APPENDIX 7

Onshore Facilities Aqueous Discharges

Purpose

To manage the *Risk*[1] of Onshore water use and aqueous discharges to the environment and to manage the Risk of construction and operation activities impacting ground water.

What situations are covered?

This document applies to all routine and non-routine aqueous discharges to the *Aquatic Environment* and *Aquifers* and/or all activities which may directly or indirectly affect ground water from all Sakhalin Energy Onshore assets, facilities, operations, projects and activities, including activities undertaken by any contractor on behalf of the Company.

Requirements

Managers are *Accountable* for requirements 1 to 6 in their own organization:

1. Assess the Risk of groundwater contamination. Establish and maintain controls based on the identified Risk of groundwater contamination, to reduce the Risk to As Low As Reasonably Practicable as described in Appendix 5 of the Water Use Management and Ground Water Protection Standard.
2. **Collect, treat as required, and dispose** wastewaters into properly designed, licensed and permitted disposal facilities in compliance with RF requirements, permit conditions and adopted international requirements.
   a. **Produced water** and used water-based mud (WBM) and WBM cuttings (when they are managed as contaminated wastewater – refer also Waste Minimisation, Diversion and Disposal) shall be reinjected.
   b. **Process wastewaters** and storage tank bottom water shall be collected and reinjected or treated to meet requirements for discharge to surface waters in compliance with requirement 2.
   c. **Potentially contaminated drainage** shall be collected for appropriate treatment (e.g. separation of potential oil) and disposal to land or surface waters in compliance with requirement 1 and 2.
      - Oily drainage wastewater from OPF shall be collected, treated (separation of oil and solids), and reinjected via the Water Disposal and Injection System.
      - Wastewaters such as boiler blowdown, brine, and cooling water shall be routed to the appropriate system based on potential contaminants and disposal route in compliance with requirement 2 and where relevant requirement 4.
      - Aqueous discharges relating to non-routine activities shall be identified during work activity planning, and instructions provided to achieve compliance with requirement 1.
   d. **Stormwater** accumulating in plant operating areas or tank farms, wash water and fire water, shall be contained and discharged only after receiving appropriate treatment, or verification that it meets WUD/WUL/Permits and applicable water quality requirements without treatment.
      - Surface run-off from the LNG/OET site that may be polluted shall be collected in a tertiary containment concrete basin and, if tested compliant with the relevant legal and international standards, shall be routed to the ponds. If the effluent is non-compliant, it shall be re-directed to the effluent treatment plant. Overflow from the ponds shall flow into Aniva Bay. [EIA VOL 5, Section 3.5.3]
3. **Monitor** aqueous discharges in accordance with the requirements of Permits and the HSE Monitoring Overview specification.

[1] Italicized terms in this document are included in the Sakhalin Energy HSE Glossary.

a. Onshore Pipeline RoW inspection and observation shall be undertaken in accordance with specification indicated in Appendix 5 of the Water Use Management and Ground Water Protection Standard.

4. **Conditionally clean water** that is authorised for discharge without treatment is exempt from requirements relating to treatment and monitoring.
   - Uncontaminated water that is collected during a fire or heavy rainfall may be routed back to the firewater tanks or clean water drainage system.

5. **Domestic wastewater** shall be managed in one of the following licensed, permitted and Sakhalin Energy approved facilities:
   a. In a municipal, community or privately-operated wastewater treatment plant;
   b. In a package and/or mobile ;sewage wastewater treatment plant, with treated effluent discharged to land or surface waters in compliance with Requirement 1, 2 of the Water Use Management and Ground Water Protection Standard Overview (note that downhole injection is allowable, however is not currently practised due to technical limitations; in case downhole injection takes place, it shall comply with Requirement 1 above);
   c. In a septic tank with a lateral field, soak-away pit or other underground percolation system, if ground permeability conditions allow; or,
   d. In a holding tank where it shall be collected and transported off site for treatment at a licensed sanitary wastewater treatment facility.

6. In areas where the generation of sanitary waste is low, portable **chemical toilets** may be used. Portable chemical toilets shall be emptied at appropriate intervals and the contents transported off site for treatment at a licensed sewage wastewater treatment facility.

Requirements applicable to Project Expansion

7. Sakhalin Energy shall apply wastewater discharge criteria to **camp wastewater**. The quality of any wastewater discharged to land during construction activities (e.g., hydrotesting, trench de-watering, etc.) shall be monitored against permit conditions and applicable water quality standards. Treated wastewater from construction camps shall be discharged in compliance with regulatory permits.