1 Purpose

This document provides scoping information for the environmental assessment of the proposed construction, operation, maintenance and decommissioning of four drill centers and associated subsea equipment, drilling operations within these drill centers, and all other related works and activities (the Project) at the White Rose oilfield. The proposed project is located on the Grand Banks offshore Newfoundland, approximately 350 km east of St. John's. Husky Oil Operations Limited (Husky) is the project proponent.

Included in this document is a description of the scope of the project that will be assessed, the factors to be considered in the assessment, and the scope of those factors.

The document has been developed by the C-NLOPB in consultation with the Department of Fisheries and Oceans (DFO), Environment Canada (EC), other advisory agencies in the Governments of Canada and of Newfoundland and Labrador[1]

2. Regulatory Considerations

In 2001 the White Rose Oilfield Development received Development Plan approval from the C-NLOPB. In addition, the White Rose Development was subject to a Comprehensive Study environmental assessment pursuant to the CEA Act and in June 2001 the Minister of Environment determined that the project was not likely to cause significant adverse environmental effects.

The proposed Project, as outlined in the project description submitted by Husky Energy, is in support of production operations at White Rose. Subsea facilities will be connected to the White Rose FPSO. However, the Project, as proposed, is outside of the scope of project previously assessed in the White Rose Comprehensive Study and the location is outside the White Rose Significant Discovery Area[2].

The Project will require authorizations pursuant to Section 138 (1)(b) of the *Canada-Newfoundland Atlantic Accord Implementation Act* and Section 134(1)(a) of the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act.* Environment Canada has indicated that the proposed project will require an ocean disposal permit pursuant to the *Canadian Environmental Protection* Act. In addition, the Department of Fisheries and Oceans has indicated that an authorization pursuant to Section 35(2) of the *Fisheries* Act will be required. Pursuant to Section 5(1)(d) of the *Canadian Environmental Assessment Act* (CEA Act), the C-NLOPB, Environment Canada and Fisheries and Oceans are Responsible Authorities(RAs) and must undertake an environmental assessment of the Project**.** The project as proposed is described in the *Inclusion List Regulations* and therefore is subject to a screening level of assessment under the CEA Act

[1]Appendix 1 contains a list of the departments and agencies consulted during the preparation of the document.
[2] As defined in the White Rose Comprehensive Study and supporting documents.

The C-NLOPB will act as the Federal Environmental Assessment Coordinator (FEAC) respecting the assessment and in this role will be responsible for coordinating the review activities of the other responsible authorities as well as those of other expert government departments and agencies that participate in the review.

***The C-NLOPB, Environment Canada and Fisheries and Oceans, as Responsible Authorities(RAs) intend that the environmental assessment submitted with any supporting documents as may be necessary, will fulfill the requirements for a Screening. The RAs therefore, pursuant to Section 17 (1) of the CEA Act, formally delegate the responsibility for preparation of an acceptable Screening environmental assessment to Husky Oil Operations Limited, the project proponent. The RAs will prepare the Screening Report, which will include the determination of significanc*e.**

3 Scope of the Project

The project to be assessed consists of the following components:

3.1 Construction, installation, operation, maintenance, modification, decommissioning and abandonment of up to four drill centres, and associated subsea facilities (to be connected to the White Rose FPSO), including drilling and workover of development wells, VSP programs, wellsite/geohazard surveys, subsea flow lines and any related seabed trenching, excavation, covering and/or spoil deposition;

3.2 Operation of support craft associated with the above facilities, including but not limited to vessels for the excavation of glory holes, mobile offshore drilling units, platform supply and standby vessels and helicopters, and shuttle tanker activity that is incremental to that already in existence or expected to be in existence

3.3 Construction and sub-sea installation activities will occur during summer and fall of each year for up to five years, commencing in July 2006. Drilling activities are likely to commence in 2007 and may occur throughout the year up to 2010. Production operations are anticipated to commence in 2008 and will continue year round through to 2020. Abandonment will likely commence in 2020.

4 Factors to be Considered

The environmental assessment shall include a consideration of the following factors in accordance with Section 16 of CEAA. :

4.1 The purpose of the project;

4.2 Alternative means of carrying out the project which are technically and economically feasible and the environmental effects of any such alternative means;

4.3 The environmental effects[3] of the Project, including those due to malfunctions or accidents that that may occur in connection with the Project and any change to the Project that may be caused by the environment;

4.4 Cumulative environmental effects of the Project that are likely to result from the project in combination with other projects or activities that have been or will be carried out, including all activities and ancillary activities for the construction, operation and maintenance of the drill centres;

4.5 The significance of the environmental effects described 4.2 and 4.3;

4.6 Measures, including contingency and compensation measures as appropriate, that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project;

4.7 The significance of adverse environmental effects following the employment of mitigative measures, including the feasibility of additional or augmented mitigative measures;

4.8 The need for, and the requirements of, any follow-up program in respect of the Project (refer to the Canadian Environmental Assessment Agency's 2002 "OperationalPolicy Statement" regarding Follow-up Programs[4]); and

4.9 Report on comments undertaken by Husky Energy with interested parties who may be affected by program activities and/or the general public respecting any of the matters described above that are received.

5 Scope of the Factors to be Considered

Husky Oil Operations Limited will prepare and submit to the C-NLOPB an environmental assessment for the above described physical works and activities, and as described in the project description "*Husky White Rose Development Project New Drill Centre Construction & Operations Program Project Description*", dated January 13, 2006. The environmental assessment will address the factors listed above, the issues identified in Section 5.3, and document any issues and concerns that may be identified by Husky through regulatory, stakeholder, and public consultation.

Program activities are proposed for the Jeanne d'Arc Basin, which has been studied extensively in a number of recent environmental assessments. Husky Energy completed a Comprehensive Study under the CEA Act for the White Rose project. In addition over the last three years Husky Energy completed environmental assessments for wellsite/geohazard surveys, VSP programs, 3D seismic program and a drilling program[5],

[3] The term "environmental effects" is defined in Section 2 of the *CEA Act*, and Section 137 of the *Species at Risk Act*.
[4] CEA Agency Guidance documents and Operational Policy Statements are available on its web site: http://www.ceaa-acee.gc.ca/012/newguidance_e.htm#6.
[5] EA reports and addenda completed include: "White Rose Comprehensive Study Report" (Husky Energy, 2000); "Northern Jeanne d'Arc Basin Seismic Program Environmental Assessment" (LGL 2005); "Husky Delineation/Exploration Drilling Program for Jeanne d'Arc Basin Area Environmental Assessment" (LGL 2005);

all located in the Jeanne d'Arc Basin. For the purposes of this assessment, the information provided in the environmental assessment documents completed by Husky Energy for the Jeanne d'Arc Basin can be used in support of the environmental assessment for the proposed drill centre construction and operation program.

If the "valued ecosystem component" (VEC) approach is used to focus its analysis, a definition of each VEC (including components or subsets thereof) identified for the purposes of environmental assessment, and the rationale for its selection, shall be provided.

The assessment of cumulative environmental effects should be consistent with the principles described in the February 1999 CEAA *Cumulative Effects Assessment Practitioners Guide* and in the March 1999 CEAA operational policy statement *Addressing Cumulative Environmental Effects under the Canadian Environmental Assessment Act*, and will include a consideration of environmental effects that are likely to result from the proposed project in combination with other projects or activities that have been or will be carried out. , These include, but are not limited to:

- proposed oil and gas activities under EA review (listed on the C-LNOPB Public registry at www.cnlopb.n1.ca)
- other oil and gas activities
- seismic activities;
- fishing activities (including Aboriginal fisheries)
- marine transportation

The scope of the factors to be considered in the environmental assessment includes the components identified in the "Summary of Potential Issues" setting out the specific matters to be considered in assessing the environmental effects of the project and in developing environmental plans for the project, and the defined "Boundaries" (see below). Considerations relating to definition of "significance" of environmental effects are provided in the following sections.

Discussion of the biological and physiological environments should consider the data available for the project and study area. Where data gaps exist, the EA should clearly identify the lack of data available.

5.1. Boundaries

The environmental assessment will consider the potential effects of the proposed physical works and physical activities within spatial and temporal boundaries that encompass the periods and areas during and within which the project may potentially interact with, and have an effect on, one or more VEC. These boundaries may vary with each VEC and the factors considered, and should reflect a consideration of:

"Jeanne d'Arc Basin Geohazard Survey Environmental Assessment" (LGL 2005); "White Rose Development Drilling VSP Program" (LGL 2003)

- the proposed schedule/timing of the construction, operation, maintenance, and decommissioning phases of the proposed physical works and/or physical activities;
- the natural variation of a VEC or subset thereof;
- the timing of sensitive life cycle phases in relation to the scheduling of proposed physical works and/or physical activities;
- interrelationships/interactions between and within VECs;
- the time required for recovery from an effect and/or return to a pre-effect condition, including the estimated proportion, level, or amount of recovery;
- the area within which a VEC functions and within which a project effect may be felt.

The proponent shall clearly define, and provide the rationale for the spatial and temporal boundaries that are used in its environmental assessment. A 'study area' shall be clearly defined by illustration in a figure. Boundaries should be flexible and adaptive to enable adjustment or alteration based on field data and/or modeling results. The Study Area and associated boundaries will be described based on consideration of potential areas of effects as determined by modeling (spill trajectory and cuttings dispersion), the scientific literature, and project-environment interactions (including transportation corridors). A suggested categorization of spatial boundaries follows.

5.1.1. Spatial Boundaries

Project area The area in which Project activities are to occur.

Affected area The area which could potentially be affected by Project activities beyond the project area.

Region The area extending beyond the "affected area" boundary. The "region" boundary will also vary with the component being considered (e.g., boundaries suggested by bathymetric and/or oceanographic considerations).

Provincial The area extending beyond the "region" boundary but confined to the area of jurisdiction of the C-NLOPB;

Transboundary The area outside Canadian jurisdiction

5.1.2. Temporal Boundaries.

The temporal scope should describe the timing of Project activities. Scheduling of Project activities should consider the timing of sensitive life cycle phases of the VECs in relation to physical activities.

5.2. Significance of Adverse Environmental Effects

The Proponent shall clearly describe the criteria by which it proposes to define the "significance" of any adverse effects (i.e., following the employment of mitigative measures) that are predicted by the environmental assessment. This definition should be

consistent with the November 1994 CEAA reference guide *Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects*, and be relevant to consideration of each VEC (including components or subsets thereof) that is identified. The effects assessment methodology should clearly describe how data gaps are considered in the determination of significance of effects.

5.3. Summary of Potential Issues

The environmental assessment will contain descriptions of the physical and biological environments and descriptions and definitions of EA methodologies. Where information is summarized from existing environmental assessment reports, the sections referenced should be clearly indicated. Effects of relevant Project activities on those Valued Ecosystem Components (VECs) most likely to be in the Study Area will be assessed. Discussion of cumulative effects within the Project and with other relevant marine projects will be included. Issues to be considered in the environmental assessment will include, but not limited to the following:

General

5.3.1 The methodology that the Proponent uses to assess environmental effects;

5.3.2 Identification where possible of testable hypotheses associated with the results of the assessment;

5.3.3 *Noise/Acoustic Environment*

- noise and acoustic issues in the marine environment that may be generated from construction activities (e.g., glory hole excavation); drilling operations (drill rig, thruster-equipped vessels, VSP/Geohazard programs, etc.) and abandonment (wellhead severance)
- means by which potentially significant effects may be mitigated through design and/or operational procedures
- Assessment of effects of noise/disturbance on VECs, including cumulative effects

5.3.4 *Physical Environment:*

Provide an update to the information presented in the environmental assessment reports and addenda completed by Husky Energy for the Jeanne d'Arc Basin area as described above. The information should include:

- Meteorological and oceanographic characteristics of Study Area, including extreme conditions
- Site-specific sea ice and iceberg conditions, including iceberg scour of the seabed
- Physical environmental monitoring, observation and forecasting programs that will be in place during the project
- Ice management/mitigation procedures, including criteria respecting disconnection of project installations and assessment of the efficiency of detection and deflection techniques
- Effects of the environment on the Project, including cumulative effects. The effects assessment should pay specific attention to effects of environmental

factors on jack-up rigs, and mitigations that may be implemented to reduce these effects.

Discharges and Emissions

5.3.5 Planned project discharges to the marine environment:

- dredge spoil, drilling fluids and cuttings, produced water; bilge water, grey water, black water, cooling water, deck drainage, blow out preventer fluid; ballast water;
- characterization, quantification and modelling of expected discharges (e.g., cuttings dispersion; concentration of metals, nutrients, hydrocarbons, biocides, etc., timing of discharges), including a description of the models employed;
- means for reduction, re-use and recovery of wastes beyond those specified in regulations and guidelines, including a description of "best available/practicable technology";
- environmental effects of discharges, with consideration of EEM data from White Rose production activities, including cumulative effects

5.3.6 Air Quality

Provide an update to the information presented in the environmental assessment reports and addenda completed by Husky Energy for the Jeanne d'Arc Basin area as described above. The information should include

- Air emissions associated with project activities, including greenhouse gas emissions;
- implications for health and safety of workers that may be exposed to them;
- annual estimates of rates and quantities of emissions, including greenhouse gases, and a description of potential means for their reduction and reporting;
- mitigation and monitoring
- assessment of effects, including cumulative effects

Marine Resources

5.3.7 Characterization, including quantification to the degree possible, of the spatial area of seabed that is predicted to be affected by dredging, trenching and dredge spoil disposal, drill cuttings and other discharges;

5.3.8 Marine and/or migratory birds using the Study Area

Provide an update to the information presented in the environmental assessment reports and addenda completed by Husky Energy for the Jeanne d'Arc Basin area as described above. The information should include:

- spatial and temporal species distributions in Study Area (observation/monitoring data collected during ongoing petroleum activities should be discussed)
- species habitat, feeding, breeding, and migratory characteristics of relevance to the environmental assessment;
- effects of hydrocarbon spills from accidental events
- attraction of birds to vessel lighting, potential effects and mitigations
- procedures for handling birds that may become stranded on offshore structures (rigs, supply vessels, construction vessels, etc.)

- means by which bird mortalities associated with Project operations may be documented and assessed;
- means by which potentially significant effects upon birds may be mitigated through design and/or operational procedures
- environmental effects due to the Project, including cumulative effects,

5.3.9 Marine finfish and shellfish:

Provide an update to the information presented in the environmental assessment reports and addenda completed by Husky Energy for the Jeanne d'Arc Basin area as described above. The information should include:

- characterization of existing environment in the Study Area
- distribution and abundance of species utilizing the Study Area with consideration of critical life stages (e.g., spawning areas, overwintering, juvenile distribution, and migration);
- description to the extent possible of location, type, diversity and areal extent of marine fish habitat in the Study Area, in particular those indirectly or directly supporting traditional, historical, present or potential fishing activity, and including any critical (e.g. spawning, feeding, overwintering) habitats;
- means by which potentially significant effects upon fish (including critical life stages) and commercial fisheries may be mitigated through design, scheduling, and/or operational procedures; and
- environmental effects due to the Project, including cumulative effects,

5.3.10 Marine Mammals and Sea Turtles

Provide an update to the information presented in the environmental assessment reports and addenda completed by Husky Energy for the Jeanne d'Arc Basin area as described above. The information should include:

- Spatial and temporal distribution and abundance of species utilizing the Study Area (observation and monitoring data collected during exploration and development activities operated by Husky Energy should be discussed)
- Description of marine mammal lifestyles/life histories relevant to Study Area
- means by which potentially significant effects upon marine mammals/sea turtles (including critical life stages may be mitigated through design, scheduling, and/or operational procedures; and
- environmental effects due to the Project, including cumulative effects

5.3.11 Species at Risk (SAR):

Provide an update to the information presented in the environmental assessment reports and addenda completed by Husky Energy for the Jeanne d'Arc Basin area as described above. The information should include:

- a description species at risk as listed in Schedule 1 of the *Species at Risk Act (SARA)*, and those under consideration by COSEWIC in the Study Area, including fish, marine mammals, sea turtles and seabird species
- a description of critical habitat(as defined under SARA), if applicable, relevant to the study area.

- means by which adverse effects upon SAR and their critical habitat may be mitigated through design, scheduling, and/or operational procedures
- monitoring and mitigation, consistent with recovery strategies/action plans (endangered/threatened) and management plans (special concern)
- assessment of effects (adverse and significant) on species and critical habitat, including cumulative effects
- A summary statement stating whether project effects are expected to contravene the prohibitions of SARA (Sections 32 (1), 33, 58(1))

5.3.12 "Sensitive" Areas

Provide an update to the information presented in the environmental assessment reports and addenda completed by Husky Energy for the Jeanne d'Arc Basin area as described above. The information should include:

- a description, to the extent possible, of any 'sensitive areas' in the Study Area such as important or essential habitat to support any of the marine resources identified;
- means by which adverse effects upon "sensitive areas" may be mitigated through design, scheduling, and/or operational procedures
- environmental effects due to the Project, including cumulative effects ,on those sensitive areas identified

Marine Use

5.3.13 Presence of structures and/or operations:

- size and location of temporary or project-life exclusion zones;
- description of project-related traffic, including routings, volumes, scheduling and vessel types;
- means by which adverse effects upon marine use may be mitigated through design and/or operational procedures
- effects assessment upon access to fishing grounds, fish research surveys and upon general marine traffic/navigation; including cumulative effects

5.3.14 The EA should describe the relationship of the existing production project assessed under the White Rose Comprehensive Study Report with the proposed Project. For example, the EA should address whether the produced water discharge rate is likely to change or whether any elements of that project, other than the drilling of the wells and subsea construction/installation are additional or supplementary to the project already assessed.

5.3.15 Traditional, existing and potential commercial, recreational and aboriginal/subsistence fisheries, including foreign fisheries

Provide an update to the information presented in the environmental assessment reports and addenda completed by Husky Energy for the Jeanne d'Arc Basin area as described above. The information should include:

- description of fisheries in Study Area (including traditional, existing and potential commercial, recreational and aboriginal/subsistence and foreign fisheries, where practicable);

- traditional historical fishing activity – abundance data for certain species in this area, prior to the severe decline of many fish species (e.g., an overview of survey results and fishing patterns in the survey areas for the last 20 years);
- consideration of underutilized species that may be found in the study area as determined by analyses of past DFO research surveys and Industry GEAC survey data, with emphasis on those species being considered for future potential fishers, and species under moratoria
- fisheries liaison/interaction policies and procedures;
- program(s) for compensation of affected parties, including fisheries interests, for accidental damage resulting from project activities;
- means by which adverse effects upon commercial fisheries may be mitigated through design and/or operational procedures
- environmental effects due to the Project, including cumulative effects;

5.3.16 Accidental Events

Provide an update to the information presented in the environmental assessment reports and addenda completed by Husky Energy for the Jeanne d'Arc Basin area as described above. The information should include:

- Quantification of blowout risk;
- Quantification of risk of petroleum/chemical spills of all volumes associated with the project;
- Modelled physical fate of oil spills, including descriptions of models and/or analyses that are employed and the physical data upon which they are based;
- Mitigation measures to be employed to reduce or prevent such events from occurring,
- Environmental effects of oil or chemical spills, including losses from streamers (VSP and geohazard surveys) and drilling muds, with consideration of effectiveness of spill countermeasures
- Cumulative effects in consideration of "chronic" oil pollution on the Grand Banks (e.g. spills from other offshore operations, bilge dumping and other discharges from vessels);

Environmental Management

5.3.17 Husky Oil Operations Limited environmental management system and its components, including, but not limited to:

- pollution prevention policies and procedures;
- environmental compliance monitoring
- provisions or management system auditing
- chemical selection and management procedures
- fisheries liaison/interaction policies and procedures
- program(s) for compensation of affected parties, including fisheries interests, for accidental damage resulting from project activities
- emergency response plan(s)

Biological and Follow-up Monitoring

5.3.18 Discuss the need for and requirements of a follow-up program (as defined in Section 2 of CEAA) and as may be required pursuant to the SARA. The discussion should also include any requirement for compensation monitoring as compensation is considered mitigation. Modifications to existing follow-up programs to accommodate project modifications should be addressed, including compensation monitoring (Section 35(2) HADD authorization) EEM design and implementation, and the need for baseline information in support of these programs.

5.3.19 Provision of an acceptable fish habitat compensation strategy, including options considered, in accordance with the Department of Fisheries and Oceans *Policy for the Management of Fish Habitat*

5.3.20 Detailed description of monitoring and observations procedures to be implemented regarding marine mammals and seabirds (observation protocols should be consistent with the C-NLOPB Geophysical, Geological, Environmental and Geotechnical Program Guidelines (April 2004))

Abandonment/Decommissioning

5.3.21 Plans for abandonment and/or decommissioning of the project area and associated facilities following termination of production, including any anticipated requirement for post-abandonment monitoring.

APPENDIX 1

Departments and Agencies Consulted by C-NLOPB

"Federal Authorities" and likely "Responsible Authorities" under the *Canadian Environmental Assessment Act*

Environment Canada

Fisheries and Oceans

Industry Canada

Natural Resources Canada

Transport Canada

Department of National Defence

Health Canada

Other Departments/Agencies

Canadian Environmental Assessment Agency

Provincial Departments (Government of Newfoundland and Labrador)

Department of Natural Resources

Department of Environment and Conservation

Department of Fisheries and Aquaculture