Schedule "A"

Agreed Statement of Facts

1. The Canada-Newfoundland and Labrador Offshore Petroleum Board ("C-NLOPB") is a federal and provincial authority established by the joint operation of section 9 of the *Canada-Newfoundland Atlantic Accord Implementation Act*, R.S.C. 1987, c. 3, as amended, and section 9 of the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland and Labrador Act*, RSNL 1990, c. C-2, as amended. The information in relation to the offence before the court was laid pursuant to the federal Act hereinafter referred to as the *Accord Act*.

2. Pursuant to the *Accord Act*, Suncor Energy Inc. ("Suncor") was issued an operating licence and an operations authorization (the "Operations Authorization") by the C-NLOPB with an effective date of May 29, 2009 and with an expiry date of September 30, 2011. The Operations Authorization granted Suncor the permission to conduct certain work or activity in the Newfoundland and Labrador Offshore Area, as defined in the Accord Act, including activity related to the drilling of the Ballicaters M-96Z exploration well.

3. As operator and holder of the operating licence, Suncor is responsible for ensuring all work or activity done pursuant to the Operations Authorization is conducted in a safe and environmentally responsible manner in accordance with the *Accord Act*.

4. Suncor contracted with GlobalSantaFe International (Canada) Drilling Company ("Transocean") to have the Mobile Offshore Drilling Unit (MODU) Henry Goodrich, a Transocean installation, drill the Ballicaters M-96Z exploration well. The Synthetic Based Drilling Mud (SBM) used in drilling operations was supplied by M-I Drilling Fluids Canada, Inc., the mud contractor.

5. Pursuant to the *Newfoundland Offshore Petroleum Drilling and Production Regulations* (SOR/2009-316), on October 19, 2010, prior to spudding the well, Suncor was also issued an Approval to Drill a Well for the Ballicatters M-96Z well on Exploration Licences 1113 and 1092, which are located in the Newfoundland and Labrador Offshore Area.

6. On March 28, 2011, while drilling the Ballicatters M-96Z well, a spill of 26,400 litres of SBM occurred from the mud system of the MODU Henry Goodrich.

7. Believing that an offence may have occurred, C-NLOPB Officers investigated the circumstances surrounding the spill. Search warrants were executed offshore at the MODU Henry Goodrich, and onshore in St. John's at the offices of Transocean, M-I Drilling Fluids Canada, Inc., and Suncor. Witnesses were also interviewed. Based on the facts obtained in the course of the investigation, the charge before this court was laid against Suncor on April 4, 2012.

The MODU Henry Goodrich and the Mud System

8. The MODU Henry Goodrich is a semi-submersible drilling unit. At the time of the spill, personnel on the MODU Henry Goodrich had completed a cement job and were verifying the position of the top of the cement as part of preparations for the testing phase at the Ballicatters M-96Z well. The blowout preventer (BOP) was in place on the well and the drill string and marine riser contained SBM with a density of approximately 1365 kilograms per cubic metre. While waiting on cement curing and weather, personnel had been conducting mud storage tank cleaning operations in preparation for the next phase of the well drilling process.

9. Drilling muds are fluids that are circulated in oil and gas wells to clean and condition the well, to lubricate the drill bit and to counterbalance formation pressure. In relation to the spill of SBM from the MODU Henry Goodrich on March 28, 2011, the relevant portions of the mud system include mud pits (storage tanks), mud pumps (that pump the mud up to the drill floor), the suction header (pipe connecting the mud pits to the mud pumps), and various valves to control the flow of mud in the mud system. At the drill floor, mud is directed down the drill string and the returns are directed to the solids control/mud processing system from which the cleaned mud is returned to the mud pits.

The Events

10. From midnight to 10:00 a.m. on March 28, 2011, personnel on the MODU Henry Goodrich had been cleaning mud pits and process pits. At 10:00 a.m., the derrickhand and pumphand were preparing to complete a final wash down of Mud Pit R3. The isolation valves on Pit R3 and the Gel Pit were open to allow wash water from Pit R3 to flow to the Gel Pit. The overboard dump valve on the Gel Pit was open to allow discharge of the wash water to the sea.

11. At 10:00 a.m., personnel involved in pit cleaning were directed by the driller to stop pit cleaning, to remove all personnel from the pits, and to arrange the mud system to circulate mud in the well. All personnel were removed from the pits and pit cleaning operations ceased.

12. The derrickhand is responsible for the arrangement of mud system elements for the delivery of mud to the drill floor. After stopping pit cleaning operations, he proceeded to arrange valves and pumps for circulation of mud to the well. He proceeded to the pump room where he walked along the suction header checking the status of the valves in the system. He opened a number of valves in the suction header to allow flow through the header and to the mud pumps. He closed the isolation valve to Pit R3 (the pit which was to receive a final washdown). He did not close the open isolation valve to the Gel Pit. He also did not close the overboard dump valve on the Gel Pit, which is operated by a hand crank in the mud room. When the derrickhand opened the isolation valve on Pit A2, containing mud to be circulated to the well, the contents of Pit A2 flowed through the suction header to the Gel Pit and was immediately discharged through the open overboard dump valve to sea. As a result, 26,400 litres of synthetic based mud (SBM) was spilled to sea before the error was realized.

13. Witnesses indicated that a sheen was observed on the sea surface but that it did not persist.

14. Suncor directed that a remotely operated vehicle (ROV) survey be conducted and this was done on March 28, 2011. The ROV survey determined that the spilled SBM had covered the seabed in a layer up to 5 millimetres thick and extending 60 to 80 metres out from the wellhead.

The Causes

15. Subsequent investigations by the C-NLOPB and Transocean have identified a number of causal factors that contributed to the spill of SBM from the MODU Henry Goodrich on March 28, 2011.

    Contributory Causes were:

    (a) **Personnel on the MODU Henry Goodrich did not obtain a permit-to-work for the opening of the overboard dump valve as required by Suncor and Transocean procedures.**

    The requirements for a permit-to-work were described variously in the Suncor *Drilling Completions and Interventions Safety Plan*, Transocean *Health and Safety Policies and Procedures Manual*, Transocean *Environmental Management Systems Manual*, and a Transocean *HSE Alert* regarding mud pit operations. According to Suncor and Transocean documents, opening of the overboard dump valve is considered to be a "hazardous operation" that requires a permit-to-work. The use of a permit-to-work is intended to reduce risk by increasing hazard awareness and putting additional controls in place.

    (b) **Personnel involved in pit cleaning operations and their supervisors did not formally suspend the permit-to-work for pit cleaning (this permit did not include operation of the overboard dump valve) when they were directed to stop pit cleaning and prepare to circulate mud.**

    Suncor and Transocean procedures require formal suspension of the permit-to-work when the work is suspended, and that this suspension be recorded by the signatures of supervisors in the designated suspension/reactivation area of the permit. This was not done when pit cleaning operations were suspended. This formal suspension element of the permit-to-work is intended to provide an opportunity for supervisory review to reduce the likelihood of an activity being left in an unsafe condition while suspended and is strongly linked to management of intersecting activities.

    (c) The *Task Specific Think Procedure* for cleaning mud pits was inadequate as it did not directly discuss the common practice of opening the overboard dump valve nor the need to obtain a permit-to-work for that task. In addition, steps in the procedure that could have prevented the spill were not followed.

Task Specific Think Procedures are developed to direct the execution of tasks that have been identified as having a higher level of criticality, complexity or risk. Within the pit cleaning scope, operating the overboard dump valve is a critical task step and should have been included in the procedure, which it was not. In spite of this inadequacy, there were some steps in the procedure (verifying all dump valves closed) that, had they been followed, could have prevented the spill. However, these steps were not followed.

(d) At the time of the SBM spill, the derrickhand was responsible for the manual operation of fourteen valves on the suction header and associated mud pits without a checklist or any other memory aid.

Manually operated valves under the direct control of the derrickhand located in the pump room included seven isolation valves between the mud pits and suction header and six valves controlling flow in the suction header to the mud pumps. In addition to these valves, the overboard dump valve on the Gel Pit is controlled by a manual hand crank in the mud room located one level above the pump room. The status of the valves on the mud system is critical information required to manage the system without contamination or a loss, and reliance on an individual's memory and situational awareness is not consistent with reducing risks to as low as reasonably practicable.

Offence

16. A spill is defined in Subsection 160(1) of the *Accord Act*, and is generally prohibited under Subsection 161(1) of the *Accord Act*. As the operator, and by causing or permitting a spill from the MODU Henry Goodrich, Suncor committed an offence pursuant to Subsection 194(1)(a) of the *Accord Act*.

17. The spilled SBM meets the definition of "petroleum" found in Section 2 of the *Accord Act*. Of the 26,400 litres spilled, approximately 18,814 litres consisted of PUREDRILL^{TM} IA-35LV, a highly refined petroleum hydrocarbon, with the remainder of the SBM consisting of weighting agents and various chemical drilling additives.