

APPENDIX A

Mitigation Commitments in the EA Report and EA Amendment, and Implementation Status

Table A.1: Primary Mitigation Commitments by Potential Effects

(Based on GrandSPAN EA Report, Table 5.1)

Potential Issues and Interactions	Primary Mitigation Measures
Interference with fishing vessels / mobile and fixed gear fisheries	<ul style="list-style-type: none"> - Upfront communications, liaison and planning to avoid fishing activity - Continuing communications throughout the program - FLOs - SPOC - Advisories and communications - VMS data - Avoidance - Start-up meetings on ships
Fishing gear damage	<ul style="list-style-type: none"> - Upfront communications, liaison and planning to avoid fishing gear - Use of scout vessel - SPOC - Advisories and communications - FLOs - Compensation program - Reporting and documentation - Start-up meetings on ships
Interference with shipping	<ul style="list-style-type: none"> - Advisories and at-sea communications - FLOs (fishing vessels) - Use of scout vessel - SPOC (fishing vessels) - VMS data
Interference with research surveys	<ul style="list-style-type: none"> - Communications and scheduling; mapping locations - Avoidance
Temporary or permanent hearing damage/disturbance to marine animals	<ul style="list-style-type: none"> - Pre-watch of safety zone - Delay start-up if marine mammals or sea turtles are within 500 m - Ramp-up of airguns - Shutdown of airgun arrays for <i>endangered</i> or <i>threatened</i> marine mammals and sea turtles within 500 m - Use of qualified MMO(s)
Temporary or permanent hearing damage / disturbance to Species at Risk or other key habitats	<ul style="list-style-type: none"> - Pre-watch of safety zone - Delay start-up if marine mammals or sea turtles are within 500 m - ramp-up of airguns - Shutdown of airgun arrays for <i>endangered</i> or <i>threatened</i> marine mammals and sea turtles within 500 m - Use of qualified MMO(s) to monitor for marine mammals and sea turtles. [No critical habitat has been identified in or near the Study Area.]

Potential Issues and Interactions	Primary Mitigation Measures
Injury (mortality) to stranded seabirds	<ul style="list-style-type: none"> - Daily monitoring of vessel - Handling and release protocols - Minimize lighting if safe
Seabird oiling	<ul style="list-style-type: none"> - Adherence to MARPOL - Spill contingency and response plans - Use of solid streamer

Table A.2 Mitigation and Monitoring Commitments and Implementation Status

Mitigation Commitment	Implementation Status (as of 1 May 2018)
<p>Pre-survey information exchanges, plan sharing, agreed on-going communications protocols for:</p> <ol style="list-style-type: none"> 1. identifying key fishing areas and times (particularly fixed gear) 2. planning mitigation of potential conflicts with fisheries, science studies and other ocean users (e.g. DND) 	<p>Completed / in place (but will continue as needed through to start-up and throughout the survey). Contacts identified.</p>
<p>Continuing communications / information exchanges throughout the program to avoid key fishing areas and times (particularly fixed gear), and conflicts/interactions with science surveys and other ocean users.</p> <p>(Advisories and communications during the survey will be via continuing e-mails, phone contacts, dedicated web site, newsletters, notices to Coast Guard, CBC and/or other means.)</p>	<p>Notices to Shipping - will be issued at survey start (specifying work area, fishing gear and vessel compensation claims contact). Agreed on-going communications protocols - to be implemented when the survey begins; FLO on-board the seismic ship (throughout the survey for at-sea communications) – in process of hiring; Photos of the planned survey vessels for the FFAW-Unifor – photos provided in copy of presentation. Will also be included in general mail-out. 24/7 telephone contact – to be in place before survey start. Reporting procedures for FLO and MMSOs established. MARLIN system on-board seismic ship DND/MARLANT contact identified</p>
<p>On-board Fisheries Liaison Officers (FLOs): Representing FFAW/Unifor (also 1 representing Labrador/Nunatsiavut interests when in offshore Labrador parts of the 2018 program)</p>	<p>FLO - GXT has contacted the FFAW-Unifor about GXT's 2018 requirements, and issued an RFP for FLO representing Labrador Inuit interests.</p>
<p>Fishing Gear and Vessel Compensation Program plan (including communications about contacts)</p>	<p>Plan in place; Project contact information included in all pre-survey communications, and will be included in future communications, and in all Notices to Shipping; FLO reporting protocols in case of fishing gear incidents</p>
<p>Single Point of Contact with 24/7 toll-free telephone access during survey; dealing with fishing gear and vessel claims</p>	<p>SPOC identified – GXT Environmental Manager</p>
<p>Accessing Vessel Monitoring System (VMS) data (for fishing vessel locations)</p>	<p>A request has been made for access to the VMS locational data for 2018.</p>
<p>Use of support/scout vessel to look for fishing gear and hazards, as needed</p>	<p>A support ship has been identified.</p>

Mitigation Commitment	Implementation Status (as of 1 May 2018)
Avoidance of EA identified special or unauthorized areas (including The Zone, the Hawke Channel, areas outside an assessed Project Area, bird colonies, Marine Protected Areas); No seismic equipment in the water outside the Project Area (including on route to and from ports).	Location of any such areas near the Project Area and the Project Area charted on board the ships and entered into the MARLIN system – MARLIN onboard; coordinates of these areas have been provided (GIS shapefiles); rules regarding these areas have been communicated and will be emphasized during start-up meetings
Marine Mammal Mitigations - Qualified MMSO for 1. Pre-watch of safety zone 2. Ramp-up of airguns 3. Watch, and shutdown of airgun arrays for endangered or threatened marine mammals and sea turtles within 500 m	RFPs have been issued for qualified MMSOs; Statement of Canadian Practice will be followed.
Observation and Data Collection - Qualified MMSOs to monitor for 1. Marine mammals and sea turtles observation and data collection during seismic operations and other times at sea 2. Seabird observation and data collection when at sea 3. Regular and post-survey observation/incident reports (and data) to go to relevant agencies	RFPs have been issued for qualified MMSOs, with MM and seabird experience. ECCC/CWS has provided computerized data forms and protocols for data collection and entry in 2018.
Minimize lighting as and if safe to do so, to minimize attracting seabirds	This will be applied during the survey and transits.
Handling and release protocols / permit for seabirds	Renewal of GXT's existing permit - submitted and in process.
Start-up meetings on ships: Communicate mitigation commitments, environmental, safety, area fisheries	Planned for all departments, both ships, at survey start and crew changes; FLO and MMSOs will be involved.
SymOps Plan to avoid conflicts / temporal/spatial overlap with other petroleum industry exploration programs	MARLIN system - onboard survey ship. Continuing communications with other operators before the survey and during
Pollution Prevention / Emergency Response (including spill contingency and response plans)	Adherence to MARPOL - certified for the ships. Low sulphur fuel – onboard SOPEP / Pollution Prevention and Emergency Response, Waste Management Plans - on ships. Solid core streamer – on board International Air Pollution Prevention Certificates - in place Solid streamer - on board the seismic ship

This page has been intentionally left blank for double-sided printing