10 CONSTRUCTION AND INSTALLATION

Husky Oil has identified the East Coast as a core business area for the company. The Husky Oil project management team, located in Newfoundland and Labrador, has responsibility for development plan execution and ensuring that all operations are conducted safely, in an environmentally responsible manner, and in accordance with all corporate and regulatory policies.

10.1 Management

Husky Oil, as operator, has assembled an integrated management team comprising Husky and Petro-Canada personnel, as well as some contractor personnel. This integrated management team reports, through Husky Oil, to a top level Management Committee of project owners, established to provide for the orderly planning and supervision of all project activities (Figure 10.1-1). The Technical Planning Committee and the Commercial Committee support this committee in all its endeavours.

Figure 10.1–1 Project Team Structure
The Technical Planning Committee reports to the Management Committee on issues relating to field evaluation, development and operations, including items concerning business, technical, and health safety and environment. The Commercial Committee also reports to the Management Committee, and is responsible for reviewing and providing expert input into the negotiation and execution of major contracts, commercial agreements and owner agreements. This committee will establish a common economic evaluation system for implementation on the project.

Husky Oil and Petro-Canada each have the right to appoint one member and one alternate member to any Committee or Subcommittee. The chairperson for each committee or subcommittee is a Husky Oil appointee, based on the company’s responsibility as field operator.

The integrated management team will eventually evolve into a “life-of-field” group as the project proceeds into the production stage.

To ensure technical competencies are in place for all aspects of the project, required specialized expertise will be contracted to augment the existing Husky Oil staff on an as-needed basis. The task of assembling an integrated management team for the White Rose development, incorporating managers and personnel from within the Husky Oil organization, from project co-venturer Petro-Canada, and from independent contractors, is now well under way.

The following section outlines the general requirements for the project administration on White Rose. The plan is to identify owner staff resources that may be suitable to become part of the White Rose team. This provides local continuity and increases the ability to apply the lessons learned on Terra Nova. In addition, recruitment from the local community will be an ongoing process.

10.1.1 Technical Project Management

Building corporate competence to handle the White Rose project is critical for the project’s success. This includes:

- Having a General Manager who will oversee the construction planning and execution of the White Rose Development Project. This position will lead the integrated project team through the front-end engineering, contractor/partner selection, project sanction and construction phases. The responsibilities of this position include:
  - designing and delivering a complete production facility and transportation systems for offshore production, including special purpose shuttle tankers, on time and on budget;
  - coordinating development planning for additional projects in the White Rose region in order to optimize the area’s resource potential;
  - integrating Husky Oil’s established development and operations team with the contractors’ project management teams; and
- ensuring project compliance with Husky Oil’s project engineering guidelines, administration procedures, and health, safety and environmental policies.

- Managing a core team of highly experienced specialists for the contractor selection process and then combined with contractor staff for the execution phase. During the contractor selection phase, senior, experienced personnel will be required to lead the engineering process. After contract award, the design and fabrication will be conducted by contractor staff with a defined reporting requirement that Husky Oil will review and supervise.

- Contracting to provide technical expertise that is not available in-house from Husky Oil or Petro-Canada. This approach ensures access to a large pool of readily mobilized expertise.

- Establishing clearly defined tasks for the development team, upon award of major contracts for the FPSO, the subsea package, and the glory hole excavation, to carry the project through to First Oil. This team will include technical specialists, project controls staff and contractor representatives.

### 10.1.2 Contracting Strategy

The White Rose Development Project is confronted with some key challenges that must be effectively addressed if a successful field development is to be achieved. These challenges include a complex reservoir, technical and operational considerations, and a harsh operating environment. Responses to these challenges will require innovative and cost-effective solutions that enhance the project’s long-term economic viability.

#### 10.1.2.1 Floating Production, Storage and Offloading Facility

Experienced contractors with proven track records of successfully managing and operating similar FPSO projects, from design through to production operations, are able to provide the necessary operational expertise and technical support required. It is possible that, by leveraging the contractor’s experience and corporate resources, an aggressive project schedule may be pursued, with a potential reduction in both the commercial and technical risks.

One viable contracting strategy is to appoint a contracting company which provides an FPSO under a charter party arrangement that includes all operating and maintenance services throughout field life. Using this strategy, the selection of the contractor best qualified to provide the depth of support will be absolutely crucial to the ultimate success of the White Rose oilfield development.

Several contractors have approached Husky Oil and expressed their interest in participating in the White Rose project. In order to obtain the commercial information needed to sanction the project and facilitate achievement of the project schedule, a competitive bid process for an FPSO provider is being conducted.
Issuing a Request for Proposals to interested contractors is the starting point in the evaluation process. Proposals from contractors will be evaluated and will result in the determination of a short list of potential contractors. Furthermore, these proposals will provide a clear indication of the efficacy and feasibility of this contracting strategy. Discussions will then be conducted with the short-list contractors to determine if this strategy is viable and to ultimately identify the successful contractor.

The contracting strategy is based on leveraging the value of a contractor’s established floating production facility (FPF) operating skills as the key agent throughout the life cycle of an FPF project. The focus on operations is the most critical criterion. This strategy is supported internationally by the increasing number of contracts signed with FPSO contractors with a scope of work that covers full project cycle skills.

The FPSO contract will be developed through negotiations that will address technical, commercial, and Canada-Newfoundland benefits aspects. In addition, a value engineering exercise will be carried out that challenges the existing basis for design, targeted at capturing cost reductions and performance enhancements through improvements in design while ensuring health, safety and environmental integrity. These negotiations will commence upon the initial review of the proposals. The FPSO Request for Proposal has therefore been issued with the following objectives:

- establishing the basis and criteria for comparing different proposals and contracting strategies;
- defining the scope of work for the FPSO contractor, outlining what the required deliverables are for the evaluation, and assessing the contractors proposed solutions;
- setting the stage for a value engineering process designed to capture improvements in both cost and performance over proposed target levels and existing benchmarks;
- identifying a recommended contractor, and creating a supporting document that includes a well defined technical definition of the FPSO facility, a commercial agreement with defined terms and conditions agreed to by both parties, a competitiveness assessment, and an industry benchmark analysis; and
- defining the specific Canada/Newfoundland benefits potential of the development and production activities.

Alternatives to the previously described preferred FPSO contractor strategy will also be considered. The decision on proceeding with an engineer, procure, install and construct (EPIC) fixed-price contract Request for Proposal will be reviewed following the initial review of the short-listed contractors’ submissions.
10.1.2.2 Subsea

The subsea contract package will consist of all equipment from (and including) the subsea christmas trees to the riser connection on the FPF. The strategy for this component of the project will be to contract for the complete subsea system in a single contract, which will encompass everything from detailed design to installation, commissioning interfacing and the option of providing ongoing operational support. The first phase of the contract, FEED, will be conducted several months prior to sanction. The installation of subsea equipment for initial development drilling will occur in the months following sanction, with installation of flowlines and risers completed the following year.

The glory hole excavation will be dealt with as a stand-alone contract and bid competitively. In conducting a contractor capacity assessment, it was confirmed that current international projects have restricted the availability of required technology for this work. Several of the potential contractors have indicated an ability and willingness to work with Husky Oil to develop a solution, however, they have all indicated the need to plan as much lead time as is possible. To address this situation, a Request for Proposal was issued to qualified companies in June 2000. The intention is to initiate discussion and to define the process that will generate a cost-effective solution at the lowest risk profile to the owners. Contract award will be scheduled following an in-depth assessment of the contractor’s proposals.

In line with the objectives for the project, the preferred solution is to conclude agreements with experienced lead contractors who will manage the supply of all subsea and glory hole services required, preferably under a single, lump sum “turnkey” contract, or, depending on commercial and interface considerations, multiple contracts.

10.2 Schedule

The schedule for the South Avalon Pool development is shown in Figure 10.2-1.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Start Date</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Milestones</td>
<td>1517 days</td>
</tr>
<tr>
<td>2</td>
<td>Start Concept Screening Study</td>
<td>1 day</td>
</tr>
<tr>
<td>3</td>
<td>Design Basis Depletion Plan Approval</td>
<td>1 day</td>
</tr>
<tr>
<td>4</td>
<td>Subsea FEED Sanction</td>
<td>1 day</td>
</tr>
<tr>
<td>5</td>
<td>Issue Draft DA</td>
<td>1 day</td>
</tr>
<tr>
<td>6</td>
<td>DA Approval</td>
<td>1 day</td>
</tr>
<tr>
<td>7</td>
<td>Project Sanction</td>
<td>1 day</td>
</tr>
<tr>
<td>8</td>
<td>Start Drilling</td>
<td>1 day</td>
</tr>
<tr>
<td>9</td>
<td>Vessel Arrives at Topsides Yard</td>
<td>1 day</td>
</tr>
<tr>
<td>10</td>
<td>FPSO Complete - Ready to Sail</td>
<td>1 day</td>
</tr>
<tr>
<td>11</td>
<td>First Oil</td>
<td>1 day</td>
</tr>
<tr>
<td>12</td>
<td>Development Plan Application</td>
<td>504 days</td>
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<tr>
<td>13</td>
<td>Pre-Project Sanction Phase</td>
<td>979 days</td>
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<tr>
<td>14</td>
<td>Topsides</td>
<td>961 days</td>
</tr>
<tr>
<td>15</td>
<td>Engineering (Post AFC Tech. Support Excl.)</td>
<td>547 days</td>
</tr>
<tr>
<td>16</td>
<td>Start Materials Procurement</td>
<td>1 day</td>
</tr>
<tr>
<td>17</td>
<td>Fabrication Topsides Modules</td>
<td>557 days</td>
</tr>
<tr>
<td>18</td>
<td>Vessel Arrives Atshore Hook-up Yard</td>
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</tr>
<tr>
<td>19</td>
<td>Atshore Hook-up and Commissioning</td>
<td>213 days</td>
</tr>
<tr>
<td>20</td>
<td>Hull</td>
<td>748 days</td>
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<tr>
<td>21</td>
<td>Engineering (Post AFC Tech. Support Excl.)</td>
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</tr>
<tr>
<td>22</td>
<td>Materials Procurement</td>
<td>196 days</td>
</tr>
<tr>
<td>23</td>
<td>Hull Fabrication, Outfitting and Pre-commissioning</td>
<td>593 days</td>
</tr>
<tr>
<td>24</td>
<td>Turret and Mooring System</td>
<td>573 days</td>
</tr>
<tr>
<td>25</td>
<td>Engineering (Post AFC Tech. Support Excl.)</td>
<td>457 days</td>
</tr>
<tr>
<td>26</td>
<td>Start Materials Procurement</td>
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</tr>
<tr>
<td>27</td>
<td>Spider Buoy</td>
<td>196 days</td>
</tr>
<tr>
<td>28</td>
<td>Lower Turret</td>
<td>326 days</td>
</tr>
<tr>
<td>29</td>
<td>Swivel / Upper Turret</td>
<td>392 days</td>
</tr>
<tr>
<td>30</td>
<td>Mooring System Fabrication</td>
<td>395 days</td>
</tr>
<tr>
<td>31</td>
<td>Mooring System Installation</td>
<td>60 days</td>
</tr>
<tr>
<td>32</td>
<td>Subsea Systems</td>
<td>670 days</td>
</tr>
<tr>
<td>33</td>
<td>Engineering</td>
<td>669 days</td>
</tr>
<tr>
<td>34</td>
<td>Start Materials Procurement</td>
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</tr>
<tr>
<td>35</td>
<td>Drilling Templates</td>
<td>572 days</td>
</tr>
<tr>
<td>36</td>
<td>Manifolds</td>
<td>548 days</td>
</tr>
<tr>
<td>37</td>
<td>Production Trees</td>
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</tr>
<tr>
<td>38</td>
<td>Well Heads</td>
<td>168 days</td>
</tr>
<tr>
<td>39</td>
<td>Other Subsea Structures Fabrication</td>
<td>397 days</td>
</tr>
<tr>
<td>40</td>
<td>Glory Hole</td>
<td>353 days</td>
</tr>
<tr>
<td>41</td>
<td>Tender Process</td>
<td>114 days</td>
</tr>
<tr>
<td>42</td>
<td>Engineering</td>
<td>156 days</td>
</tr>
<tr>
<td>43</td>
<td>Construction</td>
<td>150 days</td>
</tr>
<tr>
<td>44</td>
<td>Drilling</td>
<td>1363 days</td>
</tr>
<tr>
<td>45</td>
<td>Engineering</td>
<td>578 days</td>
</tr>
<tr>
<td>46</td>
<td>Procurement (Rig Contract)</td>
<td>492 days</td>
</tr>
<tr>
<td>47</td>
<td>Well Construction</td>
<td>720 days</td>
</tr>
<tr>
<td>48</td>
<td>Subsea Installations</td>
<td>123 days</td>
</tr>
<tr>
<td>49</td>
<td>Offshore Hook-up and Commissioning</td>
<td>65 days</td>
</tr>
<tr>
<td>50</td>
<td>First Oil</td>
<td>1 day</td>
</tr>
</tbody>
</table>
It will be noted that the schedule implies the initiation of some project activities before the actual approval of the DA by C-NOPB. Husky Oil and Petro-Canada believe that it may be necessary to proceed on this basis to obtain the information necessary for a project sanction decision which will be evaluated subsequent to a DA decision.

Accordingly, in setting this schedule, Husky Oil and Petro-Canada adopted several objectives which they wished to reflect. These were:

- **Continuity of employment for those Newfoundland personnel involved in the engineering and fabrication aspects of the offshore oil and gas industry.** These are important aspects both for the Newfoundland economy and for project economics. Accordingly, the start of engineering will commence after the engineering on the Terra Nova project is completed. This will enable the skilled personnel then coming available from Terra Nova to become a resource pool for White Rose. The opportunities for local fabrication will follow thereafter as the engineering phase proceeds and procurement contracts are bid and awarded.

- **Early First Oil date.** This is an important financial consideration for Husky Oil and Petro-Canada, inasmuch as an early as practical First Oil date impacts on the ROR on investment for White Rose, which has fewer recoverable reserves than other fields on the Grand Banks. In this regard, the selected choice of the steel FPSO is the optimum both for time to First Oil and for capital cost.

- **Long lead items.** The target First Oil date dictates that some action on long lead items, such as work leading up to identification of contracts related to procurement of the FPSO, must be initiated in sufficient time to have the long lead items available and incorporated without jeopardizing the target First Oil date.

- **Contractor input.** Husky Oil and Petro-Canada recognize that much valuable knowledge of, and ability to contribute to, the various elements of offshore oil developments such as White Rose, rests with contractors skilled in specific areas. Husky Oil proposes to take full advantage of such experience and is already invoking such participation with respect to FPSO leasing and glory hole construction.

- **Weather windows.** The planned schedule also takes account of appropriate weather windows, particularly for the subsea installation and tie-in.

Husky Oil is currently proceeding with advancement of the White Rose development in accordance with this schedule. The Company is, however, very mindful of the necessity for C-NOPB approval of its DA, and will continuously monitor the prudence of adherence to this schedule in light of the progress of the DA through the C-NOPB approval process.

**10.3 Construction**

Maximum use will be made of current technology and expertise. Contractor selection will be made having regard to prior relevant experience, commercial terms, quality and safety procedures, safety performance and Canada/Newfoundland benefits.
Details of the components of the production facilities are provided in Chapter 9. They consist of:

- steel FPSO;
- topside processing facilities;
- subsea equipment; and
- offloading system.

As well, three other major activities will be necessary for the execution of the project. These are:

- **Transportation.** The various components, and sub-components, will likely be constructed in various locations. They will require transportation to an assembly site.
- **At-shore Assembly and Hookup.** This work will be carried out at the at-shore assembly site. Components from the various construction locations will be assembled, completed, tested and commissioned to the maximum extent possible.
- **Offshore Hookup and Commissioning.** The FPSO will sail from the at-shore assembly site to the White Rose production location and be tied in to the subsea system. Final commissioning will be carried out and production start-up implemented.

### 10.3.1 New Steel Floating Production, Storage and Offloading Facility

The FPSO will be a steel, ice-strengthened, ship-shaped vessel with a double hull. Topside facilities will be installed primarily on a horizontal plane raised above the level of the vessel deck. The vessel will be moored by a turret, which will remain geo-stationary while the vessel will be free to "weather vane" around it. A fluid swivel will convey the crude from the risers to the topside production facilities.

#### 10.3.1.1 Construction Method

Historically, the hull and topsides have been built in separate facilities in different locations. This is expected to be the case for White Rose also.

A modular approach is normal for fabrication of the hull. The size of individual modules is dependent upon the lifting capacity available at the shipyard.

The turret is essentially a cylindrical vessel and the manufacturing and assembly practices for the turret are similar to those applicable to such vessels. Structural sections are pre-fabricated and assembled, either on the hull or separately for later lift into place.

The topside facilities are normally manufactured in modules, PAUs or skids.
The hull and turret, topside facilities and all equipment are delivered to an at-shore assembly site for hook-up, mechanical completion and testing prior to proceeding to the production site.

10.3.1.2 Construction Sites

Husky Oil has researched the interest and current capacity of all shipyards that have necessary facilities and experience in the construction of FPSOs. Eleven shipyards were identified. All are modern shipyards with sufficient dry-dock to accommodate the vessel, together with adequate lifting capacity for large modules, and fabrication capacity adjacent to the dock.

The turret is a highly specialized fabrication limited to only a handful of companies world-wide. It is a distinct component applicable only to an FPSO. It requires substantial fabrication and labour commitment, and the construction site for it will be an existing facility operated by the company selected for supply of the turret.

The at-shore assembly site must have a quay for safe moorage of the FPSO. It should preferably be capable of carrying the loads imposed by mobile crawler cranes used in hook-up. If the quay cannot support such operation, barge-mounted cranes may be used.

10.3.2 Existing Vessels

Husky Oil is examining the option of purchasing an existing vessel/hull for use as an FPSO on White Rose. Such a vessel/hull must satisfy the same criteria of operational capability and longevity as would be applicable to a new-build, as well as satisfying the class and certifying authorities.

10.3.2.1 Construction Method

The extent of work required for an existing vessel/hull to be used as an FPSO will depend on the characteristics of the candidate vessel in terms of current condition, previous use, age, and design. The work would necessarily include an assessment of the vessel's structural condition, and removal of superfluous deck structures and equipment. The scope of work could include any or all of the following:

- upgrading of structural scantlings;
- upgrading of the cathodic protection system;
- upgrading of the mooring system;
- installation of additional sea chests for the upgrading of the cooling and fire water systems;
- ice strengthening;
- upgrading of lifesaving equipment;
- upgrading of fire and gas detection and firefighting systems;
- expansion of power generation system;
• upgrading of the accommodation module; and
• installation of new or additional topside equipment.

10.3.2.2 Construction Sites

The extent and nature of modifications required would bear upon the type of facilities needed to carry out the upgrades. If no hull modifications are required, the work could possibly be accomplished at quayside, without the necessity of dry-dock facilities.

10.3.3 Subsea Facilities

The following are the types of facilities that will be included in the subsea systems:

• subsea trees;
• production and injection risers;
• riser base manifold;
• field manifolds or templates;
• flowlines; and
• control systems and umbilicals.

10.3.3.1 Construction Methods

Flexible line production and injection risers, suitable for use in the harsh environment at White Rose, will be supplied by manufacturers using their proprietary manufacturing process. The risers are supplied fully equipped and tested, and ready to install.

Subsea manifolds and flowlines will gather the production and convey it to the risers. Manifolds include headers, piping, valves, and control equipment, mounted on a base.

Subsea wells will include the following:

• wellheads;
• casing hangers;
• hydraulic connectors;
• valve assemblies;
• guide frames;
• subsea trees;
• protective structures; and
• control systems.
Many proprietary well components will comprise high quality forgings requiring heat treatment, special welding procedures and precision machining. Tree installation will require special running and testing tools.

Flowlines will be either flexible or rigid steel pipe. Flexible flowlines will be prepared by the manufacturer, ready for installation. Rigid steel pipe will be manufactured by the mill in lengths appropriate to transportation and handling constraints, and the limitations of the lay barge. Consideration will be given to the option of installing the flowlines in cased bundles. In this case, the flowline bundle will be fabricated onshore at a suitable construction site. Another option which may be examined for steel pipe is welding them into long strings onshore and winding them on to spools on a reel lay vessel for offshore installation.

10.3.3.2 Construction Sites

The construction facilities required for manifolds or templates are a yard with enclosed shop, and adequate wharfage for loading them aboard the transport vessel. The yard should preferably have facilities for testing system integration. An appropriate quality assurance quality control system will be implemented.

If rigid pipe flowlines are selected, the method of installation will dictate the characteristics required for the construction site. For the towed bundle or reel approaches, the site would require a pipe storage yard, a fabrication shop and a pipeline assembly area of from 2 to 4 km in length.

10.3.4 Marine Support Vessels

Marine support vessels will be necessary components of the project at all stages of its development and operation. These vessels will be required for:

- standby duty;
- ice management;
- oil spill response;
- cargo and consumable resupply;
- anchor handling and mooring;
- tug assistance;
- towing;
- diving;
- subsea facility inspection and maintenance; and
- minor well workovers and maintenance.

The actual composition of the fleet will be determined during the project. Husky Oil proposes to lease marine support vessels.
10.3.5 Environmental Effects of Construction

It is currently expected that all of the construction activities associated with the various items in the foregoing, including the FPSO, will take place in existing established facilities. It is therefore expected that all such facilities will be already set up to manage such environmental effects as emissions, effluent streams, or noise. Compliance with regulatory requirements will be the responsibility of the contractors or facility owners/operators of the site.

10.4 Installation

On-shore support will be required for installation of the FPSO and subsea facilities.

10.4.1 Floating Production, Storage and Offloading Facility

The precise location for the FPSO will be marked by underwater beacons placed by site survey, or by other appropriate methods, prior to the arrival of the FPSO. Anchors and mooring lines will also be installed at the location in advance of the arrival of the FPSO.

Following construction, sea trials, and at-shore hook-up and commissioning, the FPSO will be brought to the site and secured to the mooring system.

10.4.2 Subsea Facilities

Depending on their size, manifolds may be installed either directly through the moonpool of a semi-submersible drilling unit or from the deck of a crane vessel with sufficient lifting capacity to lower them to the seafloor, where they could be picked up and placed by a drilling unit.

A dynamically positioned vessel, equipped for flexible pipe and cable installation, will be used to install the risers. Divers may be used for making the subsea connections. They would mobilize from a saturated diving spread on the vessel.

Wellheads will be installed in the glory holes through the moonpool of the drilling unit. Upon completion of the well-drilling operation, the drilling unit will also be used to install the christmas trees. Final connection of the wells to the manifolds by jumper spools will be carried out by divers.

Flowlines will be installed during the summer weather window.
If flexible flowlines are used, they can be spooled off a dynamically positioned lay vessel. If steel flowlines are used, they can be installed from a lay barge or a dynamically positioned reel vessel. For the towed bundle installation method, two tow vessels will be required, one for the actual forward tow and the other for the trailing end.

### 10.4.3 On-shore Support

The offshore installation activities will require on-shore support for warehousing and wharfage, and for helicopter landing and refuelling.

### 10.4.4 Environmental Effects of Installation

The following is a list of the types of installation activity that may occur offshore:

- piled seabed anchors for the FPSO;
- embedded anchors;
- riser bases and risers;
- intrafield flowlines;
- production manifolds and templates in glory holes; and
- single well ice protection systems.

These activities will occur over a fairly limited area. Their impacts will be localized and only very moderate volumes of excavation or sediment will be involved. Further information on this may be found in Chapter 4 of the EIS (Comprehensive Study Part One).

Further detailed safety and environmental issues related to the installation and commissioning work will be addressed prior to implementation of that work as part of the authorization process.

Environmental effects monitoring programs will be implemented at this stage of the project.

### 10.5 Drilling Services

One or more semi-submersible drilling units will be used throughout the life of the field for drilling, re-entering and completing wells. These units will be leased.

The units will be moored at each well location by onboard chain and anchor-handling equipment. Marine support vessels, with anchor-handling capability, will also be deployed.
10.6 Quality Assurance and Quality Control

Husky Oil intends to implement a specific quality assurance system, across the whole development. It will be applicable to all contractors and suppliers in the conduct of their activities associated with the project. As well, Husky Oil will ensure that the conduct of all project tasks, and the quality of installation, are in accordance with applicable Canadian and Newfoundland offshore regulations.

Before going into production operation, Husky Oil will obtain the requisite Certificates of Fitness, and Letters of Compliance. An independent certifying agency will be engaged to monitor the project throughout its development phase and to confirm that the complete installation has been designed, constructed and installed in compliance with regulations.

Husky Oil will apply its Health, Safety and Environmental (HS&E) Loss Control Management Performance Standards to the White Rose project, with the purpose of minimizing unforeseen or accidental losses during the life of the project. These standards have been developed for the Company’s East Coast operations, and mirror Company standards across the country while recognizing the unique nature of the marine environment. The standards are based on the International Marine Safety Rating System are described in more detail in Section 1.5 of the Safety Plan (Volume 5, Part One).