

Annex 1

Terms of Reference

BACKGROUND

The critical status of the western North Pacific gray whale (WGW) population is well known. The total population numbers only around 120 individuals and may include only 20-25 reproductive females. Little is known about its breeding grounds or migration routes; its only known feeding grounds lie along the coast of north-eastern Sakhalin Island, in the Russian far east. These feeding grounds are occupied typically from late May/early June until November. Existing and planned large-scale oil and gas activities in this region may pose a serious threat to the population's survival.

Sakhalin Energy Investment Company Ltd¹ (hereafter Sakhalin Energy) is implementing the Sakhalin II Production-Sharing Agreement (PSA). Sakhalin II is a phased development project. Phase 1, an oil-only development, went into production in 1999 and produces approximately six months of the year during the ice-free period. Phase 2 is an integrated oil and gas development that will allow year-round oil and gas production, and includes two additional offshore platforms, offshore and onshore pipelines, and onshore processing and exporting facilities. Production of both oil and gas from Phase 2 of the Sakhalin II Project is planned to commence in 2007.²

IUCN has been engaged on the issue of WGW conservation for more than two years. In that time, IUCN has convened two scientific panels to advise Sakhalin Energy with regard to WGW conservation and research. One of the main recommendations of these Panels was the establishment of a long-term scientific advisory panel that could shift from the reactive or review-only approach of the previous panels, to a more proactive approach. IUCN established the Western Gray Whale Advisory Panel (WGWAP) on 2 October 2006 following the signing of a contract with Sakhalin Energy to provide financial support for the WGWAP for an initial period of 5 years.

As Sakhalin Energy prepares to initiate Sakhalin II, Phase 2 oil and gas production in 2008, the risks will shift from primarily those associated with infrastructure construction

¹ Sakhalin Energy is a consortium of companies including the following shareholders:

- Gazprom 50%
- Shell Sakhalin Holdings B.V. (Shell) 27.5%
- Mitsui Sakhalin Holdings B.V. (Mitsui) 12.5%
- Diamond Gas Sakhalin, (Mitsubishi) 10%

² For background information on the project refer to the project website http://www.sakhalinenergy.com/en/project.asp?p=explore_phase2.

to primarily those associated with production and transport operations. One of the most obvious increased risks will be environmental contamination by oil, either from spills, leaks or accidental discharges. Sakhalin Energy has pursued risk management through a variety of processes including risk-averse planning, quantitative risk analysis, prevention measures and acquisition of spill response capabilities. From the initial IUCN independent review of Sakhalin II, Phase 2 to the present, WGW panels have, in reviewing the Company's preparatory efforts, attempted to evaluate the risks to the whale population and recommended measures to avoid or minimize those risks.

The drilling of first oil at the Piltun-Astokhskoye-B (PA-B) platform and the pipeline transport of oil from both PA-B and the Molikpaq (PA-A) platforms will constitute not only a milestone marking the end of the construction phase and the beginning of a new operational phase, but also a deadline for achieving, with confirmation by the Panel, an acceptable level of preparation for oil spill prevention and response. What actually constitutes an 'acceptable' level has been an issue at the heart of concerns related to the potential effects of oil and gas development in this region, which contains the primary WGW feeding grounds. It has been a challenge to evaluate Sakhalin Energy's plans and procedures because they are so complex and because they have, by necessity, been evolving over time.

The present Panel (and preceding panels, as can be seen in their reports) have attempted to address a wide range of issues surrounding oil spill prevention and response. Examples include adequacy of quantitative risk assessment; preventative measures and response plans; coordination of responders at local, regional, national and international levels; decision-making and command structures; adequacy of response equipment, supplies and logistics in what is a remote and often hostile environment; recovery of spilled oil under icy, winter conditions; protection of areas of special value with a focus on the Piltun feeding ground and Piltun Lagoon; collection of baseline information on gray whale habitat; potentially adverse effects of dispersants; the need to test and practice oil spill plans and responses before an actual event; and long-term monitoring to detect and evaluate low levels of accidentally released oil accumulating over time and space.

In view of ongoing prevention/response planning and the impending initiation of oil production at the PA-B platform in 2008, the Panel must engage in a more rigorous and definitive assessment of the oil issue than has been possible to date. It needs to review the adequacy of previous recommendations by WGW panels, assess Sakhalin Energy's responses to those recommendations, and determine whether or what further action will be required to protect WGWs and their habitat. This assessment should clarify the company's progress to date, the current status of preparations and any remaining gaps in those preparations. It will require that Sakhalin Energy accounts fully and accurately for its preparations. Also, it will require interaction with other stakeholders to consider their remaining concerns and perspectives regarding oil spill risks to gray whales and their feeding habitat. The assessment will consider not only whether the oil spill prevention, preparedness and response measures meet general international industry standards, but also whether they are sufficient to protect western gray whales and their habitat – with this higher standard being necessary because of the whale population's particular vulnerability and endangered status.

PROJECT OBJECTIVES

The specific objectives of this project are twofold:

1. The preparation of a reference document which will provide the Panel with a 'benchmark' against which to compare Sakhalin Energy's current level of planning and preparedness for responding to a marine oil spill; and
2. Using the reference document as a basis, assist IUCN and the Panel in developing a comprehensive assessment framework to guide the workshop. This framework will thus be used as an assessment tool for the Panel to reach a determination on how well prepared Sakhalin Energy is to respond to an oil spill, with specific reference to the protection of the WGW population.

REFERENCE DOCUMENT

Purpose

The purpose of this document is to provide an overview of what may currently be considered to be 'leading practice' in the field of marine oil spill preparedness and response. The reference document will draw on best practice as exhibited by international and national oil spill response and environmental protection agencies, as well as the oil and gas industry. It will also consider leading and emerging technologies, oil spill response techniques and planning approaches.

Scope

The scope of the background document will include, but may not necessarily be limited to, the following aspects:

Site/regional specific preparedness and response systems

It will be necessary to clearly define the component elements of a preparedness and response system in order to develop criteria against which Sakhalin Energy's system will be assessed by the Panel. Among the elements that may be considered as fundamental to such a system are:

- risk identification & prioritisation
- planning
- equipment
- training
- exercising

The reference document will provide information on the role and application of those elements at each of the following discrete stages of oil spill preparedness and response activities:

1. Pre-spill information collection and contingency planning
2. Post-spill planning and response prioritisation
3. Post-spill assessment and monitoring
4. Spill response termination

The following questions should focus the analysis:

- (a) What response system elements should be in place in the event of a spill?
- (b) What resources should be available in the event of a spill?
- (c) How will spilled oil behave and where will it go?
- (d) What biotic resources may be at risk?
- (e) What are the relative priorities for their protection?
- (f) What are the best response options available to protect these resources?
- (g) How effective are the response options likely to be and how feasible are they? The full range of response options should be considered and should take into account the specific environmental conditions around Sakhalin Island.
- (h) If a specific response option is used, what impacts might result from, or be exacerbated by, the response itself?
- (i) What monitoring is needed to (i) assess the impacts of the oil spill; (ii) assess the impacts of the clean up; and (iii) assess the effectiveness of the cleanup?
- (j) How will the termination of cleanup operations be decided?
- (k) What performance indicators could be used to measure an organization's level of preparedness?

The Project Team will not attempt to establish absolute criteria for judging the adequacy of response planning, but will focus on the issues which need to be addressed and current 'best practice' in each area.

While the authors will summarize best practice to the extent practicable, it is not the intent of the project to create a comprehensive review of the oil spill planning and response literature.

Format

The document should be developed along the lines of a series of annotated matrices, with accompanying text, rather than in the form of a lengthy narrative. A series of matrices should be developed for each of the discrete stages, identified above, as appropriate.

Deliverables and Deadline for Completion

The contractee will provide to IUCN, no later than 6 April 2007, a draft structure and scope for the reference document. Subsequently, and subject to agreement between the contractee and IUCN on the draft structure and scope, the contractee will provide to IUCN, a preliminary draft of the background document in MS Word format, no later 31 May 2007. The report will be approximately 50 pages in length, and will consist of descriptive summary text accompanied by annotated matrices to summarize relevant information for the committee.

IUCN will provide comments on the draft to the contractee no later than 14 days following receipt of the document. Subsequently, and following an appropriate peer review process agreed upon by the two parties, the contractee will provide IUCN with a final version of the document in both hard copy and electronic, no later than 20 July 2007.

PROJECT TIMELINE

The following milestones must be taken into account when developing the background document

Start date	16 March 2007
Draft scope and content	6 April 2007
IUCN Comments on draft scope and content	27 April 2007
Draft document	31 May 2007
IUCN comments	15 June 2007
Redrafted document incorporating IUCN comments	29 June 2007
Peer review process complete	13 July 2007
Final document	20 July 2007

ASSESSMENT CRITERIA

Once the reference document has been completed and reviewed by the Panel, the next stage is the development of a comprehensive framework to facilitate the assessment of Sakhalin Energy's oil spill prevention, preparedness and response system. This framework will be developed using the reference document as a basis. The contractee will therefore provide support and assistance to Panel members in developing this framework and will, subject to agreement with IUCN, contribute to the development of assessment tools to be used in the assessment workshop discussed in the background above.

SUPPORTING DOCUMENTATION

To assist in the preparation of this document, the following documents are considered to provide useful background material which should be considered by the contractee.

1. Draft IMO/IPIECA Manual on Oil Spill Risk Evaluation and Assessment of Response Preparedness – To be provided by IUCN.
2. IPIECA Report Series – Oil spill preparedness and response. Volumes 1-12.
3. IPIECA/ITOPF Briefing Paper – The use of international oil industry spill response resources: Tier 3 Centres.
4. IMO/IPIECA Report Series volume 1. Sensitivity mapping for oil spill response.
5. IMO/IPIECA Report Series volume 2. Guide to oil spill exercise planning.
6. Reports of the Independent Scientific Review Panel (ISRP) and its follow up workshop – To be provided by IUCN.
7. Western Gray Whale (Lenders) Workshop (Vancouver I) – To be provided by IUCN.
8. Report of the Interim Independent Scientists Group (IISG) – To be provided by IUCN.