. Sensitive Areas

   Any Ecologically and Biologically Significant Area (EBSA) within the study area, as well as those adjacent to the project area, should be described in the environmental assessment, particularly in relation to existing species and their habitat.

3. Migratory Birds

   Marine birds and species at risk have been identified as valued ecosystem components (VEC's) for this project. The CWS is satisfied with the factors outlined in the scoping document to describe these VEC's in the EA.

   Additionally, the following sections should be considered in the development of the EA.

4. Species at Risk

   Any Species at Risk that may be found in the project area should be considered in the environmental assessment. Additional information on SARA, including a list of species scheduled under the Act, is available at http://www.sararegistry.gc.ca/default_e.cfm .

5. Information Sources

The proponent should be aware of Environment Canada's Eastern Canadian Seabirds at Sea (ECSAS) program. This program has conducted over 4000 surveys covering 7800 km of ocean track in the Newfoundland and Labrador offshore area since 2006. The most up to date data for the study area should be included in the EA. This information is available by contacting Dave Fifield at David.Fifield@ec.gc.caor 709-772-3425.

While proponents are also encouraged to employ peer-reviewed literature to support their conclusions, few studies on the interactions between birds and seismic survey activities have been conducted1, and none have been conclusive. It is important to recognize the limited applicability of available research findings in the discussion of impacts (i.e., conclusions likely do not apply to interactions with large concentrations of birds). It should also be noted that, while the Eastern Canadian Seabirds at Sea dataset contains the most recent seabird data available for the Newfoundland and Labrador offshore area, surveys have not been dedicated to determining impacts of seismic on seabirds, but rather are distribution data collection exercises.

While an EA may conclude that the overall impact of a seismic survey on seabirds is relatively small, it remains important that the opportunity for this activity to impact federally-protected avian species be properly acknowledged in the EA. Accordingly, it is also expected that the proponent commit to all reasonable measures to mitigate the potential for such impacts to occur. These measures are outlined in the following sections.

6. Mitigation

Mitigation measures related to adverse effects, including cumulative effects, should be identified. Measures should be consistent with the *Migratory Bird Convention Act* and SARA and with applicable management plans, recovery strategies and action plans. Mitigation should reflect a clear priority on impact avoidance opportunities. The following specific measures should be among those which are considered in preparing a mitigation strategy:

- Should storm-petrels or other species become stranded on vessels, the proponent is expected to adhere to the protocol described in Williams and Chardine's brochure entitled, *The Leach's Storm Petrel: General Information and Handling Instructions*. This document has been previously provided to the C-NLOPB. Should an additional copy be required please contact us. A permit is required to implement the Williams and Chardine protocol. **The proponent should be advised that it is required to complete a permit application form prior to proposed activities.** This form is available from Andrew Macfarlane at the Canadian Wildlife Service, who can be reached by phone at 506-364-5033 or email at andrew.macfarlane@ec.gc.ca.

- Ramping-up the air gun array over a 30-minute period - a procedure typically used for other animal groups - may encourage marine birds to leave the survey area and may reduce the potential for adverse interactions between the project and marine birds accordingly.

- It is expected that the proponent demonstrate how they will minimize or prevent the release of hazardous substances onboard the seismic vessel (e.g. streamer fluid, chemicals for streamer repairs, fuels, lubricants) into the marine environment. Attention should be paid to impact avoidance and pollution prevention opportunities and a contingency plan should be developed to enable a quick and effective response in the event of a spill. Other management practices and preventative maintenance plans should be outlined such as a protocol to prevent streamer-associated spill events. This protocol should describe conditions that will allow the seismic program to be conducted without spill incidents (e.g., the range of environmental conditions within which streamers can operate, monitoring to detect leaks or tears). Further details are outlined under the "Effects of Accidents and Malfunctions" section.

7. Data Collection

This survey provides a good opportunity to collect additional seabird data from the area. CWS has developed a pelagic seabird monitoring protocol that we are recommending for all offshore projects. This protocol is a work in progress and we would appreciate feedback from the observers using it in the field. A guide sheet to the pelagic seabirds of Atlantic Canada is available through CWS in Mount Pearl.

In an effort to expedite the process of data exchange, the Canadian Wildlife Service would appreciate that the data (as it relates to migratory birds or species at risk) collected from these surveys be forwarded in digital format to our office following completion of the study. These data will be centralized for our internal use to help ensure that the best possible natural resource management decisions are made for these species in Newfoundland and Labrador. Metadata will be retained to identify source of data and will not be used for the purpose of publication. The Canadian Wildlife Service will not copy, distribute, loan, lease, sell, or use of this data as part of a value added product or otherwise make the data available to any other party without the prior express written consent.

8. Effects of Accidents and Malfunctions

The mandatory assessment of environmental effects which could result from accidents and malfunctions should include a consideration of potential spill events, such as spills from damaged seismic streamers. The assessment should be guided by the need to ensure compliance with the general prohibitions against the deposit of a deleterious substance into waters frequented by fish (Section 36, *Fisheries Act*) and against the deposit of oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds (Section 35, Migratory Birds Regulations). In addition, it should be focused on potential worst–case scenarios (e.g., concentrations of marine birds, presence of wildlife at risk). Based on this analysis, the EA should describe the precautions that will be taken and the contingency measures that will be implemented to avoid or reduce the identified impacts.

In developing a contingency plan that would support the assessment of accidents and malfunctions, and a determination that impacts could be avoided or reduced, it is recommended that the Canadian Standards Association publication, *Emergency Planning*

for Industry CAN/CSA-Z731-95 (Reaffirmed 2002), be consulted as a useful reference. All spills or leaks, including those from machinery, fuel tanks or streamers, should be promptly contained, cleaned- up and reported to the **Environmental Emergencies 24 Hour Report Line (St. John's 709-772-2083; Other areas 1-800-563-9089 of NL)**.

9. Effects of the Environment on the Project
   Seismic operations will be somewhat sensitive to environmental conditions (e.g., wind, waves, ice). The EA should focus on how such conditions acting on the project could have consequences for the environment (e.g., increased risk of spills and impacts on valued ecosystem components). Marine weather information can be found on the Meteorological Service of Canada website at www.weatheroffice.gc.ca/marine. Additional information on regional climatology can be found at www.climate.weatheroffice.ec.gc.ca, or by contacting Environment Canada directly. Also, ice information can be found on the Canadian Ice Service website at www.ice-glaces.ec.gc.ca.

10. Routine Discharges
    The *Offshore Waste Treatment Guidelines* (OWTG) require a description of "specific pollution prevention measures the operator plans to implement to reduce waste generation and discharge" (NEB *et al*., 2002, 3). It is recommended that the following be considered to minimize routine discharges and waste:
    - means that would promote recovery, recycling and removal of materials that otherwise would go overboard, be incinerated or be taken back to shore for disposal;
    - means that would reduce greenhouse gases and other emissions to air;
    - means that would involve replacing fluids and chemicals with less toxic alternatives.

11. Notices
    Regarding works and/or activities that have the potential to impact upon navigation, the proponent is advised to contact the Navigation Protection Program (NPP) staff according to the following directions prior to project commencement.

    A "Notice to Shipping" is to be issued ten days prior to the commencement of any survey work, and again upon completion of the work to alert vessel operators in the area. Contact the Canadian Coast Guard's Marine Communications & Traffic Services (MCTS) Centre by telephone at (709) 772-5578 to arrange this. This is to be done on an annual basis.

The following information is provided for project planning and any questions should be directed at the applicable government agency.

Fisheries Act

Subsection 36(3) of the Act specifies that unless authorized by federal regulation, no person shall deposit or permit the deposit of deleterious substances of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter any such water.

Canadian Environmental Protection Act (CEPA)

CEPA and its complementary management instruments (e.g., agreements, regulations, notices, codes of practice, guidelines, policies, plans) govern such matters as environmental quality, toxic substances, hazardous waste management and disposal at sea.

***Migratory Birds Convention Act* and associated Regulations**

Migratory birds, their eggs, nests and young are protected under the *Migratory Birds Convention Act* (MBCA) and complementary regulations. Migratory birds include those species listed in the Canadian Wildlife Service Occasional Paper No. 1 *Birds Protected in Canada under the Migratory Birds Convention Act* (1991). The Act and regulations include the following prohibitions:

- "no person shall disturb, destroy or take a nest, egg, nest shelter, eider duck shelter or duck box of a migratory bird";
- "no person shall deposit or permit to be deposited oil, oily wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds".