

Sakhalin-2 Phase 2
Lenders' Independent Environmental Consultant

Monitoring and Audit Report

October 2013

Prepared for:
Sakhalin-2 Phase 2
Project Finance Parties

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ENVIRON UK

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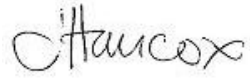
(signature):	
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1	Issue 1 for Sakhalin Energy Comment	11 November 2013	HY/AG	JH, TV, AB, PB, MR
2	Issue 2	23 December 2013	JH	JH, TV, AB, PB, MR
3	Issue 3	19 February 2014	JH	JH/KS

List of Abbreviations

BIC	Business Integrity Committee
BS	Booster Station
BVS	Block Valve Station
CAP	Community Awareness Programme
CLO	Community Liaison Organisation
CMT	Crisis Management Team
CTA	Common Terms Agreement
EA	External Affairs
ENL	Exxon Neftegas Limited
ESHIA	Environmental, Social and Health Impact Assessment
ESIA	Environmental and Social Impact Assessment
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
IFC PS	International Finance Corporation Performance Standards
IP	Indigenous Peoples
KP	Kilometre Point (along public highway or pipeline Right of Way)
KPI	Key Performance Indicators
FEED	Front-End Engineering Design
FID	Final Investment Decision
LNG	Liquefied Natural Gas
LP	Low Pressure (OPF Compression Project phase)
MPC	Maximum Permissible Concentration
MoU	Memorandum of Understanding
MP	Medium Pressure (OPF Compression Project phase)
MSDS	Material Safety Data Sheet
OET	Oil Export Terminal
OPF	Onshore Processing Facility
OSRP	Oil Spill Response Plan
PA-A	Piltun Ashtokskoye A
PCDP	Public Consultation and Disclosure Plan
PCDR	Public Consultation and Disclosure Report
PIG	Pipeline Inspection Gauge
PMD	Pipeline Maintenance Depot
PPE	Permitted Project Expansion
PTS	Pig Trap Station
RAP	Resettlement Action Plan
RF	Russian Federation
RFSU	Ready For Start-Up

RoW	Right of Way
RPN	RosPrirodNadzor
RTN	RosTekhNadzor
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
TSS	Total Suspended Solids
WGW	Western Gray Whale
WGWAP	Western Gray Whale Advisory Panel

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 29 September to 8 October 2013 and focused on the following aspects:

- **Level 1 Audits**
  - Onshore Processing Facility (OPF)
  - Piltun Ashtokskoye A (PA-A) Platform

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

- **Monitoring Visit**
  - Social performance monitoring
    - Community Liaison Organisation (CLO) and Company's information centres
    - Grievance redress mechanism
    - Sakhalin Indigenous Minorities Development Plan (SIMDP)
    - Social aspects (accommodation, medical facilities) at the OPF
    - Protection of cultural heritage
    - Social investment programme
  - Environmental monitoring:
    - Pipeline right of way (RoW)
    - Sakhalin-3 tie-in location
    - Nogliki pipeline maintenance depot (PMD)
    - Liquefied natural gas (LNG) facility
  - Project Update Discussion Topics:
    - Third party landfills and the Company's waste management strategy
    - Western Gray Whale Advisory Panel (WGWAP)
    - OPF Compression Project
    - Sakhalin-3 tie-in
    - Progress on closing out previous Findings

A "Finding" comprises an identified area or topic where the activities of Sakhalin Energy do not conform to either the requirements of Russian Federation law or the HSESAP. During the site visit, progress made towards the closure of open Findings raised from previous IEC reviews and site visits was reviewed. The updated status of the Findings is provided in a revised Findings Log (see Section 9). The Findings Log also includes all new Findings identified following this audit and monitoring visit. In many cases, ENVIRON has recommended how the Finding may be addressed by the Company.

In addition, a number of suggestions 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.

Overall we conclude that Sakhalin Energy continues to achieve a high-level of compliance to Lender standards and the HSESAP across the range of its facilities and activities. Nonetheless, a number of issues has been identified that are described in this report and these are briefly summarised by topic below. The identified issues are generally of minor significance, although the following issues are considered to be of greater significance (see below for further details):

1. Issues related to the both the limited remaining capacity at the third-party waste landfills utilised by Sakhalin Energy and the poor management practices identified at one of these landfills.
2. The presence of tree saplings along the pipeline Right of Way (RoW) is now becoming a significant compliance issue.
3. Gaps in alcohol testing and proof of medical certificates for all personnel going offshore.

Level 1 Audits

OPF

Overall ENVIRON considers that environmental performance at the OPF is very good. There is a robust and well implemented HSE management system in place, and there is evidence of a strong environmental management culture at the facility. However, while there was a generally good level of compliance with environmental law and the requirements of the HSESAP, the following Findings were identified:

- HSE Management Systems
  - The structure of the Aspects Register generally meets the requirements of ISO14001. However, we identify a number of areas where the detail of register requires improvement in order that it identifies all environmental aspects and acts as an effective tool to help prioritise management controls and improvement initiatives.
  - During the course of the audit, it was identified that the OPF HSE team considered that Level 3 audits would be undertaken by the Corporate HSE team and no Level 3 audits had been scheduled by the OPF for 2013. Subsequent discussions with the Corporate HSE team confirmed that Level 3 audits should be site managed self-assurance activities.
- Emissions to Atmosphere
  - Stack monitoring data from the main electricity generating turbines indicate some exceedances of applicable emission standards for NOx and CO.
- Wastewater Management
  - The existing process wastewater treatment facility at the OPF can only achieve permit requirements for disposal to injection wells by the use of dilution. Dilution to achieve discharge standards is not in line with good practice and Sakhalin Energy is currently assessing options for the installation of an improved water treatment

facility to resolve this issue. The current timeline for an upgraded system to be ready to operate is January 2018. In the interim, the Company is assessing whether it would be appropriate to request that the discharge limits for total suspended solids (TSS) and dispersed hydrocarbon set in the licence for the disposal well be increased.

- 2013 discharge monitoring data for the OPF STP identified permit discharge concentration exceedances against Russian permit levels in relation to nitrate and Biological Oxygen Demand (BOD).

- Waste Management
  - The clinical waste incineration facility used by medical services provider International SOS (ISOS) has not been inspected by Sakhalin Energy and we recommend that the incinerator facility is audited by Sakhalin Energy as part of its next audit of ISOS.

PA-A Platform

Overall, ENVIRON considers that environmental performance at PA-A is good and that managers, platform workers, contractors and working practices on the platform demonstrate a strong and robust HSE culture. The Auditor focused on Management Systems and associated physical control measures with emphasis on the management of wastes, hazardous materials, air emissions, aqueous discharges and emergency response. There was a good level of compliance with environmental law and the requirements of the HSESAP with the following exceptions:

- Discharged effluent from the sewage treatment plant (STP) in early 2013 breached permit conditions. However, platform personnel are confident that the third STP module and education of maintenance staff is expected to address these exceedance issues.
- Dual language material safety data sheets (MSDS) were found to accompany the majority of observed chemicals. However, there were a number of chemicals in the main chemical store which were accompanied by only English or Russian MSDS.
- The secondary containment for some hazardous materials does not meet the specification within the HSESAP.
- The Auditor observed a contractor being allowed onto the helicopter without producing evidence of a valid offshore medical certificate despite the Global Logistics Management System showing that one was not on file.
- The Auditor was not subjected to ‘mandatory’ alcohol testing before boarding the helicopter to PA-A at Nogliki airport.
- The emergency exits from the chemical storage container were found to be locked.

Social Performance Monitoring

Similarly to the previous site visit, ENVIRON’s October 2013 monitoring of Sakhalin Energy’s social performance yielded positive findings. The Company is effectively carrying out a broad range of its social commitments and continues to fulfil these in a well-structured, comprehensive and transparent manner. 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.

No formal Findings have been raised as a result of social monitoring, nonetheless a number of suggestions have been made for consideration by the Company, the most noteworthy of which relate to the following areas:

- OPF Compression Project: maintaining regular interaction and ensuring the provision of information to the local community, via the Nysh Administration and through annual public meetings.

- Revision of medical provision (including clinical waste management) and staffing levels at the OPF to account for the increase in contractor personnel during the Compression Project's construction phase.

- Continuation of awareness training and monitoring of cultural heritage resources, and retention of the specialised external contractor for new construction works and emergency excavations.

Pipeline 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 October 2013 site visit revealed significant progress in reinstatement of the RoW. In particular, ENVIRON notes continuous improvement in the re-vegetation of sandy areas and on most of the steep slopes (with some exceptions). In addition, maintenance of the pipeline RoW appears to be working successfully.

Despite the generally very favourable impression gained from the site visit, some areas for improvement were identified and the most significant of these are summarised below:

- The continued presence of tree saplings along the RoW is such that it is now becoming a significant compliance issue. There is a need for urgent control measures in order to meet RF legal requirements and to bring this issue under control.
- As noted above, the re-vegetation of sandy and steep slopes has improved significantly. However, there are some particularly problematic slopes that, due to their steepness and soil lithology, require continuing efforts and possible re-thinking of the re-vegetation methods in some cases.
- The limited visual observations of wetland areas identified differing levels of recovery, which is consistent with both the findings of the September 2012 site visit and also Sakhalin Energy's own ongoing wetland monitoring programme. Although the removal of remaining imported materials and infilling of depressions would require the use of heavy equipment, which in turn may damage recovering areas, such measures may need to be considered if poor rates of recovery continue.

Given that many sections of the RoW are becoming increasingly difficult to access for visual inspection, we again suggest that Sakhalin Energy makes increased use of aerial photography to assess the recovery of more inaccessible areas.

Other Assets

Pipeline Maintenance Depots (PMDs)

ENVIRON visited two PMDs during the October 2013 monitoring visit, namely the stand-alone PMD at Nogliki and the OPF PMD. Issues with the adequacy of secondary containment of oil drums at PMDs have been identified during previous monitoring visits. This issue was therefore a primary focus of the October 2013 site visit.

At the Nogliki PMD, secondary containment was found to be of a high standard, now meeting the requirements of the HSESAP.

The number of drums stored upon drip trays at the OPF PMD had been reduced since the previous site visit, and new drum storage facility (comprising a series of ISO containers) had been installed. However, it was unclear whether the secondary containment was sufficient to retain the volume required by the Sakhalin Energy *Soil and Groundwater Industrial Controls* HSESAP specification. A recommendation has been made for Sakhalin Energy to calculate the maximum number of drums that may be stored in this area according to the above specification.

Bulk fuel storage and refuelling areas and were in good condition at both PMDs.

LNG facility

The primary focus of ENVIRON's monitoring at the LNG facility was to assess the adequacy of secondary containment of oil and lubricant containers in storage areas, and the adequate storage of waste materials. This has previously been an area of deficiency and non-compliance with the HSESAP, which the Company has been working towards addressing.

The secondary containment measures provided by the Company were found to be much improved since previous visits, with the repair of the waste drum compound bund observed to have been completed. Secondary containment provisions are therefore considered adequate with the exception of one isolated deficiency.

Isolated instances of missing MSDS or inadequate container labelling were noted at the LNG facility, although all personnel were aware of the correct procedures.

Other aspects of housekeeping were again good across the board, with wastes stored in appropriately lidded and labelled containers.

Project Updates

Waste management and Future Waste Strategy

Waste management issues are now becoming of critical importance to Sakhalin Energy in terms of the remaining capacity and standard of operation of the third party landfills used for Sakhalin Energy waste. These current issues are summarised below:

- **Landfill capacity**. Sakhalin Energy recognises the significance of the limited capacity at the existing landfills and is developing medium and long term strategy to resolve the issue. However, we note that the urgency to define and implement these strategies is increased by a number of factors including the declining standard of management at the Nogliki landfill (see below) and also the planning construction phase for the OPF Compression Project that will generate large volumes of waste.
- **Management of the Nogliki landfill**. The October 2013 site visit identified a number of major concerns in the operation of the Nogliki landfill. On the basis of the site inspection, the management of this landfill now falls significantly short of required

standards and Sakhalin Energy needs to urgently review methods to either improve the practices of the third party operator of the landfill and/or find means to minimise the amount of waste being sent to the landfill.

OPF Compression Project

An update on the OPF Compression project was provided by the Company. ENVIRON was informed that the decision over the specification of the generators was being re-assessed to consider:

- 16 MW Generators
- 25 MW Generators
- 32 MW Generators

We note that on the basis of the data provided, only the 32 MW generators would appear to meet IFC EHS standards. In addition, the option analysis needs to consider issues of landtake and reliability.

Environmental Monitoring

During the site visit, it became apparent that the activities of Sakahlin-3 are likely to affect areas of Sakhalin Energy's environmental monitoring programme around the OPF. We recommend that Sakhalin Energy reviews all of its environmental monitoring locations and transects etc. in order to determine the extent to which they may be affected by Sakhalin-3 activities and to consider what amendments to its programme may be appropriate.

Offshore Sewage Treatment

Exceedances against HSESAP standards are identified in a number of parameters from STP discharges from the PA-B, LUN-A. As previously reported (see WATER.04), Sakhalin Energy has assessed replacement of the STP at the PA-B and LUN-A platforms and determined that the cost of replacement is uneconomic. Based on the age of the STP installed on PA-B and LUN-A, it seems surprising that the performance of these STP falls so significantly below modern discharge standards. We therefore recommend that Sakhalin Energy reviews the vendor data for the STP packages and compares this with actual performance and, if there is a significant difference, then Sakhalin Energy should seek input from the vendor in investigating the reasons for the unexpected level of performance.

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:

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.

It was agreed that ENVIRON would conduct a single site visit combining the Level 1 Audit and Project Monitoring visit in 2013. The site visit was conducted from 29 September to 8 October 2013 and focused on the following aspects (the full Terms of Reference and schedule are presented in Appendix 3):

- **Level 1 Audits**
  - Onshore Processing Facility (OPF) (Section 2 and Appendix 1)
  - Piltun Ashtokskoye A (PA-A) Platform (Section 2 and Appendix 2)

- **Monitoring Visit**
  - Social performance monitoring (Section 3):
    - Community Liaison Organisation (CLO) and Company's information centres
    - Grievance redress mechanism
    - Sakhalin Indigenous Minorities Development Plan (SIMDP)
    - Social aspects (accommodation, medical facilities) at the OPF
    - Protection of cultural heritage
    - Social investment programme
  - Environmental monitoring:
    - Pipeline right of way (RoW) (Section 4)
    - Sakhalin-3 tie-in location (Section 6)
    - Nogliki pipeline maintenance depot (PMD) (Section 5)
    - Liquefied Natural Gas (LNG) facility (Section 5)
  - Project Update Discussion Topics (Section 6), including:
    - Third party landfills and the Company's waste management strategy
    - Western Gray Whale Advisory Panel (WGWAP)
    - OPF Compression Project
    - Sakhalin-3 tie-in
    - South Piltun Development (SPD) Project
    - Progress on closing out previous Findings

This report presents the findings of the site visit, and in addition provides:

- Suggestions (Section 7). A number of suggestions 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.

- A summary of information requests where information/documentation was 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 towards the closure of open Findings was reviewed and the updated status of the Findings is provided in a revised Findings Log. The Findings Log also includes all new Findings identified following this audit and monitoring visit.

2 Level 1 Audits

Level 1 Audits were undertaken at two facilities, namely the OPF and the PA-A 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 summarised alongside those of the monitoring visit in this report – 'Summary Recommendations' are 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 Social Performance Monitoring

Monitoring of Sakhalin Energy's social performance is implemented by the IEC on an annual basis to verify fulfilment of the HSESAP commitments.

The following aspects were covered during the IEC's annual monitoring visit in October 2013:

- On-going stakeholder engagement and community liaison;
- Grievance redress mechanism;
- Progress with the implementation of the Sakhalin Indigenous Minorities Development Plan (2nd Five-Year Plan for 2011-2015) (SIMDP-II);
- OPF worker accommodation and on-site clinic;
- Protection of cultural heritage resources during Project operations; and
- Social Investment programme.

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

3.2 General Update

Detailed descriptions of the social performance mechanisms and procedures established by Sakhalin Energy to date has been provided in previous IEC site visit reports over the 2009-2012 period. All of these reports are publicly available on Sakhalin Energy's website.[1] The latest IEC site visit conducted in October 2013 confirms that all systems and tools that ensure the Company's social performance continue to function effectively, under the close supervision of the dedicated Social Performance (SP) and External Affairs (EA) teams. Therefore, the current report aims to highlight the aspects related to recent developments and potential future issues that have not been covered in the previous IEC reports.

The Company continues to implement internal training on Corporate Social Responsibility for its leadership team and senior management: 145 participants had attended the training by September 2013. This approach helps ensure that social commitments are enshrined in the Company's business philosophy. Sakhalin Energy has also completed the process of self-assessment against the ISO26000:2010 Guidance on Social Responsibility standard.

3.2.1 Revision of the HSESAP Social Management Specifications

The HSESAP commits the Project to comply with the World Bank/IFC HSE and social policies and guidelines. During 2013, Sakhalin Energy has been in the process of revising the management standard specifications applicable to social performance to reflect the updated IFC Performance Standards on Environmental and Social Sustainability that came into force in 2012 (the IFC PS 2012).

As a result, the entire suite of the HSESAP's Social Performance Management Standards is under revision, including the following specifications:

[1] http://www.sakhalinenergy.com/en/library.asp?p=lib_3rdparty_shelf&l=lib_3rdparty_lendersreport [In English]
http://www.sakhalinenergy.com/ru/library.asp?p=lib_3rdparty_shelf&l=lib_3rdparty_lendersreport [In Russian]

- Standard overview on Social Performance;
- Public Consultation and Information Disclosure;
- Addressing Grievances;
- Social Investment;
- Social Performance Monitoring;
- Indigenous Peoples;
- Resettlement Management;
- Cultural Heritage; and
- Community Health.

The revised version of the Social Performance Management Standards is pending final agreement with Lenders/ENVIRON and internal approval before being formally adopted.

Earlier in 2013, the Company completed the development of its Public Consultation and Disclosure Plan (PCDP) for 2013 and finalised the Public Consultation and Disclosure Report (PCDR) for the preceding year. Both documents are available on Sakhalin Energy's website.[2] Another yearly initiative – the Company's Sustainable Development (SD) or Global Reporting Initiative (GRI) Report – has also been completed. This included two rounds of stakeholder dialogues that typically accompany the preparation of this annual report.[3]

3.3 Community Engagement and Liaison

3.3.1 Information Centres

Sakhalin Energy continues to carry out regular engagement with its stakeholders on the basis of the annually revised PCDP. The 23 Information Centres (Info-Centres) established by the Company across Sakhalin Island remain operational and constitute a live communication link with the external public. Various printed materials are mailed to the Centres at least once a month.

The Company has tracked the number of visitors to all of the Info-Centres since they opened in 2008. A total of 11,918 visitors were recorded between 2008 and 2012, and 2,354 people visited the centres between January and September 2013. An example of the visitor register from one of the Info-Centres is shown in Photo 1 below.

[2] Public Consultation and Disclosure
http://www.sakhalinenergy.com/en/library.asp?p=lib_social_shelf&l=lib_social_campaignplan

[3] Sustainable Development Report 2012 is developed as per the Global Reporting Initiative (GRI, G3)
http://www.sakhalinenergy.com/en/library.asp?p=lib_social_shelf&l=lib_social_report_2012
Therein, see also: APPENDIX 2: Sakhalin Energy's responses and commitments as part of its dialogues with stakeholders on the Company's 2012 non-financial report (sustainable development report), pp. 100-104.

Photo 1: A register of visitors and enquiries at the Info-Centre

Data on the number of visitors to Sakhalin Energy's Info-Centres during the 2013 reporting period are shown in Figure 1 below.

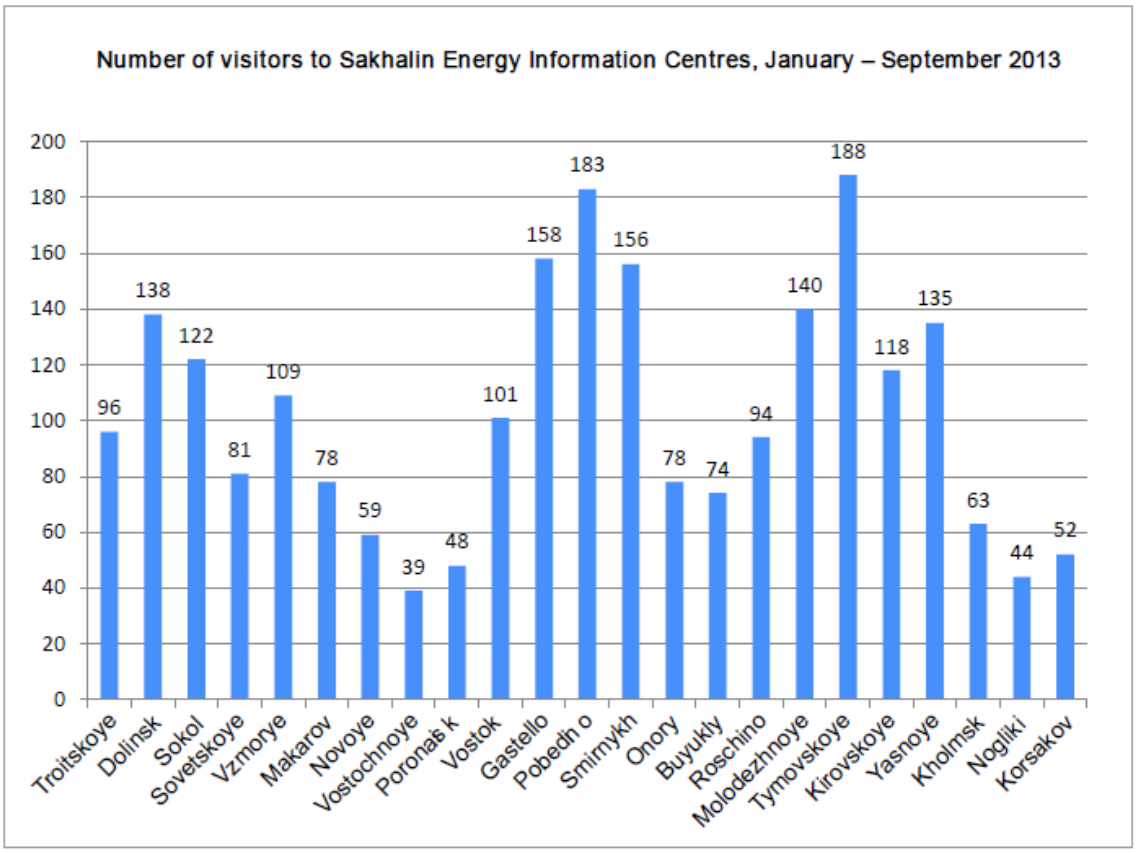
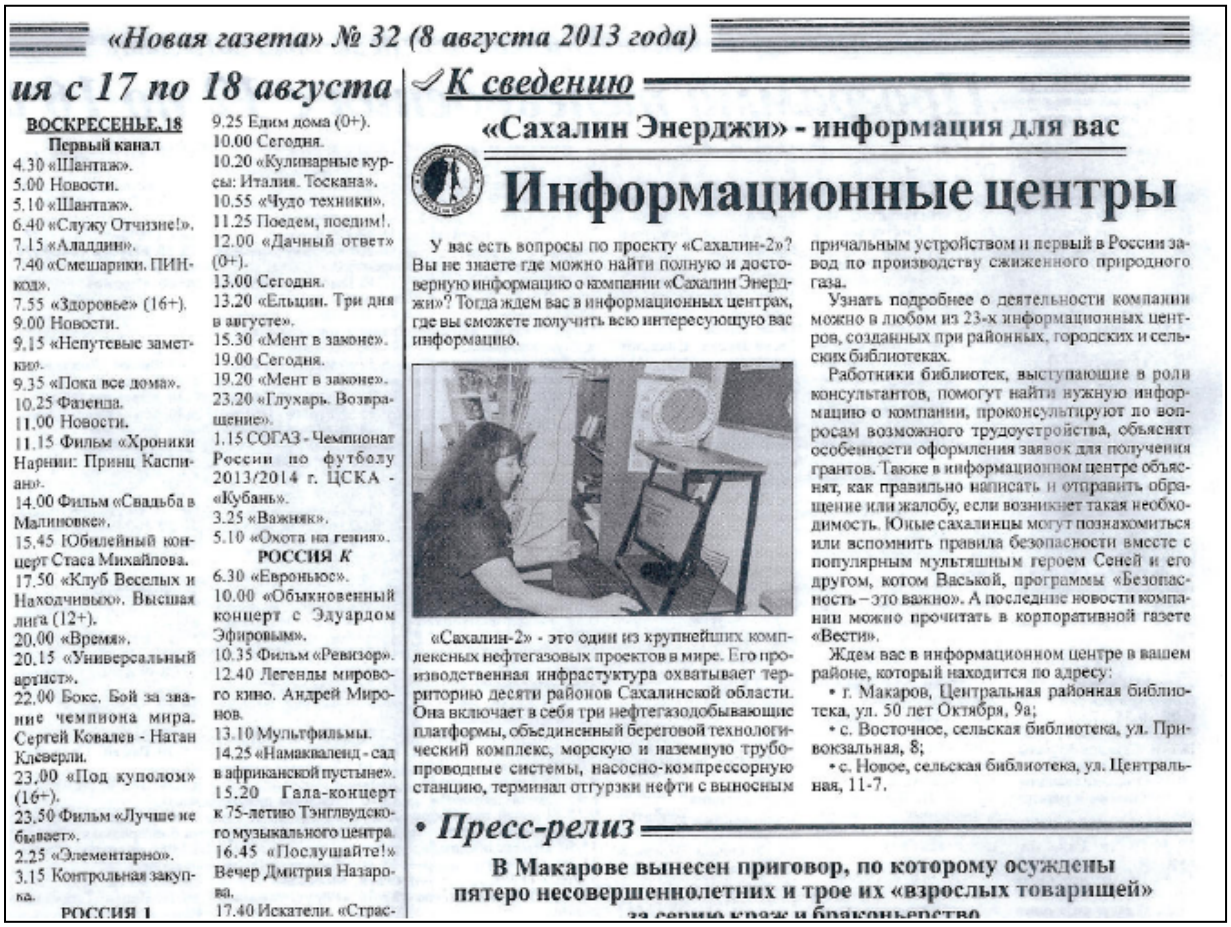


Figure 1: Number of visitors to the Company's Info-Centres

Sakhalin Energy's Community Liaison Organisation (CLO) notes that community interest in the Info-Centres tends to increase after public announcements of the Company's different initiatives, events and programmes. The Info-Centres themselves continue to be advertised through a variety of means, including printed media, public websites, posters and information boards, as shown in Figure 2 below.



«Новая газета» № 32 (8 августа 2013 года)

ия с 17 по 18 августа

ВОСКРЕСЕНЬЕ, 18
Первый канал
4.30 «Шантаж».
5.00 Новости.
5.10 «Шантаж».
6.40 «Служу Отчизне!».
7.15 «Аладдин».
7.40 «Смешарики. ПИН-код».
7.55 «Здоровье» (16+).
9.00 Новости.
9.15 «Непутевые заметки».
9.35 «Пока все дома».
10.25 Фазенда.
11.00 Новости.
11.15 Фильм «Хроники Нарнии: Принц Каспиан».
14.00 Фильм «Свадьба в Малиновке».
15.45 Юбилейный концерт Стаса Михайлова.
17.50 «Клуб Веселых и Находчивых». Высшая лига (12+).
20.00 «Время».
20.15 «Универсальный артист».
22.00 Бокс. Бой за звание чемпиона мира. Сергей Ковалев - Натан Клеверли.
23.00 «Под куполом» (16+).
23.50 Фильм «Лучше не бывает».
2.25 «Элементарно».
3.15 Контрольная закупка.

РОССИЯ 1
9.25 Едим дома (0+).
10.00 Сегодня.
10.20 «Кулинарные курсы: Италия. Тоскана».
10.55 «Чудо техники».
11.25 Поедем, поедим!.
12.00 «Дачный ответ» (0+).
13.00 Сегодня.
13.20 «Ельцин. Три дня в августе».
15.30 «Мент в законе».
19.00 Сегодня.
19.20 «Мент в законе».
23.20 «Глухарь. Возвращение».
1.15 СОГАЗ - Чемпионат России по футболу 2013/2014 г. ЦСКА - «Кубань».
3.25 «Важняк».
5.10 «Охота на гения».

РОССИЯ К
6.30 «Евроньюс».
10.00 «Обыкновенный концерт с Эдуардом Эфировым».
10.35 Фильм «Ревизор».
12.40 Легенды мирового кино. Андрей Миронов.
13.10 Мультфильмы.
14.25 «Намакваленд - сад в африканской пустыне».
15.20 Гала-концерт к 75-летию Тэнглвудского музыкального центра.
16.45 «Послушайте!» Вечер Дмитрия Назарова.
17.40 Искатели. «Страс-

К сведению

«Сахалин Энерджи» - информация для вас

Информационные центры

У вас есть вопросы по проекту «Сахалин-2»? Вы не знаете где можно найти полную и достоверную информацию о компании «Сахалин Энерджи»? Тогда ждем вас в информационных центрах, где вы сможете получить всю интересующую вас информацию.

«Сахалин-2» - это один из крупнейших комплексных нефтегазовых проектов в мире. Его производственная инфраструктура охватывает территорию десяти районов Сахалинской области. Она включает в себя три нефтегазодобывающие платформы, объединенный береговой технологический комплекс, морскую и наземную трубопроводные системы, насосно-компрессорную станцию, терминал отгрузки нефти с выносным причальным устройством и первый в России завод по производству сжиженного природного газа.

Узнать подробнее о деятельности компании можно в любом из 23-х информационных центров, созданных при районных, городских и сельских библиотеках.

Работники библиотек, выступающие в роли консультантов, помогут найти нужную информацию о компании, проконсультируют по вопросам возможного трудоустройства, объяснят особенности оформления заявок для получения грантов. Также в информационном центре объяснят, как правильно написать и отправить обращение или жалобу, если возникнет такая необходимость. Юные сахалинцы могут познакомиться или вспомнить правила безопасности вместе с популярным мультяшным героем Сеней и его другом, котом Васькой, программы «Безопасность – это важно». А последние новости компании можно прочитать в корпоративной газете «Вести».

Ждем вас в информационном центре в вашем районе, который находится по адресу:

- г. Макаров, Центральная районная библиотека, ул. 50 лет Октября, 9а;
- с. Восточное, сельская библиотека, ул. Привокзальная, 8;
- с. Новое, сельская библиотека, ул. Центральная, 11-7.

Пресс-релиз

В Макарове вынесен приговор, по которому осуждены пятеро несовершеннолетних и трое их «взрослых товарищей»

за серию краж и браконьерство

Figure 2: Newspaper announcement of the Info-Centres

This site visit covered six Info-Centres[4]. All of these contained a comprehensive stock of Project-related materials and were well-organised and coordinated. All the consultants (librarians) of the Info-Centres visited provided very positive feedback on the variety of materials supplied by the Company and ready access to the Company's CLO staff. Of special note was the annual two-day workshop specifically organised to equip the consultants with key details about the Project, its environmental aspects and relevant procedures. The main topics typically covered as part of this training workshop include:

- Sakhalin-2 Project overview;
- Grievance Procedure;
- SIMDP;

[4] Korsakov, Nogliki, Poronaisk, Yasnoye, Pobedino and Makarov.

- Company's social programmes;
- Community Awareness programme;
- Sakhalin Energy website;
- Scholarship programme;
- Biodiversity and environmental monitoring;
- Communication skills;
- Visits to Project assets.

The following items are reportedly of particular interest to visitors:

- Sakhalin Energy's community awareness programme on pipeline safety;
- The Life Safety programme;
- Social grant initiatives (a social programme board is shown in Photo 6);
- The internship and scholarship programme implemented by the Company;
- The "VESTI" corporate newspaper;
- Recruitment and employment opportunities.

No complaints related to the Project were received from the public via the Info-Centres in 2013. Nonetheless, the consultants demonstrate good knowledge of the Company's grievance procedure and are able to provide appropriate advice and assistance with completing the grievance form and communicating a complaint to the Company's CLO. The Public Grievance leaflet and relevant contact details are clearly displayed in the Info-Centres. Sakhalin Energy also uses the Info-Centres as one of the liaison links for transmitting communications and clarifications to complainants who submitted their grievances through other channels, thereby expediting an exchange of the required information.

Photo 2 shows an information board at the Info-Centre in Korsakov, and Photos 3 and 4 below pictures the Info-Centre/library staff in Nogliki and a display of materials.

Photo 2: Information board in Korsakov Info-Centre

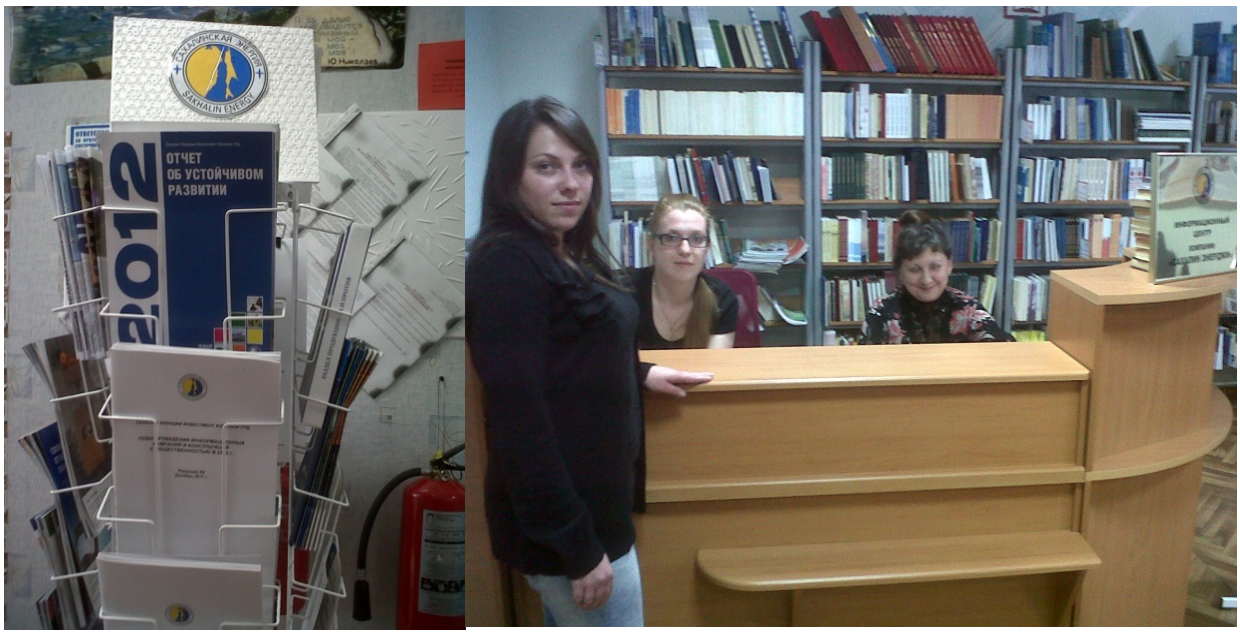


Photo 3: Sakhalin Energy Info-Centre and staff in Nogliki Library

Photo 4: Social programmes display at the Info-Centre

3.3.2 Annual Public Meetings

Annual public meetings are an effective tool in maintaining contact with the communities near the Project's main operating assets. In 2013, meetings were held in nine communities on the Island, with a total turnout of 74 people:

- Nogliki – 4 persons;
- Tymovskoye – 12 persons;
- Troitskoye – 4 persons;
- Makarov – 5 persons;
- Poronaisk – 10 persons;
- Smirnykh – 10 persons;
- Dolinsk - 18 persons;
- Korsakov – 8 persons;
- Val – 3 persons.

The Company's CLO notes, however, that the attendance at such meetings is gradually declining. This is most likely a result of decreasing public interest now that the Project has entered the operations phase. Exit questionnaires continue to be administered after each public meeting to gauge participants' attitude towards the Sakhalin-2 Project, their satisfaction with the presented materials and any need for the provision of additional information. A sample of the exit questionnaires examined during the IEC visit showed a predominantly "positive" or "neutral" perception of the Project and a satisfactory appraisal of the public meetings (an example of the exit questionnaire provided after an annual public meeting in Val village is presented in Appendix 5).

In the IEC's previous site visit report (2012), ENVIRON noted the concern expressed by a representative of the local community in Val with respect to ensuring the security of the Northern Gas Transfer Terminal (GTT).[5] Since then, the Company has advised that an additional clarification was provided to the local community about the security measures and supervision of the facility by the designated contractor. Photo 5 shows the fully automated Northern GTT facility located near Boatasino, approximately 12 km from Val.

[5] IEC Site Visit Report (September 2012), section 2.6 "Contractors' social performance"

Photo 5: Northern Gas Transfer Terminal near Boatasino

3.3.3 Community Awareness Programme

As part of its engagement activities, the Company continues to implement the well-established Community Awareness Programme (CAP) that is aimed to raise public knowledge about the measures required for ensuring pipeline safety. The CAP also specifically covers notifications to land users, forestry operators, as well as construction entities that may perform earthworks or ground disturbance activities in proximity of the Project's pipeline. Starting from this year (2013), the CAP also includes information for fishing companies operating in the vicinity of the Project's offshore platforms and the offshore section of the pipeline. The CAP therefore continually helps to communicate the importance of respecting the protection zones set up around the Project's assets noted above. A CAP poster is shown in Photo 6.

Photo 6: The CAP poster displayed in one of the Info-Centres

3.3.4 Public Opinion Surveys

After the completion of construction, the annual surveys of public opinion about the Sakhalin-2 Project have continued to be conducted during the first three years of Project operations (2011-2013). The latest round in 2013 covered 14 settlements that were originally designated for this purpose. The Company reports that no acute issues have been raised in the public opinion surveys since the Project entered the operations phase. The SP team is planning to revise the current scope and scale of the surveys because most of the locations previously included due to their proximity to active construction areas are no longer affected. ENVIRON acknowledges this viewpoint and suggests that the public opinion surveys should be continued in the settlements that are located near the Project's major operating assets (Prigorodnoye Production Complex, OPF, BS-2) and in any other areas where new construction activities may be planned in the future.

3.3.5 Public Consultations

Public consultations that are required for new development activities or any significant works that may impact the population have been conducted in relation to the OPF Compression Project. These include the following public events:

- The first round of preliminary consultations in Nysh, Nogliki and Yuzhno-Sakhalinsk held in September 2012 to inform the on-going ESHIA process;
- The second round of the public consultations scheduled for November 2013 to contribute to the finalisation of the ESHIA.

3.3.6 Engagement with the 'Stroitel' Dacha Cooperative

Sakhalin Energy has continued its engagement with the 'Stroitel' Dacha cooperative located in the vicinity of the Prigorodnoye Production Complex. A detailed description of the previous history of engagement is provided in the IEC Monitoring Visit Report (2012)[6].

A recent issue of concern for the Dacha cooperative has been the exceedance of the maximum permissible concentration (MPC) of formaldehyde in the air that was detected in June and July 2013 in the course of the "Quality of Life" monitoring at the Dacha eastern boundary. The allowable MPC for formaldehyde is 0.035 mg/m^3 and the recorded levels in air were as follows:

- 0.070 mg/m^3 on 23 June 2013, i.e. twice the established MPC (this coincided with planned maintenance shutdown at the Prigorodnoye Production Complex and associated flaring); and
- 0.061 mg/m^3 in 8 July 2013, exceeding the MPC by 1.7 times.

Nonetheless, the supervising state authority[7] has recommended that the air quality monitoring at the Dacha boundary be conducted twice a month in September and October 2013.

Air quality monitoring was undertaken at other locations by Sakhalin Energy on the above dates as part of its monitoring requirements during flaring (23 June 2013) and routine SPZ monitoring (8 July 2013). The measured data for formaldehyde from these monitoring programmes are presented in Tables 1 and 2 below.

Table 1[8] Air Quality Data (mg/m^3) from 23 June 2013

Wind Direction	270^o							
	Monitoring Location (see Figure 4)							
	Dacha	F1	F2	F3	F4	F5	F6	F7
Formaldehyde	0.070	0.031	0.034	0.033	0.034	0.018	0.016	0.014

[6] Publicly available on http://www.sakhalinenergy.com/en/documents/LIECSV_Report_October_2012.pdf , section 2.3.5 "Engagement with the 'Stroitel' Dacha Community in Prigorodnoye", pp. 15-30

[7] RosPotrebNadzor (RPN) – The Russian Federal Service for Protection of Consumer Rights and Human Welfare

[8] The location of the monitoring points are as follows: F1 is approximately 250 metres to the west of the site boundary; F2, F3, F4 are located immediately north of the site boundary, the other points are approximately 2.5 km north-east of the site perimeter.

Table 2[9] Air Quality Data (mg/m^3) from 8 July 2013					
Wind Direction	180 - 190^o				
	Monitoring Location (see Figure 5)				
	Dacha Pt	SPZ 2	SPZ 3	SPZ 4	SPZ 5
Formaldehyde	0.061	0.016	0.027	0.033	0.016

Review of the monitoring results at all sites on both dates indicates that the measured formaldehyde levels at the Dacha monitoring location are higher than at any of the other monitoring locations (for which levels are all within the MPC).

There are a number of uncertainties that may affect the interpretation of these results (e.g. precise duration and timing of the sampling events, potential wind direction changes during the sampling period, relative altitude of receptor locations to potential emission sources etc). Nonetheless, given the location of sampling points SPZ 2-5 and F1-7 in relation to the Prigorodnoye Production Complex (distance and orientation to the wind direction), it would be generally expected that if the Prigorodnoye Production Complex were the primary source of ambient formaldehyde, levels at certain sampling locations would be higher than at the Dacha monitoring location. This is not the case, and specifically formaldehyde levels at locations which are both closer to and more downwind of the Prigorodnoye Production Complex than the Dacha site were significantly lower than at the Dacha location.

Notwithstanding the uncertainties described above, overall the available data do not support the contention that the elevated formaldehyde levels at the Dacha site are primarily due to emissions from the Prigorodnoye Production Complex.

In addition to the concerns about formaldehyde concentrations in the air, the Dacha owners have also raised other issues that were mentioned in previous years, namely:

- Decreased agricultural productivity (including vegetables, fruit and berries) and the reduced quality of agricultural produce at the Dacha plots, particularly that planted in open ground;
- Concerns over the sufficiency of the established SPZ (the SPZ was approved by the Russian state authority in April 2012) in case of an emergency at the Prigorodnoye Production Complex and the evacuation procedure during abnormal events;
- The presence of flaring and the resulting visual/luminosity disturbance as well as some precipitation effects that are claimed to be associated with flaring;
- The increased concentrations of contaminants in the soil and agricultural produce;
- The presence of a sludge film on the water surface in water storage containers at the Dacha plots.

The detailed description of these issues is provided in the IEC's 2012 Site Visit Report, including the aspects related to resettlement and compensation[10].

[9] The SPZ monitoring points are located around the edge of the SPZ running from SPZ 2 point west of the site, SPZ 3 north-west, SPZ 4 north and SPZ 5 north-east of the site.

The Company has implemented the two recommendations resulting from the 2012 IEC monitoring visit, which were:

- The provision of information relating to the SPZ substantiation for the Prigorodnoye Production Complex. The material has been placed in the nearest Info-Centre in Korsakov and was sent to the Head of the Dacha cooperative in July 2013. This information is provided in Appendix 6 to this report;
- An additional information session was arranged in August 2013 for representatives of the Dacha cooperative to explain the measures of emergency prevention and response at the Prigorodnoye Production Complex. This included an explanation of the weekly testing/sound drill[11] of the emergency alarm system at the LNG Plant and provided contact details in case of an abnormal situation. Based on this session, at the time of the site visit the Company was preparing additional material to be placed in the Korsakov Info-Centre and to be sent to the Head of the Dacha cooperative (subsequent to the site visit the Company has stated that this was undertaken). Seven members of the Dacha cooperative attended the session.

Other means of engaging with the Dacha cooperative also included:

- An annual meeting organised as part of the Company's routine monitoring of social impact (conducted in July 2013);
- The on-going monitoring of air quality and noise levels at the boundary with the dachas as part of the "Quality of Life" monitoring (in addition to the mandatory industrial monitoring at the other various locations);
- An invitation to participate in the wider stakeholder dialogues conducted biannually during preparation of the Company's Sustainable Development (GRI) Report;
- Regular notifications of the planned maintenance works with gas flaring at the Prigorodnoye Production Complex and the emergency alarm test (sound drill) at the LNG plant (communicated via the Korsakov newspaper "Voskhod" and the local TV channel).

Overall, it is considered that Sakhalin Energy has a variety of well-established mechanisms and instruments of engagement in place that can continue to be used in further interactions with the Dacha cooperative. These mechanisms include:

- Social impact monitoring (annual);
- Annual public meeting in Korsakov;
- Biannual stakeholder dialogues as part of the Sustainable Development Report preparation;
- Air and noise monitoring (with the results of the monitoring communicated directly to the Head of the Dacha cooperative);

[10] http://www.sakhalinenergy.com/en/documents/LIECSV_Report_October_2012.pdf, section 2.3.5 "Engagement with the 'Stroitel' Dacha Community in Prigorodnoye", pp. 15-30

[11] Conducted every Wednesday at 10:00 AM.

- Public grievance procedure; and
- Bus tours to the Prigorodnoye Production Complex organised annually for Korsakov residents.

These means of engagement are considered to be sufficient for maintaining the overall link with the external public and with the Dacha cooperative.

3.4 Social aspects of the OPF Compression Project

Sakhalin Energy reports that the ESHIA for the OPF Compression Project is nearing finalisation. As per the Front-End Engineering and Design (FEED), the estimated peak manpower requirement for the construction phase is 1,400 personnel. It is anticipated that the entire workforce, including contractor personnel, will be housed at the on-site accommodation facility.

The existing camp for the OPF operations workforce is a high quality and well managed residential facility (closed camp – no authorised access is permitted) with a current total capacity of 400 personnel. Camp refurbishment is planned in the course of 2014 to allow for the extra intake of construction personnel. Given these additional accommodation requirements for the construction workforce, ENVIRON considers it important that the standard of the residential facilities and services should not be compromised and that sufficient camp capacity be ensured for the forthcoming construction phase. The security arrangements for the OPF site will also need to be revised accordingly to factor in the presence of 1,400 workers at the peak of construction. The security arrangements should include adequate staffing of security services and their adherence to the Code of Conduct as well as knowledge of the Company's grievance process.

Another aspect that will be essential for minimising any potential impact on the offsite communities is road traffic safety during the transport of personnel, equipment and materials on public roads during the construction phase of the OPF Compression Project. This primarily concerns the use of a section of the regional public road to the north of the OPF site (Nogliki – Nysh – KP0[12] of the OPF access road) which is presently unpaved. It is suggested that this section of the public road either be sealed or properly maintained if the Project involves heavy traffic flows along this stretch. Sakhalin Energy reports that it is currently developing a Road Safety Plan specifically for the OPF Compression Project.

It is considered very unlikely that settlements in the vicinity of the OPF could contribute a significant number of workers to the labour force. Out of 600 residents officially registered in the nearest village of Nysh, which is located approximately 90 km from the OPF site, 35-40% of the population are retired and the rest do not have the required technical skills or qualifications. Any possibilities for finding employment associated with the Project will therefore be mainly for non- or low-skilled positions, such as general labour or non-qualified services.

ENVIRON suggests that during construction Sakhalin Energy maintains regular interaction, and ensures the provision of information about the OPF Compression Project to the local community, via Nysh Administration and through annual public meetings (in addition to the yearly public meeting and the functional Info-Centre in Nogliki).

[12] Kilometre Point

ENVIRON further notes that it will be essential for the Company to ensure contractors' social compliance during the Project through, *inter alia*:

- Contractual obligations;
- Training, monitoring and auditing by Sakhalin Energy;
- Application of relevant policies and procedures (e.g. the Fishing, Hunting and Gathering Policy during Construction, the Human Rights Policy, Worker Code of Conduct); and
- Contractors' reporting on social performance.

It is also required that suitable medical services be provided for the construction workforce of up to 1,400 contractor personnel. ENVIRON understands that dedicated medical facilities/services will be provided for the construction workforce and that the existing OPF medical facilities (see below) will continue to be used for operations personnel. Medical services for construction personnel should include arrangements for routine medical examinations, supply of medications, immunisation, emergency response, epidemic prevention, health awareness raising and prophylaxis.

3.5 Medical services at the OPF

The existing clinic at the OPF site is intended for the OPF operations personnel. It is well organised and coordinated and follows the required procedures. In addition to a general ward (two beds), the clinic has an intensive care unit (two beds, as shown in Photo 7) and a fully equipped isolation ward (one bed). In an emergency, the clinic will perform the following main functions: sorting of the injured in accordance with the type/urgency of medical aid required, stabilisation and preparation for transportation to the designated hospital.

The staff of the clinic carry out necessary immunisation (primarily influenza vaccination and if necessary for tick-borne encephalitis[13]) and raise awareness among the workforce on the prevention of communicable and cold-related diseases. Routine medical check-ups are also conducted as per the RF Government Decree on rotation-based work[14]. Doctors of the clinic have access to an electronic database that tracks medical examinations performed on the workforce and contractors and provides notifications two months before the next medical examination is due.

We understand that separate dedicated medical facilities will be provided for OPF Compression Project construction workers.

[13] Based on regular liaison with the competent state authorities monitoring the encephalitis epidemic situation

[14] Contractors normally supply the data of medical examinations on their own personnel

Photo 7: Intensive care unit at the OPF on-site clinic

The clinic staff report that they maintain a drug inventory (log) to ensure the management of medication stock. The stock is stored in a secure room with restricted access, as shown in Photo 8.

Photo 8: Secure drug storage room at the OPF on-site clinic

The clinic allows the collection and disinfection of clinical waste on-site (collection and transfer containers are shown in Photos 9 and 10 below). The temporary storage of disinfected clinical waste before removal does not currently represent a major issue due to the small volumes of this type of waste generated on-site[15]. However, this aspect will need to be revised to account for the additional construction personnel and the establishment of a designated storage facility for medical waste might need to be considered. ENVIRON also suggests that Sakhalin Energy continues to ensure safety during the movement of disinfected clinical waste and we recommend that it verifies/assesses third party facilities for the final removal (incineration) of such wastes as part of the forthcoming ISOS audit.

Photo 9: Clinical waste temporary collection container (prior to disinfection)

[15] Typical duration of temporary storage is 14 days.

Photo 10: Sealed container for removal of disinfected clinical waste

3.6 Protection of Cultural Heritage Resources

In 2013, an external contractor performed monitoring of the known objects of cultural heritage and historical sites located in the vicinity of the pipeline RoW and the Project's assets. This was carried out to ensure that the integrity of the valuable features had not been compromised and that the appropriate protection measures (warning signs) are in place in line with the Company's "Plan for Protection of Cultural Resources During Sakhalin II Operations". The main finding of the external monitoring was that the Sakhalin-2 Project does not presently have any impact on known cultural resources. However, some potential risks to the integrity of some of the objects have been identified due to the natural processes of slope erosion. The correspondent measures recommended by the specialised contactors include the following:

- Installation of protective metal fencing around the sites that are at risk; or
- Implementation of emergency rescue excavations of the cultural resources at such sites.

Sakhalin Energy is currently examining these proposed measures for adequacy and applicability/effectiveness.

Having revised the existing arrangements related to the protection of cultural heritage resources, ENVIRON suggests that:

- General awareness and training should continue to be provided, including to contractor personnel as appropriate. This should also cover the Chance Finds and Protection during Emergencies procedures, and the Damage Liability for contractors;
- Internal monitoring of the known objects of cultural heritage should be continued on an annual basis;
- A specialist external contractor should be mobilised in the event of construction works and in cases where emergency /rescue excavations are required;

- A specialist external contractor should be consulted as part of revising the scale and scope of the current monitoring programme (i.e. identifying the objects that require less frequent or no further monitoring due to their remote locations and distance from the Project's operating assets, and continuing monitoring of the features in close proximity of the roads, the pipeline and other facilities that may represent a risk).

3.7 Grievance Redress

Sakhalin Energy continues to successfully operate its well-established Community Grievance Procedure that was described in detail in the previous IEC Site Visit reports. The Company informs that 14 grievances in total were lodged in 2012, all of which were rated as Low risk as per the HSESAP Risk Assessment Matrix. The breakdown of grievances by category is presented in Table 3 below.

Table 3: Grievances lodged in 2012 (Categories and % from total number)

Category	Number	%
Community impact	10	71
Recruitment and employment	1	7
Other *	3	22
Total	**14**	**100**

** Other – SIMDP, contract tender process, code of conduct*

As per the Grievance Procedure, Sakhalin Energy implements the assessment, investigation and resolution process for all incoming complaints. During 2012, the following actions were conducted as part of the resolution and tracking process:

- All new grievances were assessed against assessment criteria and, where necessary, further categorised and entered into the grievance tracking system;
- Action parties and communication focal points were duly assigned and notified;
- Acknowledgement letters on all new grievances were sent to the complainants within 7 working days from the date of grievance receipt;
- Investigations were carried out on newly received and outstanding grievances / claims;
- Communication with Action Parties and other involved parties was carried out to consult on the process of grievance resolution;
- Action Completed letters have been sent to the complainants.

Of the 14 grievances received in 2012:

- Seven have been finalised;
- Five have been resolved with signed statements of satisfaction;
- Two have been closed by a Business Integrity Committee (BIC) decision (including one closed by the SIMDP Board).

All the grievances have been finalised within the period stipulated by the Community Grievance Procedure (45 working days). Three grievances were finalised within 20 working days.

Seven of the 14 grievances received in 2012 were still 'live' at the end of 2012:

- Investigations were conducted, all circumstances were ascertained and meetings were held with the complainants;

- All outstanding grievances were subsequently finalised in 2013 (one with the satisfaction letter signed, six closed out by a BIC decision) within the time stipulated by the Grievance Procedure;
- The grievance related to the SIMDP was reviewed by a SIMDP external expert.

The most recent statistics as of August 2013 show that all 13 grievances that were lodged by that time have now been finalised: eight grievances were resolved with the statements of satisfaction signed by complainants and give grievances were closed by a BIC decision. All of the grievances were closed out within the period stipulated by the Community Grievance Procedure, with five grievances having been finalised within 20 working days.

The Grievance custodian reports that the majority of the complaints are not related to the Company's activities, e.g. roads or storage facilities that are found to be outside the Company's jurisdiction.

Sakhalin Energy continues to raise awareness of its Grievance Procedure via the following means:

- Public awareness campaign;
- Induction and refresher training of the grievance resolution process for Company staff, including specific training for responsible Action Parties;
- Training on the HSESAP Social commitments and the Human Rights Policy for contractors / sub-contractors, including office staff and in-field and security personnel that may have a direct encounter with the external communities;
- Detailed information published in Sakhalin district newspapers;
- Public leaflets with contact information of Sakhalin Energy's CLOs and Info-Centres where a complaint can be submitted;
- Information about the Grievance Procedure included in the presentations during annual public meetings with the communities;
- Training provided to librarians / consultants of the Info-Centres, with the collection of their feedback on the Procedure.

An important milestone was the participation of Sakhalin Energy in the Advisory Group for a European Commission project. This project was for the development of a guide for the oil and gas sector on implementing the UN Guiding Principles on Business and Human Rights. The project continued throughout 2012 and was successfully completed in 2013[16].

Overall, ENVIRON concludes that the Company's Public Grievance Procedure remains an illustrative example of good practice that serves as a benchmark in the oil and gas industry.

3.8 SIMDP Update

Sakhalin Energy continues to implement the Sakhalin Indigenous Minorities Development Plan (SIMDP-II) which was extensively covered in previous IEC Site Visit Reports.

[16] European Commission: Oil and Gas Sector Guide on Implementing the UN Guiding Principles on Business and Human Rights http://www.ihrb.org/pdf/eu-sector-guidance/EC-Guides/O%26G/EC-Guide_O%26G.pdf

The main highlights to date include the following:

- Workshop for the consultants of Info-Centres on the aspects of the SIMDP implementation (November 2012);
- Participation of the indigenous peoples' (IP) representatives in the public dialogues during preparation of Sakhalin Energy's Sustainable Development Report for the year 2012 (November 2012 – February 2013);
- Public meetings and information sessions (conducted in 10 settlements with a total of 226 participants in February 2013);
- Regular update of information boards in all areas of the IP residence on the Island;
- Publication of a regular newsletter;
- Operation of the dedicated website[17];
- Continued operation of the dedicated SIMDP Grievance Procedure[18];
- Consultations with potential applicants, grantees, and a review of the reporting on completed projects, including the provision of feedback;
- Simplification of the grant application form to facilitate wider participation of the IP communities.

The SIMDP continues to be the subject of independent external monitoring. The mid-term evaluation of the Plan was conducted in May – June 2013. This included a visit by external experts[19] who met more than 80 respondents in 12 communities and a sociological survey that covered 350 respondents in 7 communities. The annual internal monitoring that is carried out by Sakhalin Energy's IP Unit is also in place.

To ensure the capacity-building for the successful implementation of the Plan and wide participation of the recipient IP communities, the following training is provided as part of the SIMDP:

- Annual training on business planning (provided to the members of the SIMDP Coordinating Bodies (including Governing Board, Executive Committee, Social Development Fund Council and Committee of the Traditional Economic Activities Support Programme) for further dissemination of this information on to their respective communities);
- Workshop on the basics of project management;
- Workshop on the microloan programme, including experience sharing and the identification of potential issues and opportunities.

ENVIRON notes the ready accessibility and availability of the dedicated IP CLO that covers the traditional areas of the Indigenous Peoples residence. On the whole, the SIMDP-II

[17] www.simdp.ru

[18] Majority of complaints submitted in 2013 were related to the process of fund distribution. All seven complaints were investigated by the SIMDP regulatory bodies within the stipulated period of time, with six complaints having been resolved with signed statements of satisfaction and one complaint closed out by decision of the SIMDP Governing Board.

[19] In 2013, the independent expert panel consists of Gregory E. Guldin (an international expert in Indigenous Peoples), an independent IP representative from Khabarovsk Region and Chair of the Sociology Department at Sakhalin State University who were approved by all three parties of the SIMDP. Previous reports of external monitors are available on http://www.simdp.ru/eng.php?id=18&pid=13

serves as the exemplary model for similar projects in regions with Indigenous Peoples that require demonstration of the Free, Prior and Informed Consent (FPIC) concept.

Other IP-related initiatives with which Sakhalin Energy participates are also noteworthy, including the translation of the Universal Declaration of Human Rights into the Nivkh, Uilta and Nanai languages, publication of the Russian-Uilta dictionary, and translation of the UN Declaration on the Rights of Indigenous Peoples into the Uilta Language[20].

3.9 Social Investment Programme

Sakhalin Energy has been implementing its Social Investment (SI) Programme in line with the Company's Sustainable Development Policy. Over the years, the SI Programme has evolved into a constructive model of community investment with a strong partnership foundation and a robust sustainability agenda. From the number of successful initiatives that have been devised under the SI framework, one of the major highlights has been the Life Safety Programme for children that provides education and training on safe behaviour and guidance in emergency situations[21]. The Life Safety for Children Programme has become the subject of a case study on collaborative business practices on children's and human rights[22].

[20] Jointly with the Office of the UN High Commissioner for Human Rights. See also: http://www.sakhalinenergy.com/en/default.asp?p=channel&c=4&n=465.

[21] The Programme is jointly implemented by Sakhalin Energy, Emercom and the Ministry of Education of Sakhalin Oblast. See also http://www.senya-spasatel.ru/

[22] See also: "Sakhalin Energy: A Partnership for Promotion of Children's Rights and Safety". By K. Shakko http://www.unglobalcompact.org/docs/issues_doc/human_rights/Business_Practices/Sakhalin_Case_FINAL.pdf

4 Pipeline Right of Way Monitoring

4.1 Introduction

During the recent site visit, a number of locations were visited along the onshore pipeline Right of Way (RoW). The RoW inspections focused on the condition and reinstatement of the RoW in general, although specific visits to a number of pipeline river crossings were also undertaken. The ENVIRON team also visited Sakhalin Energy's RoW and associated landfall facilities in the Chaivo Peninsula. The full list of locations visited, together with summary descriptions of the observations from each location, is presented in Appendix 4.

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

- Biological reinstatement;
- Drainage and erosion control;
- River crossings;
- Geotechnical works;
- RoW access.

4.2 Biological Reinstatement

4.2.1 Overview

Observations made during the current monitoring visit indicated a continuous, and in some locations, significant improvement in vegetation growth over previous years. Most areas that were seen exhibited good, sometimes dense, growth and ground cover.

Despite the overall good impression on the status of biological reinstatement, specific issues were observed in relation to:

- Tree growth;
- Reinstatement of especially steep slopes along the RoW;
- Reinstatement of slopes with sandy soils.

These issues are discussed separately in the sub-sections below.

4.2.2 Tree growth

Tree growth on the RoW was first identified as an important issue during the October 2011 monitoring visit. Following the 2011 visit, Sakhalin Energy implemented a programme to fell trees / saplings on the RoW. Observations during the September 2012 site visit and the latest October 2013 site visit found that significant tree clearance efforts have been made at a number of locations (further details below). Nonetheless, the overall impression from ENVIRON's observation of sample locations along the RoW is that year-on-year the tree / sapling cover has typically become more widespread and denser, and that the trees are taller and with thicker trunks. The site-by-site status of tree growth is shown in Appendix 4, and an example of tree growth from the October 2013 site visit is shown in Photo 11 below.

Photo 11: Tree growth on the RoW north of the Djimdan River

Since the last visit in September of 2012, Sakhalin Energy increased its efforts of tree removal. Two types of tree removal methods were noted during the visit (areas in which each method had been applied were visited, although the actually cutting activity was not witnessed):

- Manual cutting with handsaws;
- Mechanical cutting using a tracked vehicle.

Multiple areas were visited were manual cutting had taken place. In these areas the trees / saplings were observed to have been cut at the main trunk about 10 to 20 cm above ground level. This method leaves the roots untouched and may not be effective in the long term. In several cases side branch re-growth (including leaf production) below the cut was evident (Photo 12).

The second (mechanical) method was seen to have resulted in the cutting/ripping of the trees / saplings at about 30 cm above ground. This method also leaves the root system in place. Since this was the first year that this method was implemented, no side branch regeneration was observed but this is likely to occur next spring. However, as Photos 13 and 14 show, an additional result of the mechanised tree removal is heavy disturbance of the soil on the RoW and damage to other vegetation including grass and other plants.

Photo 12: Sapling regeneration after cutting of main trunk

Photo 13: RoW after mechanical tree felling near KP 63

Photo 14: RoW after mechanical tree felling near KP 82

Notwithstanding the method chosen to remove the trees from the RoW, the level of effort that was observed still appears to be less than that required to keep up with the rate of tree growth, and ultimately reduce it to an annual manageable level.

We recommend that Sakhalin Energy re-evaluates and reconsiders the methods that are currently in use for long term effectiveness and also their impact on existing biological reinstatement. Alternative means of tree eradication should be reviewed (in the first instance by literature review); such alternative methods could include pulling of roots for smaller saplings (as opposed to simply cutting above the roots) and ring-barking for larger trees.

4.2.3 Steep Slopes

Only a limited number of the very steep slopes were observed during the October 2013 site visit, namely those of the Gar and the Krinka Rivers in the Makarov hills. In both cases the slopes were well vegetated. On the south slope of the Gar River a small section of soil slippage was observed. At both sites there was extensive use of slope breakers and they appeared to be in good condition.

Other steep slopes that were viewed during the visit were well protected against erosion but in some cases not very well vegetated (e.g. KP 419.5 south of MOB17 – see Photo 15).

The issue of adequate vegetation cover on steep slopes is on-going. This can result in ongoing slope erosion and sediment run-off into the rivers. ENVIRON suggest that Sakhalin Energy continues to maintain erosion and drainage control in order to minimise these impacts.

Given the difficulties encountered with the re-vegetation of some of these slopes, we also suggest that Sakhalin Energy investigates whether different re-vegetation techniques could

be identified to ensure successful re-vegetation. It likely that such techniques will be site-specific and additional specialist advice may be required.

Photo 15: Steep slope at KP 419.5 showing poor vegetation cover

4.2.4 Sandy Slopes

During the initial post-construction years, the reinstatement of sandy slopes proved to be a difficult and time-consuming task. This was mostly due to the lack of top soil preservation and the easily erodible nature of those slopes with sandy lithology. A significant improvement in the vegetation cover of these slopes was first noted during the ENVIRON's September 2012 site visit and was attributed to an increase in slope stabilisation efforts and additional seeding.

These observations were re-confirmed during the October 2013 site visit, particularly in the historically difficult sandy region of KP 120 – 140 as shown in Photo 16.

Notwithstanding the general improvement in the re-vegetation of sandy areas, continued efforts are still required to ensure that all such areas are adequately reinstated.

Photo 16: Sandy slope at KP 128 showing good vegetation cover

4.2.5 Wetlands

A number of wetlands areas were viewed during the October 2013 site visit, however due to access and schedule constraints, the number of wetland areas visited was limited and could only be viewed from a distance. Nonetheless, general impressions of wetland recovery indicated that while some wetlands showed generally good recovery (e.g. KP 149 area, Photo 17), other locations were found to be recovering much more slowly.

Photo 17: View of wetland around KP 149

An example of a poorly recovering wetland is shown in Photos 18 and 19 below from the Dagi River Valley. The photographs provide a comparative view of the state of recovery of this wetland area in September 2012 (Photo 18) and in October 2013 (Photo 19). It is clear from comparison of the photographs that very little improvement took place in the intervening year.

Photo 18: View of the Dagi Valley September 2012

Photo 19: View of the Dagi Valley October 2013

The differing levels wetland recovery at certain locations may be attributed, at least in part, to two main factors:

- In some areas, materials (e.g. soils and stone) imported during the construction phase had not been adequately removed. This includes soils used to create the berm over

the pipeline and also the 'running track' road used for machinery/vehicular access on the RoW during construction. In the areas where this material had not been removed, re-vegetation was noticeably less advanced.

- Depressions left on the RoW following construction, which have resulted in water ponding/waterlogging.

Other factors that may impede wetland recovery more generally include local climate, hydrogeology and soil conditions.

We recommend that Sakhalin Energy conducts detailed assessments of all poorly regenerated wetland areas to identify all factors impeding re-vegetation. In the case of sites where importation of materials and/or depressions are identified as key drivers for poor re-vegetation, ENVIRON recognises that measures to remove any remaining imported materials and to infill depressions would require the use of heavy equipment, which in turn may result in damage to recovering areas as they access the wetland. Nonetheless, if continued poor rates of recovery are identified by future monitoring at these specific sites, then it is recommended such measures may need to be considered in these areas.

4.3 Drainage and Erosion Control

4.3.1 Slope Breakers

Slope breakers play an important part in managing slope drainage and erosion control. During the October 2013 visit slope breakers were found to be in mostly good condition at the RoW locations inspected. An example can be seen in Photo 20, taken from KP 178 north of the Devyataya River.

Photo 20: KP 178 Slope with good slope breakers protection

The vast majority of slope breakers were well positioned and in good condition. However, there were a few sites where additional slope breakers could improve drainage. An example is the RoW slope at approximately KP 15 that exhibits erosion on the slope due to a lack of surface stabilisation from slope breakers and/or vegetation. Photos 21 and 22 show the condition of this site in September 2012 and October 2013 respectively. While the exact viewpoints are different between the two photographs, they nonetheless demonstrate that even a mild slope which has no (or poorly constructed) slope breakers and poor/no vegetation can develop deep erosion.

Photo 21: RoW at KP15 in September 2012 showing development of erosion

Photo 22: RoW at KP15 in October 2013 showing increased development of erosion

4.3.2 Geojute and Coco matting

Geojute matting (made of jute fibre), and coco matting (made of coconut fibre) are inexpensive but effective erosion control measures. When installed correctly, these materials assist in stabilising un-vegetated soils while providing better germination conditions for seeds, and hence promote the establishment of vegetation. Sakhalin Energy has used geojute and coco matting extensively on steep slopes and slopes with highly unconsolidated soils.

During the October 2013 site visit, the use of both types of matting was observed at numerous locations. The two most common and effective uses are the fortification of slope breakers and the coverage of certain steep slopes. Both geojute and coco mats are bio-degradable and will last only a limited number of years depending on soil and climate conditions. However, the use of these materials provides the temporary surface stabilisation necessary for vegetation to establish itself on slopes or slope breakers. Once the vegetation is established it promotes further, permanent soil/slope stability. There are numerous examples where the use of geojute and coco matting has successfully helped to achieve this goal.

One such example is the slopes on the Devyataya River at KP 178 on which the slope breakers were fortified by geojute and seeded (Photo 23). Both slopes are now stable, with heavy vegetation completely covering the geojute.

Photo 23: Slopes of the R. Devyataya at KP 178 showing dense vegetation on geojute fortified slope breakers

However, there are other locations where geojute and/or coco matting have been installed and not yet degraded, but nonetheless re-vegetation efforts have yet to be successful. ENVIRON suggests that such locations be re-evaluated by Sakhalin Energy and that reseeding and the potential use of fertilizer be considered (where it is not prohibited). Examples of such locations include the RoW near KP 180 (Photo 24), which has side slopes that have been covered with geojute but nonetheless remain poorly vegetated.

Photo 24: RoW slopes leading to an access on the at KP 180

4.3.3 Geotextile

Sakhalin Energy has made extensive use of synthetic geotextiles, including the flat, filament-made Enkamat type and more robust cell-based geonets. Both types of geotextile are used by the Company to stabilise slopes and side cuts of varied steepness, sometimes in conjunction with hydro-seeding.

During the October 2013 site visit, good use of Enkamat type geotextile was observed at a range of locations, including the Vatung and Pilenga River banks (KP 19 and 15). In both cases the Enkamat was placed within the Reno matting and will help to trap soil particles and encourage vegetation growth on the mats (Photo 25).

Photo 25: Use of Enkamat within Reno matting at the Vatung River

4.3.4 Silt Fencing

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 to sediment movement. By its nature the fencing is for temporary use. Silt fencing is mainly used during construction activities and in the post construction vegetation recovery period to protect water bodies. It is typically used above riverbanks and also on temporary roads and bridges above water bodies.

During the October 2013 site visit, very few instances of silt fence installation were observed. In many cases the silt fencing has already been removed, but in some it is still visible within the vegetation. The mostly very well vegetated slopes and river banks indicate that there is no further need for the silt fencing to be in place and in most cases it can be removed.

ENVIRON suggests that Sakhalin Energy continues its on-going programme of conducting a site-specific evaluation of whether to continue the use of silt fencing. If the continuing presence of silt fencing in a specific location is no longer needed, then it should be removed (e.g. the silt fence above the bank of the Krinka River – the bank and slope are fully vegetated and there is no longer need for the silt fence as shown in Photo 26). Conversely, if the silt fencing still proves useful it should be kept in good repair.

Photo 26: R. Krinka with good re-vegetation and redundant silt fence visible

4.4 River Crossings

During the previous monitoring visit (September 2012), river crossing locations, including riverbank stabilisation, were found to be in good condition. The October 2013 site visit found that the condition of the river crossings continues to improve. The main factor that contributes to the continuing stability is the improving vegetation cover on the riverbanks themselves and on the adjacent RoW. In addition, a variety of bank protection measures (including riprap, Reno matting and gabion walls) were installed at many rivers during construction, and on-going maintenance of these is of a generally good standard. These protection methods are discussed in turn below.

- **Riprap.** The continuing use and installation of heavy-duty rock at locations where previous smaller-scale riprap protection had been damaged during the spring thaw appears to be successful. Numerous good examples were identified during the site visit, including at the Vladimirovskaya, Pobedinka, and Nitui, Rivers (see Appendix 4).
- **Reno Matting.** Observations during the October 2013 site visit show that reno matting continues to be effective in protecting riverbanks. During the visit it was observed that continuing, year-on-year, improvements in the vegetation growth at many of the locations helps to stabilise and anchor the matting to the banks. 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 mostly in good condition. In a few instances it was observed that the leading corner of the matting on the upstream edge of the river crossing was damaged during high river flows. It is suggested that this type of minor damage is monitored and evaluated by the maintenance crews.
- **Gabion Walls.** Gabion walls have been installed where required, mostly as riverbank protection in high energy rivers (e.g. the R. Pobedinka and R. Manui – see Photo 27)

and in many cases in conjunction with reno matting. At locations inspected during the October 2013 site visit the use of gabions on river crossings was seen to be successful.

Photo 27: Gabion wall on the south bank of the R. Manui

4.5 Geotechnical Works

Sakhalin Energy and its contractor (GTT) have a process in place to monitor the RoW and identify areas of geotechnical concern. ENVIRON understands that the monitoring process comprises weekly helicopter surveillance flights in the autumn and spring, and bi-weekly flights in the winter and summer. Based on the surveillance flight findings (supplemented by ground inspection as necessary), 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, 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 major overhaul of river bank protection, and repair of landslides and slope failures.

Evidence from visual inspection of a number of locations along the RoW during the October 2013 site visit, including two areas where Category 2 works are in progress, indicates that the process is generally working well.

4.6 RoW Access

Several RoW access roads were used during the recent visit and typically the roads provide access to selected Block Valve Stations (BVS). The roads ranged in length from a few hundred metres to several kilometres, and appear to be well constructed and with very minor signs of erosion. The majority of the roads used were protected by a locked barrier gate which limits access to sensitive facilities such as BVS, and general access by the public to the RoW. Other access to the RoW is inherent where the pipeline RoW crosses public roads/tracks such as forestry tracks. Road crossings provide unhindered access for the general public, including fisherman and recreational motor vehicles. During the October 2013 site visit it was observed that local people were present at several locations along the RoW and there were visible tracks of various vehicles entering and travelling along the RoW (including through rivers). It should be recognised that it is difficult/impossible for Sakhalin Energy to block public access from road crossings, but it is nonetheless suggested that Sakhalin Energy continues to investigate methods to limit public access to the extent possible.

See also Section 6.3.5 for a discussion of induced access issues related to the Beach Access Road at the OPF.

4.7 Summary

Overall, the October 2013 site visit revealed significant progress in reinstatement of the RoW. In particular, ENVIRON notes continuous improvement in the re-vegetation of sandy areas and in most of the steep slopes (with some exceptions). In addition, maintenance of the pipeline RoW appears to be working successfully.

Over the last twelve months a number of ‘dig-ups’ have been undertaken along the RoW in order to inspect sections of the oil and gas pipelines. The need for such inspections is based on the results of routine intelligent pipeline inspection gauge (PIG) surveys. During the October 2013 site visit Sakhalin Energy indicated that a reinstatement procedure for the dig-ups was issued to GTT and that a Sakhalin Energy representative is present during the duration of the works, who also monitors the reinstatement activities.

Despite the generally very favourable impression gained from the site visit, areas for improvement were nonetheless identified and the most significant of these are summarised below:

- As noted above, re-vegetation of sandy and steep slopes has improved significantly. However, there are some particularly problematic slopes that, due to their steepness and soil lithology, require continuing efforts and possible re-thinking of the re-vegetation methods in some cases (LAND.16 in the Findings Log).
- The continued presence of tree saplings along the RoW is such that it is now becoming a significant compliance issue. There is a need for urgent control measures in order to maintain compliance with RF legal requirements and to bring this issue under control (see LAND.17 in the Findings Log).
- The limited visual observations of wetland areas made during the October 2013 site visit identified differing levels of recovery between different wetland areas, and this is

consistent with both the findings of the September 2012 site visit and also Sakhalin Energy's own ongoing wetland monitoring programme. We recommend that Sakhalin Energy conducts detailed assessments of all poorly regenerated wetland areas to identify all factors impeding re-vegetation. In the case of sites where importation of materials and/or depressions are identified as key drivers for poor re-vegetation, ENVIRON recognises that measures to remove any remaining imported materials and to infill depressions would require the use of heavy equipment, which in turn may result in damage to recovering areas as they access the wetland. Nonetheless, if continued poor rates of recovery are identified by future monitoring at these specific sites, then it is recommended such measures may need to be considered in these areas (LAND.19 in the Findings Log).

- ENVIRON notes that maintaining the RoW in good condition is an on-going activity and suggests that Sakhalin Energy continues to proactively manage the RoW though inspection and maintenance programmes. 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 suggest that Sakhalin Energy makes increased use of aerial photography to assess the recovery of more inaccessible areas.

5 Monitoring of Other Project Assets and Associated Facilities

5.1 Pipeline Maintenance Depot

5.1.1 Introduction

Six PMDs are located strategically along the pipeline RoW and are primarily responsible for:

- Pipeline maintenance activities along defined stretches of the pipeline RoW, including routine helicopter surveillance (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 has inspected a number of PMDs during previous Project monitoring visits and identified minor concerns regarding the drummed storage of liquid chemicals (oils, greases, etc.). The recently closed Finding S&GW.03 regarding deficiencies in adequate secondary containment at PMDs had been open since April 2010. This Finding contained a number of individual Actions which the Company has worked towards addressing.

ENVIRON visited two PMDs during the October 2013 monitoring visit, namely the stand-alone PMD at Nogliki and the OPF PMD. The facilities are designed in a standard format and therefore share a number of similar components, however some of the utilities at the OPF PMD (such as waste water treatment) are integrated and/or shared with the overall OPF site.

5.1.2 Secondary Containment

Issues with the adequacy of secondary containment of oil drums have been identified at some PMDs during previous monitoring visits. The issue was therefore a primary focus of the PMD inspections during the October 2013 site visit.

As part of the recent HSESAP revision, the corporate standard for *Soil and Groundwater Industrial Controls*[23] now brings secondary containment requirements in line with IFC and other international standards. Rather than requiring a capacity of at least 150% of the total stored volume, the specification now requires the following controls in unbunded areas:

[23] Document 1000-S-90-04-O-0004-00-E Appendix 5, Revision 02, valid from 31.11.11

"The following requirements shall be observed in the design of secondary spill containment facilities.

1.1. For single tank or container (e.g. drum) intended for storage of fuel, lubricants and other hazardous liquids: the minimum capacity of a secondary spill containment facility must be at least 110 %[24] of the tank holding capacity.

1.2. For two or more tanks and/or containers (e.g. drums) intended for storage of fuel, lubricants and other hazardous liquids: the minimum holding capacity of the secondary spill containment facility must be:

- *at least 150 %[25] of the largest tank/container OR*
- *at least 25 % of the total holding capacity of all the tanks and containers*
- *Hydraulically linked stand-alone tanks will be considered to be one large tank and fall under the requirement 1.1, that the secondary spill containment facility must have holding capacity at least 110 % of the total capacity of all such tanks."*

Nogliki PMD

At the Nogliki PMD, the secondary containment was found to be of a high standard, with all oils, greases and chemical fluids located under cover and within secondary containment that met the requirements of the HSESAP.

Drummed liquid wastes are stored in a large ISO container and located over plastic gridded drip trays. An improvement suggestion was made in relation to this liquid waste storage during the last monitoring visit. This suggestion has not yet been implemented (Photos 28 and 29).

[24] 110% and 25% of holding capacity – is required as per Work Bank standards (http://www.ifc.org/ifcext/sustainability.nsf/Content/EHSGuidelines_Russian) and (http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_GeneralEHS_Russian/$FILE/General+EHS+-+Russian+-+Final_.pdf) .

[25] 150 % of holding capacity is determined as per best international (USA) practices http://www.unidocs.org/hazmat/aboveground/un- 083.html.

Photo 28: Waste liquid storage 2012 Monitoring visit

Photo 29: Waste liquid storage 2013 Monitoring visit (unchanged)

Bulk fuel storage at the PMD comprised three above ground diesel tanks, each approximately 2,000 litres in volume. These tanks are used to supply plant and equipment at the PMD (including road-going vehicles) and also supply the site generators. The tanks were noted to be completely enclosed within a second metal skin, which forms a secondary containment layer around the tank. The tanks were noted be in excellent condition and featured alarms for the escape of any tank product into the secondary containment areas and also for over-filling. The filling points for all the tanks were noted to be located within a lipped area.

Both alarm systems were tested during the course of the monitoring visit and found to be functioning correctly.

One of the tanks was fitted with a dispensing pump for the fuelling of vehicles and plant. This pump was located within a lipped spill containment area.

The area used for vehicle and plant fuelling was surfaced with good quality concrete hard-standing and incorporated a sump for the collection of any spillage occurring from fuelling. The sump area contained a drainage point which discharged into a below ground spillage collection tank. All this equipment was in good condition and was demonstrated to be operational during the monitoring visit.

OPF PMD

During the 2012 site visit, secondary containment of oil drums at the OPF PMD was found to be inadequate, with the volume of drums stored on gridded drip trays exceeding the ability of the trays to meet the requirements of the Sakhalin Energy *Soil and Groundwater Industrial Controls* specification. Sakhalin Energy has subsequently advised ENVIRON that the situation was addressed by removing surplus drums and relocating others within the PMD.

This monitoring visit confirmed that the number of drums stored upon these drip trays had been reduced and that new drum storage, comprising a series of containers, had been installed in the external yard area of the PMD. These containers had a metal mesh shelf (allowing drums to be stored over two levels) and incorporated a spill lip into their base, providing a secondary containment area. However, it was unclear whether these secondary containment areas were sufficient to retain the volume required by the Sakhalin Energy *Soil and Groundwater Industrial Controls* specification (Photo 30).

Photo 30: External drummed storage at the OPF PMD

It is suggested that calculations are made to confirm the maximum number of drums that may be stored within the external containers in accordance with the above HSESAP specification.

A single above ground diesel storage tank was located at the OPF PMD, was in good condition and located within appropriate secondary containment. This tank also featured a diesel dispending pump and spillage collection arrangement of an identical type to that at the Nogliki PMD. Similarly to the Nogliki PMD, no concerns were identified associated with this fuelling arrangement.

5.2 LNG Facility

The Liquefied Natural Gas (LNG) facility forms part of the Prigorodnoye Production Complex. The monitoring visit included the production process, storage of LNG, and all ancillary and service areas (e.g. water and wastewater treatment and electricity generation).

ENVIRON previously audited the LNG facility in 2011 and identified minor concerns regarding the storage of hazardous materials at ancillary facilities at the LNG plant.

5.2.1 Secondary Containment

Secondary containment of oil drums at the LNG facility had previously been found to be inadequate. Therefore, this issue was the primary focus of our monitoring during this visit.

As part of the recent HSESAP revision, the corporate standard for *Soil and Groundwater Industrial Controls*[26] now brings secondary containment requirements in line with IFC and other international standards (see Section 5.1.2 above).

It is understood that Sakhalin Energy has dedicated a lot of effort towards providing adequate secondary containment of oil drums at the LNG facility, including the provision of awareness training and drip trays. The storage of lube oil and antifreeze in the garage workshops was noted to be much improved since the 2011 audit of the LNG facility as shown in Photo 31 below.

Photo 31: Lube oil and antifreeze storage in the garage workshop

A chemical store, comprising a number of separate locked rooms, contains drums and smaller containers of chemicals and oils used around the site. Each room had a concrete floor, a drain sump and a spill kit. Chemicals are stored in 205 litre metal drums and smaller metal and plastic containers. The general condition of each storage area was excellent. The auditors inspected the following areas:

- C101 - DIPA Sulfonate and Glycol Store
- C102 - Molsieve and Mercury Absorber Store
- C103 - Chemical Store
- C104 - Alkaline Store

[26] Document 1000-S-90-04-O-0004-00-E Appendix 5, Revision 02, valid from 31.11.11

- C105 - Acid Store
- C106 - Chemical Store
- C107 - Lube Oil Store

In all areas inspected the secondary containment was observed to be more than adequate, with environmental controls adequate to the types of materials stored within. Full sets of MSDS were observed in both Russian and English as required by the HSESAP *Chemicals Management* Specification.

Photo 32: Lube oil storage building showing ramp down into secondary containment area

Only one example of no secondary containment was noted in the water treatment plant area – two plastic 25-litre containers of an unknown liquid were not stored on a drip tray. Furthermore, there were no accompanying MSDS for the containers.

Photo 33: Containers of an unknown substance at the wastewater treatment plant with no secondary containment or MSDS

5.2.2 Material Safety Data Sheets and Labelling

The HSESAP requires a full MSDS, in Russian and English, to be available for all chemicals and oil products used and stored at a site. These should ideally be filed at the point of use or storage area for easy reference in case of a spill or incident.

In general, MSDS were found in all oil, lubricant and chemical storage areas, for all materials stored within that area. However, in one garage area the MSDS for lubricating oil and antifreeze were not present at all, and two containers of an unknown substance were present at the wastewater treatment plant. Similar Findings were raised during the October 2011 audit of the LNG facility (under H&S.10 (MSDS) and H&S.11 (labelling)), where the non-compliances were reportedly eliminated and preventative/assurance actions were undertaken.

5.2.3 Waste storage areas

Storage areas for general waste categories 4 and 5 were very clean and organised at the LNG facility. The purpose-built main waste storage building is locked and each waste type is stored within an appropriate metal or plastic container. Furthermore, all waste containers were covered and labelled in both Russian and English with the type of waste and hazard class. Inspection of the contents suggested that these were being used appropriately. Wastes of hazard classes 1 to 3 (e.g. mercury and fluorescent lamps) are stored in plastic crates within the waste storage building. The concrete floor of the waste storage building is sloped towards the rear of the building, ensuring that leaks or spills would be directed to a sealed drainage sump.

Photo 34: View of entrance to waste storage building

Furthermore, the bunded compound for waste empty metal drums adjacent to the waste storage building which noted to be in poor condition during the 2011 LNG audit was observed to have been repaired.

Photo 35: Storage of empty waste drums within a bunded area

Some general waste containers at the LNG facility were not appropriately labelled due to the wet and cold weather causing the labelling to come away from container. Generally these labelling issues are addressed by the site.

At all PMDs, oily rags and used oil filters are stored in clearly labelled containers in the workshop area. These containers were all noted to be placed on gridded plastic drip trays.

5.2.4 Training

Training needs are identified via the training department, which holds a personnel training matrix based upon a job training needs evaluation. The matrix is currently an Excel spreadsheet. As the system is currently manual, there is the potential for training to expire without notification to the training department. A new electronic records system is being piloted which should eliminate this problem.

5.2.5 Conclusions

The primary focus of ENVIRON's monitoring at the LNG facility was to assess the adequacy of secondary containment of oil and lubricant containers in storage areas, and the adequate storage of waste materials. This has previously been an area of deficiency and non-compliance with the HSESAP, which the Company has been working towards addressing.

The secondary containment measures provided by the Company were found to be much improved since previous visits, with the repair of the waste drum compound bund observed to have been completed. Secondary containment provisions are therefore considered adequate with the exception of one isolated deficiency.

Isolated instances of missing MSDS or inadequate container labelling were noted at the LNG facility, although all personnel were aware of the correct procedures.

Other aspects of housekeeping were again good across the board, with wastes stored in appropriately lidded and labelled containers.

6 Other Project Updates

6.1 Waste Management

6.1.1 Background

Sakhalin Energy currently disposes of its non-hazardous wastes to three third party landfill facilities, all of which were previously upgraded with (partial and/or whole) funding from Sakhalin Energy. These landfills are operated by third parties and are located in:

- Korsakov (which receives Company wastes produced from its assets in the south of the island, including the Prigorodnoye Production complex);
- Smirnykh (located in the central portion of the island, and which includes a facility for the receipt of oily contaminated soils/materials in the event of an oil spill);
- Nogliki (located in the north of the island and which receives Company waste from, *inter alia*, the OPF).

Sakhalin Energy has previously raised concerns in relation to non-hazardous waste management, and in particular:

- Concerns over the adequacy of the management of some of the above landfills following changes of ownership and management of these facilities.
- The future landfill capacity of existing landfill facilities available to Sakhalin Energy.

ENVIRON has previously reported these concerns to lenders (e.g. in the September 2012 site visit report), and the current status of these issues was assessed during the October 2013 site visit. ENVIRON's findings are summarised below.

6.1.2 Management of Existing Landfills

The landfill at Nogliki was inspected during the October 2013 site visit. During the construction phase of the Sakhalin-2 Phase 2 Project, the Nogliki landfill was upgraded with financial and technical support from Sakhalin Energy. The upgrade involved to closure of a pre-existing cell and the development of three separate cells, each with its own dedicated leachate collection pond. The design allows for leachate collected in the ponds to be sprayed back into the cells. All cells and leachate systems were designed and constructed to the standards described in the HSESAP. Each of the three cells is dedicated for the disposal of non-hazardous waste from Sakhalin Energy, Exxon Neftegas Limited (ENL) and municipal sources respectively.

The overall impression gained from the October 2013 site visit is that:

4. The management of the landfill has markedly deteriorated since ENVIRON's last visit in September 2012;
5. The management of the landfill now falls significantly short of lender and HSESAP standards.

Specific issues of concern and areas of non-compliance with the HSESAP (*Waste Management Standards Comparison* specification[27]) are summarised below:

1. Daily cover of waste is inadequate at the cell used for Sakhalin Energy waste (Photo 36) and is non-existent at the other two cells. The lack of daily waste cover has resulted in the entire site being covered in windblown waste, including the leachate ponds.

Photo 36: Inadequate daily cover at the Sakhalin Energy waste cell

2. The leachate pond for Sakhalin Energy waste cell was seen to be overflowing (Photo 37), resulting in loss of contaminated leachate water to the environment. Discussions with the landfill operators revealed that the mobile pump used to return collected leachate from the pond to the cell was off-site for repair at the time of the site visit. Inspection of the bowser used to collect water from the leachate ponds for spraying onto the cells was inadequately sized.

[27] HSESAP Document Reference 0000-90-04-O-0258-00-E Appendix 5, Revision 03

Photo 37: Overflow leachate pond at the Sakhalin Energy waste cell

3. A large bubble had developed in the municipal waste leachate pond (Photo 38). ENVIRON suggests that this is likely to be formed by methane that has transported underneath the leachate pond; it is not possible to determine whether the source of this is from the municipal waste cell, the nearby Sakhalin Energy waste cell or elsewhere. This represents a significant health and safety risk at the site and also draws into question the integrity of all cells/leachate ponds at the site.

Photo 38: Bubble formed at municipal waste leachate pond

4. Fencing around the landfill should be installed to a height of 2 m around the entire perimeter of the landfill to prevent windblown waste leaving the landfill site. However,

such fencing was found to be only located along a short stretch of the landfill site adjacent to a nearby federal road.

5. From discussions with the site operator it would appear that although groundwater monitoring cells are located up and down gradient of the landfill site, no active monitoring is performed. This is especially disturbing given the above concerns over the integrity of the cells/ponds and the over-topping of the leachate ponds.

We note that Sakhalin Energy was aware of this situation prior to the site visit and has made attempts to get the landfill site operator to improve its management of the site. We recognise that Sakhalin Energy has limited influence over the landfill operator and given the seriousness of the non-compliances identified above, we make the following recommendations:

1. Sakhalin Energy implements the following immediate initiatives:
    a. Reduce the amount of non-hazardous waste sent to the Nogliki landfill (see below for further details)
    b. Liaise with ENL to undertake a joint inspection of the landfill and work together to apply pressure on the landfill operator to improve its management practices.
2. If improvements to the operation of the site cannot be achieved then Sakhalin Energy should develop alternative waste strategies to avoid future use of the Nogliki landfill (see below for further details).

6.1.3 Landfill Capacity

Sakhalin Energy provided the following status on the existing landfills:

- **Korsakov Landfill**. The landfill operator has implemented a range of waste minimisation strategies in order to extend the life of the landfill. The Korsakov landfill is now anticipated to reach 100% of its capacity by Q3 2014.
- **Smirnykh Landfill**. This landfill has several years' remaining capacity. The landfill was upgraded with a single cell using sole funding by Sakhalin Energy, although the Company reports that over the last two years ENL has disposed of twice as much waste to this landfill as Sakhalin Energy (Sakhalin Energy is reportedly in negotiation with ENL regarding compensation for this). The new landfill operator (GUP) reportedly does not have formal land allocation documentation for the operation the upgraded landfill and therefore does not technically have a fully compliant licence for its activities.
- **Nogliki Landfill.** The remaining capacity of the Nogliki landfill is currently under review. In addition to the management deficiencies observed above, the new landfill operator (GUP) reportedly does not title documents for the landfill and therefore does not technically have a fully compliant licence for its activities.

Sakhalin Energy had previously reported that the Company, in conjunction with ENL, was planning to co-invest in the development of a new solid waste landfill for use by both companies and for the municipal waste near Kholmsk. However, we were informed by Sakhalin Energy during the October 2013 site visit that the Russian authorities had decided that they were starting their own tender process for the design of a new landfill in Kholmsk without any financial or technical aid from Sakhalin Energy or ENL. This means that Sakhalin Energy will have no opportunity to influence the appropriate location or design of the landfill to ensure that it meets lender requirements.

6.1.4 Future Waste Strategy

Sakhalin Energy recognises the risks posed to its non-hazardous waste management strategy and in particular:

- The limited remaining capacity in the landfill facilities currently being used by the Company;
- The absence of other existing landfill capacity that meets HSESAP/lender standards on the island;
- The loss of opportunity to influence the design of new landfills planned by the local authorities (and hence the opportunity to ensure that such facilities meet HSESAP/ lender standards);
- The deteriorating standard of management at the Nogliki landfill (see above) and, to a lesser extent, the Smirnykh landfill.

In response to these risks, Sakhalin Energy is investigating short and long term waste management strategy options. Short-term options include strategies to reduce the volumes of waste being sent to landfill, including the use of incineration of selected wastes by dedicated waste contractors. ENVIRON will review the waste strategies in more detail as they are worked up by Sakhalin Energy. In the meantime we make the following comments:

1. The time pressure for resolution of the poor management of the Nogliki landfill is heightened by the proposed construction of the OPF Compression Project, which is due to commence in Q1 2015. The construction project would be a source of significant additional waste volumes and the Nogliki landfill is the nearest landfill facility to the OPF site.
2. If Sakhalin Energy wishes to include waste management facilities as part of future projects, and specifically the OPF Compression Project, then this is also time-limited as:
    a. Final Investment Decision (FID) is due in Q3 2014; and
    b. There are only 6 months to develop such facilities between FID and start of construction.
3. Under the existing HSESAP the amount of waste that can be incinerated at Project facilities is limited to 90 tonnes per year. This requirement in the HSESAP was initially agreed in the construction phase of the Project and was aimed at reducing the use of small-scale incinerators by contractors. In reality, no such incineration takes place at Sakhalin Energy's operational facilities. In principle, the use of incinerators is acceptable provided that:
    a. The incinerator is appropriately designed for the waste stream for which it is to be used;
    b. In line with the HSESAP, such incinerators would need to be compliant with RF legislation and standards and appropriate EU directives (e.g. 2007/76/EC, 94/67/EC and 89/369/EEC);
    c. Location-specific assessments are undertaken to ensure that ambient air quality standards are met; and

d. Suitable disposal routes for the incinerator bottom ash are available (the requirements for disposal routes will be dependent on the nature of the waste to be incinerated).

4. Waste minimisation could be improved at the OPF (and other Sakhalin Energy facilities) by consideration of waste shredders/compactors (see also the OPF Audit in Appendix 1).

6.2 Western Gray Whale Advisory Panel

Sakhalin Energy provided an update from the Company's perspective of the status of the WGWAP to lenders and ENVIRON during the October 2013 site visit. A key focus of the presentation was the perceived need for the WGWAP process to evolve. ENVIRON has previously reported (following the WGWAP-13 meeting held in May 2013), that Sakhalin Energy and IUCN (the convener of the WGWAP) are seeking to evolve the WGWAP to:

1. Try to engage other offshore operators in the Sakhalin region into the WGWAP process;
2. Focus the Panel on meeting the Company's changing needs now that it has moved into its operational phase;
3. Diversify the sources of funding.

We understand and, in principle, support these general aims. However, the objectives for these changes need to be clearly defined and agreed with the relevant stakeholders, including Sakhalin Energy, IUCN, the Panel members and lenders as required by the WGWAP Terms of Reference. We stress that unless appropriately managed, the abovementioned evolution of the WGWAP has the potential to affect the capacity of the panel to continue to be effective and provide the required guidance for Sakhalin Energy specifically to meet HSESAP and IFC Performance Standards requirements on an ongoing basis.

As previously reported to lenders, it was ENVIRON's understanding that a steering committee was to be set up to develop an agreed set of objectives for the evolution of the WGWAP, and from there to develop a roadmap for the implementation of agreed actions to meet those objectives. It was also ENVIRON's impression that lenders would be invited to take an active part in the steering committee. The importance of lender involvement in the steering committee is that lenders have specific requirements for the WGWAP process that are covenanted by Sakhalin Energy and which therefore must be met.

During the October 2013 site visit, it became apparent that IUCN and representatives of the WGWAP had begun to draft the roadmap. ENVIRON pointed out that lenders had had no involvement in the development of the roadmap and also queried why clear objectives had not been provided for agreement by a steering committee (including lenders) prior to the roadmap itself being developed.

Subsequent to the October 2013 site visit, IUCN issued a draft roadmap for consultation to all participants in the WGWAP process, including lenders and NGOs. As noted above, ENVIRON had anticipated that lenders would have had earlier and more detailed involvement in the development of the objectives and roadmap rather than being limited to consultation at this stage. We will review the draft roadmap separately and provide feedback to lenders in due course, including our recommendations for how best lenders should take this issue forward.

6.3 OPF Compression Project

6.3.1 Introduction

The OPF Compression Project entails the installation of additional inlet compression facilities to ensure that gas inlet pressure to the OPF is maintained 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.

Progress on the OPF Compression Project was discussed during the October 2013 site visit. This included:

- An overview of the Project status and timescales;
- The technology selection for the main compressor power units;
- The status of the ESIA for the project;
- Visual inspection of the sites for the OPF Compression site and associated areas required for the construction, namely:
    - temporary worker accommodation camp
    - laydown areas
    - beach landing facility and associated access road.

Each of these aspects is discussed in turn below.

6.3.2 Project Status and Timescales

The current status of the MP phase of the OPF Compression Project was presented by Sakhalin Energy and is summarised as follows:

- Early works deforestation of the construction site was completed in January – February 2013
- Engineering surveys were undertaken between January and March 2013
- Environmental Engineering Surveys were completed in August 2013
- FEED commenced at the beginning of Q3 2013
- Final Investment Decision (FID) for the MP Phase is scheduled for Q3 2014
- The ready for start-up (RFSU) date for the MP phase is Q1 2018.

The LP phase of the compression project was reported to still be at the evaluation stage.

6.3.3 Technology Selection

In 2011, ENVIRON reviewed outline alternatives for the OPF Compression Project, and in particular the choice of power generators for the compression units. At that time the broad options were either:

- Six 16 MW generators; or
- Three 32 MW generators

ENVIRON recommended at the time that the selection of the larger power (32 MW) generators would lead to a number of significant environmental advantages and, importantly, would be more likely to achieve compliance with applicable lender standards. FEED for the

OPF Compression Project was then taken forward by the Company on the basis of three 32 MW generators being utilised.

However, at the October 2013 Site Visit, ENVIRON was informed that the decision over the specification of the generators was being re-assessed. Specifically, the following alternatives were to be evaluated:

- 16 MW Generators (Aviadvigatel GTU16, reported NOx emissions of >50ppm)
- 25 MW Generators (Aviadvigatel GTU25, reported NOx emissions of >75ppm)
- 32 MW Generators (REPH, GE, RR, reported NOx emissions of <25ppm)

ENVIRON reiterates its opinion that the larger power (32 MW) generators are most likely to meet lender standards. Specifically, we make the following comments:

- **NOx Emissions**

  According to the reported NOx emission data for the different types of power generators being considered, only the 32 MW generator option appears to be capable of meeting lender Standards (IFC EHS General and Sector Guidelines 2007 require NOx emissions of <25 ppm / 51 mg/Nm^3 and continuous or indicative stack monitoring[28]).

  The significance of NOx emissions is further emphasised by the presence of red data book listed lichen in the vicinity of the OPF, which is sensitive to ambient NOx and nitrogen deposition impacts (see also below).

- **Landtake**

  It is likely that the use of a larger number of lower power generators would increase the footprint requirements for the OPF Compression Project. Under IFC Performance Standards (e.g. Performance Standard 6), the mitigation hierarchy of "avoid, minimise and offset" must be applied. Demonstration that impacts are minimised, including through minimisation of the project footprint, is therefore required to meet lender standards.

  The significance of this issue is heightened by the nature of the habitats at and around the proposed OPF Compression Project location, which include wetland areas and, for example, the presence of red data book listed lichen. Detailed assessment of these habitats is required within the Project's ESHIA (see also below), which should include a determination as to whether they constitute modified, natural and/or critical habitats as defined under IFC Performance Standard 6. Visual inspection by ENVIRON indicates that the location of the OPF Compression Project should mostly likely be considered as Natural Habitat or possibly even Critical Habitat. Under Performance Standard 6, requirements for Natural Habitats include:

  - Any conversion or degradation is mitigated according to the mitigation hierarchy (i.e. "avoid, minimise, offset").
  - Mitigation measures will be designed to achieve no net loss.

[28] IFC EHS Guidelines define continuous or indicative monitoring as "Continuously monitor emissions or continuously monitor indicative parameters"

Demonstration that impacts on these habitats are being minimised (including direct physical disturbance) is therefore key to meeting lender standards in this regard.

- **Reliability**

  The demonstrable operational reliability of the different generator options should also be considered as part of the selection analysis. From an environmental perspective, the significance of this relates to minimisation of system trips and associated flaring requirements. This is of high importance to Sakhalin Energy in its efforts to meet the 5% flaring criterion set under Russian Federal Government Decree #7.

6.3.4 Development of the ESHIA

At the time of the October 2013 site visit, the ESHIA for the OPF Compression Project had yet to be made available to ENVIRON for review. Nonetheless, ENVIRON noted to Sakhalin Energy that, on the basis of our current understanding of the project and its location, adequate consideration of the following aspects in the ESHIA elements are likely to be of particular importance in order to meet lender and HSESAP requirements:

- A robust demonstration of Project Alternatives (see Technology Selection above);
- The assessment of impacts on biodiversity must include a detailed assessment of the nature of the habitat in line with the requirements of IFC Performance Standard 6. This should include compliance with requirements for no net loss and/or net benefits in the event that Natural or Critical Habitats respectively are identified (see also above);
- Impacts on lichen should include consideration of air quality and nitrogen deposition impacts in addition to direct physical impacts;
- During early works tree clearance, a small section of trees where lichen growth was identified was left intact (Photo 39). The ESHIA should consider the long-term viability of this mitigation and in particular ‘edge effects’ on this set aside area;
- The potential for traffic impacts on the road in the vicinity of Nysh has been raised by local communities (see also Chapter 3.4) and needs to be addressed in the ESHIA.

Photo 39: Un-felled trees comprising lichen habitats adjacent to the OPF Compression Project site

A draft of the ESHIA for the OPF Compression Project was provided to ENVIRON after completion of the October 2013 site visit. This ESHIA is currently under review by ENVIRON and comments will be provided separately in due course.

6.3.5 Inspection of the OPF Compression Site and Associated Construction Areas

OPF Compression Site

A brief walkover of the proposed OPF Compression site was undertaken and the following points were noted:

- Forested area is small and will likely be prone to edge effects, especially if construction affects local surface hydrology (as is likely). As described above, such effects need to be included in the ESIA for the OPF Compression Project.
- Determination of the habitat type in the location of the OPF Compression Project under IFC PS 6 will need to be made following detailed ecological survey (see above). However, brief visual inspection indicates the area is unlikely to be classified as 'modified habitat'. This will need to be reflected in the ESIA.

Beach Landing Area and Beach Access Road

A temporary beach landing facility will be required during the construction of the OPF Compression Project in order to import large modules and other construction items. The proposed beach landing facility will be in the same location and of similar design to that used during the original OPF construction phase. The area for the beach landing facility was visually inspected during the October 2013 site visit, and the beach and dune areas were found to have recovered well following removal of the original landing facilities used during the original construction of the OPF (Photo 40). This augurs well for the reinstatement of the

new landing facility following completion of the OPF Compression Project construction provided that similar construction and reinstatement techniques are used.

Photo 40: View to the north from the beach landing area towards the pipeline landfall location

The beach landing area is reached from the OPF site via a beach access road that was installed during the original OPF construction phase. There was clear evidence of informal fishing at the beach landing area (Photo 41(a)), which has accessed by local fishermen via the beach access road. In addition to potential impacts on fish stocks, this informal fishing activity has resulted in damage to the dunes (Photo 41(b)) and visible hydrocarbon contamination of sands immediately behind the dunes (Photo 41(c)). ENVIRON also notes that uncontrolled use of the beach access road by fishermen has the potential to lead to disturbance of Steller's sea eagle nests in the vicinity of the road.

(a) **(b)** **(c)**

Photo 41: (a) Evidence of informal fishing at the beach landing area including temporary facilities, (b) damage to the dunes and (c) localised contamination

In order to minimise ongoing induced access to the beach, ENVIRON suggests that consideration is given to removing the beach access road (or otherwise preventing its usage) once construction of the OPF Compression Project has been completed.

Temporary Construction Camp and Laydown Area

The temporary construction camp and laydown areas were briefly inspected and the following points were noted:

- Existing accommodation and associated facilities (from the original OPF construction period) are still present at the OPF site and are to be refurbished for the construction of the OPF Compression Project. Many of the buildings were seen to be in a state of some disrepair and refurbishment will need to ensure that applicable standards for worker accommodation are met (see Chapter 3.4 for further details).
- The SPZ for the current operation of the OPF covers part of the former construction camp area (see the 2013 OPF Audit Report in Appendix 1 for further details). It is therefore required that Sakhalin Energy ensures that all relevant temporary accommodation for the OPF Compression Project is restricted to those portions of the previous camp area that lie outside of the SPZ.
- Before the construction workers' accommodation camp and associated laydown areas are refurbished and used by the construction contractors, we suggest that a ground contamination survey be undertaken in order to confirm the existing baseline conditions. These data can then be used as the basis for handover criteria for the construction contractors at the end of the OPF Compression Project construction period. We suggest that such a survey should be risk-based, focusing on known risk areas (e.g. location of fuel storage facilities etc. during the original construction phase). We further suggest that these handover criteria are stipulated within the construction contracts to ensure that the construction contractors take responsibility for the remediation of any contamination that occurs during the construction period.
- As reported in previous site visit reports, significant volumes of legacy waste were left at the OPF site by construction contractors at the end of the original OPF construction phase. Visual inspection of the legacy waste storage areas shows that these wastes have now been almost completely removed from the site. In order to prevent reoccurrence of this issue at the end of the OPF Compression Project construction period, we suggest that construction contracts include clauses that require the following to be completed prior to payment of final fees:
    - Removal of all facilities, wastes and material from the site
    - Demonstration that all areas of contamination have been identified and clean-up to pre-existing baseline levels.

6.4 Environmental Monitoring

Sakhalin Energy provided an overview of its ongoing environmental monitoring programme. This was found to be comprehensive and in line with agreed requirements.

One noteworthy issue was identified, however, in relation to environmental monitoring around the OPF. Some of the onshore construction activities and facilities of a third party oil and gas development (Sakhalin-3, which is being developed by Gazprom Dobycha Shelf, GDS) are in relatively close proximity to the Sakhalin Energy OPF and onshore pipelines. In

particular, some of these third party's activities/facilities will directly impact on some of the monitoring areas included within Sakhalin Energy's environmental monitoring programmes.

As an example, during the October 2013 Site Visit, ENVIRON witnessed water samples being taken from the River Bolotny as part of Sakhalin Energy's monitoring programme. However, the sampling site was shortly downstream of the location where the Sakhalin-3 pipeline right of way crosses the river and where construction works had visibly affected the river flow leading to localised upstream flooding. It is therefore likely that Sakhalin Energy's monitoring data from the Bolotny are being significantly influenced by the impacts of Sakhalin-3 activities and facilities.

Discussions with Sakhalin Energy staff suggest that Sakhalin-3 activities are likely to affect other areas of Sakhalin Energy's environmental monitoring programme around the OPF. We therefore make the general recommendation that Sakhalin Energy reviews all of its environmental monitoring locations/transects etc. in order to determine the extent to which they may be affected by Sakhalin-3 activities and to consider what amendments to their programme may be appropriate.

6.5 Sand Production

Sakhalin energy reported that sand production has been identified at two of the offshore platforms, as follows:

- PA-B. Significant levels of sand are reportedly produced at PA-B. Produced sand is disposed of to re-injection wells. Following injectivity problems with one of the existing re-injection wells, a new re-injection well is now planned at PA-B.
- LUN-A. Sand has been detected in gas production at LUN-A and this has reportedly lead to two production wells being beamed back.

Sand production at PA-B and LUN-A does not currently represent a significant environmental concern. However, this issue does require ongoing monitoring, and we suggest that lenders may wish to seek the advice of their independent technical and/or reserves consultants on this issue.

6.6 Flaring

Sakhalin Energy is committed to no continuous flaring or venting (HSESAP *Air Emissions Standards Comparison*, 0000-S-90-04-O-0257-00-E). As previously reported, Russian Federal Government Decree #7 came into force in 2012 and set a 95% utilisation limit for associated gas. At the time of the site visit, year to date (the end August 2013) cumulative flaring across all assets was 3.3 bscf, which is less than the equivalent period in each of the previous three years. This demonstrates the achievements made by the Company in flaring minimisation, although meeting the 5% flaring limit remains a major challenge.

6.7 Sewage Treatment

6.7.1 Discharges to land/soakaways

A general permitting issue related to discharge of treated water to land/soakaways has previously been reported (see the September 2012 Site Visit Report and also item WATER.08 in the Findings Log). A number of water discharges (e.g. treated surface water runoff) to ground were originally permitted by the applicable Russian authority, RosTekhNadzor (RTN). As previously reported, responsibility for environmental permitting

has reportedly now moved from RTN to RosPrirodNadzor (RPN). However, RPN does not have a regulatory procedure in place to issue permits for these discharges. Sakhalin Energy's original RTN permits for discharge of water to land have expired and RPN has no legal basis to re-approve for such permits. As such, Sakhalin Energy does not have valid permits for its ongoing for discharge of treated water to ground at its onshore facilities.

We note that the on-going discharges are unchanged from the previously permitted discharges and that the issue is of a technical legal nature. We suggest that Lenders seek the opinion of their legal advisors on this matter (see also WATER.08 in the Findings Log).

6.7.2 Sewage treatment plant performance

Monitoring data from sewage treatment plant (STP) discharges identify exceedances above HSESAP and/or permit limits at the following facilities:

- **Offshore Platforms**. Exceedances against HSESAP standards and permitted limits are identified in a number of parameters, although most markedly in relation to phenol concentrations, from STP discharges from the PA-B, LUN-A and, to a lesser extent, PA-A platforms. As described in the PA-A October 2013 Audit Report (see Appendix 2), a new (third) STP unit has been installed on PA-A and once commissioned this is expected to resolve non compliances on that platform.

  As previously reported (see WATER.04 in the Findings Log), Sakhalin Energy has assessed replacement of the STP at the PA-B and LUN-A platforms and determined that the cost of replacement is uneconomic. Based on the age of the STP installed on PA-B and LUN-A, it seems surprising that the performance of these STP falls so significantly below modern discharge standards. We therefore recommend that Sakhalin Energy reviews the vendor data for the STP packages and compares this with actual performance and, if there is a significant difference, then Sakhalin Energy should seek input from the vendor in investigating the reasons for the unexpected level of performance.

  In addition, we suggest that sampling methods be improved in order to gain a greater understanding of the performance of the offshore STP. This could include consideration of the use of composite samplers (to improve the representativeness of sampling) and continuous monitoring of basic parameters via sondes.

- **OPF**. Discharges from the STP at the OPF exceed HSESAP standards for a number of parameters, but most significantly for nitrates and biological oxygen demand (BOD). The performance of the STP at the OPF is discussed in detail in the OPF October 2013 Audit Report (see Appendix 1).

6.8 OPF Waste Water Treatment and Injection

The status of waste water treatment and disposal to deep wells at the OPF is described in the October 2013 OPF Audit report (see Appendix 1).

6.9 South Piltun Project

Sakhalin Energy presented the latest status of the South Piltun Development (SPD) Project. The Company confirmed that a platform based project would only be planned for execution on a 'just in time for LNG' basis, subject to meeting commercial requirements. No further engineering design work for the SPD Project is therefore proposed in the short term.

6.10 Sakhalin-3 Tie-In

The site for the Sakhalin-3 tie-in was visited during the October 2013 Site Visit, with a particular focus on oil spill response arrangements for the performance of the hot-tap works. The findings of the inspection are reported to lenders elsewhere through a separate October 2013 OSR Audit Report and a separate Supplemental Note to Lenders in regard of the Sakhalin-3 tie-in.

7 Summary Suggestions

A number of suggestions 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 9), 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	Suggestion	Action Party
1	Social Performance	**Public Opinion Surveys** – The SP team is planning to revise the current scope and scale of public opinion surveys as most of the locations previously included are no longer affected. ENVIRON acknowledges this and suggests that the public opinion surveys are continued in the settlements that are located near the Project's major operating assets (Prigorodnoye Production Complex, OPF, BS-2) and in any other areas where new construction activities may be planned in the future.	Sakhalin Energy
2	Cultural Heritage	We suggest that general awareness and training related to the protection of cultural heritage resources continues to be provided, including to contractor personnel as appropriate. This should also cover the Chance Finds and Protection during Emergencies procedures, and the Damage Liability for contractors.	Sakhalin Energy
3	Cultural Heritage	It is suggested that internal monitoring of known objects of cultural heritage is continued on an annual basis.	Sakhalin Energy
4	Cultural Heritage	We suggest that the specialised external cultural heritage contractor should be retained for new construction works and in cases where emergency/rescue excavations are required.	Sakhalin Energy
5	Cultural Heritage	We further suggest that the specialised external cultural heritage contractor should be consulted as part of revising the scale and scope of the current monitoring programme. This should include identifying the objects that require less frequent monitoring due to their remote locations and distance from the Project's operating assets, and continuing monitoring of the features in close proximity of the roads, the pipeline and other facilities that may represent a risk.	Sakhalin Energy
6	RoW	**Erosion/sedimentation control** – The issue of adequate vegetation cover on steep slopes is on-going. We suggest that Sakhalin Energy continues to maintain erosion and drainage control in order to minimise sedimentation impacts on the receiving rivers. Given the difficulties encountered with the re-vegetation of some of these slopes, we also suggest the consideration of different techniques to ensure successful re-vegetation.	Sakhalin Energy
7	RoW	**Natural fibre matting** – ENVIRON suggests that locations where geojute and/or coco matting have been installed and not yet degraded, <u>but re-vegetation efforts have yet to be successful</u> are re-evaluated, and that	Sakhalin Energy

		reseeding and the potential use of fertilizer be considered (where not prohibited).	
8	RoW	**Silt fencing** – ENVIRON suggests that Sakhalin Energy continues its on-going programme of conducting a site-specific evaluation of whether to continue the use of silt fencing. If the continuing presence of silt fencing in a specific location is no longer needed, then it should be removed. Conversely, if the silt fencing still proves useful it should be kept in good repair.	Sakhalin Energy
9	RoW	**Reno matting** – In a few instances it was observed that the leading corner of the matting on the upstream edge of the river crossing was damaged during high river flows. It is suggested that this type of minor damage is monitored and evaluated by the maintenance crews.	Sakhalin Energy
10	RoW	**Induced access** – It is recognised that it is difficult/impossible for Sakhalin Energy to block public access from road crossings, but it is nonetheless suggested that Sakhalin Energy continues to investigate methods to limit public access to the extent possible.	Sakhalin Energy
11	RoW	**Ongoing maintenance** – ENVIRON notes that maintaining the RoW in good condition is an on-going activity and suggests that Sakhalin Energy continues to proactively manage the RoW though inspection and maintenance programmes. Such an approach will ensure cost-effective maintenance of the RoW in the longer term.	Sakhalin Energy
12	RoW	**RoW Inspection** – Given that many sections of the RoW are becoming increasingly difficult to access for visual inspection, we suggest that Sakhalin Energy makes increased use of aerial photography to assess the recovery of more inaccessible areas.	Sakhalin Energy
13	Secondary Containment	Drummed liquid wastes are stored in a large ISO container at Nogliki PMD. As observed in 2012, secondary containment is provided only by plastic gridded drip trays. While these are suitable for empty drums containing oily residues only, they are not appropriate for full drums. Further secondary containment is required here.	Sakhalin Energy
14	Secondary Containment	A new drum storage area, comprising a series of containers, was noted in the external yard area of the OPF PMD. However, it was unclear whether these secondary containment areas were sufficient to retain the volume required by the Sakhalin Energy *Soil and Groundwater Industrial Controls* specification. It is suggested that calculations are made to confirm the maximum number of drums that may be stored within the external containers in accordance with the above HSESAP specification.	Sakhalin Energy, ENVIRON (comment and future monitoring)
15	Secondary Containment	Spills from the monoethylene glycol (MEG) storage tanks at the OPF would be captured within the associated bund. However, the bund does not have an in-built system to enable it to be drained to an isolation tank. We suggest	Sakhalin Energy

		that written procedures are developed to address how MEG would be removed from the bund in the event of a spill.	
16	OPF Compression Project	It is suggested that the section of public road to the north of the OPF (Nogliki – Nysh – KP0 of the OPF access road) either be sealed or properly maintained if the OPF Compression Project will involve heavy traffic flows along this stretch.	Sakhalin Energy
17	OPF Compression Project	During construction of the OPF Compression Project, ENVIRON suggests that Sakhalin Energy maintains regular interaction and ensures the provision of information about the project to the local community, via Nysh Administration and through annual public meetings (in addition to the yearly public meeting and the functional Info-Centre in Nogliki).	Sakhalin Energy
18	OPF Compression Project	ENVIRON suggests that Sakhalin Energy continues to ensure safety during the movement of disinfected clinical waste, particularly with the presence of additional construction personnel at the OPF.	Sakhalin Energy
19	OPF Compression Project	In order to minimise ongoing induced access to the beach, we suggest that consideration is given to removing the beach access road (or otherwise preventing its usage) once construction of the OPF Compression Project has been completed.	Sakhalin Energy
20	OPF Compression Project	Before the construction workers' accommodation camp and associated laydown areas are refurbished and used by the construction contractors, ENVIRON suggests that a ground contamination survey is undertaken to confirm the existing baseline conditions. We suggest that such a survey should be risk-based, focusing on known risk areas. These data may be used as the basis for handover criteria for the construction contractors at the end of the OPF Compression Project construction period. We further suggest that these handover criteria are stipulated within the construction contracts to ensure that the construction contractors take responsibility for the remediation of any contamination that occurs during the construction period.	Sakhalin Energy / Contractor
21	OPF Compression Project	In order to prevent reoccurrence of 'legacy waste' issues at the end of the OPF Compression Project construction period, we suggest that construction contracts include clauses that require the following to be completed prior to payment of final fees: • Removal of all facilities, wastes and material from the site • Demonstration that all areas of contamination have been identified and clean-up to pre-existing baseline levels.	Sakhalin Energy
22	Platform Sand Production	Sand production at PA-B and LUN-A does not currently represent a significant environmental concern. However, this issue does require ongoing monitoring, and we suggest that lenders may wish to seek the advice of their	Lenders

		Independent Technical and/or Reserves Consultants on this issue.	
23	Aqueous Discharge to Land	Sakhalin Energy's original RTN permits for discharge of water to land ('soakaways') have expired and RPN has no legal basis to re-approve for such permits. As such, Sakhalin Energy does not have valid permits for its ongoing for discharge of treated water to ground at its onshore facilities. We note that the on-going discharges are unchanged from the previously permitted discharges and that the issue is of a technical legal nature. We suggest that Lenders seek the opinion of their legal advisors on this matter (see also WATER.08 in the Findings Log).	Lenders
24	Offshore STP	ENVIRON suggests that sampling methods be improved in order to gain a greater understanding of the performance of the offshore STP. This could include consideration of the use of composite samplers (to improve the representativeness of sampling) and continuous monitoring of basic parameters via sondes.	Sakhalin Energy
25	Nogliki Landfill	As a result of serious non-compliances noted during this visit, ENVIRON suggests that Sakhalin Energy reduces the amount of non-hazardous waste sent to the Nogliki landfill.	Sakhalin Energy
26	Nogliki Landfill	ENVIRON also suggests that Sakhalin Energy liaises with ENL to undertake a joint inspection of the landfill and work together to apply pressure on the landfill operator to improve its management practices.	Sakhalin Energy
27	Nogliki Landfill	If improvements to the operation of the Nogliki Landfill cannot be achieved then it is suggested that Sakhalin Energy develops alternative waste strategies to avoid future use of the site.	Sakhalin Energy
28	Waste – OPF	An examination of the wood to be passed to local people identified that some had been treated, potentially with various forms of wood preservative. Should this preserved wood be burnt, a potential exists for the release of toxic substances (e.g. arsenic). It is therefore suggested that Sakhalin Energy reviews the usage of the wood by the public and if wood is used for burning then treated and untreated waste wood should be separated so that only untreated wood is passed to local people for burning.	Sakhalin Energy
29	Chemicals Management	Although the use of R22 in domestic-sized refrigeration equipment is permitted by Sakhalin Energy it is suggested that alternatives are considered (R417A is a drop-in replacement for R22 and has an ozone depleting potential of zero). Given the large number of units across all Sakhalin Energy assets that contain ozone depleting substances (ODS), ENVIRON suggests that consideration be given to undertaking the replacement of ODS on a Corporate level.	Sakhalin Energy
30	Permit to Work	ENVIRON suggests that the permit to work approval process be modified to ensure that individual training	Sakhalin Energy

		requirements are automatically checked as of the grant of the permit to work.	
31	HSEMS	Air emissions are identified as a low (C2) risk rating under the Company's Environmental Aspects Register. Given the challenges of meeting Russian Federal Government Decree #7 on flaring of associated gas (see also below), we suggest that this risk rating should be re-evaluated.	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	HSE Case for the OPF (in full)
2	Current aspects and impacts register for the OPF
3	Audit report for the OPF Sewage Treatment Works (undertaken May 2013)
4	Document 6000-S-90-04-P-7084-00-E: *Organisation of Sanitary Protection Zone*
5	Discharge compliance monitoring data for the Sewage Treatment Works at the OPF (2013)
6	Document 0000-S-90-04-P-0039-00-E: Contractor HSE Management Standard
7	Document 0000-S-90-01-P-0029-00-E: Contracting and Procurement Standard
8	2013 monthly discharge sampling results from OPF biological treatment plants 1 and 2 (those treating the wastewater from the OPF PMD and the PAO)
9	A copy of the RF permit for the above two plants that includes the required emission standards
10	A copy of the 2013 OPF groundwater monitoring data (covering wells MW1 to MW21 and also wells WPU 1-20)

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 is tracked by 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[29] raised in regular reports to Lenders since the date of the last IEC visit (i.e. from September 2012 to date) and still having open actions;

d) Actions arising from HSESAP revision process.

Only new, open and recently closed 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[30], and where applicable, a reference to the relevant HSESAP, RemAP or other stakeholder commitment has been provided.

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

[29] 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).

[30] Assessed as per Risk Assessment Matrix

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
AIR EMISSIONS AND ENERGY MANAGEMENT								
AIR.07	Low Amber	**Open**	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**: Rework MOC #3000-S-10-32-Y-0027 to develop full engineering solution for installation of sampling points on compressor/generator exhaust stacks. Ensure design reflects requirement of appropriate engineering standards i.e. GOST-R/ ISO11042-1 "Exhaust gas emission. Measurement and evaluation". **Action**: Implement suitable sampling points in exhaust ducts of Main Power Generators A-4001 A/B and gas exhaust compressor A-0401 to allow emission sampling using portable air emission tester. **01.11.12**: Sakhalin Energy held a meeting to reassess the requirements and the stack survey scope of work required. Solutions were agreed. **26.11.12**: Action #612347 (MOC) closed; ENVIRON awaits confirmation/evidence that the modifications to the sampling points have been completed prior to closing out Action #612348.	612347 – closed 612348

[31] This Findings Log includes all Findings that were open at the date of the previous report (October 2012 in this case), plus newly identified findings.

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

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
AIR.08	Low Amber	**Closed**	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**: Provide approved Flaring Strategy (either in isolation or as a pan asset document). **16.11.12:** Sakhalin Energy Flaring Commitments have been issued officially, authorised by the Chief Executive Officer (CEO), communicated to relevant staff, and displayed at Company sites. CED and Well Delivery and Asset Managers are accountable to actively communicate the Flaring Commitment. The document custodian shall provide printed copies of the Flaring Commitment to Asset/Functional HSE Advisers for display at all Sakhalin Energy sites. This document is applicable to all Sakhalin Energy assets – Offshore Platforms, OPF, Pipelines, Booster Station 2 and LNG. **26.11.12**: Action closed. The "monitor and control" targets referenced in point 3 of the flaring commitment requested and provided. Performance against targets to be reported through Lenders' Quarterly Reports.	612350 – closed
AIR.09[33]	Low Amber	**Closed**	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**: Refer to existing Action #467749- Review HSE Monitoring Overview (0000-S-90-04-O-0009-00-E Appendix 6). **28.08.12**: HSE-MO has been revised by Sakhalin Energy and approved by Lenders Consultants, and Lenders. **15.10.12**: The requirements against which Sakhalin Energy was not compliant (monitoring at the HVAC intakes and in the accommodation block) have been removed from the Monitoring Overview. Thus ENVIRON can consider this finding to be no longer applicable and effectively closed.	612352 – closed

[33] Referenced as AIR.10 in the September 2011 monitoring report

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
AIR.10	Low Amber	**New**	Oct 13	Air emission (OPF Compression Project)	Air Standards Comparison IFC EHS Guidelines	At the October 2013 Site Visit, ENVIRON was informed that the decision over the specification of the generators was being re-assessed to consider: • 16 MW Generators • 25 MW Generators • 32 MW Generators We note that on the basis of the data provided only the 32 MW generators would appear to meet IFC EHS standards. In addition, the option analysis needs to consider issues of landtake and reliability.		
AIR.11	Low Amber	**New**	Oct 13	Emissions to Atmosphere	0000-S-90-04-O-0257-00-E Appendix 4	From the emission results supplied to ENVIRON, the emissions from the electricity generating turbines at the OPF do not currently appear to comply with the NOx emission requirements of the HSESAP. In addition, carbon monoxide concentrations in the stack appear to be in excess of RF limits in some instances. However, full understanding of the nature of the results and any apparent exceedances of HSESAP/regulatory limits is difficult to determine on the basis of the available monitoring data. In particular, further details on the operating conditions under which the stack monitoring was undertaken are required.	**Action**: It is recommended that Sakhalin Energy examines the power turbine emission sampling method, strategy and laboratory analysis quality. This should be undertaken to ensure that accurate emission data are obtained.	
WATER USE								
WATER.03	Low Amber	**Open**	Apr 10	Water – effluent quality – phenol – OPF	0000-S-90-04-O-0255-00-E Appendix 1	The six most recent monthly compliance checks on process water discharges show significant exceedances 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	**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.	467657 – closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
						sources that are generally from peaty, iron-rich sources which frequently contain naturally occurring phenolic compounds.	**07:06:12**: The operation is currently in compliance with applicable licence. Evidence has been sent to AEA. Action closure approved by AEA. *AEA note that Finding WATER.03 should remain open until the permanent treatment system is in place.* **07.06.11**: Treatment system to control suspended solids and hydrocarbons: Project is currently being developed, and FEED 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. **02.09.12**: OPF still using temporary disposable TSS filter system (OPEX intensive). Also looking to better understand the well capacity to assess whether current discharge licences remain appropriate. **15.11.12**: Update provided, Action #618507 closed. Expect information regarding the new permit as part of the quarterly reporting process, and the next progress update just prior to the 2013 IEC visit. **Oct 13:** The current timeline for an upgraded system to be ready to operate is January 2018. In the interim, the Company is assessing whether it would be appropriate to request that the discharge limits for TSS and dispersed hydrocarbon set in the licence for the disposal well be increased.	618507 – closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WATER.04	Low Amber	**Closed**	Oct 11 (PA-B audit)	Effluent quality – PA-B	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 exceedances 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**: Provide update to Lenders on progress of PA-B and LUN-A STP solutions. **05.09.12**: The current STP design does not allow for both aerobic and anaerobic compartments to fully break down nitrites. The cost of replacing each reactor is reportedly $15 million, and additional hot work and safety risks must be considered. Sakhalin Energy is currently discussing relaxing compliance with the Authorities. **04.09.13**: New permits obtained and the English translation provided. Sakhalin Energy to update Water use Standard accordingly and provide for review within HSESAP Rev 4 process. Finding closed.	612355 – closed
WATER.05	Low Amber	**Closed**	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**: Refer to existing Action #467749- Review HSE Monitoring Overview (0000-S-90-04-O-0009-00-E Appendix 6). **28.08.12**: HSE-MO has been revised by Sakhalin Energy and approved by Lenders Consultants, and Lenders. **16.10.12**: The requirements against which Sakhalin Energy was not compliant (analysis of seawaters for certain parameters around PA-B) have been significantly modified in the recently revised and agreed Monitoring Overview. Finding WATER.05 is no longer applicable and effectively closed.	612359 – closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WATER.06	Low Amber	**Closed**	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.)*	**Action**: HSESAP revision to properly specify offshore secondary containment requirements. **05.06.12**: The practical difficulties in finding appropriate secondary containment for use with limited floor space were discussed. **Action**: Sakhalin Energy to provide details of its platform topsides containment and surface water capture and treatment. **Action**: ENVIRON to forward any applicable Oil & Gas UK (formerly UKOOA) guidance for consideration. **19.11.12**: Evidence regarding platform drainage systems, reservoirs and instrumentation provided to IEC. Trays of various sizes used for handling and storage of insignificant volumes of liquids. **07.12.12**: Action and Finding closed. **09.12.12**: Follow-up information sent in response to additional query, supporting action closure.	612361 – closed
WATER.07	Low Amber	**Closed**	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. **13.02.12**: Sakhalin Energy's Legal Dept reported that the fine levied by the authorities has been paid by the Company without a dispute, and all the instructions issued by the authorities to rectify the problem have been implemented. The completeness of rectification actions will need to be verified to enable the closure of this item. **02.07.12**: Sakhalin Energy provided information with regard to flow meters calibration and inspections. Copies of current calibration certificates also provided. **19.10.12**: Company provided clarifications including the issue's background (Regulator's concerns) and calibration records. Clarifications provided 19.10.12. **02.11.12**: Action closed pending confirmation that flowmeters are fully operational. This was confirmed.	612363 – closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WATER.08	Low Amber	**Open**	Sept 12	Water use permit	Permit compliance	An issue has been identified with the validity of valid environmental permits has been identified, which relates to water discharges to land. A number of water discharges (e.g. treated surface water runoff) to ground were originally permitted by the applicable Russian authority, RTN. Responsibility for environmental permitting has now moved from RTN to RPN. However, RPN does not yet have a regulatory procedure in place to issue permits for these discharges. Sakhalin Energy's original RTN permits for discharge of water to land have now expired and applications to obtain new permits from RPN cannot be legally approved due to the current absence of an applicable regulatory procedure for these discharges. In the interim, Sakhalin Energy is continuing to operate in line with the previous (expired) permits issued by RTN, including reporting of monitoring results versus limits and payment of normal fees. Resolution of this issue is required.	**11.04.13**: ENVIRON accepts Sakhalin Energy's proposal to (i) report upon progress towards the resolution of the issue via half-yearly HSESAP reports to Lenders, and (ii) keep the overall Finding open. ENVIRON encourages Sakhalin Energy to maintain the dialogue with RPN to find a way to legitimately regulate the matter, as proposed. **Oct 13:** No change. (Note ENVIRON suggestion to Lenders to seek legal opinion from the legal consultant)	Progress to be tracked through half-year HSESAP reports
WATER.09	Low Amber	**Open**	Sept 12 (BS-2)	Water use permit	Permit compliance	Discharges from the sewage treatment plant (STP) at BS-2 during the first 2 quarters of 2012 have shown exceedances of existing Maximum Permissible Discharges (MPD) for phosphate (in quarters 1 and 2) and nitrites (quarter 1 only).	**Action**: The reason of the exceedance is the blockage of receiving tank aerator by sludge which resulted in water stagnation. Sakhalin Energy to develop Action Plan for improving STP performance. **27.02.13**: STP Operation Improvement Action Plan was developed. In accordance with the Plan sludge was pumped-out and disposed, aerator was repaired and some other actions were taken. The Action plan includes a number of procedures which, if followed, will help to avoid such situations in the future. Estimated completion date: 30 September 2013. **Oct 13:** BS-2 not visited during the October 2013 site visit, but similar issues were identified at the OPF (see WATER.13)	681837

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WATER.10	Low Amber	**New**	Oct13 (PA-A)	Effluent quality	0000-S-90-04-O-0255-00- E Appendix 4	Discharged effluent from the sewage treatment plant (STP) in early 2013 breached permit conditions.		
WATER.11	Low Amber	**New**	Oct 13	Effluent quality LUN-A and PA-B		Exceedances against HSESAP standards are identified in a number of parameters, although most markedly in relation to phenol concentrations from STP discharges from the PA-B and LUN-A. As previously reported (see WATER.04), Sakhalin Energy has assessed replacement of the STP at the PA-B and LUN-A platforms and determined that the cost of replacement is uneconomic. Based on the age of the STP installed on PA-B and LUN-A, it seems surprising that the performance of these STP falls so significantly below modern discharge standards.	**Action**: ENVIRON recommends that Sakhalin Energy reviews the vendor data for the STP packages and compares this with actual performance and, if there is a significant difference, then Sakhalin Energy should seek input from the vendor in investigating the reasons for the unexpected level of performance.	
WATER.12	Low Amber	**New**	Oct 13 (OPF)	Effluent quality at OPF	0000-S-90-04-O-0255-00-E Appendix 4	2013 discharge monitoring data for the STPs identified permit discharge concentration exceedances against Russian Permit levels in relation to Nitrate and Biological Oxygen Demand (BOD). Compliance sampling for the STPs was limited to a single sample. A single set of results may not be representative of the overall system performance.	**Action**: ENVIRON recommends that an amended sampling strategy be devised for sampling the effluent discharged from the STPs. Such a strategy may include the use of equipment such as composite samplers, which reduce the significance of individual results, which may not be representative of overall system performance.	
WATER.13	Low Amber	**New**	Oct13 (PA-A)	Effluent quality	0000-S-90-04-O-0018-00-E Appendix 5	Drip trays were not provided for all oil/chemical drum storage on the PA-A platform deck. *(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)*	**Action**: Provide secondary containment for all drums on the PA-A platform. (See also WATER.06)	

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WASTE MANAGEMENT								
WASTE.01	Blue	**Closed**	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. **26.11.12**: As was discussed during the 2012 Monitoring Visit, the Company does not have the authority to influence this issue, as permits must be obtained by the operator of the landfill. The Company proposes to advise Lenders of any changes via regular routine reports and monitoring visits. **06.12.12**: Proposal accepted, Finding closed	467659 – closed Changes will be advised via regular reports and monitoring visits.
WASTE.15	Blue	**Closed**	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. **02.09.12**: Issue discussed at the OPF. Asset manager to action an investigation into options for a water polishing system to generate potable water on-site, rather than using bottled water. **19.11.12**: Efforts were made at the OPF during 2012 to improve the quality of the potable water. Sampling of potable water streams is currently ongoing to determine whether it can be safely used in kitchens. However, bottled water will continue to be used for personal consumption as it is not reaching the drinking standards quality. We note that plastic is compacted at OPF and all empty plastic bottles are recycled through the approved Contractor. **20.02.13**: The results of the OPF investigation for reducing the number of the plastic bottles were	618501 – closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
							provided to ENVIRON. No waste reduction initiatives were identified by Sakhalin Energy at the LNG. Refillable bottles not considered viable due to hygiene reasons. Focus is currently on waste segregation and recycling of plastic bottles and minimizing the quantity of waste plastic bottles. Finding closed.	
WASTE.16	Blue	**Open**	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. **02.09.12**: At the OPF, plastic bottles are now compacted and baled on-site before being sent to a plastic recycler in Yuzhno-Sakhalinsk. **Oct 13**: No update	618503
WASTE.17	High Amber	**New**	Oct 13	Landfill Operation	HSESAP Waste management Standard	A number of significant concerns are identified in the third party operation of the Nogliki landfill including: • Lack of daily cover • Overflowing leachate pond on the cell used for Sakhalin Energy waste • Gas bubble formed under the leachate pond on the municipal waste cell • Lack of fencing around the facility to prevent windblown waste from the site • Lack of monitoring from groundwater wells	**Action**: We recommend that • Sakhalin Energy implements the following immediate initiatives: o Reduce the amount of non-hazardous waste sent to the Nogliki landfill (see below for further details) o Liaise with ENL to undertake a joint inspection of the landfill and work together to apply pressure on the landfill operator to improve its management practices. • If improvements to the operation of the site cannot be achieved then Sakhalin Energy should develop alternative waste strategies to avoid future use of the Nogliki landfill (see WASTE.18 for further details).	

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
WASTE.18	High Amber	**New**	Oct 13	Landfill Operation	HSESAP Waste management Standard	The remaining capacity at the existing non-hazardous landfills used by Sakhalin Energy is reducing. Sakhalin Energy recognises the significance of this issue and is developing medium and long term strategy to resolve the issue. However, we note that the urgency to define and implement these strategies is increasing by a number of factors including the declining standard of management at the Nogliki landfill and also the planning construction phase for the OPF Compression Project that will generate large volumes of waste.		
WATER.19	Low Amber	**New**	Oct 13 (OPF Audit)	Waste Management	0000-S-90-04-O-0258-00-E Appendix 9	The clinical waste incineration facility used by ISOS has not been inspected by Sakhalin Energy.	**Action**: Sakhalin Energy includes an audit of the incineration disposal route for clinical wastes as part of its audit of ISOS.	

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
SOIL AND GROUNDWATER								
S&GW.03	High Amber	**Closed**	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.	**Progress since September 2011:** **7.12.11**: Revised Soil & Groundwater Industrial Controls Specification (1000-S-90-04-O-00004-00-E) provided by Sakhalin Energy. New Appendix 5 agreed February 2012. **13.07.12**: Action #516456 closed as Appendix 5 agreed by IEC and assessment of secondary containment at PMDs having been carried out by Sakhalin Energy (although it was agreed that this did not identify practicable immediate solutions for PMD secondary containment). ACTION #467675 REMAINS OPEN FOR PROVISION OF ADEQUATE SECONDARY CONTAINMENT AT PMDs. ENVIRON to review progress during Sept 12 monitoring visit. Sept 2012. Improvements identified (especially at Nogliki PMD). However further improvements required to ensure 110% secondary containment is provided in all cases. **01.11.12**: ENVIRON has carefully considered the improvements in secondary containment noted at PMDs during the Sept 2012 monitoring visit and the additional procedures and awareness training undertaken following our visit, and can now accept closure of actions #467679 and #467675 and overall Finding S&GW.03. ENVIRON recommends to also include the HSESAP requirement for secondary containment of single drums in the Company's new procedures. This is not currently specified, and since it is a different volume requirement (110%) it would be a useful addition. ENVIRON will continue to assess the secondary containment provisions during future monitoring visits.	467680 – Closed 467677 – Closed 467678 – Closed 467676 – Closed 467675 – Closed 467679 – Closed 516456 – Closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
LAND MANAGEMENT								
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. **Sept 12**: Update – this action is still ongoing. **Oct 13**: No further updates received from the Company; action ongoing.	467691 – Closed 467693 – Closed 467972 – Closed 467973 – Closed

Ref[31]	Rank[32]	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. **23.04.10**: 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). **Nov10**: Sakhalin Energy provided AEA with updates on temporary facilities' decommissioning in Q3 and Q4 2010. AEA approved closure of 4 actions. **July11**: Sakhalin Energy provided AEA with updates on LNG camp decommissioning. AEA approved the closure of this action. **25.6.12**: Given Sakhalin Energy's current waste disposal issues, this Finding remains open until the OPF camp waste has been removed and disposed of. Expected completion is end September. **02.09.12**: OPF camp waste segregated and awaiting removal and disposal to landfill. Contractor reportedly now appointed. Expected completion date remains as above. **Oct 13**: Visual inspection of the legacy waste storage areas shows that these wastes have now been almost completely removed from the site. Finding may be closed.	467695 – Closed 467698 – Closed 467699 – Closed 467700 – Closed 467701 – Closed 467703 – Closed 467696 – Closed 467704 – Closed
LAND.16	Low Amber	**Open**	Oct 11	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.	**Action**: Incorporate IEC recommendations on biological reinstatement improvements into RoW plans. **Action**: Develop an Action Plan for sandy and steep slope re-vegetation **Sept 12**: Action #612568 for 2012 closed. New action(s) to be opened for 2013 season. **Oct 13:** General improvements in re-vegetation were identified but continued further efforts are still required.	612568 – Closed XXXXXX

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
LAND.17	High Amber	**Open**	Oct 11	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.	**Action**: Incorporate tree control into RoW maintenance programme and implement in 2012 season. This Finding requires ongoing implementation and is subject to annual review during Lenders' monitoring visits. **Sept 12**: While maintenance activities were seen to be undertaken, further major efforts are required in order to get tree growth under control. Action #612571 for 2012 closed. New action(s) to be opened for 2013 season. **Oct 13**: The continued presence of tree saplings along the RoW is such that it is now becoming a significant compliance issue. There is a need for urgent control measures in order to meet RF legal requirements and to bring this issue under control. ENVIRON recommends that Sakhalin Energy re-evaluates and reconsiders the methods that are currently in use for long term effectiveness and also their impact on existing biological reinstatement. Alternative means of tree eradication should be reviewed and could include pulling of roots for smaller samplings (as opposed to simply cutting above the roots) and ring-barking for larger trees. **Finding Ranking raised to High Amber**.	612571 – Closed XXXXXX
LAND.18	Blue	**Closed**	Oct 11	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**: Install silt fencing to prevent sediment egress into the affected rivers. **05.09.12**: Discussed during Sept 12 monitoring visit. Sakhalin Energy to provide details and photos of works undertaken. **Oct 12**: Finding and action have been closed.	612574 – Closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
LAND.19	Low Amber	**New**	Oct 13	Wetlands	RemAP	The limited visual observations of wetland areas made during the October 2013 site visit identified differing levels of recovery between different wetland areas, and this is consistent with both the findings of the September 2012 site visit and also Sakhalin Energy's own ongoing wetland monitoring programme. In cases where weaker recovery was identified, this is likely to be attributed, at least in part, to the residual presence of imported materials (e.g. soils and stone imported during construction) and depressions left on the RoW following construction that have resulted in water ponding/waterlogging. ENVIRON recognises that measures to remove the remaining imported materials and infill depressions would require the use of heavy equipment, which in turn may result in damage to recovering areas as they access the wetland. Nonetheless, if continued poor rates of recovery are identified by Sakhalin Energy's future wetland monitoring programme, then we recommend that such measures may need to be considered.	**Action**: We recommend that Sakhalin Energy conducts detailed assessments of all poorly regenerated wetland areas to identify all factors impeding re-vegetation. In the case of sites where importation of materials and/or depressions are identified as key drivers for poor re-vegetation, ENVIRON recognises that measures to remove any remaining imported materials and to infill depressions would require the use of heavy equipment, which in turn may result in damage to recovering areas as they access the wetland. Nonetheless, if continued poor rates of recovery are identified by future monitoring at such specific sites, then it is recommended such measures may need to be considered in these areas..	

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
BIODIVERSITY								
BIODIV.07	Low Amber	**Closed**	Oct 11	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**: Identify locations where access roads' drainage channels/culverts are disturbing wetlands flows and provide corrective action plan. **05.09.12**: Discussed during Sept 12 monitoring visit. Sakhalin Energy to provide details and photos of works undertaken. **17.10.12**: Sakhalin Energy confirms that there is only one access road through wetlands – access road to NOB-24. There the location has been identified and the drainage (flume) pipe has been installed. Act provided stating the location, description of the defect and photos before and after the remedial work was performed. **01.11.12**: Finding closed	612849 – Closed
BIODIV.08	Low Amber	**New**	Oct 13	Environmental monitoring	Local monitoring programmes, HSE-MO	Sakhalin-3 activities are likely to affect areas of Sakhalin Energy's environmental monitoring programme around the OPF.	**Action:** We recommend that Sakhalin Energy reviews all of its environmental monitoring locations and transects etc. in order to determine the extent to which they may be affected by Sakhalin-3 activities and to consider what amendments to its programme may be appropriate.	
OIL SPILL RESPONSE								
OSR.14	Low Amber	**Closed**	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	467739 – Closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
							(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. **Jan 2012**: Sakhalin Energy provided six asset plan summaries for IEC review. Review comments on all six asset plans returned by March 2012. **14.06.12**: Revised plan summaries provided for comment. **03.08.12**: PCCI's review of Rev.3 of the six asset OSRP summaries was provided to the Company and Lenders. Four summaries were found to be fully adequate for publication. The OPF summary was considered only marginally adequate and Lunskoye not at all adequate. Sakhalin Energy will publish acceptable plan summaries, and provide revisions of OPF and Lunskoye summaries for further review. **08.05.13**: All OSRP Summaries have been published on the Sakhalin Energy website. Finding closed.	

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
OSR.15	**Red**	**Closed**	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. **Update since October 11:** **Action #594736**: Sakhalin Energy will reinstate and update the Corporate OSRP and will provide both the update, and a summary of the update, of the plan to PCCI for review in 2012. The ER STO may be maintained as a company standard, but will not replace the Corporate OSRP. The summary will be published on Sakhalin Energy's public website in Russian, English and Japanese. **09.07.12**: The C-OSRP (0000-S-90-04-P-0076-00 effective in 2008) was 'polished' and reinstated internally. Evidence provided showing publication of the C-OSRP and the Livelink upload. Action #594736 closed. **11.07.12**: Revised C-OSRP summary provided for review. **06.08.12**: C-OSRP summary considered acceptable for publication. Sakhalin Energy to translate and publish. Finding OSR.15 may be closed when the document is published in all three languages. **01.10.12**: In accordance with article 4.8. of Schedule 8 of the CTA, the summary of the corporate ER standard in relation to oil spill preparedness and response (C-OSRP summary) was placed at the Sakhalin Energy website in Russian, English and Japanese. **02.11.12**: ER-STO summary has been reinstated and is publically available in all three languages. Action #594737 and closure of Finding OSR.15 approved.	467741 – Closed 594736 – Closed 594737 – Closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
OSR.17	Low Amber	**Closed**	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**: Provide oiled wildlife response training to PMD responders. **16.10.12**: OWR Equipment is allocated at PMD Lunskoye, Gastello (BS-2) and Prigorodnoye LNG sites. Two oiled wildlife responders' trainings for Sakhalin Energy and CREO staff at Gastello PMD and Lunskoye OPF. The training was provided by SEIC CHSE Peter van der Wolf. **23.10.12:** Both the wildlife preventive oiling (hazing) and the initial capture/stabilisation/treatment training appear appropriate. Sakhalin Energy confirmed that periodic refresher training would be provided at appropriate intervals to ensure staff remain familiar with the equipment and new team members are trained. Finding closed.	612851 – Closed
OSR.19	High Amber	**Closed**	Oct 11	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**: Conduct a Tier 3 exercise involving the pipeline and third party damage (joint exercise with Sakhalin Oblast Counter Terrorism Committee). Scheduled May 2012. **18.07.13**: On July 16-17 the Tier 3 OSR Exercise was conducted successfully with the participation of the Lenders OSR Consultants PCCI. The report on the exercise will follow. Actions will be captured through Fountain system in accordance with the established process. Finding closed.	594734 – Closed

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OSR.26	Low Amber	**Closed**	Oct 11 (OSR visit)	OSR Training	0000-S-90-04-O-0014-00-E Appendix 15	The ECT requires basic training on oil spill response equipment, strategies, and techniques. Suggested sources for the technical training would be the Alaska-based Cooperative "Alaska Clean Seas." This training could take place in Alaska, on-site in Yuzhno-Sakhalinsk, or with Mr Stillings and his Ecoshelf organization. In addition to this necessary training, the ECT really needs to have in their rotation as ECT Leaders very experienced oil spill response managers who can immediately assess any situation and determine the best mix of personnel and equipment to respond to the event. The ECT and CMT members should also have team, process, and role training on the Incident Command System. Suggested sources for the ICS process and role training would be Alaska Clean Seas or another Industry Cooperative "Clean Islands Council" in Honolulu, HI, or Mr Stillings and Ecoshelf.	**Action:** Provide to ECT basic training on OSR equipment and tactics, and provide team, process, and role training on the Incident Command System (via service provider in line with industry good practice). **04.07.12**: From April 24 to April 27, 2012 the training "Incident Command System (ICS-OS-420-1)" provided by the Institute of Sea Protection and Shelf Development. Marine State University, Vladivostok was conducted for ECT. Evidence was provided for more information. **13.07.12**: PCCI considers the finding to be only partially met. Specifically, the requirement for basic ICS training has been met by 33 Sakhalin Energy ECT/CMT personnel and two Ecoshelf contracted personnel. To fully close out this action, PCCI recommends that oil spill response strategy training be conducted by someone like Ecoshelf and Ecospac so that Sakhalin Energy's response managers fully understand the Company's response capabilities and when, how and from where to call in additional support. PCCI also recommends that Sakhalin Energy identifies at least four qualified ECT Leaders who rotate this position as either primaries or alternates. **17.10.12**: Further information provided on 8 October. Action now closed.	594743 – Closed
OSR.27	Low Amber	**Open**	Oct 11 (OSR visit)	Non-Mechanical Response Options and Capability	0000-S-90-04-O-0014-00-E Appendix 15	Non-Mechanical Response Options and Capability – Just prior to PCCI's visit, Sakhalin Energy had met with and briefed the Russian Federation officials in an attempt to move forward the planning for non-mechanical response options for oil spills. With the assistance of a visiting Spill Response Specialist/Environmental Scientist from Shell Global Solutions (US) Inc., Dr Victoria Broje, Sakhalin Energy highlighted the effectiveness of in-situ burning and dispersants as response	**Action:** Report progress in **half-yearly** (or earlier if relevant) to Lenders regarding non-mechanical OSR options (dispersants, in-situ burning). Communications with authorities, status of planning/pre-approval, and establishment of company capabilities for use of these options. **17.07.12**: During last 6 months Sakhalin Energy has conducted 2 meetings with authorities: 1. In the beginning of 2012 the meeting was held with local MChS	594741 – Closed Six-monthly updates to be provided in HSESAP reports.

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						techniques to the Deepwater Horizon oil spill in the U.S. Gulf of Mexico last summer. Significant progress was made in convincing the Russian Federation that in-situ burning and dispersants should be considered as response options. Much work remains to be done in getting pre-approvals for the rapid use of these response techniques during a spill, and then in establishing the capability for deploying these response techniques during an actual incident. This is a high priority issue. As further discussed in the Offshore Exercise Evaluation, Sakhalin Energy's offshore mechanical containment and recovery capabilities are very limited, and non-mechanical response techniques such as dispersants and in-situ burning may be the only response options available to them during most wave and weather conditions.	2. In March 2012 Alexander Gutnik took part in the meeting organised by the Deputy Minister of MChS in Moscow. On both meetings the possibility of dispersants application and in-situ burning was brought up by Sakhalin Energy. The more or less favourable opinion was expressed by MChS representatives and the instruction was given to work out these options inside MChS organisation. However, no any clear consent or instructions were provided to Sakhalin Energy. Nevertheless, Sakhalin Energy's OSRPs stipulate dispersants application. NEBA has been conducted for certain areas. A mechanism exists for getting Authorities' approval in case dispersants application is necessary, but the decision can be taken (and will be taken) inside the Company if required. Sakhalin Energy proposes to close this action and provide updates in the HSESAP half-year reports. **07.08.12**: Six-monthly update and reporting proposal accepted. Action #594741 closed. Finding OSR.27 remains open. **04.04.13**: No updates were made in the half-yearly reports, so Sakhalin Energy provides the following update: "It is required to develop legal background (law documentation) in order to be able to implement non-mechanical technologies in Russia. We have already started to develop the documentation that will ease obtaining Russian Authorities permission for non-mechanical technologies." **17.07.13**: During the July 2013 Tier 3 OSR exercise, Sakhalin Energy tested its ability to prepare the necessary background information and forward an application to Russian Authorities for the use of dispersants on an offshore spill. Approval was quickly obtained and the use of dispersants was successfully simulated via the identification of capable aircraft and	

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
							vessels, and the validation that these resources, together with the necessary dispersants, could be obtained. The IEC considers this a noteworthy development in bringing Russian Authority partners closer to allowing non-mechanical response options for large offshore spill events.	
HEALTH AND SAFETY								
H&S.07	Low Amber	**Closed**	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	**Action:** Provide proper drum labelling and secondary containment and conduct inspection. **Action Taken:** The revealed non-compliances have been eliminated (please see attached the extract from the original audit report and the photo of the current situation). - All drums have been labelled and installed in drip trays. - As per the design chemical storage is equipped by the drainage system. - Regular inspections and audits are conducted. **16.10.12**: As per previous approaches in closing out actions relating to incidences of unlabelled drums and lack of secondary containment at the LNG facility, and based on the evidence provided, this action can be considered closed – subject to verification during future audits.	612588 – Closed

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H&S.08	Low Amber	**Closed**	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**: Investigate opportunities to optimise chemicals storage and delivery. **05.09.12**: During the 2012 monitoring visit, Sakhalin Energy advised that a staged (phased) delivery of chemicals, storage in different containers (tanks rather than drums, so they can be stored elsewhere) and semi-mechanised shelving (more efficient use of space) were all being considered. This action remains open until measures are implemented. **23.12.12**: The following actions have been developed/implemented: 1. Stocking procedure 2. Use of other storage areas 3. Alternative containers 4. Accelerate MOC to remove unused equipment/substances 5. Sack store management checklist 6. Chemical management inspections/audits **11.01.13**: PA-B confirmed that the chemical safety, containment and stock control measures, and the chemicals management audit process/checklist is applicable for all new storage areas. **07.02.13**: Finding closed	618505 – Closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
H&S.10	Blue	**Open**	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. **18.09.12**: (response in conjunction with H&S.11) The revealed non-compliances have been eliminated: 1. All materials stored inside the chemical storages have MSDS in a special folder kept near the relevant materials. 2. The responsible person for chemical storage has been appointed, who regularly conducts inspection of the labelling of materials in accordance with the SAP system. 3. In case the vendor provides MSDS in one language, the Act of non-compliance is issued and the missing documents are provided. **01.10.12**: LNG-specific action closed, but finding remains open to cover other MSDS issues arising from the Sept 12 monitoring visit. **Oct 13**: During the PA-A Platform audit, dual language MSDS were found to accompany the majority of observed chemicals. However, there were a number of chemicals in the main chemical store which were accompanied by only English or Russian MSDS. At OPF, need to ensure that all hazardous wastes are appropriately labelled in both Russian and English. .	612859 – Closed XXXXXX XXXXXX

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
H&S.11	Blue	**Open**	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. **18.09.12**: (response in conjunction with H&S.10) The revealed non-compliances have been eliminated: 1. All materials stored inside the chemical storages have MSDS in a special folder kept near the relevant materials. 2. The responsible person for chemical storage has been appointed, who regularly conducts inspection of the labelling of materials in accordance with the SAP system. 3. In case the vendor provides MSDS in one language, the Act of non-compliance is issued and the missing documents are provided. **01.10.12**: LNG-specific action closed, but finding remains open to cover other MSDS issues arising from the Sept 12 monitoring visit. **Oct 13**: During the OPF 2013 Audit, wastes in the waste storage areas viewed by ENVIRON were found to be well labelled, however a small selection of drums located in the Temporary Waste Transit Area were not found to be labelled. Additionally, two unlabelled 25 litre containers of unknown liquid were stored without secondary containment at the LNG water treatment plant.	612861 – Closed XXXXXX XXXXXX
H&S.12	High Amber	**New**	Oct 13 (PA-A audit)	Health & Safety	0000-S-90-04-O-0270-00-E Appendix 3	The auditor observed a contractor being allowed onto the helicopter without producing evidence of a valid offshore medical certificate despite the Global Logistics Management System showing that one was not on file.		
H&S.13	High Amber	**New**	Oct 13 (PA-A audit)	Health & Safety	0000-S-90-04-O-0270-00-E Appendix 3	The auditor was not subjected to 'mandatory' alcohol testing before boarding the helicopter to PA-A at Nogliki airport.		

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
H&S.14	Low Amber	**New**	Oct 13 (PA-A audit)	Health & Safety	0000-S-90-04-O-0270-00-E Appendix 9	The emergency exits from the chemical storage container were found to be locked.		
SOCIAL								
SOC.03	Low Amber	**Closed**	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. **Action**: Sakhalin Energy to provide an update on the resolution of the grievance submitted by the resident of the nearest dwelling adjacent to the LNG camp fence related to the smell of unburned hydrocarbons in the air. **Sept12**: Sakhalin Energy had performed a week-long investigation of the complaint. It has been agreed that Sakhalin Energy will provide the available materials from the investigation for the IEC review (air samples taken at the pollutant sources on the LNG Accommodation site, etc.). Once received, ENVIRON will review these materials and provide an opinion regarding the status of this action. **07.05.13**: Air Quality monitoring results were reviewed by ENVIRON. We note that they are of limited use as they do not necessarily address a specific odour. It is recommended for future issues that odour assessments are undertaken as soon as possible following the complaint, and visual inspection of the area to identify any spills or leaks. Finding Closed.	612863 – Closed

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
SOC.05	Blue	**Closed**	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 0000-S-90-O4-P-7003-00-R-01 (i.e. as a standard measure, not only with respect to emergency situations). **02.05.12**: Cultural Heritage Plan was updated and now includes the Chance Finds Procedure as a standard measure. ENVIRON to discuss during Sept 12 monitoring visit. **19.09.12**: Chance finds procedure and associated communication protocol was included in the Plan for Protection of Cultural Resources During Sakhalin II Operations 0000-S-90-04-P-7003-00-R-02, section 6.3. All the procedures and awareness materials (presentation provided) regarding Objects of Cultural heritage, Chance Finds Procedure and Emergency Case will be provided to contractors via Contract Holders. **Oct-Nov 12**: Further clarifications provided regarding internal/contractor awareness training and incident reporting. Presentations provided. **10.11.12**: Information now deemed sufficient, Finding may be closed.	612873 – Closed
GENERAL								
GEN.05	Blue	**New**	Oct 13 (OPF Audit)	HSE Management Systems	0000-S-90-04-O-0015-00-E Appendix 1	During the course of the audit, it was identified that the OPF HSE team held the expectation that level 3 audits would be undertaken by the Corporate HSE team and no Level 3 audits had been scheduled by the OPF for 2013. Subsequent discussions with the Corporate HSE team identified that confirmed that Level 3 audits should be site managed self-assurance activities.	**Action**: Undertake audit level re-training for Sakhalin Energy OPF HSE staff and implement programme of OPF level 3 audits.	

Ref[31]	Rank[32]	Status	Date	Topic	HSESAP Ref.	Finding	Action Progress Review	Action#
GEN.06	Blue	**New**	Oct 13 (OPF Audit)	HSE Management Systems		The structure of the Aspects Register generally meets the requirements of ISO14001. However, we identify a number of areas where the detail of register requires improvement in order that it identifies all environmental aspects and acts as an effective tool to help prioritise management controls and improvement initiatives. Examples of environmental aspects that are currently not fully addressed in the Aspects Register include: 1. Storage and management of fuel (only unrefined oil is considered) 2. Routine management of non-hazardous solid waste 3. Control of ozone depleting substances 4. Water abstraction/use 5. Energy consumption 6. Air emissions (re-evaluate risk rating given RF decree #7 on flaring	**Action:** Review and update Aspects Register	

Appendix 1: OPF October 2013 Audit Report

Appendix 2: PA-A October 2013 Audit Report

Appendix 3: Site Visit Terms of Reference and Schedule

Appendix 4: Individual RoW Descriptions

Appendix 5: Example Val Public Meeting Exit Questionnaire

Appendix 6: SPZ substantiation documentation for the Prigorodnoye Production Complex