



## APPENDIX 6

## Offshore Aqueous Discharges

### Purpose

To manage the *Risk*<sup>1</sup> of Offshore discharges to the marine environment.

### What situations are covered?

This document applies to all discharges to the *Marine Environment* from all Sakhalin Energy Offshore facilities (platforms, jack-up rigs, FSOs, export tankers, PSVs and other vessels), operations, projects and activities, including activities undertaken by any contractor on behalf of the Company.

### Requirements

1. The Russian Federation is a signatory to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) and its Annexes I through V. MARPOL requirements apply to offshore platforms, jack-up rigs, and other vessels.
  - a. Sakhalin Energy shall comply with the provisions of MARPOL as it applies to offshore operations and vessels under Sakhalin Energy's control. Specifically, all hazardous operations at sea, such as fuelling, and hazardous waste transportation shall be conducted in compliance with the guidelines and with Russian federal law.
2. Do not dispose **drilling cuttings or residual muds or completion and workover fluids** into the sea or other surface waters (this refers to both water-based and oil/synthetic muds and cuttings).
  - a. Oil Based Muds (OBM) shall not be used.
  - b. All platforms shall dispose of used drilling cuttings, muds, completion and workover fluids by injection down their dedicated cuttings reinjection (CRI) well. Each platform's CRI well is each other's backup. Downhole injection techniques and methods employed shall be designed to protect aquifers from pollution.
  - c. As an alternative, these may be transported to shore for recycling, treatment and/or disposal in accordance with RF and adopted international requirements.
  - d. Records shall be kept of the amount of cuttings produced. Quality check shall be carried out during audits. All necessary approvals and permits shall be obtained prior land disposal of water based drilling mud and cuttings.
3. **Collect, treat as required, and dispose**, to the extent practicable, the following wastewaters into properly designed, licensed and permitted disposal facilities:
  - a. Re-inject all **produced water** generated during the operation of the offshore platforms into the production reservoirs. Under normal operations any produced sand will be captured and re-injected.
  - b. All **oily wastewater** from the platforms will be re-injected. The platform closed drainage system is designed to collect all oily effluents and to re-inject these into special wells. There shall be no discharge of oily water from the platforms into the sea.
  - c. **Potentially contaminated drainage**, including all drainage from machinery spaces and deck drainage, shall be collected and treated to ensure that oil concentrations meet the standard of 15 ppm<sup>2</sup> maximum without dilution, or less if specified by regulation or WUD/WUL, prior to discharge to marine waters.
  - d. **Sewage effluents and sink drain wastewater** shall be treated and disinfected, as defined in Requirement 4. This shall include black and grey-water treatment facilities onboard vessels to process the wastewater produced from any offshore construction activities.

<sup>1</sup> Italicized terms in this document are included in the [Sakhalin Energy HSE Glossary](#).

<sup>2</sup> Note that this MARPOL limit is applicable to all aqueous discharges to marine waters, as documented in the Aqueous Discharges Standards Comparison.



- e. All wastewater shall be treated and the quality of the effluent monitored.
- This does not include conditionally clean water that is authorised for discharge without treatment (e.g. water from desalination plants, power generation cooling systems, washings of seawater filters).
- f. Wastewater shall be discharged below sea level to allow dilution and mixing with seawater. [EIA Volume 5, Section 3.12.3]
4. No **domestic sewage** shall be discharged to sea within 4 nautical miles (7 km) of the nearest land. Any sewage discharged between 4 and 12 nautical miles (21 km) shall be collected and treated in appropriately designed and MARPOL approved **sewage treatment plants** (by aerobic methods, settlement and the neutralisation of pathogens) to reduce the concentration of organic material, and in accordance with WUL/WUD terms and conditions prior to discharge to the sea. [EIA Volume 2, Section 3.4.2].
- Note:** MARPOL Requirement for International Sewage Pollution Prevention Certificate does not apply to fixed platforms as they are registered as immovable property in territorial waters of the RF, sewage treatment plants of such installations shall comply with RF requirements.
- a. **Food wastes from vessels** shall be macerated and discharged to sea, or by other compliant methodology (e.g. incineration where permitted).
- b. **Food wastes from platforms** shall be returned to shore with other wastes for disposal in compliance with Waste Management Standard, however it is also permissible for such waste to be macerated and digested along with sewage waste in a bioreactor prior to discharge.
- c. Sewage treatment equipment shall be regularly inspected and maintained to ensure optimum operation.
- d. As an alternative, domestic sewage may be injected downhole, or collected and transported to shore for treatment at a licensed sewage treatment facility.
5. **Well cleaning and testing** [EIA V2:3-9].
- a. Undertake visual monitoring of sea surface around platform during clean up and testing activities, using floodlights at night. If a sheen is observed, positive identification of the source shall be made and action taken.
- b. Flaring shall cease if an upset condition occurs in the normal operation of the test equipment that is directly attributable to the observed sheen. This excludes initial well clean up periods for all wells, and the cold start of Lunskeye wells.
6. **Pipeline Leak Detection.**
- a. Maintain an offshore pipeline leak detection system, including Accidental Release Shutdown Procedures and training for engineers and operators. The system shall be an integral component of a Supervisory Control and Data Acquisition (SCADA) system and shall meet the internationally recognised Alaskan standard for leak sensitivity (Alaskan Administrative Code Title 18 Chapter 75 – Regulation of pipeline leak detection systems). Pipeline pressure and temperature shall be continuously monitored. [EIA V2-3; 3-35 and Addendum on Oil Spill Response]
- b. Sakhalin Energy shall endeavour to conduct aerial observations. Frequency of such observations shall be determined by the Company considering safety risks and business needs. As a minimum, aerial observations shall be undertaken as part of crew change and other regular flights.
7. **Decommissioning** – refer to [Site Decommissioning Specification](#).