

APPENDIX 2A

Shah Deniz Production Sharing Agreement Extract

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ARTICLE 26 - Environmental Protection and Safety

26.1 Environmental Standards

Contractor shall develop jointly with SOCAR and the State Committee of the Azerbaijan Republic on Ecology and Control over the Use of Natural Resources ("SCE") safety and environmental protection standards and practices appropriate for the regulation of Petroleum Operations. The safety and environmental protection standards shall take account of the specific environmental characteristics of the Caspian Sea and draw, as appropriate, on (i) international Petroleum industry standards and experience with their implementation in exploration and production operations in other parts of the world and (ii) existing Azerbaijan safety and environmental legislation. In compilation of such standards and practices account shall be taken of such matters as environmental quality objectives, technical feasibility and economic and commercial viability. Subject to the first sentence of Article 26.4 the standards, which shall apply to Petroleum Operations from Effective Date shall be the standards and practices set out in part II of Appendix 9 until substituted by new safety and environmental protection standards devised and agreed between Contractor, SOCAR and SCE on a date between the Parties and SCE and from such date such agreed standards and practices shall have the force of law as if set out in full in the Agreement. In the event that the safety and environmental protections standards and practices are imposed otherwise than with the agreement of Contractor it is agreed that the provisions of Article 23.2 shall apply. The Parties and SCE shall agree a separate protocol for the detailed implementation of the joint development and definition of the new standards and practices for safety and environmental protection. The cost to Contractor of such development and definition shall be Cost Recoverable.

26.2 Conduct of Operations

Contractor shall conduct the Petroleum Operations in a diligent, safe and efficient manner in accordance with the Environmental Standards to minimise any potential disturbance to the general environment, including without limitation the surface, subsurface, sea, air, lakes, rivers, animal life, plant life, crops, other natural resources and property. Contractor shall implement an integrated management system covering all health, safety and environmental aspects of the activities carried out in relation to the Petroleum Operations as outlined in Part 1 of Appendix 9.

26.3 Emergencies

In the event of emergency and accidents, including but not limited to explosions, blow-outs, leaks and other incidents which damage or might damage the environment, Contractor shall promptly notify SCE (Goskomokhrana) and SOCAR of such circumstances and of its first steps to remedy this situation and the results of said efforts. Contractor shall use all reasonable endeavours to take immediate steps to bring the emergency situation under control and protect against loss of life and loss of or damage to property and prevent harm to natural resources and to the general environment. Contractor shall also report to SOCAR and appropriate Government Authorities on the measures taken.

26.4 Compliance

Contractor shall comply with present and future Azerbaijani laws or regulations of general applicability with respect to public health, safety and protection and restoration of the environment, to the extent that such laws and regulations are no more stringent than the Environmental Standards. In the event any regional or multi-governmental authority having jurisdiction enacts or promulgates environmental standards relating to the Contract Area, the Parties will discuss the possible impact thereof on the project. The provisions of Article 23.2

shall apply to any compliance or attempted compliance by Contractor with any such standards which adversely affect the rights or interests of Contractor hereunder.

26.5 Environmental Protection Strategy

An environmental protection strategy shall be developed which shall include:

- (a) The establishment of an environmental management system as an integral part of Petroleum Operations and the formation of an environmental sub-committee as described in the Environmental Standards.
- (b) An environmental work programme carried out in sequences appropriate to the normal phases of Petroleum Operations as described in the Environmental Standards (seismic survey, exploration drilling, field development and production).

26.6 Environmental Damage

- (a) Contractor shall be liable for those direct losses or damages incurred by a Third Party (other than Government Authority) arising out of any environmental pollution determined by the appropriate court of the Azerbaijan Republic to have been caused by the fault of Contractor. In the event of any environmental pollution or environmental damage caused by the fault of Contractor, Contractor shall reasonably endeavour, in accordance with generally acceptable international Petroleum industry practices, to mitigate the effect of any such pollution or damage on the environment.
- (b) Contractor shall not be responsible and shall bear no cost, expense or liability for claims, damages or losses arising out of or related to any environmental pollution or other environmental damage, condition or problems which it did not cause, including but not limited to those in existence prior to the Effective Date of this Agreement and SOCAR shall indemnify and hold harmless Contractor, its Sub-contractors and their consultants, agents, employees, officers and directors from any and all costs, expenses and liabilities relating thereto.
- (c) Any damages, liability, losses, costs and expenses incurred by Contractor arising out of or related to any claim, demand, action or proceeding brought against Contractor, as well as the costs of any remediation and clean-up work undertaken by Contractor, on account of any environmental pollution or environmental damage (except for such pollution or damage resulting from the Contractor's Wilful Misconduct) caused by Contractor shall be included in Petroleum Costs.

ARTICLE 26 – APPENDIX 9 – Environmental Standards and Practices

I. Integrated Management System

A. Environmental Sub-Committee

1. The formation and organisation of an environmental sub-committee of the Steering Committee shall be set forth in a proposal of Contractor which will be submitted to SOCAR for approval. Once approved SOCAR, the environmental sub-committee shall be formed in accordance with the approved recommendation and shall be composed of environmental representatives of Contractor Parties and SOCAR, the State Committee of the Azerbaijan Republic on Ecology and Control over the Use of Natural Resources, Azerbaijan Academy of Sciences and other relevant research institutes.
2. Responsibilities of the environmental sub-committee shall be to:
 - Design monitoring programme for monitoring of selected environmental parameters
 - Coordinate monitoring programme
 - Review results and propose recommendations
 - Publish annual report

B. Environmental Work Programme

The environmental work programme to be pursued during Petroleum Operation pursuant to Article 26.2 shall be phased as follows:

1. For seismic surveys
 - Environmental impact assessment
 - Health, safety and environmental management plan for seismic operations, including emergency procedures, oil spill contingency plan, waste management plan and an audit programme
2. For exploration drilling
 - Drilling environment impact assessment
 - Baseline environmental study
 - Health, safety and environment management plan for exploration drilling, including emergency procedures, oil spill contingency plan, waste management plan (including drill cuttings disposal) and an audit programme
3. For development and production
 - The environmental work programme for the Development and Production Period shall be submitted together with the Development Programme to SOCAR for approval

II Environmental Standards

The following are general and specific guidelines relating to discharges associated with oil and natural gas exploration and production activities.

A. General Guidelines

1. There shall be no discharge of waste oil, produced water and sand, drilling fluids, drill cuttings or other wastes from exploration and production sites except in accordance with the following guidelines.
2. There shall be no unauthorised discharges directly to the surface of the sea. All discharges authorised by these guidelines shall be controlled by discharging into a caisson whose open end is submerged, at all times, a minimum of two (2) feet below the surface of the sea.

B. Discharge Guidelines and Monitoring

1. Produced Water

- (a) Contractor will endeavour to utilise produced water for reservoir pressure maintenance if, through standard compatibility testing with Caspian Sea water, no damage to the reservoir resulting in a reduction in overall hydrocarbon recovery would occur by mixing the two water streams. In the event that the two water streams are compatible, Contractor may only discharge a volume of produced water after treatment to the Caspian Sea that exceeds the total volume required for reservoir pressure maintenance or in the event of an emergency, accident or mechanical failure. In the event that the two water streams are not compatible, Contractor may discharge produced water to the Caspian Sea after treatment in accordance with generally accepted international Petroleum industry standards and practices.

2. Drill Cuttings and Drilling Fluids

- (a) There shall be no discharge of oil based drilling fluids, other than low toxicity and biodegradable drilling fluids.
- (b) There shall be no discharge of drill cuttings generated in association with the use of oil based drilling fluids, invert emulsion drilling fluids, or drilling fluids that contain radiation, if any, waste engine oil, cooling oil, gear oil, or other oil based lubricants, other than cuttings generated in association with the use of low toxicity and biodegradable drilling fluids.

- (c) There shall be no discharge of drill cuttings or drilling fluids if the maximum chloride concentration of the drilling fluid system is greater than four (4) times the ambient concentration of the receiving water.
- (d) Prior to the start of the drilling programme, a drilling mud system will be designed and laboratory tested under the US EPA, 96-hour acute toxicity test using mycid shrimp or other indicator organisms of the Caspian Sea agreed between Contractor and SOCAR. Those muds biodegradable and of low toxicity will be authorised for discharge during the drilling programme.
- (e) During drilling operations, mud samples will be collected periodically to determine toxicity using procedures established for the Caspian Sea.
- (f) The composition of the mud system may be altered as necessary to meet changes in the drilling operations. The modified mud system may be discharged if it has been shown to meet the above limits on oil, salinity and toxicity.

3. Other Wastes

- (a) Sanitary waste may be discharged from a U.S Coast Guard certified or equivalent Marine Sanitation Device (MSD) with total residual chlorine content greater than 0.5 mg/l but less than 2.0 mg/l as long as no floating solids are observable. The Hach method CN-66-DPD test shall be used to measure the residual chlorine.
- (b) Domestic wastes and grey water may be discharged as long as no floating solids are observable.
- (c) Desalinisation unit wastes shall be discharged.
- (d) Deck drainage and wash water may be discharged as long as no visible sheen is observable. Oily and clean drainage or wash water shall be segregated: clean water shall be discharged to the sea and oily water shall be treated as provided in B.1 above.
- (e) Trash shall not be discharged offshore. Trash shall be transported to an appropriate land-based disposal facility

4. Monitoring

- (a) Produced Water
 - 1. The volume of produced water discharged and concentration of oil and grease contained in the discharge will be monitored daily.
 - 2. The daily maximum and monthly average oil and grease concentration will be reported to the appropriate environmental authority monthly.
- (b) Drill Cuttings and Drilling Fluids
 - 1. An inventory of drilling fluids additives and their volumes or mass added to the drilling fluid system will be maintained for each well.
 - 2. Drilling fluid properties, including volume percent oil concentration of chlorides, will be monitored daily for each well.
 - 3. The estimated volume of drill cuttings and drilling fluids discharged shall be recorded daily and reported monthly to the appropriate environmental authority.
- (c) Other Wastes
 - 1. The estimated volume of other wastes discharged shall be recorded daily and reported monthly to include:
 - (i) Sanitary waste
 - (ii) Domestic waste
 - (iii) Deck drainage and wash water

C. Air Emission Guidelines and Monitoring

Contractor is authorised to discharge air emissions. Such discharges will be limited and monitored in accordance with generally accepted international Petroleum industry standards and practices.

D. Safety Guidelines

Contractor shall take into account subject to the provisions of Article 26.1 relevant Azerbaijani regulations and the following international safety and industrial hygiene standards in conducting its Petroleum Operations under the Agreement:

1. Oil Industry International Exploration and Production Forum (E&P Forum) Reports – HSE Management
2. International Association of Drilling Contractors (IADC) – Drilling Safety Manual
3. Association of Geophysical Contractors International (IAGC) – Operations Safety Manual
4. Threshold Limited Values for Chemical Substances in the Work Environment – American Conference of Governmental Industrial Hygienists.