Sakhalin-2 Phase 2 Lenders' Independent Environmental Consultant

Monitoring and Audit Report

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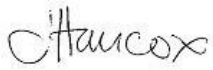
(signature):	
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List of Abbreviations

BS	Booster Station
BVS	Block Valve Station
CLO	Community Liaison Organisation
CMT	Crisis Management Team
CTA	Common Terms Agreement
ECT	Emergency Co-ordination Team
GC	United Nations Global Compact
GRI	Global Reporting Initiative
GTT	Gas Transfer Terminal
HSESAP	Health, Safety, Environmental and Social Action Plan
IEC	Independent Environmental Consultant
IP	Indigenous Peoples
KPI	Key Performance Indicators
FID	Final Investment Decision
LNG	Liquefied Natural Gas
MOU	Memorandum of Understanding
OET	Oil Export Terminal
OPF	Onshore Processing Facility
OSR	Oil Spill Response
OSRP	Oil Spill Response Plan
PPE	Permitted Project Expansion
PCDP	Public Consultation & Disclosure Plan
PMD	Pipeline Maintenance Depot
RAP	Resettlement Action Plan
RF	Russian Federation
RoW	Right of Way
Sakhalin Energy	Sakhalin Energy Investment Company Ltd
SI	Social Investment
SIMDP	Sakhalin Indigenous Minorities Development Plan
SP	Social Performance
SPD	South Piltun Development
SPZ	Sanitary Protection Zone
SD	Sustainable Development
SWSP	Sakhalin West Seaport
WGW	Western Gray Whale
WGWAP	Western Gray Whale Advisory Panel
WRC	Wildlife Rehabilitation Centre

Executive Summary

ENVIRON UK is the Independent Environmental Consultant (IEC) acting on behalf of the Senior Lenders to the Sakhalin-2 Phase 2 project (the 'Project'). Under the Terms of Reference of our engagement, ENVIRON undertakes:

1. Annual Project monitoring visits that cover a range of project activities, assets, programmes and plans.

2. Biennial 'Level 1' audits of selected Project facilities.

A combined Level 1 Audit and Project Monitoring site visit was conducted from the 28th September to the 4th October 2011 and focused on the following aspects:

- **Level 1 Audits**
  - LNG Site
  - PA-B Platform

  Full reports from the audits of these facilities, with executive summaries, are presented in Appendices 1 and 2 respectively.

- **Monitoring Visit**
  - Social monitoring
    - Community Liaison Organisation (CLO) and Company's information centres
    - Contractor compliance
    - Gas Transfer Terminal (GTT) South
    - Prigorodnoye complex accommodation
    - Update on dacha issue, Sakhalin Indigenous Minorities Development Plan (SIMDP) and Social investment
  - Environmental monitoring:
    - Pipeline Right of Way (RoW)
    - Block Valve Stations
    - Nogliki and Sovetskoye PMDs
    - Kholmsk Port
  - Project Update Discussion Topics:
    - Progress on previous open Findings
    - HSESAP Monitoring
    - OPF Compression Project
    - Oil spill response
    - South Piltun Development (including associated geotechnical surveys)

During the site visit, progress made towards open Findings raised from previous IEC reviews and site visits were reviewed. The updated status of the Findings is provided in a revised Findings Log (see Section 9). The Findings Log has also been updated to include all new Findings identified following the site monitoring and audit visit.

In addition, a number of recommendations are made following the site visit that do not relate to specific areas of non-compliance (and hence are not included in the Findings), but which are made for the benefit of either Sakhalin Energy and/or Lenders to either improve performance or, in some cases, avoid future areas of non-compliance.

Social

On the whole, the monitoring of Sakhalin Energy's social performance undertaken by the Lenders' IEC has yielded positive findings and various forms of evidence that the Company has put into practice and is effectively carrying out a broad range of its social commitments. No examples of materially significant non-compliances with the Health Safety Environment & Social Action Plan (HSESAP) and the international standards applicable under the HSESAP have been identified as a result of the monitoring. The well-structured, systematic, transparent and readily auditable approach undertaken by the Sakhalin Energy's Social Performance Team is highly acknowledged and should continue to be maintained in an equally comprehensive and dedicated manner.

A number of minor findings for action by the Company were raised during the site visit, the most noteworthy of which relate the following areas:

- Completion of an investigation into the grievance from a resident neighbouring the Prigorodnoye complex accommodation facility (concerning the presence of fuel smell in the air).
- Adaptation of the Fishing, Gathering and Hunting Policy (currently referring to Construction) for the Operations phase, or retention as a general policy applicable to all Project phases, assets and personnel.
- Reinstatement of a chance finds procedure and associated communication protocols as part of the 'Plan for Protection of Cultural Resources During Sakhalin II Operations' (i.e. as a standard measure, not only for emergency situations).

Right of Way

A number of locations along the pipeline Right of Way (RoW) were inspected from across all sections of the onshore pipeline. Inspections focused on the status of the following aspects:

- Drainage and erosion control along the pipeline RoW
- Biological reinstatement
- River crossings
- Geotechnical works.

Overall, the site visit revealed that significant progress had been made in relation to reinstatement and maintenance of the pipeline RoW. Despite the generally very favourable impression gained from the site visit, areas for improvement were nonetheless identified and the most critical of these are summarised below:

- Re-vegetation of sandy slopes and some steep slopes remains slow and continued efforts are required by the Company in order to meet HSESAP requirements.

- Control of tree growth on the RoW is urgently required to meet RF legal requirements

In addition, we note that maintenance of the good condition of the RoW is an ongoing activity and we strongly recommend that Sakhalin Energy continues to work to proactively manage RoW risk though inspection and maintenance programmes in the long term. Such an approach will ensure cost-effective maintenance of the RoW in the longer term.

Given that many sections of the RoW are becoming increasingly difficult to access for visual inspection, we also recommend that Sakhalin Energy makes increased use of either aerial photography or satellite imagery to assess recovery of more inaccessible areas.

Other Assets

Block Valve Stations

A number of block valve stations were visited along the RoW – all appeared clean and litter free, and all access roads and site drainage controls were found to be in good order.

Due to reliability issues, Sakhalin Energy is currently undertaking a programme to replace all gas-fired electricity generators with new design generators by the end of 2012. Temporary diesel-powered generators are being used in the interim period, surrounded by temporary bunding/containment. While the provision of basic secondary containment is an improvement since our previous site visit in 2010, visual inspection found the quality of the bunding/containment to be variable. In the northern pipeline sections, bunds were rudimentary and unlikely to meet the 110% containment requirement specified in the HSESAP. It is therefore recommended that improved standard design drawings are developed and consistently implemented in all future cases were temporary generators are required at BVSs to ensure that 110% secondary containment is provided.

Pipeline Maintenance Depots

ENVIRON visited two PMDs during the October 2011 site visit, namely the 'stand-alone' PMDs at Nogliki, and Sovetskoye. The buildings and facilities at these PMDs are of a standard design comprising offices, warehouse/storage areas for equipment and vehicles, workshops, oil storage areas, and wastewater treatment facilities. As such, many of ENVIRON's findings were common to both PMDs visited.

Vehicle storage areas at both PMDs visited were found to be clean and well organised. Oil Spill Response (OSR) equipment also appeared well maintained and very well organised. While basic equipment for the treatment of oiled seabirds is maintained at Nogliki, none of the responders had received any training in how to handle or treat oiled wildlife. We recommend that in order to protect both human health and safety and the wellbeing of wildlife, all responders expected to provide preliminary treatment of oiled wildlife be provided with basic training.

Good housekeeping was observed at oil and chemical storage areas at both PMDs visited. Following secondary containment issues raised by the IEC in 2010, all oil and chemical drums were now observed to be stored on top of gridded drip trays. While we acknowledge

that this represents an improvement to spill control at the PMDs, the drip trays provided are significantly too shallow to provide the volume of secondary containment required under the HSESAP. Further secondary containment is required to comply with HSESAP standards and we recommend that simple permanent bunding at the storage facilities should be considered. At Nogliki PMD, a high step up to the entrance of the oil/chemical store makes transfer of heavy oil/chemical drums difficult, and likely to lead to enhanced risk of spillage when drums are moved. The installation of a ramp to the storage areas is recommended (this could be combined with the installation of permanent bunding for the areas as recommended above).

Kholmsk Port

The Sakhalin West Seaport at Kholmsk is an integrated supply base serving platform operations. A number of operations are undertaken at Kholmsk, including the loading and offloading of supply vessels, preparation of oil based drilling muds and brine, preparation of dry bulk products for well engineering, fabrication of riggings accessories and spare parts storage. As well as providing platforms with supplies, the port receives and handles wastes arising from all three platforms (the majority of this being solid domestic and galley waste).

Management of Sakhalin Energy's platform wastes appeared to be of a very high standard. Wastes were stored appropriately and their disposal prioritised depending on waste type. Sakhalin Energy's HSE record at Kholmsk is excellent, with zero LTI statistics since operations commenced and active management of risk. No adverse findings were identified.

Project Updates

Oil Spill Response

A number of outstanding concerns remain regarding certain oil spill response plans in relation to:

- resolution of long-standing comments of their adequacy as workable plans by the IEC (it is an HSESAP requirement that all such plans are agreed by the Lenders and the IEC)

- non-compliance with public disclosure requirements in the HSESAP.

Given the importance of adequate oil spill response provisions during the operational phase of the Project, which commenced over 2 years ago, it is now critical that as a matter of urgency Sakhalin Energy resolves to the satisfaction of the IEC and Lenders:

- The development of an overarching project oil spill plan, either in the form of a reinstated Corporate OSRP or an improved Emergency Preparedness and Response Standard ('ER STO') (we understand that Sakhalin Energy is considering the reinstatement of the Corporate OSRP, which would resolve this issue if confirmed)

- Finalisation of the Onshore Processing Facility (OPF) OSRP, the Prigorodnoye Onshore OSRP and the Oil in Ice Manual

- The public dissemination of all OSRP documentation as required under the HSESAP.

In addition, discussions with Sakhalin Energy's OSR personnel indicated that major oil spill exercises incorporating third party organisation (either field or desk-based) had not been undertaken. The involvement of third parties in major oil spill exercises is vital if major exercises are to be adequately undertaken and we strongly recommend that such an exercise is planned and implemented in the near future.

An updated OPF OSRP issued in 2008 was approved by all the relevant Russian Federation (RF) authorities except the Emergencies Ministry (Federal EmerCom). Federal EmerCom has advised Sakhalin Energy that a number of amendments to the OPF OSRP are required before it can be approved. We understand that Sakhalin Energy disputes the legal basis for the above requirements from Federal EmerCom and that on the 6th September 2011 the Company submitted a Statement of Claim to Arbitrazh Court in Moscow challenging the inaction of Federal EmerCom in approving the revised OPF OSRP.

2D-Seismic Survey

During the site visit Sakhalin Energy provided an update on the 2D-siesmic survey and geotechnical investigation planned for 2012 which are required as part of the planned work for the South Piltun Development Project (see below). The Company confirmed that:

- The survey works are to be classified as a Permitted Project Expansion (PPE) under the Common Terms Agreement (CTA) (this is as previously recommended by the Lenders' Independent Legal Advisor and ENVIRON)

- An Environmental Impact Assessment (EIA) will be produced by the Company for both the 2D seismic survey and the geotechnical investigation works to relevant international standards.

The development of an EIA for these works is welcomed and in line with HSESAP PPE requirements. ENVIRON will review the EIA when available. In reviewing the EIA, we will pay particular attention to:

- The incorporation of key findings from the analysis of monitoring data from a previous 4D seismic survey performed in 2010 (in particular in relation to any further insight that may be gained into the behavioural response of Western Gray Whales (WGW) to seismic survey noise).

- The implementation of all mitigation measures in line with the reasonable recommendations of the WGW Advisory Panel (WGWAP), and in particular the performance of the survey works as soon as possible after ice break-up (to minimise the number of WGW potentially present in the area).

South Piltun Development Project

Sakhalin Energy has previously notified Lenders that it is investigating how to recover hydrocarbons in the southern portion of the Piltun offshore field through the so-called South

Piltun Development (SPD). The Company provided a summary update on the potential SPD. The Company confirmed that:

1. The Final Investment Decision (FID) for the SPD is scheduled for mid-2014.

2. The SPD would be classified as a Project Expansion under the CTA.

3. The SPD would comprise two inter-dependent phases, an initial oil development phase and a subsequent gas development phase.

4. The SPD would require the installation of a new platform in the Piltun field, located between the existing PA-A and PA-B platforms. Other associated infrastructure requirements (e.g. onshore and offshore pipelines etc.) are still being studied.

5. The Company will produce EIA documentation for the SPD (addressing both development phases) to meet both RF and lender requirements.

ENVIRON agrees with the classification of the SPD as a Project Expansion and that, under this classification, an EIA to Lender standards is required. Given the inter-dependence of the two development phases we also concur that the EIA should address both the oil and gas development phases of the project. We also make the following points:

1. The need for the SPD, which would involve the development of a third platform in the Piltun field, appears to be at odds with statements previously made in the Alternative Analysis section of the 2005 EIA that "full development" of the Piltun-Astokh field would be achieved with two platforms (i.e. PA-A and PA-B). We recommend that Sakhalin Energy clarifies this apparent discrepancy for Lenders.

2. We note that under the provisions of the HSESAP the IEC should review and agree the scope of the EIA. In addition, we also strongly recommend that ENVIRON reviews the environmental and social aspects considered at all relevant 'decision gates' within the SPD development process, including screening assessments for the development alternatives. In doing so, we further recommend that the technical and engineering considerations at each decision gate are also reviewed on behalf of Lenders by the Independent Technical Consultation (or other relevant specialists working on behalf of Lenders).

3. We recommend that the Company and Lenders agree and confirm which international standards, and more specifically which version of Lender standards, will be applied to the SPD and associated EIA.

OPF Compressor Project

An update on the OPF Compressor project was provided by the Company. It is good to note that Sakhalin Energy has confirmed that it will develop an EIA for the OPF Compression Project and that, in line with the requirements of the HSESAP, this will be provided to Lenders and the IEC for review. We note that the IEC and Lenders should be involved in both the scoping phase for the EIA and the analysis of development alternatives in order to

ensure that any issues are identified at an early stage. In this regard we note that the design and selection of the compressor facilities is of particular importance and in selecting the final design due consideration should be given to, inter alia:

- The physical footprint required by the different options;
- The relative gaseous emissions of different turbine options (this should include both comparison with applicable emission standards and the potential effects on ambient air quality);
- The reliability of the selected compressor design with particular regard to the likely levels of flaring required under different development options (this is of particular importance given a forthcoming Russian Federation (RF) decree to limit flaring from oil and gas developments).

Monitoring Programmes

During the presentation of the Local monitoring programmes, it became apparent that some changes to the current monitoring programmes have already been made (for 2011). However, these changes were not agreed with Lenders and ENVIRON. While we do not necessarily disagree with the appropriateness of the changes identified, this does represent a breach of procedural CTA requirements, whereby any changes to the HSESAP must be agreed in advance with the Lenders. As such, current Local monitoring arrangements are not fully compliant with the existing agreed HSESAP monitoring requirements. This situation needs to be corrected as soon as possible by the provision of detailed (and justified) revised Local monitoring programmes to Lenders and ENVIRON for review and agreement.

Contents

1 Introduction

ENVIRON UK is the Independent Environmental Consultant (IEC) acting on behalf of the Senior Lenders to the Sakhalin-2 Phase 2 project (the 'Project'). Under the Terms of Reference of our engagement, ENVIRON undertakes:

3. Annual Project monitoring visits that cover a range of project activities, assets, programmes and plans.

4. Biennial 'Level 1' audits of selected Project facilities.

For 2011, it was agreed that ENVIRON would conduct a single combined Level 1 Audit and Project Monitoring site visit. The site visit was conducted from the 28th September to the 4th October 2011 and focused on the following aspects (the full Terms of Reference and schedule are presented in Appendix 4):

- **Level 1 Audits**
  - LNG Site (see Section 2 and Appendix 1)
  - PA-B Platform (see Section 2 and Appendix 2)

- **Monitoring Visit**
  - Social monitoring (see Section 3):
    - Community Liaison Organisation (CLO) and Company's information centres
    - Contractor compliance (Booster Station-2 as a case study)
    - Gas Transfer Terminal (GTT) South
    - Prigorodnoye complex accommodation
    - Update on dacha issue, Sakhalin Indigenous Minorities Development Plan (SIMDP) and Social investment
  - Environmental monitoring:
    - Pipeline Right of Way (RoW) (see Section 4)
    - Block Valve Stations (see Section 5)
    - Nogliki and Sovietskoye PMDs (see Section 5)
    - Kholmsk Port (see Section 5)
  - Project Update Discussion Topics (see Section 6):
    - Progress on previous open Findings
    - HSESAP Monitoring
    - OPF Compression Project
    - Oil spill response
    - South Piltun Development (including associated geotechnical surveys)

This report presents the findings of the site visit, which are presented in the sections indicated above. In addition, the report also provides:

- Recommendations (Section 7). A number of recommendations are made following the site visit that do not relate to specific areas of non-compliance (and hence are not included in the Findings Log –see below), but which are made for the benefit of either Sakhalin Energy and/or Lenders to either improve performance or, in some cases, avoid future areas of non-compliance. Such recommendations are summarised in Section 7.

- A summary of information requests that were not available at the time of the site visit (Section 8).

- An updated Findings Log (Section 9). The Findings Log is a live log of all Findings identified from IEC site visits and reviews of Project documentation. During the site visit progress made against open Findings was reviewed and the updated status of the Findings is provided in a revised Findings Log. The Findings Log has also been updated to include all new Findings identified following the site monitoring and audit visit.

2 Level 1 Audits

Level 1 Audits were undertaken at two facilities, namely the LNG site and the PA-B Platform. Full reports from the audits of these facilities are presented in Appendices 1 and 2 respectively. Key Recommendations, Data Requests and Findings from the audits are also summarised in the 'Summary Recommendations' presented in Section 7, Data/Information Requests in Section 8 and 'Findings Log' presented in Section 9.

3 Social Performance Monitoring

3.1 Objectives of the IEC's Social Monitoring

Monitoring of Sakhalin Energy's social performance is implemented by the IEC on an annual basis and involves review of the relevant documentation/procedural mechanisms, interviews with designated responsible staff within the Company, visits to the assets operated by the Company's contractors, as well as visits to facilities that are used by Sakhalin Energy for the purpose of community engagement and information dissemination.

The following aspects of social performance were reviewed as part of the monitoring carried out at the end of September – beginning of October 2011:

- Sakhalin Energy's current approach to and the execution of community engagement;
- Social compliance by contractors;
- Social impact monitoring activities implemented by the Company;
- Progress with the commencement and implementation of Sakhalin Indigenous Minorities Development Plan (2nd Five-Year Plan for 2011-2015) (SIMDP II);
- Liaison with the Prigorodnoye dacha residents;
- Social investment framework operated by Sakhalin Energy; and
- Protection of cultural heritage during operations.

Detailed updates on each of the aforementioned aspects are provided in the following subsections.

3.2 General Update

3.2.1 Company's Management of Social Performance/ HSESAP

The 3rd revision of the HSESAP was completed in 2010 and has resulted in the compilation of a suite of commitments and management standards that are mandatory for the Company. The revised HSESAP in its entirety is publicly available on Sakhalin Energy's corporate web-site in Russian and English[1], which is beneficial from the perspective of transparency. The social commitments and management imperatives are stipulated in the Social Performance Management Standard which is a subcomponent of the HSESAP and represents a set of specifications in relation to the following elements:

- Overall approach to the Company's social performance (policy framework, roles, responsibilities, related plans and procedures);
- The summary of international standards and requirements applicable to the Sakhalin-2 Project in respect of the critical social parameters (indigenous peoples, resettlement, and cultural heritage); and
- Management specifications enforced by the Company in relation to the individual social issues (indigenous peoples, resettlement, cultural heritage, public consultation

[1] http://www.sakhalinenergy.com/en/library.asp?p=lib_actions_shelf&l=lib_social_plan2010rev3
http://www.sakhalinenergy.com/ru/library.asp?p=lib_actions_shelf&l=lib_social_plan2010rev3

and information disclosure, addressing grievances, social investment, Russian content and employment, and social monitoring).

The Social Performance (SP) Management Standard is an overarching framework which provides further references to the specific policy and procedural elements and mechanisms that the Company has committed to implement as part of the overall HSESAP requirement. The IEC's social monitoring is carried out against the SP Management Standard specifications as well as the subsidiary documents and instruments stipulated therein.

Given the Project's long history, the international requirements for social performance against which the Project strives to perform had been originally set up as the World Bank's relevant Operational Directives[2] (ODs) that were in force at the time of the Project's onset. Revision of the applicable international standards within 12 months of the Project Completion is stipulated in the Social Performance Management Standard[3]. This in addition to the fact that the ODs have since been replaced by new international benchmark provisions such as the Equator Principles and the IFC Performance Standards on Social and Environmental Sustainability, and hence there is presently a need for the international social requirements adopted by the Project to be revisited. It is understood, however, that such a revision process, cannot be effectively carried out in isolation from the environmental requirements and will therefore require an integrated approach to deciding on the set of applicable standards for the Project going forward.

3.2.2 Social Performance Strategy and Plan

Sakhalin Energy's Social Performance (SP) Strategy for 2012-2014 (supplemented by the Social Performance Plan for 2011) is a governing document that outlines specific commitments, mechanisms enabling effective delivery of the commitments, and a range of activities planned for realisation in the course of 2011. The SP Strategy is underpinned by the Company's overall vision of its role and responsibilities in the wider society and provides a useful roadmap for the short- and medium-term planning, including key priorities, challenges, and resourcing provisions.

It is expected that the SP Plan will continue to be reviewed and updated on an annual basis to ensure fulfilment of the established strategic priorities and optimisation of the implementation mechanisms, as appropriate.

The SP Plan for 2011 envisages a number of revision exercises, particularly in relation to target-setting and assurance in the form of key performance/process indicators, the Social Performance Monitoring Specification (particularly in relation to Social Compliance Monitoring and reporting), as well as a review of the Community Grievance Procedure (see also section 3.3.3 below). Given that all these activities are currently underway, it is recommended that the IEC participates in the process of revision and finalisation of the

[2] OD 4.20 'Indigenous Peoples', OD 4.30 'Involuntary Resettlement', and OD 4.50 'Management of Cultural Property in Bank Financed Projects'.

[3] See Sakhalin Energy HSESAP, 'International Requirements For Social Performance'/Purpose.

relevant documentation as all the aforesaid elements subject to the revision are key to the successful social performance and the measurement thereof.

3.2.3 Internal Promotion of Social Compliance

Integration of the social policy component into the Corporate Health, Safety and Environment (HSE) Policy has been an important highlight of late. It needs to be ensured that the integrated HSE& Social Performance Policy is promptly rolled out internally and to the Contractors.

In addition, the SP Manual has been produced by the SP Group to strengthen awareness of the existing mechanisms of social management within the Company by providing detailed summaries of the most critical principles, practices, instruments, requirements and activities pursued by Sakhalin Energy in the sphere of corporate social responsibility and sustainable development. In particular, the Manual covers the following aspects:

- Sakhalin Energy's overall approach to managing its social performance;
- Mechanisms of the Social Impact Assessment and social impact monitoring;
- Engagement with stakeholders through consultation and disclosure;
- Grievance redress;
- Engagement with the Island's indigenous population;
- Principles of resettlement and associated compensation;
- Social investment and other benevolent initiatives; and
- Social performance monitoring, including internal assurance of compliance and mechanisms of external auditing.

The Manual is primarily intended for the use by the in-company Leadership team, managerial staff and those personnel who may be involved in interacting with the public or dealing with issues of the social nature, as well as by contractors and subcontractors through their respective Social Focal Points (see also section 3.4 for a more detailed discussion on contractor compliance). Social performance training is also mandatory for this type of employees.

The additional practical value of the Manual consists in flagging up the points of importance that require special attention, e.g. ensuring compliance with the HSESAP commitments, the role of impact assessments in the proactive management of risks, close cooperation with Project teams and contractors in performing impact assessments and implementing impact mitigation, the importance of Project's interaction with the affected population, etc. The description of specific elements of social performance is also complemented by the provision of contact details of the main focal points within the Company.

The SP Manual in itself and the fact that its release has been endorsed by Sakhalin Energy's CEO is seen as an illustrative example of the Company's adherence to fulfilling and championing its social commitments.

3.2.4 External Initiatives Related to Good Practice

Starting from 2009, Sakhalin Energy has been an active participant of the United Nations Global Compact which is a strategic policy initiative for businesses that are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption.[4] Sakhalin Energy has been named among the examples of best practice of corporate sustainability in the 2011 Global Compact International Yearbook[5], particularly in relation to the Company's initiatives to support the Island's indigenous peoples (see also section 3.7 for more detail on the SIMDP progress). Sakhalin Energy has so far been the only Russian company that joined the Global Compact LEAD which is a new initiative for corporate sustainability leadership.[6] In September 2011, Sakhalin Energy initiated LEAD Task Force on Indigenous People.

To date, the Company has also produced two non-financial sustainable development (SD) reports in accordance with the GRI Reporting Framework[7]. The 2010 report provides a detailed outline of Sakhalin Energy's activities in the following areas: corporate management, management of economic, environmental and social impacts, stakeholder engagement and the Project's development strategy up to 2015. A notable feature of both SD reports consists in providing the lists of questions and comments received by Sakhalin Energy from stakeholders in the course of public meetings that preceded preparation of the reports. The list of questions received is supplemented by the provision of detailed responses and clarifications from the Company in the SD reports, which is indicative of a two-way dialogue.[8]

Another highlight of the Company's recent activities has been its participation (as the only representative from industry and from Russia) in the testing of practical applicability of the Ruggie Principles[9], particularly in relation to the community grievance procedure that is operated on the corporate level. From the Principles' viewpoint, such procedures are regarded as a non-State-based and non-judicial operational-level mechanism of recourse, remedy and resolution that enables the protection of human rights.

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[4] For further details see http://www.unglobalcompact.org/

[5] GC International Yearbook for 2011, Best Practice/Human Rights, 'Sakhalin Energy. Corporate Sustainability – The Way Forward', see pages 80-83.

[6] http://unglobalcompact.org/HowToParticipate/Lead/lead_participants.html

[7] Sakhalin Energy' reports on Sustainable Development for 2009 and 2010 can be accessed on the following links: http://www.sakhalinenergy.com/en/documents/GRI_2009_Eng_I.pdf and http://www.sakhalinenergy.com/en/library.asp?p=lib_social_shelf&l=lib_social_report_2010

[8] See Sakhalin Energy Sustainable Development Reports for 2009 and 2010, APPENDIX 2: Sakhalin Energy's answers and commitments as part of its dialogue with stakeholders.

[9] "Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework" were proposed by UN Special Representative John Ruggie in 2008 and eventually endorsed by the UN Human Rights Council in June 2011. See also:

http://www.business-humanrights.org/SpecialRepPortal/Home/Protect-Respect-Remedy-Framework/GuidingPrinciples , and specifically: "The corporate responsibility to respect human rights"

This level of Sakhalin Energy's proactive involvement in a range of the activities that are exemplary in terms of best international practice testifies to the Company's practical realisation of its vision and commitment to act as a good corporate citizen and in an ethical manner.[10]

3.2.5 Other Types of Third Party Monitoring

In addition to the regular monitoring by the Lenders' IEC, a number of important social aspects of the Sakhalin-2 Project have also been subject to the independent external monitoring, namely in relation to:

- Implementation of the Resettlement Action Plan (RAP);
- Implementation of the Sakhalin Indigenous Minorities Development Plan (SIMDP); and
- Fulfilment of the Social Investment (SI) programme.

The RAP monitoring has been carried out by an external resettlement specialist and was primarily focused on measuring and reporting on the RAP's overall performance and compliance of the process with the relevant specifications enshrined in the Project's HSESAP. By the time of the IEC visit in September 2011, six visits had been conducted by the RAP monitor, including a field survey for the final evaluation carried out in July 2011. Although the final evaluation report is currently in preparation by the RAP monitor, some preliminary findings have already been made available, including the fact that the Project's resettlement commitments can now be considered complete and that the main instruments for managing any further issues that may arise during the operations will continue to be the social impact assessment/monitoring, stakeholder engagement, and the grievance redress mechanism implemented by the Company.

The latest resettlement case, a family household from Firsovo, was successfully completed in 2007-2008, and continuous engagement with this family has been maintained on a regular basis during 2010-2011 to monitor their social and economic status at the post-resettlement stage. No specific issues were identified as a result of the internal and external monitoring or reported by the resettled family.

One of the key preliminary conclusions of the RAP Final Evaluation by the external monitor consists in the absence of significant residual issues and a recommendation to cease the external RAP monitoring, whilst continuing the implementation of internal monitoring and impact assessment studies by the Company, as required. The Lenders' IEC will review the RAP Final Evaluation report once such becomes available. All previous RAP monitoring reports have been publicly disclosed on the Sakhalin Energy's web-site.

[10] See also Sakhalin Energy's Statement of General Business Principles, June 2010.

Some representatives of the "Stroitel" Dacha[11] community in Prigorodnoye (adjacent to the LNG plant), namely those who had declined Sakhalin Energy's waiver and compensation package at the earlier stages of Project development, continue to express their concerns about the sufficiency of the Sanitary Protection Zone (SPZ)[12] that was set up for the LNG facility. Further discussion on the Company's continued interaction with the Dacha community is provided in section 3.3.6.

Another potential issue associated with resettlement is a dacha located in the vicinity of the pipeline Right-of-Way and the associated exclusion zone, near the Solyanka River. This concern was previously raised by the IEC and Sakhalin Energy has been duly tracking the issue. In addition, the Company has reported that the Sakhalin Oblast is considering a new law whose enforcement may result in reducing the pipeline's required protection zone. Sakhalin Energy currently awaits further update as to the enactment of this new law and will act accordingly once there is sufficient clarity. It is also reported that the dacha owner has not initiated contact with Sakhalin Energy to date and that no grievances have been lodged to the Company by this family so far.

Subsequent to the site visit Sakhalin Energy has informed the IEC that:

- The resettlement of this dacha is not required as per the Pipelines Industrial Safety Declaration approved by the Russian Ministry of Emergencies and Federal Service for Environmental, Technological and Atomic Supervision (Rostechnadzor).

- Representatives of the Company have visited the family residing at the dacha several times in order to identify any concerns related to the Project and to explain the existing grievance procedure should it be required

The IEC will revisit this issue at the next site visit to review the status of requisite negotiations between the Company and the dacha owner in case the law on reduction of the pipeline safety zone has not been passed by then and to verify the additional information provided above.

If the Project further progresses into the expansion stage that may in turn entail physical or economic displacement, Sakhalin Energy's Social Impact Assessment Group will continue working closely with the respective Project teams to identify potential issues and develop

[11] "*Dacha*" is a Russian word which stands for 'summer residence/ cottage'.

[12] In Russia, SPZ serves a buffer zone between industrial facilities and nearest residential areas and public buildings. The SPZ is set up to protect population from potential impacts related to harmful industrial processes, including noise, dust, gaseous and other deleterious emissions. The size of an SPZ is determined based on the premise that concentration of industrial pollutants and the level of other harmful factors shall not exceed maximum permissible norms when reaching the residential areas. Depending on the harmfulness of emissions, specifics of process flows and the effectiveness of impact abatement solutions, industrial facilities are divided into five categories, with most hazardous facilities typically requiring an SPZ of circa 1000m. The SPZ around the Sakhalin Energy's LNG plant was established at ~1.1 km.

appropriate solutions. The Lenders' IEC will remain involved in this process and will provide a further update, as required.

External monitoring of the SIMDP was carried out biannually by a third-party qualified consultant-anthropologist since the early stages of the SIMDPI. The commissioning of the 2nd SIMDP for the period of 2011-2015 also involves the implementation of external monitoring for the purposes of providing a third-party review and assurance, including with respect to realisation of the Plan's goals and commitments, the quality of addressing SIMDP-related grievances, verifying the aspects of Plan's implementation with the indigenous communities, and assessing overall compliance with the applicable international standards.

All reports by the independent monitor, including the final evaluation report as part of the SIMDP I completion, are publicly available on the dedicated web-site that has been set up by Sakhalin Energy. See also section 3.7 for further discussion on the SIMDP II.

Monitoring of Sakhalin Energy's Social Investment programme is also conducted by external consultants.

3.3 Community Engagement in Operations

Having progressed into the operations phase, the Project continues to engage with the affected communities, including Indigenous Peoples, and other stakeholders (government authorities, social institutions, businesses, etc.) through a variety of means:

- Community Liaison Organisation (CLO);
- Company's Information Centres;
- Public meetings with local residents;
- Public opinion surveys;
- Community Grievance Procedure;
- Community Awareness Programme;
- Engagement with Japanese stakeholders; and
- Ongoing interaction with the Stroitel Dacha community etc.

3.3.1 Community Liaison Organisation (CLO) and Information Centres

The CLO network has been considerably scaled down and restructured for the operations phase, the main reason for this being a gradual decrease in in the range and intensity of community impacts as well as a declining public interest in the Project after completion of the construction activities and demobilisation of a significant part of the workforce. Sakhalin Energy reports that the operations phase does not necessitate an extended network of the mobile CLOs that previously used to cover individual spreads of the pipeline and other Project assets that were under construction. From this viewpoint, availability of the stationary

venues whereby Project-related information can be regularly disseminated to the communities is deemed a more appropriate approach for the operations.

At present, the restructured network comprises the Municipal Liaison Coordinator and two CLOs, including the dedicated Indigenous Peoples (IP) CLO that operates in the northern part of Sakhalin Island which is traditionally inhabited by the indigenous communities. This compact organisation now covers larger geographical areas as compared to the sections previously allocated to the larger CLO team during the construction. Regular contact with the public is currently exercised via 23 Information Centres that have been established across the Island on the basis of municipal libraries (district and village-based). For this purpose, librarian staff act as 'information consultants' on behalf of Sakhalin Energy and the Company allocates some remuneration to the staff for rendering these services.

The main function of the information centres and their consultants (librarians) consists in provision of the following types of assistance to the local residents:

- Providing access to up-to-date information on the Project and other Project-related materials that are regularly supplied by Sakhalin Energy. A range of different media are employed for this purpose, including posters, information boards, leaflets, brochures, "Vesti" corporate newspaper, multimedia and the internet[13];
- Referring to the Sakhalin Energy Community Grievance mechanism and assisting with completing the Grievance form and/or arranging a meeting with the Company's CLO, as necessary[14];
- Providing information on the Social Investment programmes and grant opportunities available from Sakhalin Energy; and
- Collecting and recording feedback from members of the communities[15].

The Sakhalin Energy's CLOs remain in close contact with the information centres and their staff and strive to promptly respond to any specific queries that have been lodged in the centres by the public. It is important to note that the centres *per se* and their consultants serve primarily as the interlink/point of interface between the Island's communities and the Company, and they are by no means intended to replace or substitute the qualified advice that is available from Sakhalin Energy's dedicated staff responsible for social performance and government liaison.

[13] Sakhalin Energy provides computer equipment and pays for the Internet access in the libraries that have been designated as Project's information centres. All users that are interested in viewing the Sakhalin Energy corporate web-site are offered free access to the Internet.

[14] Librarians are not responsible for addressing or investigating received grievances which are dealt with strictly by the Sakhalin Energy qualified staff.

[15] Librarians maintain a register of public enquiries at each information centre, including type of assistance that has been provided in relation to each enquiry. These data are subsequently reported to Sakhalin Energy.

The advantage of the information centres versus mobile CLOs lies in the greater availability and accessibility of the former due to their wide geographic coverage, the presence of permanent staff-librarians who are familiar to the local communities, convenient open hours throughout the week and including some of the weekend. The latest statistics show that over the period of January – August 2011 the information centres were visited by the total of 2,980 members of the public[16].

Staff of the information centres who are involved in consulting the public on Sakhalin Energy and related activities receive training from the Company that is aimed at enabling the librarians to successfully perform their advisory role. The training includes both individual (face-to-face) and group seminars. Key topics covered as part of the training include the following:

- Overview of Sakhalin-2 Project;
- Grievance Procedure;
- Sakhalin Energy web site;
- Company's social programmes;
- Community Awareness programme;
- Building up community engagement;
- Visits to Project assets.

Aspects that currently attract most interest from the visitors include recruitment and employment opportunities, social investment projects and grant schemes operated by the Company, as well as information presented on the Sakhalin Energy corporate web-site (including environmental aspects) and the corporate newspaper "Vesti".

It is crucial that the community awareness of the availability of Sakhalin Energy's information centres and the various ways of engaging with the Company continue to be maintained on a high level in the Project's operations phase. It is therefore indicative of good practice that Sakhalin Energy advertises its information centres through a range of methods, including printed media (local newspapers), information boards, posters/notices in the local communities and telephone directories. It is important that such an approach remains actively in place, thereby allowing the Island's residents to keep abreast of the available mechanisms of interaction with the Project.

Of great popularity among the libraries and their users has been the book donations project that was initiated by Sakhalin Energy in 2010 and continued in 2011. Once a year and as a gesture of goodwill, the Company supplies a new stock of contemporary thematic books[17] to all the twenty-three information centres, together with the libraries in Yuzhno-Sakhalinsk and

[16] The statistics on visitors to Sakhalin Energy information centres are collected separately from those who visit libraries for any other purposes. These data are based on the register records.
[17] The book donations were dedicated to special occasions widely commemorated in Russia: in 2010 – the 65th anniversary of the country's Great Victory in Second World War, and in 2011 – the 50th anniversary of the first man's flight into the space.

Aniva. Based on the interviews with the librarians, this initiative is highly complimented by the staff as an opportunity to update the existing book stock and to organise exhibition displays using these new sources of information.

Overall, the librarians interviewed expressed their enthusiasm towards performing the role of information consultants on behalf of Sakhalin Energy and positively viewed this task as a way of attracting more readers to the libraries, particularly thanks to the availability of diverse materials supplied by the Company (including the books on traditions and history of the Island's Indigenous Peoples) that enable public interest to be retained.

To sustain this success and positive attitude towards this initiative, it is of the key importance that the Company further upholds this good practice through maintaining close and regular interaction and intercommunication with information centre personnel, as well as continues to provide mentoring, training and supervision in order to effectively contribute to capacity-building of the qualified advisory staff at the centres. The provision of all requisite and up-to-date information materials and accessories[18] that allow the information centres to adequately fulfill their function should also continue to take place.

It is also important that if the Project progresses into a stage of further expansion, the capacity of the existing CLO structure will need to be revisited accordingly, to ensure the adequate coverage of any additional areas that may be affected as a result of the new developments.

3.3.2 Annual Public Meetings and Public Opinion Surveys

Similarly to the earlier stages of Project development, Sakhalin Energy regards public meetings in the communities previously affected by the construction or where Project assets are presently located as a means of gathering feedback from the residents, providing updates on the Project progress and further information on measures for the pipeline protection. Technical specialists are also present at the meetings in case any specific clarifications may be required.

To date, ten public meetings[19] were held by the Company in April-May 2011, with the total number of participants amounting to 105 people and the varying degree of interest and attendance depending on the location[20] and seasonality. As a rule, public meetings are preceded by advertising these events 3 weeks in advance in the printed media, Sakhalin Energy corporate web-site, posters in the communities, notification letters distributed to the local administrations and other stakeholders, as well as targeted telephone calls. The calendar of public meetings is also available on the Sakhalin Energy web-site.

[18] Such as stationery, equipment for information display and availability of the Internet access

[19] The following locations were covered by the meetings in 2011: Makarov, Poronaisk, Smirnykh, Val, Nogliki, Tymovsk, Korsakov, Troitskoye, Dolinsk and Lugovoye.

[20] For example, it was reported that only 3 persons attended a public meeting in Troitskoye settlement.

Annual surveys of public opinion have been employed by Sakhalin Energy as a means of ascertaining the following aspects:

- Public attitude towards the Company and Sakhalin-2 Project as well as public opinion about the Company's various initiatives (e.g. social investments, safety awareness and other programmes);
- Collating public feedback on the Company's activities and the Project's impact on the local communities;
- Identifying expectations and concerns of the local population related to the Company's activities and Project implementation;
- Determining the level of community awareness of the Project; and
- Identifying further needs for information provision.

The annual surveys are based on a standardised questionnaire, typically covering a sample of at least 940 residents from 23 settlements of Sakhalin Island directly or indirectly affected by the Project, and serve as one of the primary tools used by the Company as part of the social monitoring. The data collected in 2011 show that a proportion of respondents expressing negative attitude towards Sakhalin Energy and the Project has declined over the recent years: 8% of the survey respondents indicated that they had *"very unfavourable or unfavourable"* impression of the Project as compared to 37% in 2007. Interestingly, the percentage of those who have *"very favourable or favourable"* perception has also declined, although inconsiderably: 28% in 2011 versus 31% in 2007. Presumably, the decline in the latter parameter may to an extent be accounted for by the reduction of employment opportunities (especially for low-skilled/non-technical jobs) after completion of the construction and Project's transition into the operations phase. Majority of the respondents – 35% of the total – remain *'undecided'* about the Project, whilst those with "*equally favourable and unfavourable"* attitude comprising 29% of the total survey sample.

The 2011 data also shows that a proportion of the respondents who indicated that they had questions or concerns regarding the Sakhalin-2 Project activities remains high: nearly 55% of the population surveyed. The greatest percentage of questions/concerns have been indicated as related to *"damage to the environment"* (20.6% of respondents highlighted this in 2011, as opposed to 44% in 2008), followed by 9.1% expressing concern over a potential *"danger of serious accidents"* (as compared to 16.5% in 2009) and 7.5% of the respondents flagging employment/demobilisation among the main issues (vs. 2% both in 2007-2008 at the peak of construction).

These findings signify that continuous engagement with the communities and provision of the tailored information should remain a priority going forward into the operations phase. At the same time, however, the survey results are indicative of the fading public interest: 65% of the survey participants responded that they *"never"* have an interest in the information about Sakhalin Energy or Sakhalin-2 Project, with 28.9% being *"occasionally"* interested and only 6.1% of the respondents expressing *"regular"* interest.

According to the Company's current plans, the next public opinion survey will be conducted on the full scale in 2012, i.e. in all the 23 settlements. It is envisaged that in subsequent years, the geographical scope of the survey may be reduced to cover those settlements that are in the vicinity of the Project's operational assets (such as PMDs, Booster Station, GTTs, OPF, LNG Plant and OET), omitting those locations that were originally included in the scope due to their proximity to specific construction activities which were eventually completed and no longer represent a source of impact. This approach is considered reasonable, although it is also recommended that any other new locations that can potentially be impacted due to the Project's expansion activities in the future should be covered by such surveys in due course.

3.3.3 Community Grievance Procedure

Sakhalin Energy has been successfully operating the Community Grievance Procedure since the Project's construction phase and this mechanism is seen as one of the key instruments enabling the social monitoring. Explanatory information about the Company's Grievance Procedure has been widely disseminated among the affected communities (via CLOs, information centres, public meetings and other means) through the use of an easily comprehensible leaflet and related posters. This procedural mechanism is operated separately from a grievance procedure maintained by the Human Resources Team to address workplace complaints raised by employees that are directly contracted to Sakhalin Energy. The Community Procedure does apply to Sakhalin Energy contractor and subcontractor personnel and its implementation remains mandatory as part of the contractor compliance requirement.

Detailed information about the Procedure, and an up-to-date list of the CLO contact details and addresses of the Company's information centres are also provided on the Sakhalin Energy web-site.[21,22] However, following a review of the website it has been noted that the contact details specifically for submitting grievances as part of the whistle blowing procedure currently appear to refer to the previous, more extended network of the CLOs that is no longer in place (as it relates to the document dated 2009[23]). The latter information should be updated to reflect the most recent CLO structure and their contact data, including the provision of a reference to Sakhalin Energy's Information Centres as their consultants are able to offer initial advice on how to lodge a grievance (at present the Company's web-site and the public leaflet do not specifically mention the Information Centres among the means of reporting a grievance[24]).

[21] Information about the Grievance Procedure can be accessed on the following links: http://www.sakhalinenergy.com/en/aboutus.asp?p=whistleblowing and http://www.sakhalinenergy.com/en/documents/Leaflet_Eng.pdf

[22] http://www.sakhalinenergy.ru/ru/community.asp?p=community_liaison

[23] http://www.sakhalinenergy.com/ru/documents/Contacts_Febr_2009_Ru.pdf.

[24] See Whistleblowing/Grievance Procedure on the web-site and the Public Grievance Leaflet: "How Do I Report A Grievance?"

The SP Team continues to assess all incoming grievances based on the Risk Assessment Matrix to determine the severity of a complaint[25] and tracks their resolution through the Sakhalin Energy assurance system (Fountain). It is reported that no material grievances (i.e. complaints that are ranked 'high amber' and 'red' that may result in major or massive impact/damage) have been recorded in 2011 to date. Over the period of January-June 2011, the total number of 13 grievances were submitted via the Community Grievance Procedure, all rated as 'blue' (low risk). By August 2011, seven out of these grievances had been resolved, four complaints were being processed, and two were closed out. Sakhalin Energy has subsequently provided a further update that as of today (October 2011) there remain 2 'living' grievances, i.e. those in progress. The grievances lodged were primarily concerned with community impact, recruitment and employment, as well as SIMDP-related complaints[26]. No grievances were submitted in relation to workers behaviour/code of conduct.

In general, the grievance handling against the KPI target (75%) remains adequate: 88% of complaints were resolved within the time period stipulated in the Grievance Procedure, i.e. forty-five days (including the 100% resolution of community impact related grievances and 80% resolution of IP complaints within the required timeframe), with 77% overall satisfaction with the grievance addressing process. Interestingly, the percentage of complainants' satisfaction with the resolution of grievances related to community impacts is noted to have been well below the target during January-June 2011 (33% against the 75% KPI). At the same time, there has been a 100% satisfaction with addressing grievances related to the Indigenous Peoples. It was recommended that Sakhalin Energy further analyse the likely reasons for the low percentage of complainants' satisfaction with resolving the community-impact related grievances, to ascertain whether this was a result of some systemic nature that requires procedural improvements, or had represented a temporary trend.

The Company has since clarified that it always undertakes an analysis of grievances that have not been closed with a signed statement of satisfaction. Sakhalin Energy emphasised that before any grievance is submitted for closure in the absence of a complainant's statement of satisfaction, the Company's Business Integrity Committee (BIC) conducts a detailed review to ensure that all steps required by the procedure have been implemented to attain the status of satisfaction in relation to the grievance. After the reasons for closure have been fully validated and it has been concluded that no additional actions can reasonably be taken to resolve the grievance, and no feedback from the complainant has been received within 45 days upon sending the close-out letter, the BIC makes a decision to close such a grievance.

[25] All grievances rated high amber and red shall be reported to the Lenders within 2 working days of the receipt.

[26] Sakhalin Energy reports that the SIMDP grievances were reviewed by the SIMDP external monitor as part of his field visit in June 2011.

Furthermore, the Company interprets that the low percentage of grievances closed with signed satisfaction letters is a temporary trend due to the above process. However, the IEC will continue to monitor progress against this KPI.

As part of the standard approach, Sakhalin Energy will continue to analyse all grievances where no satisfaction with the proposed resolution has been achieved, with the aim of identifying the underlying causes, ascertaining trends and determining measures to enhance the level of satisfaction.

The Community Grievance Procedure document is presently undergoing an internal review to reflect the recent developments in the Project along with the external standards to which the procedure aims to conform. In particular, the Procedure now commits to meeting the *Guiding Principles on Business and Human Rights* under the UN "Protect, Respect and Remedy" Framework[27] as well as the *ISO 26000:2010 Guidance on Social Responsibility*[28]. Sakhalin Energy's pledge to align its Community Grievance mechanism with such prominent benchmarks is deemed a very positive initiative which is aimed at the convergence of the Company's approaches with best international practice.

The Sakhalin Energy Grievance Procedure has been assessed under the pilot testing of the practical applicability of principles for effective non-judicial grievance mechanisms that was conducted in 2009-2010 on behalf of the Special Representative of the UN Secretary-General on the issue of human rights and transnational corporations. [29] Based on findings of the pilot testing, Sakhalin Energy's grievance mechanism has been commended as "*among the more comprehensive and well-resourced in the industry*"[30], which is considered a notable accomplishment.

The revised Procedure has introduced a number of new features such as:

- Communication focal points,

[27] Also known as the *Ruggie Principles*, see also section 3.2.4 "External Initiatives Related to Good Practice".
[28] ISO 26000:2010 provides guidance on aspects related to social responsibility, including implementation and promotion of socially responsible behaviour throughout the organisation and engaging with stakeholders. Source: http://www.iso.org/iso/catalogue_detail?csnumber=42546
[29] http://www.business-humanrights.org/Categories/Individualcompanies/S/SakhalinEnergyjointventureShellGazpromMitsuiMitsubishi
[30] *Piloting Principles for Effective Company-Stakeholder Grievance Mechanisms: A Report of Lessons Learned'*. By Caroline Rees. The United Nations Human Rights Council/ CSR Initiative, Harvard Kennedy School, Cambridge, 2011. See 'Sakhalin Energy Investment Corporation/Pilot Project to Test Principles of Effective Grievance Mechanisms' by Luc Zandvliet, CDA Collaborative Learning Projects, p. 62 – Conclusion. Source URL: http://www.business-humanrights.org/media/documents/ruggie/grievance-mechanism-pilots-report-harvard-csri-jun-2011.pdf

- References to the Company's information centres as another channel for lodging grievances,
- Collectively submitted grievances,
- A proposition to close out through the Company's Business Integrity Committee (BIC) those grievances that have been further taken by a complainant to a state authorised body for resolution (such as a court or Labour inspection). Closure of such grievances on the Company's level signifies that all feasible and available means of resolution have been exhausted by Sakhalin Energy and communicated to/negotiated with the complainant but failed to result in complainant's acceptance. Closure of the grievance by the BIC by no means prevents complainant's appealing to external bodies but serves as evidence that no further measures/actions could effectively be implemented at the Company level. Sakhalin Energy is aware that instigation of legal proceedings by a complainant as a way to resolve a grievance remains a possibility and that it may involve a statutory process of arbitration or litigation, if such is enforced by the state body with which the complaint has been lodged. Should this possibility translate into a real scenario, the Company will approach such cases with due observance of all applicable regulations and norms of the law.
- The final Statement of Satisfaction with grievance resolution[31] has been expanded to determine the complainant's satisfaction with the Company's approach to addressing their grievance (quality of communications, availability and accessibility of Company's staff, etc). This additional measure is considered a useful indicator of the overall quality of the grievance redress process throughout all of its stages, i.e. not only after a resolution has been finally reached.

The Lenders' IEC is involved in the revision of the Community Grievance Procedure to ensure the validity of all the amendments and additions proposed by Sakhalin Energy.

With commencement of the SIMDP II (2nd Five-Year Plan for 2011-2015), a separate procedure has been introduced that specifically pertains to the SIMDP implementation and is operated over and above the Sakhalin Energy Community Grievance Procedure (see also section 3.7 for further discussion on the 2nd Plan and related mechanism of addressing complaints).

3.3.4 Community Awareness Programme

Sakhalin Energy has been implementing its Community Awareness Programme since 2008. The Programme is primarily aimed at the following:

- Enhancing public knowledge on the start-up and commissioning processes;

[31] According to the Procedure, if a complainant is agreeable to the proposed resolution and outcome, they are requested to sign a Statement of Satisfaction that allows a grievance to be formally closed out.

- Raising awareness of the affected communities and key stakeholders on environmental, safety and land use issues, including the pipeline protection measures; and
- Advising the affected communities and key stakeholders on the principles of safe behaviour and actions that they can take to prevent and respond to potential emergences.

The tools for information dissemination used as part of the Programme include the following:

- Sending out notifications to particular stakeholders (land users, local administrations, other companies carrying out works in the area) to communicate specific information;
- Quarterly announcements in major Sakhalin newspapers;
- Posting up and regularly updating safety posters in major public areas;
- Distribution of printed materials;
- Group/public meetings in the communities, including with school teachers of life safety fundamentals.

3.3.5 Engagement with Japanese Stakeholders

The Project continues to maintain two-way engagement with the stakeholders in Japan, with visits and meetings taking place twice a year[32]. In 2011 these events were held in February and September. The stakeholders involve the communities residing in coastal areas of the Sea of Okhotsk, the Government of Hokkaido, the Hokkaido Fishery Environmental Centre (HFEC), Otaru, Wakkanai and Mombetsu branches of Japan Coast Guards. The Sakhalin Project Forum was held in Wakkanai, Japan, in September 2011. The engagement topics include oil spill preparedness and response as well as aspects related to environmental protection.

3.3.6 Interaction with Stroitel Dacha Community

An active representative of the dacha residents whose summer residencies are neighbouring the LNG Complex in Prigorodnoye continues to express her concerns related to proximity of the facility to the dachas and the size of the 1km Sanitary Protection Zone (SPZ) that has been set up around the plant (see also the discussion on RAP monitoring in section 3.2.4). The main issues raised include the following:

- Soil quality – the presence of benzapyrene above maximum permissible norms is claimed to have been found in soil samples taken from some dacha plots[33]. The actual results of the analysis, that has reportedly been performed by some alternative

[32] As per the annual calendar of public events which is available on http://www.sakhalinenergy.com/en/documents/Consultations_activities_eng.pdf

[33] The sampling was reported to have been carried out by an anonymous consultant at the initiative/behest of dacha residents themselves. It was also reported that samples of plants from dachas had been collected for analysis but the results were not yet available at the time of the interview with the IESC.

laboratory[34] at the dacha residents' own initiative, have not been provided to the Company and the IEC for verification purposes;

- Decreasing crop productivity, particularly lower yield from orchard trees and honeysuckle is claimed to have been observed at some dacha plots;
- Noise and deteriorating quality of air from flaring at the LNG plant;
- Insufficiency of the established SPZ for emergency safety purposes.

Sakhalin Energy implements regular industrial monitoring at the Prigorodnoye LNG complex and at selected monitoring points outside the facility and reports to relevant authorities as per the statutory requirement, including in relation to air quality, soils, flora and fauna (see LNG Audit Report in Appendix 1 for further details of industrial monitoring). The results of the industrial environmental monitoring are presented directly to the authorities on a regular basis and there is no obligation on the Company to place this technical information in the public domain as it represents a complex set of specialised data that may not be easily amenable to non-specialist interpretation. If required, the industrial monitoring data can be requested by the public from the competent state bodies to which this information is submitted by Sakhalin Energy.

In addition, to make the process of monitoring accessible to the community, Sakhalin Energy made arrangements for monthly monitoring of air quality and noise to be undertaken (also known as '*the Quality of Life monitoring*') on the border with dachas by a certified and specialised laboratory during the dacha season, i.e. May-October, in the presence of dacha residents. If necessary, the Company is also open to conducting additional one-off observations under specific conditions such as, for example, the approach of a vessel. Protocols and results of these monthly measurements are shared with the head of the dacha community (as agreed with the community members). To date, some exceedances of the permitted noise levels during daytime were registered on two occasions at the dacha area. Sakhalin Energy commissioned a licensed contractor to analyse possible causes of the exceedance and the bird singing was reportedly identified as a source of the higher ambient noise levels registered at the dacha locations. The Company has agreed to provide the IEC with an explanatory note from the Sakhalin Hydrometeorological Service linking the occasional upward trend in noise levels with the effects of bird signing.

The regular noise and air quality monitoring is conducted by accredited laboratories on the border of the dacha plots, 200 metres from the SPZ established for the Prigorodnoye LNG complex. Recent monitoring results (August 2011 for noise and July to August 2011 for air quality) were provided for review and no exceedances of the legal or HSESAP standards were identified for these monitoring periods (see Appendix 5 for further details).

[34] During the interview with the IESC, the dacha representative did not provide specific details on the laboratory, their equipment and methods of analysis used.

During the post-visit period, Sakhalin Energy has further reported that a letter was sent to the dacha owners in November 2011 informing them that according to the results of industrial soil monitoring performed in 2010 at a 1000m distance from the border of the Prigorodnoye complex, the content of benzapyrene in the soil was significantly lower than permitted levels.

Sakhalin Energy has reported that the studies of soil quality and agricultural crop productivity conducted in 2006-2007 found no significant impacts.

The Company also disseminates to the community (including via the printed media) advance information about flaring during the planned shut-down and maintenance at the LNG Plant that can result in smoke formation. Sakhalin Energy has produced a public brochure entitled "Flaring System at the LNG Plant" which explains in lay terms the process of flaring, its purpose, safety and accident prevention/response measures implemented at the Plant, and potential impacts on the environment. More information regarding flaring as well as other potential environmental impacts from the Prigorodnoye complex is contained in the "Environmental protection at the Prigorodnoye complex" brochure. The brochure is also available on the Company's public web-site[35].

Reportedly, the dacha residents were also informed about an emergency alarm drill that is tested at the Plant on a weekly basis and about the associated audible sound of the test siren. An emergency layout plan for the LNG Plant set up on the basis of risk assessment studies has been approved by the Russian Federal Service for Environmental, Technological and Atomic Supervision (RosTekhNadzor). The Company has also organised a number of site visits to the Prigorodnoye complex with participation of relevant specialists in order to familiarise members of the public with the facility and the flaring technology. Detailed clarifications in response to questions from the public about the SPZ size, impacts associated with the Plant and the compensation package were provided by the Company as part of the Sustainable Development Reports for 2009 and 2010.[36]

The size of the SPZ (currently 1km) for the operational LNG Plant is now undergoing a final revision by the competent authorities following the yearly monitoring of air quality and noise based on the factual data collected from five sampling stations, including on the border with the nearest residential area (i.e. the dachas). Subsequent to the site visit Sakhalin Energy has informed the IEC that formal approval of the LNG SPZ size has not yet been received from the competent authorities. In relation to this matter, the Company has submitted two reports (in Russian) for the IEC to review, including:

- "Assessment of risks for population health from chemical pollution of the air due to emissions by the Prigorodnoye complex (LNG plant/Oil Export Terminal)" performed by St. Petersburg's Institute for Applied Ecology and Hygiene in 2010; and

[35] http://www.sakhalinenergy.ru/en/documents/Environment_brochure_eng.pdf

[36] See Sakhalin Energy SD Report 2009, Appendix 2: Sakhalin Energy's Answers and Commitments As Part Of Its Dialogue With Stakeholders. Pp. 94-96; and Sakhalin Energy SD Report 2010, Appendix 2: *ditto*, pp. 118-120.

- "Materials for establishing the final size of a Sanitary Protection Zone for the Prigorodnoye complex (LNG plant/Oil Export Terminal)", prepared by the same Institute in 2011.

The IEC will examine these documents and will report on the findings separately in due course.

There is general appreciation that the ongoing issue with the dachas has stemmed from dissatisfaction on the part of some of the dacha residents with the compensation and waiver package offered by the Company in the course of the construction phase as part of the proposed resettlement. In 2009, the IEC reviewed the compensation approach that had been employed by Sakhalin Energy and was satisfied with its adequacy. The external RAP monitor has also concluded as part of the final evaluation conducted in 2011 that the Company's resettlement commitments were considered complete and that any ongoing issues will be managed through the social impact monitoring, stakeholder engagement and the grievance redress mechanism.

In the light of these conclusions and based on the previous reviews of this aspect, the IEC acknowledges the Company's efforts to address the issue and the actions taken to forge a constructive relationship with the dacha community. It is recommended that Sakhalin Energy continue to maintain the ongoing dialogue with the Stroitel dacha community as part of the regular engagement and social impact monitoring, and remain open to a two-way interaction with the dacha residents. Furthermore, given that the primary noise and air quality concerns by local residents related to flaring from the LNG plant we recommend that Sakhalin Energy ensures that noise and air quality monitoring is undertaken during the significant flaring operations where practicable. Subsequent to the site visit Sakhalin Energy has informed the IEC that such monitoring has already been undertaken during planned shutdowns and results show no exceedances of permitted levels. This will be verified during subsequent monitoring visits by the IEC.

3.4 Contractor Compliance

Having transitioned into the operations phase, Sakhalin Energy continues to enforce compliance with the social requirements by Project contractors. This is achieved by the following means:

- Provision of the annual training in Social Performance to Contractors' Social Focal Points – typically a site manager or their delegated personnel – who are in turn responsible for cascading of the requirements and their implementation internally, as well as refresher training as appropriate;

- Distribution of the Social Performance Manual (described in section 3.2.3 *'Internal Promotion of Social Compliance'*) to Contractors' Social Focal Points;

- Regular monitoring visits to the Project facilities operated by contractors and the provision of advice as necessary;

- As per the Community Grievance Procedure, tracking of complaints that may be raised by contractor personnel and if lodged by the public in relation to contractor activities;
- Enforcement of the Workers' Code of Conduct for the Sakhalin-2 Project;
- HR-related reporting (such as workforce headcounts); and
- Incident reporting and tracking via the Sakhalin Energy Fountain assurance system to which the Social Performance Team has full access

As part of the monitoring, the IEC visited the Booster Station-2 located in Gastello and operated by the Project contractor 'Gazprom Transgaz Tomsk' (GTT). Overall, the contractor exhibited a good level of awareness of the Sakhalin Energy requirements for social compliance. Local content of the workforce has been sufficiently fulfilled as personnel employed at the Gastello PMD and Booster Station are predominantly from Sakhalin Island, with circa 20% of workers coming from other regions of the Russian Federation. GTT enforces a ban on alcohol and drug consumption and possession of any type of arms by the personnel. There is an opportunity to discuss social aspects at regular staff meetings (normally twice a week) that are conducted on the site. It was reported that the Sakhalin Energy Community Grievance Procedure[37] was communicated to the workforce and copies of the grievance leaflet were seen displayed on information boards in the offices.

Social requirements, including Sakhalin Energy Workers' Code of Conduct and the Fishing, Gathering and Hunting Policy, are conveyed to contractor workforce as part of mandatory induction (which is taken either at the Yuzhno-Sakhalinsk offices or on the site upon job commencement). The IEC continues to regard these policy instruments as the key tools to ensure proper behavioural standards among the personnel and recommends that their enforcement be rigorously exercised throughout the Project's operations in relation to all workers involved in the Sakhalin-2 activities, both directly and through the contractor pool. It has been noted that the Fishing, Gathering and Hunting Policy still bears in its title the direct reference to construction. It is recommended that this Policy either be adapted for the operations phase, reflecting the specifics of the latter, or be kept as a general policy, i.e. applicable to all Project phases, assets and personnel (taking into account potential Project expansion and other variations).

As indicated in section 3.2.3 'Internal Promotion of Social Compliance', it is also important that Sakhalin Energy's newly integrated Health, Safety, Environment and Social Performance (HSE&S) Policy is promptly rolled out to the Project contractors and that the latter in turn relay the relevant social performance requirements on to a wider chain of their subcontractors, thereby maintaining the consistency of compliance throughout the Project's entire spectrum.

[37] The Community Grievance Procedure is a standalone subsidiary document

3.5 Other Issues Outstanding from Previous Monitoring Visit

The last social monitoring visit conducted by the IEC in March 2010 identified the following aspects that required specific actions by Sakhalin Energy:

- The update of Social Impact Assessments (SIAs) for the two Gas Transfer Terminals – GTT North near Boatasino and GTT South near Lugovoye; and
- Monitoring of potentially impacted households neighbouring the permanent accommodation facility for Prigorodnoye complex workers in Korsakov, particularly in relation to grievances.

3.5.1 SIAs for Gas Transfer Terminals

The IEC has verified that the aforementioned SIAs were updated in accordance with the IEC previous reviews and the updated versions, both in Russian and English, were placed in the library of public documents on the Sakhalin Energy web-site[38].

Construction works have now been completed for the Southern GTT which was seen by the IEC during the visit in September 2011. The Company paid compensation for the withdrawal of agricultural land to the Agricultural Enterprise that was the principal land user. The Terminal will be mainly automated during operations, with circa 10 service personnel visiting the facility on a fortnightly basis for maintenance purposes and primarily using light motor vehicles.

Sakhalin Energy ensures the provision of the SP training to the contractor servicing the GTT and implementation of the social impact monitoring. As the IEC did not have an opportunity to visit the GTT North, it is expected that the identical measures are used in relation to that facility as well, in line with the overall systematic approach employed by Sakhalin Energy for the social performance assurance.

As previously, the IEC emphasise the importance of timely implementation and disclosure of targeted SIAs for any Project variations as well as the IEC involvement in such studies from the early stages.

3.5.2 Monitoring of Impacts Related to Prigorodnoye Complex Accommodation Facility

The updated versions (English and Russian) of the SIA/scoping exercise for the Prigorodnoye complex accommodation facility have been placed on the Sakhalin Energy public website[39], in line with the IEC's previous recommendation.

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38 Available at http://www.sakhalinenergy.com/en/library.asp?p=lib_social_shelf&l=lib_social_gasn and http://www.sakhalinenergy.com/en/library.asp?p=lib_social_shelf&l=lib_social_gass

39 Available at http://www.sakhalinenergy.com/ru/library.asp?p=lib_social_shelf&l=lib_social_accommodation and

The permanent accommodation facility for LNG workers/OET service personnel is located on the periphery of Korsakov. The high-quality facility, which is operated as a closed camp with the total capacity of 100 residents, is situated in close proximity to the dwellings (circa 10 m to the nearest private residential building from the camp fence).

At the time of the IEC monitoring visit, there was an outstanding grievance submitted earlier during the year by the resident of the nearest dwelling adjacent to the camp fence. The grievance pertained to the presence of smell resembling unburned hydrocarbons in the air. Sakhalin Energy has launched an investigation into determining whether the LNG accommodation facility has caused this problem and what equipment/asset may have been a source of the smell. Since the site visit the Company has informed the IEC that the grievance was resolved satisfactorily and an agreement was reached regarding the Company undertaking additional investigation into this issue. The IEC will request further documentary evidence to verify this.

The Company has provisionally identified three potential sources on the site, including a car wash unit, the automated boiler plant, and a diesel generator. The latter is not considered a likely source of smell formation as this generator is intended for emergency power supply only and is operated on average once a month for maintenance. The car wash unit was not using heated water for the time being.

At-source air samplings were taken from the boiler and air quality monitoring was conducted on border with the dwelling. The results were being processed at the time of the visit, involving the analysis of dispersion based on the wind pattern. It is also taken into consideration that there exist a number of other operating facilities in the area that act as the sources of air emissions (e.g. a thermal power unit, an asphalt plant, and numerous stacks from individual dwellings using liquid fuel).

Once the definitive results of the air sampling analysis become available, this will enable Sakhalin Energy to determine whether it was any specific equipment at the accommodation facility that triggered the presence of perceptible smell in the air and what measures can be feasibly implemented in response. The IEC will track an outcome of this process together with any proposed resolutions.

http://www.sakhalinenergy.com/en/library.asp?p=lib_social_shelf&l=lib_social_impactdocumentation

3.6 Treatment of Cultural Heritage during Operations

In the course of construction activities, Sakhalin Energy successfully implemented the Treatment Plan for Objects of Cultural Heritage that was mandatory for Project personnel and Project contractors as per the HSESAP requirement.

Moving forward into the operations phase, the Company has updated this document which is now entitled *"Plan for Protection of Cultural Resources During Sakhalin II Operations*". The Plan provides for the following measures intended to protect the objects of cultural heritage in the areas of direct and indirect impact from the Project activities[40]:

- Periodic monitoring of the identified assets of cultural heritage throughout the operations, including archaeological monitoring of objects located in the vicinity of the pipeline and other Project assets (also to ensure enforcement of the established protection areas and warning/information signs[41]). This type of monitoring will be implemented biennially during the summer season starting from 2010, with a possibility of revising this periodicity in the future;

- Monitoring of the cultural heritage assets in case of emergencies and a sequence of actions to be followed to ensure safety of the objects, as well as observing the required communication protocols in line with an emergency rescue/recovery plan.

The monitoring is to be implemented by an appointed Contractor for Cultural Heritage Protection (Sakhalin State University).

Overall, the approaches for protection stipulated in the Plan are deemed adequate, including the provision for training to Project personnel and the contractors. It has been noted, however, that the Plan only applies to the known objects of cultural heritage that were previously identified at the stage of Project construction and does not cover fortuitous/chance finds of artefacts and other valuable features of cultural heritage that may still be encountered during the operation activities or Project expansion/variations, including discoveries of previously unknown sites that bear significance to the indigenous peoples. Currently, the Plan provides for the preservation of chance finds only encountered in the process of an emergency/accident response during operations.

As the likelihood of further ground intervention activities and earthworks as part of the Project cannot be fully excluded (in routine operations and Project variations/expansion) and probability of finds and discoveries cannot therefore be discounted, it is recommended that a procedure for the treatment of chance finds and associated notification requirements be reinstated in the Plan, similarly to those that were stipulated in the Treatment Plan for Objects of Cultural Heritage during Construction. Such procedures should also be conveyed to the operations phase contractors.

[40] Fifty-four monuments of cultural heritage altogether

[41] The signs warn about the protection zone and prohibit transport passage as well as earthworks within the protected zone.

3.7 Update on SIMDP 2 Progress

The Sakhalin Indigenous Minorities Development Plan (Second Five-Year Plan covering the period of 2011-2015) has been commissioned and is now in effect, following the successful completion of SIMDP I in 2010. The Plan is a tripartite covenant between Sakhalin Energy, Sakhalin Oblast Government, and Regional Council of Authorised Representatives of Indigenous Minorities of Sakhalin Oblast. The implementation and completion of the SIMDP were closely overseen by the dedicated external monitor – an international expert on indigenous peoples, as described in section 3.2.5 'Other Types of Third Party Monitoring'. The SIMDP 2 is available for public access on the dedicated web-site[42].

Noteworthy is the process that was undertaken to ensure wide participation of the Island's indigenous communities and their direct input into the development of SIMDP II. Two rounds of detailed consultations with the IP communities were held in the course of 2010, with the principal aim to gather feedback, suggestions on the Plan's objectives, structure and governance system. The consultations with indigenous communities and local authorities took place in the districts inhabited by the representatives of the Indigenous Minorities of the North, including Poronaisk, Smirnykh, Aleksandrovsk-Sakhalinskiy, Tymovsk, Nogliki, Okha, and Yuzhno-Sakhalinsk[43]. 381 individual members of the IP communities participated in the two consultation rounds, with the rest of the audience also represented by the local administrations and Indigenous Peoples Organisations. The total number of the consultation participants exceeded 500 people.

To reflect the equal partnership approach, the SIMDP II Working Group was comprised of representatives from the principal partners of the Plan specified above, as well as the Sakhalin Oblast Legislative Assembly and RAIPON[44] (Russian Association of Indigenous Peoples of the North, Siberia and Far East). Six out of eight Working Group members were persons from the indigenous communities. All the preparatory work eventually culminated in holding a special IP conference in Yuzhno-Sakhalinsk in November 2010 to finally approve the SIMDP II. A notable outcome of the conference was signing a Statement of Consent to the Plan by the delegates who had been formally elected on behalf of their indigenous communities.

The participatory and inclusive approach that was employed to reach the agreement on the SIMDP 2, together with the broad community support, have been demonstrative of the key principles of Free, Prior an Informed Consent (FPIC) through good faith negotiation that is currently being implemented as part of the new revision of the IFC Performance Standards[45].

[42] See http://www.simdp.ru/uploads/files/april_1.pdf

[43] Overall, circa 4,000 members of the four officially designated ethnic groups of Indigenous Peoples reside on Sakhalin Island - *Nivkh*, *Nanai*, *Uilta*, and *Evenki*, including a few dozen members of other indigenous groups. The SIMDP 2 covers all these groups.

[44] http://www.raipon.info/en/

[45] IFC Performance Standard 7 on Indigenous Peoples that will come into effect in January 2012. http://www.ifc.org/ifcext/policyreview.nsf/Content/PerformanceStandard7

The SIMDP was promoted as 'one of the best world practices' at 10th Annual session of the UN Permanent Forum on Indigenous Issues earlier in 2011.

The SIMDP 2 endorses the two main lines of development activities within its framework, namely the Social Development Fund (SDF) and Traditional Economic Activities Support Programme (TEASP). The committees of both programmes comprise representatives of the indigenous communities from each of Sakhalin's seven districts of the IP traditional residence who are vested with the authority to make decisions regarding allocation of the funds. Detailed description of these development measures is provided in Section 4 of the SIMDP. Co-ownership of the activities with the indigenous communities and capacity-building remain among the central priorities of the Plan.

Another important component of the SIMDP 2 is the introduction of a standalone Grievance Procedure which is separate from the community complaint mechanism operated by Sakhalin Energy (see also section 3.3.3 'Community Grievance Procedure'). The principal distinction of the SIMDP Grievance Procedure lies in its being a dedicated instrument for addressing concerns specifically related to the Plan's implementation, as well as in participation of all the three SIMDP partners (through members of the SIMDP Executive Committee) in grievance handling and resolution. A public brochure has been developed to explain principles of the Procedure to the communities. This brochure is available from Sakhalin Energy's information centres and in public libraries at the traditional localities of indigenous community residence, as well as from the dedicated web-site. The key methods of distributing information and ensuring access to the SIMDP Grievance Procedure for the indigenous communities also include special posters in the traditional IP settlements and wide advertising of the Procedure during meetings and consultations with the indigenous people.

Overall, the SIMDP philosophy and its mechanisms are considered as a progressive initiative that establishes an illustrative example of forging the effective collaboration between a corporation and the Indigenous Peoples, based on the principles of trust and partnership. This approach is in compliance with the Company's commitments as per the HSESAP.

3.8 Social Investment Programmes

Sakhalin Energy continues to implement the Social Investment (SI) programme framework that is aimed at supporting socially-orientated projects and initiatives from the community, in line with the principles of sustainable development. Priority areas for social investments endorsed by the Company, as previously, include the following:

- Healthcare
- Education
- Safety
- Environmental protection (biodiversity), and
- Development programmes aimed at the Indigenous People.

At present, the active partnerships include the following programmes:

- *What to Do in Emergency Situations* – an educational initiative that is targeting schoolchildren and is implemented in collaboration with Sakhalin Ministry of Emergency Situations and Sakhalin Department of Education;
- *Korsakov Sustainable Development Partnership Council*[46] – an initiative realised in one of the most critical communities on the Island. The partnership comprises the Company, the local public, and the Korsakov Administration. The budget available for sustainable development projects under this framework is $ 800,000 for the period of 2010 – 2012.
- *Sakhalin Salmon Initiative* – jointly implemented by Sakhalin Energy, Wild Salmon Center[47], and Sakhalin Government. The total fund for this partnership initiative has amounted to $9.1 million over the period of 2004-201, including $4.7 million of Sakhalin Energy contribution
- *Road Safety Partnership* – the undertaking of this type was for the first time established on the territory of Russian Federation with support of the Global Road Safety Partnership[48]. This successful example was subsequently replicated in other regions of the country.

The *Small Grants Big Deeds* Programme, a competitive grant programme aimed at supporting the local community-level initiatives that has been implemented by Sakhalin Energy since 2003, still retains its popularity and will remain in place throughout the Project's operations phase. The Programme is now placing a greater focus on promoting long-term initiatives.
The decision on continuation of each individual initiative is made during an assessment and is based on a verified necessity to continue the implementation of a specific activity or initiative. The same principle of 'on an as needed basis' is applied to initiatives implemented as part of the *Small Grants Big Deeds* Programme.

When evaluating its social investments, Sakhalin Energy applies the KPIs that were agreed with the Lenders and constitute a component of the HSESAP reporting. The Company is currently planning to revise the existing KPIs for specific programmes for internal use, which will help better assess and subsequently enhance effectiveness of the programmes. No amendments are currently planned in relation to the agreed KPIs that are part of the Company's reporting to the Lenders.

The diversity of the investment mechanisms and partnership schemes instigated by and with the participation of Sakhalin Energy offer a wide range of funding sources for various community initiatives. It is therefore regarded as an exemplary platform for fulfilling the

[46] http://korsakovsovet.com/eng.php
[47] http://www.wildsalmoncenter.org/programs/sakhalin/index.php
[48] See also http://www.grsproadsafety.org/page-russian_federation-321.html

Company's role as a *bona fide* corporate citizen of the society within which it operates. Such an approach should be acknowledged and encouraged further.

3.9 Main Conclusions and Recommendations

On the whole, the monitoring of Sakhalin Energy's social performance undertaken by the Lenders' IEC has yielded positive findings and various forms of evidence that the Company has put into practice and is effectively carrying out a broad range of its social commitments. No examples of materially significant incompliance with the HSESAP and the international standards applicable under the HSESAP have been identified as a result of the monitoring. The well-structured, systematic, transparent and readily auditable approach undertaken by the Sakhalin Energy's Social Performance Team is highly acknowledged and should continue to be maintained in an equally comprehensive and dedicated manner.

However, a number of isolated findings were identified as detailed below:

- An investigation into the grievance from a resident neighbouring the Prigorodnoye Complex accommodation facility has not yet been finalised as further investigation is currently underway (concerning the presence of fuel smell in the air).
- The Fishing, Gathering and Hunting Policy (currently referring to Construction) should be adapted for Operations or be kept as a general policy, i.e. applicable to all Project phases, assets and personnel.
- Reinstating a chance finds procedure and associated communication protocols as part of the Plan for Protection of Cultural Resources during Sakhalin 2 Operations (i.e. as a standard measure, not only for emergency situations) is required.

Additionally, general recommendations for maintaining high standard of social performance are provided in Section 7 'Summary Recommendations'.

4 Pipeline Right of Way Monitoring

4.1 Introduction

During the site visit a number of locations along the pipeline Right of Way (RoW) were inspected from across all sections of the onshore pipeline. The full list of locations visited with summary descriptions of the observations from each location, are presented in Appendix 3.

Inspections along the RoW focused on the status of the following aspects:

- Drainage and erosion control along the pipeline RoW
- Biological reinstatement
- River crossings
- Geotechnical works.

An overview of the site visit findings within each of these aspects is provided in turn below.

4.2 Drainage and Erosion Control

4.2.1 Slope Breakers

Slope breakers are an important component in managing slope drainage and erosion control. Overall, the application and condition of slopes breakers was found to be good in all sections of the RoW visited. It was also observed that in locations where additional repair works were conducted by heavy plant in 2011 any slope breakers that were damaged during the repairs works had been repaired and replaced prior to the plant leaving the site (e.g. see Photo 1). We consider this to be good practice in line with HSESAP land management requirement and will be a positive factor in stabilizing new work sites.

Photo 1 Repaired slope breakers on access road in Gar River slope

For the most part the slope breakers that were observed during the visit were performing well where applied correctly and with adequate frequency. Although a small number of areas of erosion were identified where improvements are required (e.g. near the River Khandusa – see Appendix 3 for further details and also Photo 2), these were generally minor in nature.

Photo 2 Visible but minor erosion on slopes near the R. Khandusa

4.2.2 Geojute and Coco Matting

Geojute matting (made of jute fibre) and coco matting (made of coconut fibre) are an inexpensive but effective erosion control measure. When installed correctly, these materials assist in stabilising unvegetated soil while providing better germination conditions for seeds and assisting in establishment of vegetation. These materials are also bio-degradable. Sakhalin Energy has used geojute and coco matting extensively on steep slopes and slopes with highly unconsolidated soils.

During the site visit it was observed that these materials are still actively and extensively used on the RoW where needed, both for surface stabilisation and to protect slope breakers. Numerous examples were observed where matting installed in previous years remained in good condition. In addition, instances of matting having been used were observed in locations where recent (2011) repair work has taken place for slope surface stabilization and fortification of slope breakers (see Photo 1).

4.2.3 Geotextile

Geotextile matting (made of synthetic filaments) is a very effective way to control erosion on barren steep slopes and slopes with poorly consolidated soils. Sakhalin Energy has used this material extensively on side cuts at most of the fault crossings and on slopes with high risk of erosion. This was previously undertaken successfully at a several locations in conjunction with hydro-seeding.

A number of good examples of geotextile usage were observed during the site visit. These included coverage of some of the sandy slopes at KP 513 and those adjacent to the River Khandusa at KP22.7 (e.g. see Photo 3)

Photo 3 Use of geotextile on sandy slope near the R. Khandusa

4.2.4 Silt Fencing

Silt fencing is an effective method of protecting rivers and streams from sediment influx from slopes above the banks, and reducing siltation from temporary road works and bridges

during construction. A silt fence is a low (approximately 50 cm in height) barrier made of a specialty synthetic weave. It is designed to filter sediment-laden water and not as a structural barrier for sediment movement. By its nature, silt fencing is temporary and is used as a protective barrier to siltation for as long as the slopes above the banks are without vegetation. In most cases, once the vegetation is re-established the silt fencing is no longer necessary.

At most of the sites that were observed during the site visit, the vegetation cover on and above the river banks was found to be well-established and the use of silt fences is no longer necessary (see also Section 4.4). The condition of remaining silt fences observed during the site visit (principally in the southern RoW sections) were found be of variable condition.

Materials provided by Sakhalin Energy indicate that there is an ongoing site specific evaluation process regarding the fate of the silt fences. In the example of the Kormovaya River (see Photo 4) the evaluation process calls for repair of the fences - we concur with this evaluation since the slopes are bare and the existing silt fences are in poor condition and suggest that such repairs need to be implemented urgently.

Photo 4 Example of damaged and missing silt fence on a slope with little or no vegetation – Kormovaya River (KP – 351)

Overall, we conclude that Sakhalin Energy should not only evaluate and classify the final silt fencing requirements, but acts on the urgent cases in timely manner. In general, silt fences that are at the bottom of slopes where vegetation cover is poor and above a sensitive river should have a high priority in the repair process. Subsequent to the site visit Sakhalin Energy has confirmed that these aspects have been included in the decision-making process for determining the prioritisation of repair works.

4.2.5 Internal Drains

Internal drains are subsurface drainage channels made of perforated pipe and gravel. These are essential in situations where the slope sediment is saturated due to an in-situ water source such as a spring which cannot be stopped. The drain then is used to safely divert the water off the RoW and to dry the sediment, thereby stabilising the slope. Successful internal drains were observed during the visit, for example on the north slope of the Krinka River and on the Sovetskoye Ridge (see Photo 5).

Photo 5 Sovietskoy Ridge example of internal drain

4.3 Biological Reinstatement

4.3.1 General

Overall, during the October 2011 site visit we observed a significant improvement in vegetation growth since the previous IEC site visit in 2010. Most areas that were seen during the site visit exhibited good, sometimes dense, growth and ground cover (e.g. see Photo 6).

Photo 6 Good re-vegetation observed at KP 255.7

However, at the same time, young tree saplings from opportunistic tree species were seen in abundance at numerous locations along the RoW (e.g. see Photo 7) and we note that:

- Trees are not permitted on the RoW under RF regulations.
- In some places the sapling coverage was so dense that it interfered with the growth of grasses that were seeded by the project.

Subsequent to the site visit, Sakhalin Energy has confirmed that a programme is in place for tree removal in 2012 and progress on this will be reviewed by the IEC during the next site visit.

Photo 7 Dense tree sapling growth observed on RoW at KP143.4

It is therefore essential that Sakhalin Energy undertakes a tree removal exercise in the near future. Given the density of sapling growth observed at many locations along the RoW during the site visit this represents a major and pressing task for the Company.

Two other exceptions to the overall improvement in biological reinstatement relate to:

- **Sandy Slopes**

  Bio-reinstatement in sandy slope areas is lagging behind other areas. This is due to the lack of topsoil preservation during construction together with the poorly consolidated nature of the sandy soil. In sandy slopes the situation is often exasperated since soil erosion develops rapidly and seed washes away in greater quantities.

  Numerous sandy areas were observed during the site visit which indicated that re-vegetation of these areas, particularly in upland locations, continues to be slow and in some locations no significant vegetation was identifiable (e.g. see Photo 8). While the environmental consequences of this are typically limited by the generally good standard of erosion and drainage control (see Section 4.2), significant continuing effort is nonetheless required to meet HSESAP re-vegetation requirements. We understand from Sakhalin Energy that the Company has recently been granted permission by relevant authorities to use fertilisers in many of the more problematic areas and its use should be evaluated on a case-by-case basis in these areas and used where deemed applicable. In addition we note that in some instances bare sandy areas need more surface preparation prior to seeding to promote germination

and to limit seed wash-off. (See also Section 4.3.3 for further recommendations relating to re-vegetation.)

Photo 8 Sandy slopes showing no significant re-vegetation in the area around KP37

- **Steep Slopes (typically in RoW Section 3)**

  Re-vegetation is also proving slow at some of the very steep slopes, typically in RoW Section 3, such as the Kormavaya River slopes (see Photo 9). In these areas it is critical that Sakhalin Energy continues to maintain erosion and drainage control in order to minimise sedimentation impacts on the receiving rivers while re-vegetation activities are ongoing.

Photo 9 Bare slopes on the Kormovaya River at KP 351

4.3.2 Wetlands

Previous IEC site visits had identified an issue regarding the presence of timber roads, concrete blocks and other debris in Dolinsk wetlands that were left in place on the RoW after pipeline construction. During the site visit Sakhalin Energy reported that this debris had been removed manually by labourers working without heavy equipment. The timber was cut in place to manageable sized pieces and manually hauled to the road crossing. Photographs of this effort were presented by Sakhalin Energy during the site visit. The Dolinsk wetland area was visited by ENVIRON via a federal road running through the wetland and it appeared to be well vegetated, although observations were limited to views from the road.

Other wetland areas in the northern section of the RoW were also visited and found to be generally well re-vegetated, although we make the following general observations:

- In areas where project access roads have been retained (e.g. the access road to BVS NOB24) care is required to ensure that drainage channels/culverts under the road are maintained to ensure that wetland flows are not disturbed.

- Access to some wetlands areas is now extremely difficult, often making direct visual observation of recovery impossible. We recommend that Sakhalin Energy makes increased use of either aerial photography or satellite imagery to assess recovery of more inaccessible wetland areas and we understand from Sakhalin Energy that this is in progress.

4.3.3 Recommendations for Improved Biological Reinstatement

Sakhalin Energy is expending significant effort in continual seeding of problem areas. However this effort at times falls short of the anticipated results. Following discussions with Sakhalin Energy personnel we recommend the following steps in order to improve the effectiveness of the seeding program:

1. Early planning for next year's seeding season. Front loading the planning and preparation stage will prove useful to being able to start seeding at the optimal time and with optimal quality seed.

2. Acquiring seed mix well in advance of the seeding season. This will ensure readily available seed throughout the season.

3. Testing the seed as soon as possible. We recommend that Sakhalin Energy conducts bench test on selected seed groups to verify the quality of seed and that batches that perform poorly are rejected.

4. Storing the seed as per best practice in a humidity and temperature controlled environment. Store the seed bags in an appropriate manner to allow ventilation (e.g. do not stack seed bags on top of each other). These conditions will help prevent rotting and reduced viability of the seed.

5. Preparing soil surface prior to seeding. It was observed that on slopes that were not scarified prior to seeding, most of the seed was washed down slope and germinated in a narrow bend at the bottom of the slope or against the first encountered slope breaker. Proper scarifying will allow the seeds to stay in place and provide better anchoring during germination.

6. Use of fertilizer. Sakhalin Energy reported that a permit was issued for some use of fertilizer on the RoW. We recommend that the use of fertilizer be considered in some areas where seeding was not successful in the past such as sandy/silty areas without topsoil.

4.4 River Crossings

On the whole, the river crossings that were observed during the site visit were found to be in good condition. A major contributing factor to this success is the robust vegetation cover observed on most riverbanks visited. In addition to riverbank re-vegetation, a range of engineered bank protection has been installed, ranging from riprap to reno matting to gabion walls (or a combination of all three). These protection methods are discussed in turn below.

- **Riprap**. Observations during the site visit revealed improvements in the use of riprap, and in particular the installation of significantly heavier-duty rock at locations where previous smaller-scale riprap protection had been damaged during the spring thaw. This practice appears to be successful, with numerous good examples identified during the site visit, including at the Leonidovka, Nitui, Goryana and Valdimirovka Rivers (see Appendix 3).

- **Reno Matting**. The success and survivability of reno matting is subject to the effectiveness of the initial placement and the quality of the construction. At most locations visited the initial reno matting is still in place and is often covered by vegetation that is anchored into natural river deposits. In other locations, particularly

in high energy rivers, reno matting seen to have been replaced/repaired to a good standard.

- **Gabion Walls.** Gabion walls have been stalled where required, mostly as bank protection in high energy rivers (e.g. the R Podedinka and R. Vstrechny– see Photo 10) and in many cases in conjunction with reno matting. At locations visited the gabion usage on river crossings was seen to be successful, although in some instances recent repair works have been required; from visual inspection these repairs appear to have been undertaken to a good standard.

Photo 10 Gabion wall in good condition at the R. Vstrechny

4.5 Geotechnical Works

Sakhalin Energy and its contractor Gazprom Transgas Tomsk (GTT) have a process in place to monitor the RoW and identify areas of concern. Reportedly, the process operates as follows:

- GTT conducts helicopter surveillance flights once a week in the autumn and spring and bi-weekly in the winter and summer. GTT personnel conduct visual observations during the flight in addition to obtaining still photographs of areas of interest.
- Following each flight, a report is produced by GTT and submitted to Sakhalin Energy.
- Based on the surveillance flight findings and sometimes ground inspection, any identified issues are classified into Category 1, 2 or 3 as follows:
    - Category 1 – includes mostly minor issues such as replacement of damaged or missing signage. Works in this category are conducted directly by GTT personnel.
    - Category 2 – includes projects that require subcontractor support and at times plant/machinery but do not require specific or specialist engineering design.

This type of work is supervised by GTT. Works in this category include repair of reno matting and slope breakers, and seeding etc.

- Category 3 – includes projects that require specific specialist engineering design and are more complex in nature than Category 2 projects. These works are currently entirely controlled by Sakhalin Energy. Works in this category include, inter alia: major overhaul of river bank protection, and repair of landslides and slope failures.

Although Sakhalin Energy currently takes full control of Category 3 projects, it is reported that a process is in place to transfer the Category 3 project responsibility to GTT. Sakhalin Energy also uses the services of Geomatics, a geotechnical engineering company and, until recently, the services of Scott Wilson to assist with the monitoring and maintenance of geotechnical works.

Based on all the above, a daily activity reports are submitted by GTT to Sakhalin Energy. Sakhalin Energy compiles the daily activity reports into a single report which is updated daily. Once a project is identified, a document is produced detailing (with the aid of photos) the work to be done and what plant and personnel are required for the works. At the completion of the works, evidence that the work was completed is attached to the initial report (including photos) and the project is signed off by Sakhalin Energy.

Evidence from visual inspection of a number of locations along the RoW, including areas where Categories 2 and 3 repairs have recently been completed, indicates that the process is generally working well. Although some areas were identified where geotechnical repairs are required these were minor in nature – e.g. side cuts at Fault Crossing 1 as described in Appendix 3.

4.6 RoW Access

A number of dedicated Project roads have needed to be retained by the Project in order to ensure access to key project facilities, including the Block Valve Station (BVS), for maintenance purposes. Access on dedicated roads is controlled by locked barriers to both prevent unauthorised access to sensitive facilities. A potential impact associated with Project access roads is that they provide access for poachers to previously inaccessible salmon rivers (so-called 'induced access'). During the site visit some evidence of this was identified at the River Khandusa, where geotextile netting (Enkamat) installed by the Company for surface stabilisation on the RoW was found to have been pulled up and used as impromptu netting across the river, presumably for illegal fishing during the salmon spawning season (see Photo 11). We note that the River Khandusa is not only a salmon river, but is also thought to support the protected Sakhalin Taimen. We recommend that Sakhalin Energy investigates further methods for the control of induced access to sensitive rivers, especially those that may also support Taimen.

Photo 11 Enkamat used by poachers as an improvised fishing net at the R Khandusa

The Project access roads also require a number of permanent bridges over rivers. The quality of the permanent bridges viewed during the site visit was mixed, and at some bridges (e.g. the access to BVS NOB24) maintenance works are required to install silt fencing to prevent sediment egress into the river.

4.7 Summary

Overall, the site visit revealed that significant progress had been made in relation to reinstatement and maintenance of the pipeline RoW. Despite the generally very favourable impression gained from the site visit, areas for improvement were nonetheless identified and the most critical of these are summarised below:

- Re-vegetation of sandy slopes and some steep slopes remains slow and continued efforts are required by the Company in order to meet HSESAP requirements.
- Control of tree growth on the RoW is urgently required to meet RF legal requirements.

In addition, we note that maintenance of the good condition of the RoW is an ongoing activity and we strongly recommend that Sakhalin Energy continues to work to proactively manage RoW risk though inspection and maintenance programmes in the long term. Such an approach will ensure cost-effective maintenance of the RoW in the longer term.

Given that many sections of the RoW are becoming increasingly difficult to access for visual inspection, we also recommend that Sakhalin Energy makes increased use of either aerial photography or satellite imagery to assess recovery of more inaccessible areas.

5 Monitoring of Other Project Assets

5.1 Block Valve Stations

Block valve station are located along the pipeline RoW to enable the oil and gas pipelines to be shutdown in sections. A number of BVS along the pipeline RoW were observed during the site visit (see Appendix 3 for a full list of locations). None of the visits included entry to the stations and so observations were limited to visual inspection from the perimeter fences. All BVS observed appeared clean and litter free, and all access roads and site drainage controls were found to be in good order.

Gas-powered 'Ormat' electrical generators are located at each BVS that keep the system batteries (which drive the valves) charged. Since commencement of operation, a high proportion of the Ormat have failed, and a programme is in place to replace all the Ormat generators with new design generators by the end of 2012. In some cases the Ormat generators have failed before being replaced and, in the interim period prior to replacement of the permanent generator, temporary diesel-power generators are used. During previous IEC monitoring visits, an issue was identified whereby fuel day tanks associated with temporary diesel generators were identified at some BVS without bunding or other secondary containment. At the time of the October 2011 site visits temporary diesel generators and fuel day tanks were observed at a number of block valves. In all instances the generators and fuel tanks were found to be provided with temporary bunding/containment.

We acknowledge the improvements made to provide basic secondary containment since our previous site visit in 2010, although visual inspection found the quality of the bunding/containment was variable. BVSs visited in the Southern pipeline sections revealed that, where present, fuel day tanks were located in appropriately sized large drip trays (e.g. see Photo 12).

Photo 12 Temporary diesel generator and fuel day tank at block valve station PGB4

However, in the northern pipeline sections the site visit observations found that bunds were rudimentary and unlikely to meet the 110% containment requirement specified in the HSESAP (see Photo 13).

Photo 13 Temporary diesel generator and fuel day tank at block valve station NOB17

We therefore recommend that improved standard design drawings are developed and consistently implemented in all future cases were temporary generators are required at BVSs to ensure that 110% secondary is provided.

Several of the temporary generators observed during the site visit were also found to be old and excessively noisy, and in this regard it is good to note that Sakhalin Energy has recently procured a number of new mobile diesel generators to replace the older generators currently being used at block valve stations (see also Section 5.2).

5.2 Pipeline Maintenance Depots

Six Pipeline Maintenance Depots (PMDs) are located strategically along the pipeline RoW. The PMDs are primarily responsible for:

- Pipeline maintenance activities along defined stretches of the pipeline RoW, including routine helicopter surveillance of the RoW (undertaken by contractors at some PMDs).
- Maintenance of access to BVS. These were permanently de-manned from 1 April 2010 and now have security cameras, sensors and alarms (monitored by PMD staff).
- Operation of pig trap stations (PTS) – receiving/launching pigs and management of pigging wastes.
- Oil spill and emergency response.
- Maintenance of a range of vehicles:
    - Emergency (e.g. fire fighting vehicles, ambulances)
    - Oil spill response (e.g. Kamaz and Ural trucks, river/sea vessels)
    - Maintenance and snow-moving vehicles (e.g. dozers, shovels)
    - General site vehicles (e.g. Land Cruisers).

ENVIRON visited two PMDs during the October 2011 site visit, namely the 'stand-alone' PMDs at Nogliki, and Sovietskoye. The buildings and facilities at these PMDs are of a standard design comprising offices, warehouse/storage areas for equipment and vehicles, workshops, oil storage areas, and wastewater treatment facilities. As such, many of ENVIRON's findings were common to both PMDs visited. These are discussed in general, highlighting any exceptions, in the following sub-sections.

5.2.1 Oil Spill Response

The PMDs conduct oil spill response (OSR) drills regularly according to internal schedules, but with a minimum frequency of once a month. This includes RoW drills in which personnel and equipment are mobilised to the RoW, and drills on-site at the PMD facilities themselves. At the time of the site visit an OSR drill had recently been undertaken by the Nogliki PMD OSR team within Piltun Lagoon – see Section 6.1.2 for further discussion on the issues raised by this exercise.

OSR equipment is stored in dedicated warehouses at the PMDs visited. The OSR equipment appeared to be well maintained and very well organised; all equipment is clearly labelled and stored (e.g. see Photo 14), and OSR personal protective equipment was neatly stored and readily accessible.

Photo 14 OSR equipment warehouse at Nogliki PMD

Basic equipment for the treatment of oiled seabirds is located at the Nogliki PMD and this is reportedly for preliminary treatment of birds in the event of an oil spill prior to the arrival of full wildlife treatment equipment and trained personnel from Prigorodnoye. However, discussions with staff indicated than none of the responders at the Nogliki PMD had any training in how handle or treat oiled wildlife. We recommend that in order to protect both human health and safety and the wellbeing of wildlife, all responders expected to provide preliminary treatment of oiled wildlife be provided with basic training.

Each PMD has all-terrain trucks dedicated to OSR response and communications. The vehicles are stored pre-loaded with key first-response equipment in order facilitate rapid deployment. Inventories on the containers show the contents in each container. In addition, the PMDs also have vehicles dedicated to snow removal and tracked vehicles for access through boggy terrain.

5.2.2 Vehicle Storage and Maintenance

Vehicle storage areas at both PMDs visited were found to be clean and well organized. All vehicles were parked indoors and facing outward for quick mobilization. The floors were clean and free of clutter.

The maintenance areas were also found clean and well organized. Wheeled waste oil drums were positioned above drip trays and containers were clearly labelled (e.g. see Photo 15).

Photo 15 Vehicle maintenance at Sovietskoy PMD

At the Sovietskoye PMD battery storage and handling is undertaken in a dedicated room. The room was clean and well organized. Two batteries were on the floor and others on the test bench under a hood. Eye wash station was present with detail instruction posted on the wall next to it.

5.2.3 Hazardous Material Storage

Oil and chemical storage areas at both PMDs visited were found to be clean and free of clutter. The storage areas are provided with impermeable flooring, but are not afforded bunding or drainage sumps. During previous IEC site visits in 2010 it was noted that oil and chemical drums/containers were stored within the storage areas without any form of secondary containment. During the October 2011 site visit all oil and chemical drums were observed to now be stored on top of gridded drip trays (e.g. see Photo 16) and we acknowledge that this represents an improvement to spill control at the PMDs. However, we note that the drip trays provided are significantly too shallow to provide the volume of secondary containment required under the HSESAP. (The HSESAP requires that where gridded drip trays are used in unbunded storage areas the volume of such trays should be 150% of the stored volume.) Further secondary containment is required to comply with HSESAP standards and we recommend that simple permanent bunding at the storage facilities should be considered.

Photo 16 Oil and Chemical storage on gridded drip trays at Sovietskoye PMD

At the Nogliki PMD we also noted that access to the oil/chemical store was hindered by a high step up to the entrance that made transfer of heavy oil/chemical drums difficult and was likely to lead to enhanced risk of spillage when drums are moved. The installation of a ramp to the storage areas is recommended (this could be combined with the installation of permanent bunding for the areas as recommended above).

Fuel for generators at both PMDs is stored in above ground self-contained bulk storage units (e.g. see Photo 17). The tanks are reportedly double skinned and fitted with alarms and this meets IFC EHS guidelines. The fuel truck bays are designed to capture spill during delivery and includes a sump (water from the bay drain can reportedly be diverted to the storm water drainage system when not in use to minimise the volume of potentially contaminated water being generated during periods of precipitation).

Photo 17 Fuel storage at Sovietskoye PMD

5.2.4 Waste Storage and Disposal

The PMDs store hazardous Class 1 waste (e.g. spent mercury lamps) in a locked container. Class 2 and 3 (e.g. oily waste) is turned over to licensed waste contractors for disposal/recycling. Class 4 and 5 wastes are stored in covered sheds within labelled and covered bins (e.g. see Photo 18). The sheds also include separate collection points for recyclables such as wood and cardboard. Class 4 and 5 wastes are disposed to Project approved landfills (in Korsakov for the Sovietskoye PMD and in Nogliki for the Nogliki PMD).

Photo 18 Waste storage shed at Nogliki PMD

Old mobile generators and associated fuel day tanks are currently stored at the Nogliki PMD prior to disposal (see Photo 19). PMD staff present during the site visit were not aware of the ultimate disposal routes for these generators and ENVIRON has requested information from Sakhalin energy on how they will be disposed of. New replacement mobile generators to be used at BVS in the event that Ormat generators fail (see Section 5.1 above) have been procured and are also stored at Nogliki PMD.

Photo 19 Storage of old mobile generators awaiting disposal at the Nogliki PMD

5.2.5 Other Items

Both PMDs visited have waste water treatment facilities which provide both biological and ultra violet treatment of effluent. Effluents from the treatment units are directed into soakaways. Discharge effluents are monitored weekly by contractors. The monitoring results are held centrally by Sakhalin Energy in Yuzhno rather than at the PMDs and records of recent monitoring results have been requested by ENVIRON for review.

5.3 Kholmsk Port

Sakhalin West Seaport (SWSP) at Kholmsk is an integrated supply base, primarily supporting the Company's drilling and production operations offshore. SWSP is dedicated to oil and gas operations, and is ice-free, making it suitable for year round operations. Sakhalin Energy has undertaken operations at Kholmsk since 2006, and shares the port with other seasonal and year round operators, including ENL.

5.3.1 Operations

A number of operations are undertaken at Kholmsk. The loading and offloading of supply vessels is undertaken at Berth 5 with a 60 tonne Condor dock crane and adjacent laydown area. Sakhalin Energy operates three platform supply vessels, all of which operate to MARPOL requirements and passed an audit undertaken by STASCO in 2010. New vessels entering the port for Sakhalin Energy are vetted by the Company's marine department.

Further engineering operations are undertaken on-site to maximise the effectiveness of the platform operations by minimising the drillers' work on the platform. Such operations include preparation of oil based drilling muds and brine, preparation of dry bulk products for well engineering, and fabrication of wire rope slings, spreader bars, cargo frames and riggings accessories. The mud mixing plant includes on-site storage of oil and brine in twenty 160 m^3 silos. Mixing of drill mud is undertaken in dedicated mixing tanks by adding emulsifiers and viscosity additives. This premix is then pumped to a Supply Vessel in a bunded area (see Photo 20), thus able to contain any spills that may occur. The process of mud transfer is controlled by Marine Operations Guidelines and carried after the pre-transfer check list and meeting between the vessel and MMP operators.

Photo 20 Bunded tanker loading area

A large (almost 3,000 m^2) warehouse with movable racking and mezzanine levels houses smaller platform spare parts and supplies. Housekeeping was of a very high standard, with first aid stations, fire extinguishers and relevant PPE signage. An exterior pipe yard and areas for drill and casing strings, pipe staging and pipe inspection is located at the east side of the port.

As well as providing platforms with supplies, the port receives and handles wastes arising from all three platforms (the majority of this being solid domestic and galley waste).

Port operations are undertaken by a number of key contractors, overseen competently by Sakhalin Energy. Sakhalin Shelf Service ('3S Company') undertakes the majority of port operations, including loading/unloading of cargoes and vessel-generated waste management. Schlumberger Cementing operates the dry bulk plant, MI SWACO operates the mud mixing plant, and SC Tubular Solutions Sakhalin (SUMITOMO) operates the oil casing and tubular facility. Green Coast is responsible for management of platform and some port-generated wastes, and disposal of this waste as appropriate. Only one example of poor material storage was identified – mislabelling of a drum of waste water – the warehouse manager was made aware of the error and its potential consequences, and this was rectified immediately.

5.3.2 Waste Management

Waste management was a key focus of the monitoring at Kholmsk. Management of Sakhalin Energy's platform wastes is undertaken by Green Coast and appeared to be of a very high standard. Waste accumulation areas were tidy and staff knowledgeable. Records of recent waste transfers appeared to be in order. Waste is already well segregated on the platforms, making waste management at SWSP more efficient. The vast majority of wastes received at the port are non-hazardous (hazard classes IV and V), consisting primarily of galley and solid domestic wastes, but also including wood, oily rags and scrap metal. Wastes were stored outside in appropriate containers, skips and drums while awaiting collection. Some bespoke containers specially fabricated for the Company were noted to be particularly effective, for example containers able to contain multiple wheelie bins (to minimise waste transfer/handling) and specially designed containers for liquid transportation, to enable safe lifting with forks (see Photo 21).

Photo 21 Bespoke container for wheeled bins

Wastes are lifted according to priority, for example domestic solid wastes being lifted first, and metal wastes being of lower priority, and taken to Korsakov for appropriate disposal. Mercury lamps, batteries and other hazardous wastes (rarely received) are accumulated in

locked containers at the SWSP until a sufficient number are received for shipping to the mainland. Oily sands are very rarely received, only once every 2-3 years.

Wastes generated by the mud mixing plant include cardboard, plastic packing materials, wooden pallets, PVC bags, waste oil (one drum every six months) and oily rags (packed in drums, one drum every three months). These are also managed by Green Coast. Washings of storage grease from pipe preparation activities are drained into an isolated septic tank, which is emptied and disposed of by the contractor. Vessel-generated wastes and SWSP septic tanks (sewage from lavatory and showers) are managed and disposed of by the 3S Company.

5.3.3 HSE

The HSE record at Kholmsk is excellent, with zero LTI statistics resulting from Sakhalin Energy operations since 2003. The supply base has passed all ISO14001 environmental audits since 2006, and achieved OHSAS 18001 in 2010. All contractors' mileage at SWSP in 2010 was driven in the IVMS 'green zone', and road safety has remained a key HSE focus during 2011. Sakhalin Energy proactively manages its Risk register, and provided evidence of how lessons were learned from another operator's recent incident (spill) and how this was integrated into Sakhalin Energy's own risk register.

6 Project Update Discussions

6.1 Oil Spill Response

6.1.1 Oil Spill Response Plans (OSRP)

Sakhalin Energy had previously developed a "Corporate OSRP", which ENVIRON's oil spill response specialist subcontractors (PCCI) had reviewed and found to be of a general good standard. The Corporate OSRP provided a description of the overall project approach to oil spill prevention and response, including demonstration of the adoption of good international practices. In addition, the Corporate OSRP also previously fulfilled the Lenders' dissemination and public disclosure requirements in force at the time. Sakhalin Energy subsequently agreed with Lenders that the Corporate OSRP would be replaced by an Emergency Preparedness and Response Standard ('ER STO'), that would provide both details relating to specific Russian regulatory requirements and standards, and also the wider aspects previously addressed in the Corporate OSRP. It was further agreed that a summary of the ER STO would be made available on the Sakhalin Energy public website, the contents of which would fulfil the Lender requirements for public disclosure previously provided by the Corporate OSRP.

PCCI has reviewed the adequacy of the ER STO and the findings of the review were discussed during the site visit. Overall, we conclude that the ER STO falls significantly short of containing the relevant contents to act as an adequate replacement for the Corporate OSRP, either as a public disclosure document or as a valuable and usable internal working plan for the Project[49]. These deficiencies represent a significant non-compliance with Lender requirements under the HSESAP and Common Terms agreement (CTA).

The status of the OSRP for individual Project assets and also the Oil in Ice Manual were also discussed during the site visit. ENVIRON notes that PCCI raised significant concerns with the adequacy of two Asset OSRP, namely the Onshore Processing Facility (OPF) OSRP (for example in terms of the credible oil release scenarios assumed) and the Prigorodnoye Onshore OSRP, and also the Oil in Ice Manual. The concerns with these documents were raised with Sakhalin Energy over a year ago, but Sakhalin Energy has still not yet responded to these review comments. The lack of agreement by Lenders of these Asset ORSPs and the Oil in Ice Manual represents a non-compliance with Lender requirements.

In addition, under the HSESAP, summaries of the Asset OSRP are to be made available on Sakhalin Energy's web site. However, at the time of the site visit such summaries were not available on the website and hence this also represents a non-compliance with Lender requirements.

49 See "PCCI Review of Full ER STO Standard Final" issued to Lenders and Sakhalin Energy of the 15th September 2011 for further details.

Given the importance of adequate oil spill response provisions during the operational phase of the Project, which commenced over 2 years ago, it is now critical that as a matter of urgency Sakhalin Energy resolves to the satisfaction of ENVIRON/PCCI and Lenders:

- The development of an overarching project oil spill plan, either in the form of a reinstated Corporate OSRP or an improved ER STO (we understand that Sakhalin Energy is considering the reinstatement of the Corporate OSRP, which would resolve this issue if confirmed)
- Finalisation of the OPF OSRP, the Prigorodnoye Onshore OSRP and the Oil in Ice Manual
- The public dissemination of all OSRP documentation as required under the HSESAP.

ENVIRON was also informed during the site visit that while the original OPF OSRP was duly approved by relevant Russian regulatory authorities in 2006, an updated OPF OSRP issued in 2008 was approved by all the relevant Russian Federation (RF) authorities except the Emergencies Ministry (Federal EmerCom), who had advised Sakhalin Energy that a number of amendments to the OPF OSRP are required.

Sakhalin Energy disputed the legal basis for the above requirements from Federal EmerCom and on the 6th September 2011 the Company submitted a Statement of Claim to Arbitrazh Court in Moscow challenging the inaction of Federal EmerCom in approving the revised OPF OSRP. Subsequent to the site visit, Sakhalin Energy provided the following update to lenders and the IEC on this issue:

> "*On October 14, 2011 EmerCom issued a letter of approval of the OPF OSRP. The approval is granted on condition that the Company should provide a number of documents which have been amended since the date of submitting the OPF OSRP for approval. The Company does have the documents in its possession and is planning to submit them shortly. EmerCom has also requested that the Company conducts a drill to test its abilities in Oil Spill Response, however this should not affect the validity of the OPF OSRP approval.*
>
> *Taking into account that EmerCom voluntarily satisfied the Company's claim and approved the OPF OSRP before the court hearings, the Company filed a motion to the Court with request to renounce the claim in connection with its voluntary satisfaction by the EmerCom.*
>
> *On October 19th, 2011 the court accepted Company's petition and terminated the court proceedings.*"

The IEC will review progress on fulfilment of the conditions set by EmerCom.

6.1.2 Oil Spill Response Exercises

An oil spill exercise was reportedly undertaken in Piltun lagoon shortly before the site visit. We understand from discussions with Sakhalin Energy personnel that the exercise revealed a number of important lessons for improvement and ENVIRON has requested a copy of Sakhalin Energy's exercise review report when available.

Discussions with Sakhalin Energy's OSR personnel also indicated that major oil spill exercises incorporating third party organisation (either field or desk-based) had not been undertaken. The involvement of third parties in major oil spill exercises is vital if major exercises are to be adequately undertaken and we strongly recommend that such an exercise is planned and implemented in the near future.

6.2 South Piltun Development

6.2.1 2012 2D Seismic Survey

A 2D Seismic survey and geotechnical investigation is planned to be undertaken in 2012 offshore in the Piltun field as part of the preliminary investigation works required for the potential South Piltun Development (SPD) (see below). The surveys were originally planned for 2011 but were postponed due to delays in obtaining the relevant permits that would have meant the works being performed during the peak feeding season of the critically endangered Western Gary Whale (WGW).

During the site visit Sakhalin Energy confirmed that:

- The survey works are to be classified as a Permitted Project Expansion (PPE) under the Common Terms Agreement (CTA) (this is as previous recommended by the Lenders' Independent Legal Advisor and ENVIRON)

- An Environmental Impact Assessment (EIA) will be produced by the Company for both the 2D seismic survey and the geotechnical investigation works to relevant international standards.

The development of an EIA for these works is welcomed and in line with HSESAP PPE requirements. ENVIRON will review the EIA when available. In reviewing the EIA, we will pay particular attention to:

- The incorporation of key findings from the analysis of monitoring data from a previous 4D seismic survey performed in 2010 (in particular in relation to any further insight that may be gained into the behavioural response of WGW to seismic survey noise).

- The implementation of all mitigation measures in line with the reasonable recommendations of the WGW Advisory Panel (WGWAP), and in particular the performance of the survey works as soon as possible after ice break-up (to minimise the number of WGW potentially present in the area).

6.2.2 SPD Planning

Sakhalin Energy has previously notified Lenders that it is investigating how to recover hydrocarbons in the southern portion of the Piltun offshore field through the so-called South Piltun Development (SPD) project. The Company provided a summary update on the potential SPD. The Company confirmed that:

1. The Final Investment Decision (FID) for the SPD project is scheduled for mid 2014.

2. The SPD would be classified as a Project Expansion under the CTA.

3. The SPD would comprise two inter-dependent phases, an initial oil development phase and a subsequent gas development phase.

4. The SPD would require the installation of a new platform in the Piltun field, located between the existing PA-A and PA-B platforms. Other associated infrastructure requirements (e.g. onshore and offshore pipelines etc.) are still being studied.

5. The Company will produce EIA documentation for the SPD (addressing both development phases) to meet both RF and lender requirements.

ENVIRON agrees with the classification of the SPD as a Project Expansion and that, under this classification, an EIA to Lender standards is required. Given the inter-dependence of the two development phases we also concur that the EIA should address both the oil and gas development phases of the project. We also make the following points:

1. The need for the SPD, which would involve the development of a third platform in the Piltun field, appears to be at odds with statements previously made in the Alternative Analysis section of the 2005 EIA that "full development" of the Piltun-Astokh field would be achieved with two platforms (i.e. PA-A and PA-B). We recommend that Sakhalin Energy clarifies this apparent discrepancy for Lenders.

2. We note that under the provisions of the HSESAP the IEC should review and agree the scope of the EIA. In addition, we also strongly recommend that ENVIRON reviews the environmental and social aspects considered at all relevant 'decision gates' within the SPD development process, including screening assessments for the development alternatives. In doing so, we further recommend that the technical and engineering considerations at each decision gate are also reviewed on behalf of Lenders by the Independent Technical Consultation (or other relevant specialists working on behalf of Lenders).

3. We recommend that the Company and Lenders agree and confirm which international standards, and more specifically which version of Lender standards, will be applied to the SPD and associated EIA. The Lenders standards applied to the Sakhalin 2 Phase 2 Project are those in place at the time of its original development (e.g. the 1999 World Bank/IFC Operational Policies and relevant associated

Guidance Notes as described in the HSESAP and the 2003 Equator Principles). Since this time the 2007 IFC Performance Standards and the 2006 Equator Principles have been introduced, both of which are due to be revised again in 2012. We also understand that Sakhalin Energy is currently reviewing the applicable international requirements to be included in the HSESAP, including a review of whether to update to more recent Lender standards.

6.3 Onshore Processing Facility (OPF) Compression Project

Sakhalin Energy provided ENVIRON and Lender representatives with an overview update of the OPF Compression project during the site visit. The OPF Compression project entails the installation of additional inlet compression facilities to ensure that gas inlet pressure to the OPF is maintain as the Lunskoye field pressure naturally declines. Sakhalin Energy proposes to install the inlet compression facilities in two stages, the so-called 'Medium Pressure' (MP) and 'Low Pressure' (LP) phases of the Lunskoye field lifetime. The MP phase compression is due to be completed by 2017. The MP compression project requires the installation of gas turbines and associated facilities (including a new flare).

Sakhalin Energy reported that it has confirmed with the Intercreditor Agent and the Independent Technical Consultant that the OPF Compression project is classified as 'Routine Works' under the Common Terms Agreement (CTA). ENVIRON was not involved in the agreement of this classification and we make no further comment except to suggest that Lenders content themselves that this classification was made with due regard to environmental provisions of the CTA and HSESAP.

It is good to note that Sakhalin Energy has confirmed that it will develop an EIA for the OPF Compression Project and that, line with the requirements of the HSESAP, this will be provided to Lenders and the IEC for review. We note that the IEC and Lenders should be involved in both the scoping phase for the EIA and the analysis of development alternatives in order to ensure that any issues are identified at an early stage. In this regard we note that the design and selection of the compressor facilities is of particular importance and in selecting the final design due consideration should be given to, inter alia:

- The physical footprint required by the different options;
- The relative gaseous emissions of different turbine options (this should include both comparison with applicable emission standards and the potential effects on ambient air quality);
- The reliability of the selected compressor design with particular regard to the likely levels of flaring required under different development options (this is of particular importance given a forthcoming RF decree to limit flaring from oil and gas developments).

6.4 Local (Environmental) Monitoring

Sakhalin Energy is currently updating its provisions for the environmental (or so-called 'Local') monitoring that are included within the HSESAP, and a presentation on progress made towards revision of the monitoring programmes was presented during the site visit. Sakhalin Energy is adopting a risk-based adaptive management process to future Local monitoring programmes, whereby requirements are informed by analysis of previous monitoring data in order to ensure that monitoring programmes remain relevant and focused on appropriate areas. ENVIRON considers the proposed approach to the evolution of Local environmental monitoring to be appropriate in principle, although precise details of the proposed revised programmes for 2012 will need to be reviewed by ENVIRON and agreed with Lenders when available.

During the presentation of the Local monitoring programmes, it became apparent that some changes to the current monitoring programmes have already been made (for 2011). However, these changes were not agreed with Lenders and ENVIRON. While we do not necessarily disagree with the appropriateness of the changes identified, this does represent a breach of procedural CTA requirements, whereby any changes to the HSESAP must be agreed in advance with the Lenders. As such, current Local monitoring arrangements are not fully compliant with the existing agreed HSESAP monitoring requirements. This situation needs to be corrected as soon as possible by the provision of detailed (and justified) revised Local monitoring programmes to Lenders and ENVIRON for review and agreement.

6.5 Flaring

We were informed by Sakhalin Energy a new RF decree on associated gas utilisation will be implemented in 2012 and that this will apply to Sakhalin Energy's operations. We understand that the decree sets a standard of 95% utilisation (i.e. an upper limit on gas flaring of 5% of associated gas produced) and increased fees are applied if this limit is not met. This target is challenging for Sakhalin Energy, particularly in relation to its offshore assets. We recommend that Sakhalin Energy investigates potential approaches to improve flare minimisation.

7 Summary Recommendations

A number of recommendations are made following the site visit that do not relate to specific areas of non-compliance (and hence are not included in the Findings Log –see Section), but which are made for the benefit of either Sakhalin Energy and/or Lenders to either improve performance or, in some cases, avoid future areas of non-compliance

ID	Topic	Recommendation	Action Party
1	Social	Complete roll-out of the newly integrated HSE & Social Performance Policy internally and to the contractors/subcontractors.	Sakhalin Energy
2	Social	Undertake revision of the applicable international requirements for social performance stipulated in the HSESAP, to ensure that the ongoing work and social impact assessment/management/monitoring related to any Project variations/expansion activities planned for the future are implemented in line with best socially responsible practices to date.	Sakhalin Energy
3	Social	Complete the other key revision tasks planned for 2011, particularly in relation to the Community Grievance Procedure, social performance indicators and social performance monitoring (including contractor compliance). It is advisable that the IEC is involved in these revision processes.	Sakhalin Energy
4	Social	As a standard practice, continue maintaining a close interlink between the Social Impact Assessment Group and other Project teams that are involved in the development of Project variations/expansion to ensure that a comprehensive social input is provided from the very early stages, in the form of targeted SIAs, investigation of any issues that may have social repercussions (such as resettlement or economic displacement), and public surveys as appropriate. It is desirable that the IEC is also involved in such undertakings of the social nature.	Sakhalin Energy
5	Social	Keep maintaining close and regular interaction with personnel of the Company's information centres, and continue to provide training and supervision of the centres' staff. The provision of all requisite and up-to-date information materials and accessories that allow the information centres to adequately fulfil their function should also remain in place as it is currently practised. Continuation of the book donations initiative is highly encouraged.	Sakhalin Energy

ID	Topic	Recommendation	Action Party
6	Social	The capacity of the existing CLO structure should be revisited as appropriate in case the Project progresses into a stage of further expansion, to ensure the adequate coverage of any additional areas that may be affected as a result of the new developments.	Sakhalin Energy
7	Social	Keep the current CLO contact details up-to-date on Sakhalin Energy web-site[50] and provide a reference to Information Centres as a means of submitting a grievance[51].	Sakhalin Energy
8	Social	Keep maintaining the ongoing dialogue with the Stroitel dacha community as part of the regular engagement and social impact monitoring, and remain open to a two-way interaction with the dacha residents. Given that the primary noise and air quality concerns by local residents relate to flaring from the LNG plant, it should be ensured that noise and air quality monitoring (the 'Quality of Life' monitoring) is undertaken during the flaring operations wherever practicable.	Sakhalin Energy
9	Social	It is recommended that Sakhalin Energy continue to identify and analyse the reasons for complainants' non-satisfaction with grievance resolution and to determine whether addressing such issues requires some specific procedural improvements.	Sakhalin Energy
10	Social	As a regular practice that has been implemented to date, Workers' Code of Conduct should remain part of mandatory induction for the entire Project personnel, including contractor workforce.	Sakhalin Energy
11	PA-B Audit	Waste management practices are generally good, particularly with respect to segregation, reuse and recycling and reinjection of wastes. However, further efforts could be made to minimize wastes both in order to stay within allowed limits and to comply with good management practices.	Sakhalin Energy
12	PA-B Audit	We recommend that Sakhalin Energy continues to monitor the effectiveness of the installed smokeless flaring system and takes all necessary practicable to minimize smoke at the flare.	Sakhalin Energy

[50] See files on http://www.sakhalinenergy.com/ru/documents/Contacts_Febr_2009_Ru.pdf and http://www.sakhalinenergy.com/en/documents/Contacts_Febr_2009_En.pdf

[51] See http://www.sakhalinenergy.com/en/aboutus.asp?p=whistleblowing

ID	Topic	Recommendation	Action Party
13	PA-B Audit	Sakhalin Energy should consider the mandatory use of sole protectors in safety boots worn by all Sakhalin Energy and Contractor personnel.	Sakhalin Energy
14	PA-B Audit	It is recommended that the Learning and Development Office should be visited during future monitoring/audit trips.	IEC
15	PA-B Audit	In 2012 new legislation governing the permitted volume of associated gas that can be flared will come into effect. The new legislation will set the maximum permissible volume at 5 % of associated gas; currently Sakhalin Energy is exceeding this limit. Sakhalin Energy's flaring strategy will need revision to accommodate the new Russian requirements as set out in RF Government degree #7, dated 8th Jan 2009.	Sakhalin Energy
16	LNG Audit	Provision of a low ramp would allow vehicle access to the waste storage area outside Building 10, whilst retaining adequate secondary containment. This would allow faster and easier access, minimising manual handling risks.	Sakhalin Energy
17	LNG Audit	Provision of a roof over the waste storage area outside Building 10 would minimise the volume of potentially contaminated runoff requiring treatment and disposal.	Sakhalin Energy
18	LNG Audit	Although the use of R22 in domestic-sized equipment is permitted by Sakhalin Energy it is recommended that alternatives are considered (R417A is a drop-in replacement for R22 and has an ODP of zero)	Sakhalin Energy
19	Wild life OSR equipment	Full repair of Wildlife OSR equipment warehouse roof. Water is still leaking into the building, causing pooling by the pedestrian door which may present a slip hazard and/or cause damage to equipment.	Sakhalin Energy
20	RoW	Access to some wetlands areas is now extremely difficult, making visual observation of recovery impossible. We recommend that Sakhalin Energy makes increased use of either aerial photography or satellite imagery to assess recovery of more inaccessible areas	Sakhalin Energy
21	RoW	Following discussions with Sakhalin Energy personnel we recommend the following steps in order to improve the effectiveness of the seeding program: • Early planning for next year's seeding season. • Acquiring seed mix well in advance of the seeding	Sakhalin Energy

ID	Topic	Recommendation	Action Party
		season • Testing the seed as soon as possible. • Storing the seed as per best practice in a humidity and temperature controlled environment. • Preparing soil surface prior to seeding. • We recommend that the use of fertilizer be considered in some areas where seeding was not successful in the past such as sandy/silty areas without topsoil.	
22	RoW	We note that maintenance of the good condition of the RoW is an ongoing activity and we strongly recommend that Sakhalin Energy continues to work to proactively manage RoW risk though inspection and maintenance programmes in the long term. Such an approach will ensure cost-effective maintenance of the RoW in the longer term.	Sakhalin Energy
23	OSR	We recommend that Lenders seek legal advice from their Independent Legal Advisors regarding the legal basis of Sakhalin Energy's Action against Federal EmerCom regarding the lack of approval of the OPF OSRP.	Lenders
24	2D Seismic survey	We strongly recommend that in developing the EIA and management plans for the 2010 Seismic survey that Sakhalin Energy ensures: • The incorporation of key findings from the analysis of monitoring data from a previous 4D seismic survey performed in 2010 (in particular in relation to any further insight that may be gained into the behavioural response of WGW to seismic survey noise). • The implementation of all mitigation measures in line with the reasonable recommendations of the WGW Advisory Panel (WGWAP), and in particular the performance of the survey works as soon as possible after ice break-up (to minimise the number of WGW potentially present in the area).	Sakhalin Energy
25	SPD	We strongly recommend that in relation to the SPD Sakhalin Energy: • Clarifies the apparent discrepancies in the need for the SPD, which would involve the development of a third platform in the Piltun field, with previous statements made in the 2005 EIA that "full development" of the Piltun-Astokh field would be achieved with two platforms. • Provides the environmental and social aspects	Sakhalin Energy (and Lenders)

ID	Topic	Recommendation	Action Party
		considered at all relevant 'decision gates' within the SPD development process, including screening assessments for the development alternatives to both ENVIRON and other relevant lender advisors for review. • Agrees with Lenders which international standards, and more specifically which version of Lender standards, will be applied to the SPD and associated EIA.	
26	OPF Compressor project	We recommend that that Lenders content themselves that the classification of the OPF Compressor Project as 'Routine Works' under the CTA was made with due regard to environmental provisions of the CTA and HSESAP.	Lenders
27	OPF Compressor project	We strongly recommend that the design and selection of the compressor facilities for the OPF Compressor Project give specific consideration to: • The physical footprint required by the different options; • The relative gaseous emissions of different turbine options (this should include both comparison with applicable emission standards and the potential effects on ambient air quality); • The reliability of the selected compressor design with particular regard to the likely levels of flaring required under different development options (this is of particular importance given a forthcoming RF decree to limit flaring from oil and gas developments).	Sakhalin Energy
28	Flaring	We recommend that Sakhalin Energy investigates potential approaches to improve flare minimisation in order to seek ways to meet the new RF decree on associated gas utilisation.	Sakhalin Energy

8 Data/Information Requests

A summary of information requests that were not available at the time of the site visit

ID	Data Request
1	Sakhalin Energy's review report for the Piltun lagoon oil spill exercise (September 2011)
2	Records of recent monitoring results from the waste water treatment facility at the Nogliki PMD have been requested for review.
3	ENVIRON has requested information from Sakhalin energy on how old mobile generators and associated fuel day tanks stored at the Nogliki PMD will be disposed of
4	Environmental Monitoring Reports for PA-B seawater and sediment analysis
5	PA-B Flaring Strategy
6	Findings of the investigation conducted in relation to the noise exceedance on the LNG SPZ border (as per the 'Quality of Life' monitoring for the Dacha community).

9 Findings Log

The IEC has previously documented all observations, issues and recommendations arising from its environmental monitoring visits in the subsequent reports. The resolution and/or close-out of these issues tracked ENVIRON and Sakhalin Energy through the Findings Log, which includes:

a) All issues not closed out at the date of the previous report plus new Findings identified during that visit;

b) All actions from the Rivers, Erosion and Wetlands Remedial Action Plan (RemAP) 2007 for completeness;

c) HSE Issues[52] raised in regular reports to Lenders since the date of the last IEC visit report (i.e. from June 2010 to date) and still having open actions;

d) Actions arising from HSESAP revision process.

Only new/open items are presented in the Findings Log.

Findings are listed in the **Findings** column, and have been categorised, put into chronological order (by date identified) and given a reference number (AIR.01, AIR.02 etc). Items have also been ranked according to Sakhalin Energy's Methodology[53], and where applicable, a reference to the relevant HSESAP, RemAP or other shareholder commitment has been provided.

The **Action Progress Review** column shows recent progress made towards resolving/closing the outstanding items, and any RemAP status updates.

52 Note that issues/incidents shall be reported to the Lenders and tracked via regular reports in accordance with the Loan Agreement, and are not separately included in this Findings Log. If a new RemAP is subsequently agreed in relation to any issue/incident, then this will be included in the Findings Log because it includes formally agreed actions. Where a RemAP is not required, the issue/incident should carry over to the next report until its status is shown as closed. Lenders can request additional information on any issue/incident at any time (as per Loan Agreement).

53 Assessed as per Risk Assessment Matrix

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
AIR EMISSIONS AND ENERGY MANAGEMENT								
AIR.05	High Amber	**Closed**	Apr 10	Air emissions – flaring at OPF	0000-S-90-04-O-0258-00-E Appendix 1	Operational difficulties with overhead compressors and on-going shutdowns at LUN-A has led to OPF having used 80% of its permitted 2010 flaring limit during the first quarter of the year. It is expected that the OPF will exceed its flaring allowance and hence emissions limits for 2010.	**21.06.10**: Sakhalin Energy advised that, based on the cumulative flared volume to date and an expectation that both overhead compressors will continue to run without failure, the total flared volume by the end of the year is expected to be 3.0 Bscf, versus RTN limit 3.5 Bscf. The cause of the failure of the machines is still subject to an ongoing investigation with the manufacturer (Hitachi) and a specialist consultancy. Design enhancements have been agreed upon which are currently under manufacture. The plan is to install the enhanced components during 2011. **Action**: Provide monthly updates of cumulative 2010 flaring volume and six-monthly updates on progress towards rectification of overhead compressor and other operational issues. **2010:** Flaring volume updates received as part of monthly HSESAP report during 2010. **Action**: Sakhalin Energy to provide the overdue six-monthly update on progress towards rectifying the overhead compressor problems (due April 2011). **January 2011:** December 2010 Monthly HSESAP Report confirms cumulative flaring within RPN flaring limits.	467655 – closed New action# required for next update

54 This Findings Log includes all Findings that were open at the date of the previous report (April 2010 in this case), plus newly identified findings.

55 **Ref**: Finding number. **Rank:** RAM Red/ High Amber/ Low Amber / Green. **Status:** New (Finding raised this visit), Open (Finding from a previous visit), or Closed. **Date:** date of report in which the Finding was initially raised. **HSESAP Ref.:** reference to relevant HSESAP document and requirement number. **Action Progress Review:** new information confirmed at this visit. **Action#:** Fountain database action reference number(s).

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
AIR.06	Low Amber	**Open**	Jun 10	Air emissions – SPZ Solyanka River	0000-S-90-04-O-0257-00-E Appendix 1	A dacha was noted living very close to the pipeline by the Solyanka River. As per RF law, living accommodation is not permitted within an area designated as an SPZ.	**Action**: Advise whether the dacha is within the SPZ for the pipeline, and what actions the Company has taken, if applicable. **13.12.10**: Sakhalin Energy has conducted the survey of the distance between the dacha and gas line axis. The survey has indicated that the dacha is within the pipelines exclusion zone. Sakhalin Energy will start the negotiation with the dacha owner regarding the removal of the dacha. **19.7.11**: Sakhalin Energy provided an update on resettlement issue: The Sakhalin Authority has proposed a bill that may potentially reduce the pipeline SPZ. This bill has passed the first reading but has not yet been ratified. If the SPZ is reduced, Sakhalin Energy will not need to resettle the owner. It was hoped that the bill would come into force in August 2011. **28.9.11**: The bill has not yet been ratified and Sakhalin Energy has taken no further action to contact or resettle the dacha owner. Sakhalin energy to provide update within six months (March 2012).	467964
AIR.07	Low Amber	**New**	Oct 11 (PA-B audit)	Stack emission monitoring	Air Emissions and Energy Standard Rows 10 & 11 Doc. 0000-S-90-04-O-0257-00-E App 4, Rev 02	To date there has been no measurement of emissions from either the compressor/generator stacks. Moreover there is no means to take such samples i.e. no sampling window for such monitoring. Sakhalin Energy is therefore unable to demonstrate that emissions from these sources meet the applicable Project standards.	Action to be determined.	XXXXXX
AIR.08	Low Amber	**New**	Oct 11 (PA-B audit)	Flaring	Air Emissions and Energy Standard Doc. 0000-S-90-04-O-0257-00-E App 1 Rev 03	Platform personnel were unable to present the Auditor with a written PA-B Flaring Strategy.	Action to be determined.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
AIR.10	Low Amber	**New**	Oct 11 (PA-B audit)	Workplace air quality	HSE monitoring and reporting standard table AC1.2 (0000-S-90-04-O-0009-00-E Appendix 6)	Whereas the actual monitored parameters broadly align with the HSESAP requirements, there are some deviations. In particular, the data reviewed does not include total VOCs, nor does it specify sampling at the HVAC intake/accommodation block. This Finding is related to Finding GEN.02, regarding revision of the HSE Monitoring Overview document.	Action to be determined.	XXXXXX
WATER USE								
WATER.03	Low Amber	**Open**	Apr 10	Water – effluent quality – phenol	0000-S-90-04-O-0255-00-E Appendix 1	The six most recent monthly compliance checks on process water discharges show significant exceedences of phenol over permitted levels. Part of the problem is that process water is filtered through a single filter rather than the three filter system originally in the plant design. The current system filters total suspended solids but still requires the addition of freshwater to avoid exceeding the hydrocarbon ppm discharge limits. This water is obtained from local surface water sources that are generally from peaty, iron-rich sources which frequently contain naturally occurring phenolic compounds.	**Action**: Install a permanent treatment system able to control suspended solids, hydrocarbons and phenol while not requiring additional dilution to achieve discharge consents. If the phenol source cannot be eliminated Sakhalin Energy needs to consider putting an activated carbon filter in-line to deal with this problem. **Action**: Status of existing issues and concentrations, and any future issues to be reported via monthly/ quarterly reporting as per WATER.02. **07.06.11**: Treatment system to control suspended solids and hydrocarbons: Project is currently being developed, and front end engineering design is in progress to define technical and economic parameters. Investment decision will be considered later this year. If investment decision is taken, then implementation would take approximately two years. **Action**: Sakhalin Energy to advise on progress towards installing the permanent treatment system.	467657 – closed XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WATER.04	Low Amber	**New**	Oct 11 (PA-B audit)	Effluent quality	Water Use Standard (Row 4 0000-S-90-04-O-0255-00 E Appendix 5)	Monitoring results to date for 2011 for the chemical parameters show exceedences in the levels of ammonia nitrogen, nitrite (thought to be due to poor nitrification process caused by poor composition of bacteria species) and phenols (thought to be due to poor bioreactor aeration process).	Action to be determined.	XXXXXX
WATER.05	Low Amber	**New**	Oct 11 (PA-B audit)	Seawater analysis	HSE monitoring and reporting standard table AC1.1 (0000-S-90-04-O-0009-00-E Appendix 6)	Seawater and sediment samples are collected for analysis. However the parameters analysed do not match those specified in the HSESAP. In addition there are discrepancies with the HSESAP in terms of the number of monitoring stations for sediment analysis and the locations of control points. This Finding is related to Finding GEN.02, regarding revision of the HSE Monitoring Overview document.	Action to be determined.	XXXXXX
WATER.06	Low Amber	**New**	Oct 11 (PA-B audit)	Hazardous materials	Soil and Groundwater Standard (0000-S-90-04-O-0018-00-E Appendix 5)	Drip trays have an 83 litre capacity for 200 litre drums does not meet the standard for Soil and Groundwater Industrial Controls, which states 'Where bunded areas are not practical, chemicals are stored over grated drip trays designed to hold and retain 150% stored volume'. This Finding is related to Finding S&GW.03, regarding secondary containment.	(N.B. The IEC notes that the relevant standard in the HSESAP, which is included in the Soil & Groundwater section of the HSESAP, needs to be reviewed for its applicability to offshore platforms.)	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WATER.07	Low Amber	**New**	Oct 11 (LNG audit)	Water Use	0000-S-90-04-O-0255-00-E Appendix 1	In July 2011 the Federal Service for Supervision of Natural Resources wrote to Sakhalin Energy (Ruling No. ЯШ - 01 - 005/2011), informing the company that it will be fined RUR 300,000 for breaches of permit requirements (license ЮСХ 00338 ВЭ) including over abstraction, use of faulty water flow meters, and inadequate water quality sampling.	**Action**: Investigate the root cause of the non-compliance and implement appropriate corrective and preventative measures.	XXXXXX
WASTE MANAGEMENT								
WASTE.01	Blue	**Open**	Sep 07 (p 235, section 8.3.8)	Waste – oily waste handling	0000-S-90-04-O-0258-00-E Appendix 9	Sakhalin Energy to develop the relevant facility for Oily waste storage. Sakhalin Energy to provide quarterly update on obtaining legal permits on operating the facility.	**23.04.10**: Sakhalin Energy reported that the relevant facility, Smirnykh Oily Waste Holding Area (OWHA), has been developed. Land allocation is an outstanding issue to be resolved by the local administration. A legal permit is required to operate facility thereafter. **Action**: Commission the Smirnykh Oily Waste Holding Area after resolution of the land allocation issue by the local administration.	467659

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WASTE.06	Low Amber	**Open**	Apr 10	Waste management	0000-S-90-04-O-0258-00-E Appendix 1	Approximately 540 shipping containers, most of which are 40 feet in length, are located in various open fields at the OPF site. Reportedly, the containers were left by Project contractor BETS and are now the responsibility of Operations. Within the last year the OPF maintenance department has been systematically opening and surveying the containers, and classifying the contents and structural condition of the containers themselves to ascertain what content can be reused at the facility and what needs to be classified as waste and disposed of. To date 540 containers have been examined for lifting integrity and 488 examined for content.	**Action**: Complete examination and inventory of legacy waste containers at OPF. Prepare a plan (with timescales and end-points) for disposal of this waste. **28.7.11**: Sakhalin Energy has completed the examination and inventory of legacy wastes containers and removal schedule was developed and is currently ongoing. Company provided OPF Clean-Up Plan for the details. **28.7.11**: IEC requested an estimate of how much material may be re-used at the facility, the volume of waste for disposal (including the scrapped containers), and the ultimate end-points of this waste. **23.8.11**: Sakhalin Energy provided Act showing estimated quantities for disposal. It is reportedly difficult to give specific details on quantities for re-use, however approximately 9000 line items have been identified by the team for introduction into OPF stock. Scrap is being prepared for removal. **1.9.11**: IEC requested proposed end-points for the waste/scrap identified, as per agreed action.	467663

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WASTE.08	High Amber	**Open**	Apr 10	Landfills	0000-S-90-04-O-0258-00-E Appendices 5 & 9	A review of the Waste Management Standards Comparison and Approved Waste Diversion and Disposal Facilities specification highlighted that some aspects of landfill engineering at the upgraded Smirnykh, Nogliki and Korsakov landfills might not comply with international standards (i.e. the Landfill Directive). This seemed to conflict with statements within these documents that the upgraded landfills met international standards. Risk Assessment reports for each of these facilities were prepared in 2004 and have been reviewed. The statement of full compliance with the European IPPC Directive (Directive 96/61/EC) and the landfill Directive (Directive 99/31/EC) cannot be justified from the contents of the Risk Assessment reports. It is recommended that Sakhalin Energy clearly confirm and clarify the relevant engineering measures that have been carried out at the upgraded landfills. These should be compared to the requirements of the Landfill Directive. Amendments should then be made to the appropriate parts of the Waste Management Standard, as necessary, to reflect the status of the landfills with respect to international standards.	**Action:** Review the Approved Waste Diversion and Disposal Facilities Specification (0000-S-90-04-O-0258-00-E Appendix 9) to ensure appropriate specification of landfill engineering measures within 12 months following Project Completion.	467667
WASTE.11	Low Amber	**New**	Oct 11 (LNG audit)	Waste Management	0000-S-90-04-O-0258-00-E Appendix 10	Inadequate waste labelling was observed outside the canteen: • Labelling of four metal bins containing general waste was non-existent ; • A metal bin labelled for oily rags actually contained only cardboard; and • Waste cooking oil was stored in unlabelled drums.	**Action**: Ensure all waste bins are appropriately labelled. It is understood that a request has already been submitted to the maintenance department for refurbishment of waste containers (cleaning, repainting, repair and labelling).	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WASTE.12	Blue	**New**	Oct 11 (LNG audit)	Waste Management	0000-S-90-04-O-0258-00-E Appendix 10	Clause 7 of the Waste Containers, Labelling and Transport Specification, forming part of the Waste Management Standard requires that "waste containers shall be used for the protection of wastes from vermin and scavenging animals". However, a general waste bin had no cover, so there is a risk of wind-blown litter generation or vermin gaining access to the waste.	**Action**: Ensure all general and food waste containers are protected from vermin.	XXXXXX
WASTE.13	Low Amber	**New**	Oct 11 (LNG audit)	Waste Management	0000-S-90-04-O-0258-00-E Appendix 8	Clause 3k of the Approved Waste Storage and Accumulation Facilities Specification, forming part of the Waste Management Standard, requires "spill containment for liquid wastes such as oil and chemicals". However, concrete staining indicates that leaks of cooking oil have occurred.	**Action**: Provide secondary containment for waste cooking oil tanks.	XXXXXX
WASTE.14	Blue	**New**	Oct 11 (LNG audit)	Waste Management	0000-S-90-04-O-0258-00-E Appendix 5	The Waste Management Standards Comparison, which is part of the Waste Management Standard states that "during the operation phase of the Project, lube oil shall be blended with crude oil in a controlled manner". However, waste lube oil is actually sent for off-site recycling. It was reported that the Commercial Department will not allow waste lube oil to be blended into the crude system due to quality control concerns.	**Action**: Sakhalin Energy LNG to work with Commercial Department to investigate the feasibility of blending waste lube oil into the crude system.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WASTE.15	Blue	**New**	Oct 11 (LNG audit)	Waste Management	0000-S-90-04-O-0258-00-E Appendix 7	Clause 2b of the Waste Minimisation, Diversion and Disposal Specification, which is part of the Waste Management Standard requires the company to "procure materials in bulk and in returnable containers", and to "procure materials in refillable and returnable packaging" to minimise packaging waste. Room for improved performance was noted in the audit. For example, drinking water is currently supplied to staff in 500ml plastic (non-returnable) bottles. It is recommended that consideration is given to alternative water supplies to avoid generation of waste plastic. Options include: • Potable water supply (which meets WHO drinking water standards); or • Refillable water cooler systems. Waste avoidance is a better option in the waste management hierarchy than recycling or disposal.	**Action**: Investigate opportunities to avoid the use of disposable drinking water bottles. Ideally this should be investigated as part of a wider, systematic waste minimisation/resource efficiency initiative.	XXXXXX
WASTE.16	Blue	**New**	Oct 11 (LNG audit)	Waste Management	0000-S-90-04-O-0258-00-E Appendix 7	Clause 5c of the Waste Minimisation, Diversion and Disposal Specification, which is part of the Waste Management Standard, requires certain wastes (including plastic and paper) to be diverted to recycling where practicable. Waste paper and waste plastic is segregated at source for recycling. Sakhalin Energy has not yet signed contracts with recycling companies so this material is currently mixed with general waste before off-site disposal. However, it is understood that recycling companies have now been identified (two plastics recyclers on Sakhalin Island and a paper recycler on the mainland) and that arrangements will soon be in place to recycle this material.	**Action**: Conclude the contracts with waste plastic and paper recyclers as soon as possible and investigate opportunities to recycle, reuse, reduce or avoid other waste streams.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
SOIL AND GROUNDWATER								
S&GW.03	High Amber	**Open**	Apr 10	Secondary containment of drums containing fuel, oil and oil-contaminated materials	1000-S-90-04-O-0004-00-E Appendix 5	Drums and other containers containing diesel, new and waste oil, and other oil-contaminated materials were noted to be without secondary containment at many Project facilities and all PMDs. This was of particular concern at Nogliki PMD since spills from the storage area could run directly to unmade ground.	**June 10**: Full OPF site survey identified three drums being stored outside a bunded area – this was immediately rectified. **21.06.10**: A Management of Change has been raised to install self-contained areas at each PMD to store oil. The works target completion date is October 2010. Sakhalin Energy Environmental Manager to visit Nogliki PMD on 22 June to advise on interim groundwater protection measures. **Action:** Provide secondary containment (e.g. drip trays) for drums and other containers to all facilities and PMDs. Provide awareness training to employees to encourage usage of these. **14.11.10**: Training material provided (Action# 467677) along with evidence that Awareness Training had been provided to employees and contractors at OPF (# 467678) and LNG/OET (# 467680). **14.11.10**: Evidence provided of drip trays at LNG/OET and confirmation that oil drums are located inside buildings and shelters connected to COC system. Outside storage areas are connected to AOC system. IEC considered these drip trays to be sufficient in areas with COC systems in place, or where the flooring is of impermeable construction providing adequate spill containment, although too shallow for outside areas and sheds with only AOC systems, or areas with no bunding at all (such as Nogliki PMD). **9.12.10**: Sakhalin Energy commenced manufacture of 20 x 110% capacity drip trays for LNG/OET facility (Action# 467676). **4.1.11**: Action# 467676 closed following their deployment on site. IEC encouraged Sakhalin Energy to periodically re-assess the secondary containment arrangements (at all assets and PMDs) and	467680 – Closed 467677 – Closed 467678 – Closed 467676 – Closed 467675 467679 516456

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
							manufacture more drip trays if required in the future. **29.7.11**: Pipeline Operations completed action 467675 as written, and drip trays have been installed for drums and other containers in all PMDs. However, IEC inspection of storage areas at Nogliki and Sovetskoye PMDs found the drip trays used are too shallow to provide adequate secondary containment for oil/fuel storage drums (less than HSESAP requirements). At these PMDs, we query whether permanent bunding of the storage areas themselves could not be readily installed. Further evidence requested, in conjunction with Action# 516456. **29.7.11**: Inspection of the oil storage area at Nogliki PMD identified a high step up to the entrance that requires manual handling of waste drum over during transfer operations and this poses a spill risk. This step should be replaced with a ramp (it is possible that this could be achieved simultaneously with provision of a permanent bund (see above). **29.7.11**: Evidence of secondary containment awareness training provided for Pipelines (Action# 467679), but appeared inconsistent with that provided at other assets and was not considered adequate and appropriate. Further training should be provided following a review of the Company requirements for secondary containment. **Action Taken**: The training schedule was developed and the training is ongoing in accordance with the schedule. The training on oil spill prevention during operations with lubricants is an integral part of the complex approach including constant oil spill knowledge improvement and Oil Spill Response exercising. **29.7.11**: An assessment of PMD's fuel/waste oil storage areas listing storage location, drainage system type (COC, AOC, clear rainwater), materials stored,	

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
							type of drip trays currently installed, type of drip trays was undertaken (Action# 516456). Reportedly PMDs have monthly drainage water sampling as the control method for oil contamination. IEC queried whether this was a 'control measure'.	
S&GW.04	Low Amber	**Open**	Jun 10	Secondary containment – 'Day Tanks' at BVS	1000-S-90-04-O-0004-00-E Appendix 5	Diesel day tanks have been observed at some BVS, for example at the Ai River (KP 511.5). These are reportedly necessary for the backup generator since the gas take-off generator is in repair. These require secondary containment. Even if the tanks themselves are double skinned, the ground is unprotected from leaks from the hoses/connectors.	Action: Sakhalin Energy to provide secondary containment (e.g. drip trays) for all day tanks currently at BVS. 16.6.11: Eathen berms constructed with impermeable membrane base. Photo evidence of examples provided. 28.6.11: Earthen berms considered adequate in these circumstances. Action closed provided they are: • Of sufficient depth to contain an entire tank volume • Well maintained, e.g. impermeable membrane regularly checked for wear/damage, and no gaps/damage to bund walls • Always cleared of snow in winter time, and other debris throughout the year. **Sept 11**: Sakhalin Energy commented upon the high failure rate of the original BVS generators. The diesel day tanks and temporary generators are being used as old generators are removed and replaced with new models. Following reconsideration, this action is re-opened as the containment was not deemed adequate at many BVS (especially in northern sections of the pipeline.	467966

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
S&GW.05	High Amber	**New**	Oct 11 (LNG audit)	Waste Management	0000-S-90-04-O-0258-00-E Appendix 8	There is a hole in the bund wall around the external waste storage area. At the time of the audit this area only contained empty drums but the facility is used to accommodate liquid wastes when Building 10 is full. There is a risk of contamination of the ground immediately outside the breached bund wall. This issue was noted in the last Independent Environmental Consultant (IEC) monitoring visit report, dated April 2010, and no action has been taken. This issue has therefore been raised as a Finding due to the "frequent exceedence of statutory or other prescribed limit".	**Action**: Immediately repair the bund wall.	XXXXXX
S&GW.06	Low Amber	**New**	Oct 11 (LNG audit)	Storage of Hazardous Materials	0000-S-90-04-O-0018-00-E Appendix 5	Two above ground diesel storage tanks of 0.5 m^3 capacity each are used in the effluent treatment plant construction site, serving two generators. Both had drip trays. However, the drips trays do not meet Clause 1b of the Soil and Groundwater Industrial Controls Specification, forming part of the Soil and Groundwater Standard , which requires that "where bunded areas are not practical, chemicals are stored over grated drip trays designed to hold and retain 150% stored volume"). Also, two holes were noted in one of the drip trays that appear to have been created to allow rainwater to drain away. This Finding is related to Finding S&GW.03, regarding secondary containment.	**Action**: Ensure that effective secondary containment is provided at the two diesel tanks, and work with the contractor to ensure that the root cause of this non-compliance is identified, and corrective actions taken.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
S&GW.07	Low Amber	**New**	Oct 11 (LNG audit)	Storage of Hazardous Materials	0000-S-90-04-O-0018-00-E	Five 205 litre drums and three smaller drums were noted outside C107 on hardstanding adjacent to gravel. No secondary containment was provided. The lack of secondary containment is non-compliant with Clause 1b of the Soil and Groundwater Industrial Controls Specification, forming part of the Soil and Groundwater Standard, which requires that "there shall be an appropriate use of bunded areas to provide spill containment of 110% of the largest stored vessel or double skinned tanks" and "where bunded areas are not practical, chemicals are stored over grated drip trays designed to hold and retain 150% stored volume". This Finding is related to Finding S&GW.03, regarding secondary containment.	**Action**: Investigate the root cause of the non-compliance and implement appropriate corrective and preventative measures.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
LAND MANAGEMENT								
LAND.06	Low Amber	**Open**	Aug 07	Land management – river monitoring	RemAP R2 item	1) Identify the most critical rivers affected by non-compliances during the winter crossing(s) 2) Set up a post-construction monitoring programme (2008) 3) Execute a medium term monitoring programme (2008-2011) 4) Evaluate the results. (Note that closure of this issue requires completion of 2011 monitoring, and presentation of all results and evaluation.)	**Sep 07**: (AEA Report Table 6-4 Item 6.26) Sakhalin Energy to implement remediation programme if monitoring report identifies any significant impact from the Project. **May 09**: Sakhalin Energy reported river monitoring scope for 2009 completed (May 2009 Monthly Report). **Jul 09**: Originally, fishery characteristics were being monitored for 84 rivers. Sakhalin Energy reported that an independent review of river monitoring was completed, and concluded that monitoring should continue in 10 rivers. An additional 5 rivers will be included to enhance understanding of spawning success at the crossings. (July 2009 Monthly Report) **May 10**: Sakhalin Energy report that the post-construction river monitoring report for 2009 was received, and results have been evaluated. Of the 15 rivers monitored in 2009, no impact was identified in11 rivers. Four rivers still show altered conditions downstream of crossings, including Leonidovka and Gornaya (which were impacted by the cyclones last year), Nitui (which has changed its course), and Lesnaya. These 4 rivers have been included in the 2010 monitoring programme. **Action**: Implement medium term river environmental sampling and monitoring programme (2008-2011) and provide evaluation of results. **10.6.10**: Sakhalin Energy undertakes twice-yearly monitoring (sampling) of selected sensitive rivers under the provisions of the Environmental Monitoring Programme (EMP). The programme depends on the size of the spawning areas downstream of the pipeline crossing and erosion development potential. The IEC recommends that all sensitive rivers that were disturbed by the recent (late 2009/early 2010)	467684 467976 – Closed 467977

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
							emergency repairs be added to this (or a similar) monitoring programme. The IEC recognises that river monitoring is required by the Water Permit (to be undertaken by the contractor after the construction period of in-river engineering work) however it is recommended that further monitoring is considered depending on the outcome of this monitoring, for example if continued increased suspended solids are noted. The IEC further recommends that in the future, all sensitive rivers that have been significantly disturbed should be monitored as a matter of course, as part of a similar programme for an appropriate length of time to ensure recovery of the river. **Action**: After corrective engineering works are undertaken on a river, include such rivers in the next hydrology and hydrochemistry monitoring program scope (for hydrocarbon, sediment and hydrological parameters). Thereafter, such locations shall be included in the monitoring program, results evaluated and compared to pre-disturbance conditions, until the parameters (particularly suspended solids) return to normal levels. **22.7.10**: Action completed. Evidence has been sent to AEA for review and confirmation on action closure.	
LAND.07	Low Amber	**Open**	Aug 07	Land management – remediation of river habitats	RemAP R3 item	1) Obtain expert input and agreement with Russian authorities on remedial actions, if any. Identify remediation benchmarks and criteria that indicate successful remediation. 2) Execute remedial actions, if any.	**May 10**: Based on analysis of river environmental sampling and monitoring results, additional intervention is not indicated at this time. The RoW inspection programme shall be implemented as per new Finding in June report (LAND.14). **Action**: Based on evaluation of results of 2010 river environmental sampling and monitoring programme, determine whether any rivers remedial actions are required as per RemAP R3.1.	467687

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
LAND.09	High Amber	**Open**	Sep 07 (Table 6-4 Item 6.24)	Land management – temporary equipment/ bridges	0000-S-90-04-O-0254-00-E Appendix 8	Remove equipment bridges as soon as possible after permanent seeding.	**23.4.10**: Sakhalin Energy reported that 15 temporary bridges are planned to be removed. Construction was still ongoing for 5 access roads. A survey is planned to identify and evaluate remaining temporary bridges. **10.6.10**: As per LAND.12, the Orkunie River bridge will be modified to be able to contain any spillage on bridge surface and thereby protect the river from pollution. Survey must be conducted to identify what is required to make it permanent. Appropriate authority approvals to be obtained as required. **Action:** Complete additional survey of temporary bridges. Identify bridges to be removed, and requirements for bridge upgrade where applicable. Provide updated plan for temporary bridge removal and permanent bridge upgrade. **Action**: Provide to Lenders six-monthly updates on the status of implementation of the plan for removal/ upgrade of temporary bridges.	467691 – Closed 467693 – Closed 467972 – Closed 467973 – Closed

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
LAND.11	Low Amber	**Closed**	Sep 08 (p 18)	Construction camps – Pipelines	0000-S-90-04-O-0259-00-E Appendix 1	Detailed decommissioning plans are required for construction camps once the future disposal/ abandonment options are confirmed, including plans for the disposal of assets and materials and appropriate site investigation/remediation and to manage the termination of local employment. Guarantees must be in place to ensure camp emissions and effluents remain within legal limits. Sakhalin Energy to provide AEA with quarterly updates on current status of camp demobilisation/ decommissioning plans, including whether these will be sold or retained/mothballed by Sakhalin Energy.	**Jan 10**: Progress update provided. **23.4.10**: Detailed progress presentation provided to AEA in relation to pipeline construction camps. **Action**: Provide quarterly updates on decommissioning of temporary facilities (including Pipeline and Asset camps and other sites).	467695 – Closed 467698 - Closed 467699 – Closed 467700 – Closed 467701 - Closed 467703 - Closed 467696 - Closed 467704 – Closed

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
LAND.15	Low Amber	**Closed**	Jun 10	Land Management – silt fences	0000-S-90-04-O-0254-00-E Appendix 6	Sakhalin Energy used silt fencing extensively and effectively to reduce siltation of rivers during construction. Some locations still have the silt fences in place and they continue to function well. In other locations, the fences are damaged from storms and from occasional theft of the textile. Additional silt fences (in conjunction with silt traps) should be considered in sandy slope areas where there is little vegetation and significant run-off from the RoW. It is also clear that some well vegetated locations do not require the protection any longer.	**Action**: Sakhalin Energy to evaluate the need to add, replace, maintain or remove the silt fences on a site by site basis. If silt fences are not considered necessary, they should be removed from the area and disposed of appropriately **7.10.11**: During the inspections of ROW in spring-summer 2011 Sakhalin Energy Pipeline Operations and GTT have developed the plan of the areas where the silt fences need to be removed and where the fences should be repaired. This plan has been incorporated into RoW Maintenance Scope of Work for summer 2011 and is being executed as part of this plan. It is planned to conduct the same exercise in spring-summer 2012 in order to ensure the silt fences are installed in the areas where they are needed only. At some locations visited by the IEC in October 2011 (e.g. Kormovaya) urgent repairs to silt fencing is required. **November 2011** Closed following observations from the monitoring visit.	467970
LAND.16	Low Amber	**New**	Oct 2011	Land management – reinstatement of sandy and steep slopes	0000-S-90-04-O-0254-00-E Appendix 6	Progress on re-vegetation of sandy and certain steep slopes remains slow and continued efforts on reinstatement are required. A number of recommendations to how biological reinstatement can be improved have been identified by the IEC in the October 2011 Site Visit report and these should be actioned by Sakhalin Energy.	Incorporate IEC recommendations on biological reinstatement improvements into RoW plans.	XXXXXX
LAND.17	Low Amber	**New**	Oct 2011	Tree growth on RoW	RF Requirement	Significant tree growth was identified at numerous locations along the RoW, which is contrary to RF permit requirements. Sakhalin Energy needs to undertake a major tree control programme.	Incorporate tree control into RoW maintenance programme and implement in 2012 season.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
LAND.17	Blue	**New**	Oct 2011	Maintenance of permanent bridge	RF Requirement	The Project access roads also require a number of permanent bridges over rivers. The quality of the permanent bridges viewed during the site visit was mixed, and at some bridges (e.g. the access to BVS NOB24) maintenance works are required to install silt fencing to prevent sediment egress into the river.	Action to be determined.	XXXXXX
BIODIVERSITY								
BIODIV.02	Low Amber	**Re-Opened**	Oct 11	Biodiversity – induced access control	0000-S-90-04-O-0259-00-E Appendix 1	During the October 2011 site visit some evidence of this was identified at the River Khandusa, where geotextile netting (Enkamat) installed by the Company for surface stabilisation on the RoW was found to have been pulled up and used as impromptu netting across the river, presumably for illegal fishing during the salmon spawning season. We note that the River Khandusa is not only a salmon river, but is also thought to support the protected Sakhalin Taimen. We recommend that Sakhalin Energy investigates further methods for the control of induced access to sensitive rivers, especially those that may also support Taimen.	Action to be determined.	467706
BIODIV.04	High Amber	**Closed**	Sep 07 (p141)	Biodiversity – Wetlands monitoring W2	RemAP W2, 0000-S-90-04-O-0009-00-E Appendix 6	Complete post-construction monitoring of wetlands as per RemAP scope W2, which is: 1) Appoint suitably qualified Third Party Contractor(s) for delineation and classification work. 2) Wetlands delineated on baseline data sets. 3) Wetland classified by ecological and physical characteristics into wetland "Classes". 4) Field observation for desktop studies verification and impact assessment. 5) Completion of classification work. 6) Appoint suitably qualified Third Party Contractor(s) for carrying out field surveys.	**Nov 08**: Sakhalin Energy reported that 2008 wetland monitoring scope was executed (Monthly Report November 2008). **May 09**: Sakhalin Energy reported that scope of work for 2009 was completed (Monthly Report May 2009). **Aug 09**: 2009 wetland monitoring programme has been completed and draft report is currently being prepared. **06.04.10**: Sakhalin Energy reported that: • 2007-2009 monitoring scope has been completed, • a contract is in place for 2010 and 2011 for wetlands monitoring,	467706 - Closed

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
						7) Reference Surveys and Year 1 Post Construction Monitoring surveys completed. 8) Monitoring reports from Reference Survey and Year 1 Post Construction Monitoring submitted to Sakhalin Energy for review. 9) Post construction monitoring completed during the second and third years after construction 2008-10.	• RemAP requirements have been incorporated into ongoing Local Monitoring programmes, and the HSE Monitoring Overview (previously Annex C, now 0000-S-90-04-O-0009-00-E Appendix 6), which includes wetlands monitoring requirements, is to be reviewed with Lender approval within 6 months following Project Completion. **23.04.10**: Items 1-8 have been completed, item 9 is in progress. **Action**: Complete wetlands environmental sampling and monitoring 2010 scope. **12.5.11**: The wetlands environmental sampling and monitoring has been completed and the report has been issued to the IEC for review. **31.5.11** Sakhalin Energy response to comments received from the IEC. **15.7.11**: Reissue of the report following further feedback and requests for clarification from the IEC. **2.9.11**: Further comments provided to Sakhalin Energy following IEC review. The Company has started work on addressing this feedback. **November 2011:** Closed following ENVIRON review of Wetland Monitoring for Onshore Pipeline Route in 2010 Report.	

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
BIODIV.05	High Amber	**Open**	Sep 07 (p141)	Biodiversity – Wetlands remediation W3	RemAP W3, 0000-S-90-04-O-0009-00-E Appendix 6	Complete remediation of wetlands as per RemAP scope W3, which is: 1) Assessment of immediate remediation works required. 2) Development of practical tools to be used by the construction team for wetland remediation upon completion of the construction activities. 3) Immediate remediation measures implemented (as determined on a site by site basis) by Sakhalin Energy Reinstatement and Environmental coordinators and carried out under their supervision. 4) Remediation Plan and Prioritisation list developed. 5) Remediation measures implemented under Reinstatement and Environmental Coordinators' supervision. 6) The need for post-construction remediation measures identified via inspection and monitoring 2008-2010 and advice sought from wetlands expert. Remediation measures implemented under Operations supervision.	**23.04.10**: Items 1-5 completed. **Action**: Based on evaluation of results of 2010 wetlands environmental sampling and monitoring programme, determine whether any wetlands remedial actions are required as per RemAP W3.6.	467708
BIODIV.07	Low Amber	**New**	Oct 2011	Biodiversity – Wetlands reinstatement W1	0000-S-90-04-O-0259-00-E Appendix 4	In areas where project access roads have been retained (e.g. the access road to BVS NOB24) there is evidence that drainage channels/culverts under the road are disturbing wetland flows Inspection and maintenance of these roads is required.	Action to be determined.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
OIL SPILL RESPONSE								
OSR.05	High Amber	**Open**	May 09 (p 27)	Oil Spill Response Plans	0000-S-90-04-O-0014-00-E Appendix 15	Current versions of the OPF and Onshore Prigorodnoye plans assume 100% secondary containment 100% of the time and therefore do not contain measures for reacting to an incident in which a spill breaches the facility containment. International best practice requires this to be analysed in a worst-case scenario. AEA recommends the plans be revised to accommodate international best practice procedures.	**09.03.10**: Sakhalin Energy agreed that the plans should be revised as indicated. However, the schedule for revision and associated regulatory review timelines make it impractical to complete this in the short term. Hence addenda will be prepared. **Action**: Review capabilities for response to loss of secondary containment on OPF and Onshore Prigorodnoye and document response arrangements in temporary internal addenda to the OSRPs. **24.5.11:** Addenda were developed for OPF and Onshore Prigorodnoye Oil Spill Response Plans, and provided to the IEC for review. They were not considered to meet industry best practice – action remains open.	467712
OSR.12	Low Amber	**Closed (but see OSR17)**	Sep 09 (p 11)	Oil Spill Response	0000-S-90-04-O-0014-00-E Appendix 15	It is recommended that Sakhalin Energy establishes and conducts appropriate training and refresher training for all personnel involved in the Wildlife Rehabilitation Programme.	**Action**: Identify target group for Wildlife Rehabilitation training. Identify/develop training programme (content, trainer, frequency). Conduct training for all personnel involved in the Wildlife Rehabilitation Programme.	467720 – Closed
OSR.13	High Amber	**Closed**	Sep 09	Oil Spill Response	0000-S-90-04-O-0014-00-E Appendix 15	AEA was informed at the pre-exercise meeting that the size of the field exercise was to be scaled back and that observers would not be allowed on the OSR vessels or the TLU. The last minute changes to the volume and simulated discharges, as well as the positioning of the observers, reduced the effectiveness and ability of the observers to evaluate response operations. As a result, this exercise did not provide the Lenders representatives with an opportunity to observe and evaluate Sakhalin Energy's offshore operations or evaluate the activation and processes associated with the Emergency Coordination Team (ECT) and Crisis Management Team (CMT).	**Action**: Provide an opportunity for the Lenders' representatives to observe an OSR Exercise, including to undertake adequate on-site observation and evaluation of the activation and decision-making processes associated with the ECT or CMT and particularly Offshore operations. **18.7.11**: Sakhalin Energy has invited the IEC to observe a major offshore OSR exercise in October 2011, centred on the Molikpaq (PA-A platform). It is anticipated that the IEC will be able to observe both offshore and onshore (ECT, CMT) response operations. **October 2011** PCCI undertook an OSR Exercise Site Visit	467735 - Closed

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
OSR.14	Low Amber	**Open**	Sep 09	Oil Spill Response – redacted/ summary plans	0000-S-90-04-O-0014-00-E Appendix 15	PCCI discussed the current asset-specific OSRPs, specifically where the OSRPs were considered to fall short of international best practice and standards; Sakhalin Energy concurred with PCCI's suggestions, and planning for a potential breach of secondary containment would now go forward. Sakhalin Energy to publish redacted/summary OSR Plans as per PCCI's recommendations.	**09.03.10**: Sakhalin Energy proposed to revise the redacted plans to include the information as recommended by PCCI (however of course we reserve the right to omit commercial, legal, and security-sensitive information): • Primary, secondary and worst case oil spill risks • Discovery and notification process • Spill pathways, receptors (i.e. environmental, economic, cultural and historic resources), and sensitivities and priorities for protection • Sakhalin Energy response resources (personnel and equipment) and strategies for protection, recovery, disposal, and restoration and recovery of the environment • Sakhalin Energy readiness in terms of equipment maintenance, upgrade, compatibility with the operating environment, and also in terms of personnel qualifications and experience • Sakhalin Energy compliance with RF standards and industry best practice. Also proposed to change the terminology from "redacted" to "summary" of plans as indicated in the attached Draft 3 specification. This was supported. **Action**: Update and republish Summary OSR Plans for Assets, as per item OSR.13. Provide to AEA/PCCI for review. **13.2.11**: Sakhalin Energy provided a draft summary of the Offshore Prigorodnoye OSRP for Lender comment. **1.3.11**: IEC provided feedback regarding the Offshore Prigorodnoye summary. Sakhalin Energy to revise this summary for further review, and use general comments to refine other Asset summaries.	467739

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
OSR.15	Red	**Re-Opened**	Apr 10	Summary ER Standard	0000-S-90-04-O-0014-00-E Appendix 15	Sakhalin Energy has committed to publish a "Summary of the Corporate ER Standard in relation to oil spill preparedness and response".	**Action**: Provide a draft "Summary of the Corporate ER Standard in relation to oil spill preparedness and response" for Lender comment. **13.2.11**: Sakhalin Energy provided a draft summary of the "Corporate ER Standard in relation to oil spill preparedness and response" for Lender comment. **25.2.11**: Action closed as review had been received. **4.3.11**: IEC provided feedback regarding the ER STO summary; it was not considered to adequately inform the public of the Company's oil spill risks, mitigation measures and response procedures. **New Action**: Sakhalin Energy to provide a revised summary to the IEC for further review. **October 2011.** Sakhalin Energy remains out of compliance with HSESAP requirements in relation to OSRP and in order to return to compliance it is now critical that as a matter of urgency Sakhalin Energy resolves to the satisfaction of ENVIRON/PCCI and Lenders: • The development of an overarching project oil spill plan (either in the form of a reinstated Corporate OSRP or an improved ER STO) • Finalisation of the OPF OSRP, the Prigorodnoye Onshore OSRP and the Oil in Ice Manual • The public dissemination of all OSRP documentation as required under the HSESAP.	467741 – Closed XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
OSR.17	Low Amber	**New**	Oct 11 (Nogliki PMD)	Handling of oiled wildlife	General	Basic equipment for the treatment of oiled seabirds is located at the Nogliki PMD and this is reportedly for preliminary treatment of birds in the event of an oil spill prior to the arrival of full wildlife treatment equipment and trained personnel from Prigorodnoye. However, discussions with staff indicated than none of the responders at the Nogliki PMD had any training in how handle or treat oiled wildlife. We recommend that in order to protect both human health and safety and the wellbeing of wildlife, all responders expected to provide preliminary treatment of oiled wildlife be provided with basic training.	Action to be determined.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
OSR 18	Low Amber	**Closed**	Oct 2011	OPF OSRP Approval	RF permit requirements	An updated OPF OSRP issued in 2008 was approved by all the relevant Russian Federation (RF) authorities except the Emergencies Ministry (Federal EmerCom). Federal EmerCom has advised Sakhalin Energy that a number of amendments to the OPF OSRP are required before it can be approved. We understand that Sakhalin Energy disputes the legal basis for the above requirements from Federal EmerCom and that on the 6th September 2011 the Company submitted a Statement of Claim to Arbitrazh Court in Moscow challenging the inaction of Federal EmerCom in approving the revised OPF OSRP.	**October 2011** Sakhalin Energy to provide Lenders with an update on outcome of legal action. **28 October 2011** Subsequent to the site visit, Sakhalin Energy provided the following update to lenders and the IEC on this issue: "*On October 14, 2011 EmerCom issued a letter of approval of the OPF OSRP. The approval is granted on condition that the Company should provide a number of documents which have been amended since the date of submitting the OPF OSRP for approval. The Company does have the documents in its possession and is planning to submit them shortly. EmerCom has also requested that the Company conducts a drill to test its abilities in Oil Spill Response, however this should not affect the validity of the OPF OSRP approval.* *Taking into account that EmerCom voluntarily satisfied the Company's claim and approved the OPF OSRP before the court hearings, the Company filed a motion to the Court with request to renounce the claim in connection with its voluntary satisfaction by the EmerCom.* *On October 19th, 2011 the court accepted Company's petition and terminated the court proceedings.*". This closes the action, although the IEC will review progress on fulfilment of the EmerCom conditions.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
OSR 19	High Amber	**New**	October 2011	OSRP Exercises	0000-S-90-04-O-0014-00-E Appendix 15	Discussions with Sakhalin Energy's OSR personnel also indicated that major oil spill exercises incorporating third party organisation (either field or desk-based) had not been undertaken. The involvement of third parties in major oil spill exercises is vital if major exercises are to be adequately undertaken and we strongly recommend that such an exercise is planned and implemented in the near future.	Action to be determined.	XXXXXX
HEALTH AND SAFETY								
H&S.07	Low Amber	**New**	Oct 11 (PA-B audit)	Hazardous materials	Occupational Health and Hygiene Standard – Chemicals Management (0000-S-90-04-O-0270-00-E Appendix 3)	Isolated incidence of unlabelled chemical drums and drums without secondary containment Cross ref to water secondary containment		
H&S.08	Low Amber	**New**	Oct 11 (PA-B audit)	Hazardous materials	Occupational Health and Hygiene Standard – Chemicals Management (0000-S-90-04-O-0270-00-E Appendix 3)	The volume of chemicals stored on the Platform exceeded the capacity of chemical storage facilities resulting in increased handling of chemicals and risk to workers.	Action to be determined.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
H&S.09	Blue	**New**	Oct 11 (PA-B audit)	Medical fitness	Occupational Health and Hygiene Standard Doc. 0000-S-90-04-O-0270-00-E App 3, Rev 02	DTP vaccinations are not mandatory but instead are recommended based on a risk based approach. The non-mandatory nature of these vaccinations is in contrast to the requirements of the HSESAP.	(N.B. The IEC notes that the HSESAP requirements in relation to vaccination requirements need to be checked against RF legal requirements to ensure compatibility.)	XXXXXX
H&S.10	Blue	**New**	Oct 11 (LNG audit)	Storage of Hazardous Materials	0000-S-90-04-O-0270-00-E Appendix 9	Clause 6 of the Chemicals Management Specification, forming part of the Occupational Health and Hygiene Standard requires that "a full Material Safety Data Sheet (MSDS), in English and Russian shall be made available for all chemicals and oil products used at the site". The following non-compliances were noted in the chemical storage area: • No MSDS (in English or Russian) was available in the C103 store for the Hydranal Coulomat AD reagent. An electronic copy of the MSDS was later produced for inspection in the office but the MSDS file in C103 was incomplete. • In C104 and C106 the MSDS for chemicals stored were only available in Russian.	**Action**: Ensure that dual language MSDS documentation is provided in each chemical store. Periodically check the documentation, for example during audits and inspections.	XXXXXX

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
H&S.11	Blue	**New**	Oct 11 (LNG audit)	Storage of Hazardous Materials	0000-S-90-04-O-0270-00-E Appendix 9	Clause 6a of the Chemicals Management Specification, forming part of the Occupational Health and Hygiene Standard requires that "chemicals are appropriately labelled". The following deficiencies were identified: • A drum of liquid in C104 is stored in a box with an incorrect stock code (the MSDS with the corresponding stock code - 1000941689 - was for High-density polyethylene (HDPE)). • Two metal drums of liquid were noted in C107 that had labels in Japanese only. • Five 205 litre drums and three smaller drums were noted outside C107. The drums were full but the contents unknown as there were no labels.	**Action**: Ensure that all chemical containers have adequate labelling. Periodically check labels, for example during audits and inspections.	XXXXXX
SOCIAL								
SOC.03	Low Amber	**New**	Oct 11 (section 3.5.2)	Social monitoring for operational phase: Actions related to Public grievance	SP Standard (0000-S-90-04-O-0021-00-E)	An outstanding grievance submitted by the resident of the nearest dwelling adjacent to the LNG camp fence. The grievance was related to the smell of unburned hydrocarbons in the air, which if confirmed may pose health risks to the local community. On this basis this issue classified as Low Amber.	**20.10.11:** Investigation underway to determine whether the LNG accommodation facility has caused this problem and what equipment/asset may have been a source of the smell. **NB:** Since the site visit Sakhalin Energy has reported that the grievance was resolved with satisfaction and it was agreed that the Company would conduct additional investigations. **Action:** Sakhalin Energy will provide an update on the resolution and further investigations agreed. Target date: 29/002/2012	

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
SOC.04	Blue	**New**	Oct 11 (section 3.4)	Sakhalin Energy Policy on Fishing, Gathering and Hunting during Construction	SP Standard (0000-S-90-04-O-0021-00-E)	The Policy on Fishing, Gathering and Hunting should be adapted for Operations or should be kept as a general policy, i.e. applicable to all Project phases, assets and personnel.	**Action:** Update the Policy on Fishing, Gathering and Hunting as appropriate. Target date: 29/02/2012	
SOC.05	Blue	**New**	Oct 11 (section 3.4)	Plan for Protection of Cultural Resources During Sakhalin II Operations	SP Standard (0000-S-90-04-O-0021-00-E)	Currently, the Plan for Protection of Cultural Resources During Sakhalin II Operations (0000-S-90-04-P-7003-00-R-01) provides for the preservation of chance finds only encountered in the process of an emergency/accident response during operations.	**Action:** Reinstate a chance finds procedure and associated communication protocols as part of the Plan for Protection of Cultural Resources During Sakhalin II Operations (i.e. as a standard measure, not only with respect to emergency situations).	
SOC.06	Blue	**New**	Oct 11 (PA-B audit)	Grievance procedure – Sakhalin Energy employees	SP Standard – Addressing Grievances (0000-S-90-01-O-0021-00_E Appendix 08)	There is limited awareness of Sakhalin Energy's formal grievance mechanism on the PA-B platform. All Sakhalin Energy and contractor staff should be made fully informed of the Grievance Procedure.	Action: Implement measures aimed at improving PA-B platform staff awareness of the Sakhalin Energy's Public Grievance Procedure. Target date: 29/02/2012	

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
GENERAL								
GEN.02	Low Amber	**Open**	Apr 10	Monitoring	0000-S-90-04-O-0009-00-E Appendix 6	HSE Monitoring Overview is to be revised considering monitoring results to date and operational requirements.	**Action**: Review HSE Monitoring Overview (0000-S-90-04-O-0009-00-E Appendix 6) and update where appropriate within 6 months of formal Project Completion date. **22.03.11**: Sakhalin Energy shared its initial proposals for the new HSE Monitoring Overview document. Also provided was a detailed comparison of the EMP and the Company's current Permits and Licences requirements. A marked-up version of the current HSESAP document was provided to the IEC for review (industrial environmental control requirements only). **08.04.11**: AEA provided feedback regarding the revised document. **03.10.11**: Sakhalin Energy provided an update presentation showing proposed changes to the local monitoring (biodiversity) programme.	467749
GEN.03	Low Amber	**Open**	Apr 10	General	International Requirements specifications	"International Requirements" and "Standards Comparison" specifications are based on original project data and standards in force at date of signing. These documents shall be reviewed based on operational data and revised standards where applicable, within 12 months following Project Completion.	**Action**: Review "International Requirements" and "Standards Comparison" specifications referenced in HSESAP and update where appropriate within 12 months of formal Project Completion date.	467753 467762 467760 467759 467758 467757 467754 467752 467751 467756

Ref[54]	Rank[55]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
GEN.04	Low Amber	**New**	Oct 2011	Local Monitoring	0000-S-90-04-O-0009-00-E Appendix 6	During the presentation of the Local monitoring programmes, it became apparent that some changes to the current monitoring programmes have already been made (for 2011). However, these changes were not agreed with Lenders and ENVIRON. While we do not necessarily disagree with the appropriateness of the changes identified, this does represent a breach of procedural CTA requirements, whereby any changes to the HSESAP must be agreed in advance with the Lenders. As such, current Local monitoring arrangements are not fully compliant with the existing agreed HSESAP monitoring requirements. This situation needs to be corrected as soon as possible by the provision of detailed (and justified) revised Local monitoring programmes to Lenders and ENVIRON for review and agreement.	**Action**: Sakhalin Energy to expedite agreement with IEC and Lenders on future local monitoring requirements	XXXXXX

Appendix 1 LNG October 2011 Audit Report

Appendix 2 PA-B October 2011 Audit Report

Appendix 3 Individual RoW Descriptions

Appendix 4 Site Visit Terms of Reference and Schedule

Terms of Reference – Lenders' Audit and Monitoring Visit, September 2011

Background

Under the Common Terms Agreement between Sakhalin Energy and the Phase 2 Senior Lenders (CTA), the Company commits to comply in all material respect with HSESAP which has been developed for the Sakhalin-2 Phase 2 Project.

The HSESAP consolidates the commitments from the Environmental, Health and Social Impact Assessments. It details the measures agreed between the Company and the Phase 2 Senior Lenders to eliminate, mitigate or manage identified adverse HSE and social impacts to acceptable level.

ENVIRON, working with AEA Technology (AEA), is the Independent Environmental Consultant (IEC) acting on behalf of the Lenders to the Sakhalin-2 Phase 2 project (the 'Project'). Under the CTA, the IEC and Lender representatives undertake both:

Level 1 Audit once every two years (see CTA clause 4.6.1):

> *"Following the Completion Date and once every two years thereafter, the Company shall at its expense arrange for a Level 1 audit to be carried out by the Independent Environmental Consultant in accordance with the provisions of paragraph 4.6.3 below. Such audit shall focus on any of the Project Facilities or any Project Expansion Facilities or any major issues affecting or arising from the Project or any Project Expansion which shall be selected by the Phase 2 Senior Lenders in their discretion. The audit shall review the Company's compliance with material Environmental Law, Environmental Consents, Project Expansion Environmental Consents and/or Interim Environmental Permissions and the HSESAP. The Independent Environmental Consultant shall, whilst on or at any Project Facilities or any Project Expansion Facilities only, be accompanied at all material times by representatives of the Company. The Company shall obtain the prior consent of the Phase 2 Senior Lenders (acting Reasonably) to the terms of reference of the Independent Environmental Consultant's audit or review which shall (a) specify the timetable for preparation, comment on and final delivery of the report, (b) make provision for access for the Phase 2 Senior Lenders to the Independent Environmental Consultant for the purposes of consultation provided that any requests from the Phase 2 Senior Lenders for the Independent Environmental Consultant to carry out any additional work beyond the agreed terms of reference of such audit or review shall be subject to the prior approval of the Company (acting reasonably), and (c) include an obligation upon all parties thereto to act expeditiously in the planning, undertaking and closing out of any audit process and to use all reasonable endeavours to ensure that all Level 1 audit reports prepared*

under this paragraph 4.6.3 are delivered directly to the Phase 2 Senior Lenders and copied to the Company."

Annual Project Monitoring visits (see CTA clause 4.5):

"....one site visit during each 12 (twelve) month period after the Completion Date by the Nominated Representatives to monitor the progress of the Project or any Project Expansion and the Project Facilities or any Project Expansion Facilities insofar as Environmental Matters or Social Matters are concerned and the Company's compliance with material Environmental Law, Environmental Consents, Project Expansion Environmental Consents and/or Interim Permissions, the Pre-Signing Remedial Action Plan, any Remedial Acton Plan and the HSESAP. The focus and timing of each visit shall be determined by the Phase 2 Senior Lenders (following consultation with and, with respect to timing, having due regard to any reasonable views expressed by the Company) and they shall give the Company reasonable prior notice of the planned dates of such visits which visits shall, whilst on or at any Project Facilities or any Project Expansion Facilities only, be accompanied at all material times by representatives of the Company."

While there are many similarities in the nature of 'Level 1 Auditing' and 'Project Monitoring', in broad terms the two processes may be distinguished as follows;

- Level 1 Audits are in-depth audits of selected individual Project facilities
- Project Monitoring visits on the other hand are typically higher level in their detail but at the same time are broader in scope, covering both a wider range of Project facilities and also Project-wide issues, programmes and plan, and also relevant third party stakeholders.

The Company sees several benefits from the Level 1 audits and annual monitoring visits, including demonstrating environmental and occupational health and safety commitments to staff and external stakeholders, regular focus through management review to help us maintain controls and improve performance, regular external review and evaluation, assurance of conformance to requirements, improved staff awareness and commitment, and improved reputation of the Company.

In September 2011, the IEC, and Lenders' representatives will conduct a site visit that includes both a Level 1 Audit of the LNG and PA-B assets and a Project Monitoring visit to a range of other project assets.

Objectives

The overall purpose of the Level 1 Audit and Project Monitoring visit is to determine conformance with the HSESAP requirements in managing the identified HSE and Social

Performance (SP) risks, compliance with legal and other requirements and continual improvement.

Scope

This site visit will be focused on the following selected sample project facilities, areas and topics:

- Level 1 Audit:
  - LNG Site
  - PA-B Platform

- Monitoring Visit:
  Areas/facilities:
  - Northern and Southern Gas Transfer Terminals (GTTs)
  - Nogliki PMD
  - Sovetskoye PMD
  - Booster Station 2
  - Pipeline RoW (river crossings, biological reinstatement)
  - Prigorodnoye (including LNG workers' accommodation and Korsakov park)
  - Yuzhno Facilities
  - Villages/dachas (compensation and other social impacts)
  - Local information centres
  - Kholmsk Port (depending on access to Port).

  Topics:
  - RoW vegetation cover, maintenance, river bank erosion, technical reinstatement (e.g. Dolinsk and recently re-engineered rivers), and known high risk locations
  - Waste Management, including OPF camp and legacy waste position
  - OSR facilities, including wildlife rehab facility storage (LNG)
  - Camp demolition, mothballing, sale and reinstatement
  - Social Performance Compliance, including labour management; indigenous peoples; community liaison and engagement; social investment; protection of cultural heritage; impact assessments for project variations; internal and contractor roll-out of compliance/performance requirements.

Parties involved in this audit

The site visit team will be provided by ENVIRON and the parties involved will be as described below:

Project Monitoring Visit	
ENVIRON personnel	Sakhalin Energy Personnel
Jon Hancox (Overall team leader) Paul Bochenski (environmental issues) Tatyana Vassilevskaya (social issues)	Andrei Galaev (CEO, Audit Sponsor) Erwin Nijsse (Finance Director, Auditee) Zhanna Lyubaeva (Senior Loan Compliance Officer, Audit Focal Point Finance) Stephanie Lock (HSE Assurance Manager, Audit Focal Point HSE). Assurance Coordinators: Elena Klishina / Tatiana Kvon (HSE); Marina Ee (Social).
Level 1 Audit – LNG Site	
ENVIRON personnel	Sakhalin Energy Personnel
Alan Fowler (Lead Auditor) Helen Yip (Auditor)	Peter Norman (Prigorodnoye Asset Manager) Evgeniy Kovalyov (Prigorodnoye HSE Manager)
Level 1 Audit – PA-B Platform	
ENVIRON personnel	Sakhalin Energy Personnel
Chris Halliwell (Lead Auditor)	James Foo (Offshore Asset Manager) (PA-B Offshore Installation Manager) Victor Spitsyn (Offshore HSE Manager)

The monitoring and audit report(s) will be subject to peer review by Emma Goodchild (ENVIRON).

Standards and special conditions

The Level 1 Audits and Project Monitoring Visit shall determine conformance with the requirements of the HSESAP and applicable environmental laws and consents.

Timing/Schedule

A detailed audit programme is found at the end of these TOR.

Methodology, Communication of Results, Report and Report Distribution

- Audit methodology. The Level 1 Audits shall be conducted in line with the principles of ISO 19011 (as they apply to the scope of the Level 1 Audits).

- Close out meetings:
  - Local close-out meetings will be held at the PA-B Platform and LNG site respectively. At the close-out meeting the Lead Auditor will provide the auditees with a key issues summary (KIS) that will briefly document the key issues that will be raised in the subsequent audit report.
  - A final close-out meeting for the overall site visit will be undertaken on the final day where the summary findings of the Project Monitoring visit and the Level 1 Audits 1 will be presented.
- Reporting. Following the site visit a single report will be provided. This report will provide:
  - A summary of the findings of the Project Monitoring visit
  - Audit reports for the Level 1 Audits of the PA-B platform and LNG site respectively (these will be provided as appendices)
  - A combined tabulated summary of all recommendations and actions.

  In line with the requirements of the IEC Schedule Contract Scope of Work the timetable for preparation, comment on and final delivery of the site visit report will as follows:
  - Within 10 working days of the conclusion of the site visit the IEC will provide an initial draft of the report to the Role Bank (Mizuho) and JBIC, copied to Sakhalin Energy.
  - The Role Bank, JBIC and Sakhalin Energy shall provide any comments on the report to the IEC within 10 days of their receipt of the draft report.
  - The IEC shall amend any factual errors in the report brought to their attention and shall consider any reasonable comments made by the reviewers.
  - The IEC will produce a final version of the site visit report within 5 working days of receiving comments and shall issue this to the Role Bank and JBIC, copied to the Sakhalin Energy.

END OF TOR

Monitoring Visit Schedule

Date/Team	**Team 1** – South Bochenski	**Team 2** – North Hancox, Halliwell	**Team 3** – LNG Fowler, Yip	**Team 4** – Social Vassilevskaya
27 Sep 11	Arrive	Arrive	Arrive	Arrive
28 Sep 11	Office discussions; Sovetskoye PMD	Office discussions	Office discussions	Office discussions
29 Sep 11	RoW: KP 388 – 360	Hancox: Nogliki PMD, RoW: KP 115 – 109 Halliwell: PA-B audit	LNG audit	Nogliki: IP & IP CLO discussions; Information centre visit
30 Sep 11	RoW: KP 300 – 352	Hancox: RoW: KP 22.7 – 83.2 Halliwell: PA-B audit	LNG audit	BS-2 social issues; Information centre visits
01 Oct 11	RoW: KP 421 – 510	RoW: KP 124 – 276.6	Fowler: Report prep. Yip: Kholmsk port	Prigorodnoye: Dachas; LNG permanent accommodation
02 Sep 11	RoW: KP 512 – 622	RoW – KP	Report preparation	Southern GTT: social impacts and issues
03 Sep 11	Report preparation	Office discussions	Fowler: LNG audit; Yip: Office discussions	Office discussions
04 Sep 11	Close-out meeting; Depart	Close-out meeting; Depart	Close-out meeting; Depart	Close-out meeting; Depart

Appendix 5 Results of noise and air quality monitoring on the LNG SPZ border in July and August 2011

Noise levels at Stroitel dacha monitoring point, Daytime*

	Sound pressure level in octave bands centre frequencies in Hz, dB									**Sound level LA and LEQ, dBA**	**Maximum sound level LA max, dBA**
	31.5	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**		
Actual readings	64	56	48	40	39	37	34	32	27	43.5	58.7
MPL**	**90**	**75**	**66**	**59**	**54**	**50**	**47**	**45**	**44**	**55**	**70**
Exceedance	-	-	-	-	-	-	-	-	-	-	-

** Taken on 12/08/2011, at 10:05-12:35 hours*
**Maximum Permissible Level (from 07:00 to 23:00 hours), according to Sanitary Norms "Noise at workplaces, inside residential dwellings, public buildings and on the territory of residential built-up areas"*
Measurement conditions: wind velocity 0.8-0.12 m/sec, natural noise – bird singing, passing motor transport, waves.

Noise levels at Stroitel dacha monitoring point, Night time*

	Sound pressure level in octave bands centre frequencies in Hz, dB									**Sound level LA and LEQ, dBA**	**Maximum sound level LA max, dBA**
	31.5	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**		
Actual readings	64	65	55	47	42	39	34	31	28	37	48
MPL**	**83**	**67**	**57**	**49**	**44**	**40**	**37**	**35**	**33**	**45**	**60**
Exceedance	-	-	-	-	-	-	-	-	-	-	-

** Taken on 12/08/2011-13/08/2011, at 23:00-00:40 hours*
**Maximum Permissible Level (from 23:00 to 07:00 hours), according to Sanitary Norms "Noise at workplaces, inside residential dwellings, public buildings and on the territory of residential built-up areas"*
Measurement conditions: wind velocity 0.1-0.3 m/sec, natural noise.

Air quality monitoring results as of 11/07/2011

Parameter, mg/m^3	**Monitoring results**	**Maximum Permissible Concentration*, mg/m^3**
Benzapyrene	$<0.2x10^{-6}$	$1.0\ x10^{-6}$
NO_2	0.034	0.200
SO_2	0.044	0.500
CO	1.5	5.000
Soot	0.025	0.150
Formaldehyde	0.010	0.035

**MPC of pollutants in the air of populated areas*

Air quality monitoring results as of 15/08/2011

Parameter, mg/m^3	**Monitoring results**	**Maximum Permissible Concentration*, mg/m^3**
Benzapyrene	$<0.3x10^{-6}$	$1.0\ x10^{-6}$
NO_2	0.022	0.200
SO_2	0.012	0.500
CO	1.2	5.000
Soot	0.054	0.150
Formaldehyde	0.017	0.035

**MPC of pollutants in the air of populated areas*