Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
A. ISRP	ISRP-22	ISRP Report, p. 51 (p. 47 in the printed version of the report)	Oil spill & gas associated risks	Key Scientific Information and Gaps: Prediction of oil spill effects will be enhanced by several types of information currently not available, including: (iii) Alteration of acute toxicity patterns for spilled oil resulting from application of dispersants.		There is ample evidence in the available literature on influence of dispersants on the effects of oil on a range of marine species. Toxicity data alone does not indicate effect. This is influenced in the short-term by distribution, dilution etc and in the longer term by considering dilution, threshold effects and HC degradation.	End of 2005 for NEBA study.	Closed - implemented/resolved satisfactorily		
A. ISRP	ISRP-26	ISRP Report, p. 55 (p. 51 in the printed version of the report)	Oil spill & gas associated risks	The CEA did not discuss in any detail the relative consequences of spills associated with the alternatives, but they could be important and are considered in more detail below in section 1.3.1.1 (selection of platform location and pipeline alternatives.		Spills from platforms are covered in the CEA and modelled. Excursion envelopes for blowouts will be similar. Worst case blowout volumes are relatively high and initial (0-12 hour) perimeters may be slightly different (larger) due to influence of spreading. Duration of blowout will also influence these.	Jul-05	Closed - implemented/resolved satisfactorily		
A. ISRP	ISRP-32	ISRP Report, p. 62-63 (p. 58 in the printed version of the report)	Oil spill & gas associated risks	Information is needed on the following topics for a comprehensive analysis of risks associated with Phase 2: (iv) a more thorough analysis of pipeline spill risk to compare the base case and Alternative 1, based on the likelihood of a spill due to pipeline length, more disturbance associated with construction and other relevant factors (e.g. bottom type) versus the chance that a spill would reach the nearshore gray whale foraging habitat.		This work has been undertaken. The bottom profile was considered in risk analysis. The base case is not proceeding and so no comparison is required.	Jul-05	Closed - implemented/resolved satisfactorily		
A. ISRP	ISRP-33	ISRP Report, p. 63 (p. 58 in the printed version of the report)	Oil spill & gas associated risks	Information is needed on the following topics for a comprehensive analysis of risks associated with Phase 2: (vii) spill response plans, particularly with respect to winter scenarios, training and 'practice' exercises, coordination of Tiers 2 and 3 and measures to protect WGW and their habitat.		OSRPs for Operations are being prepared and these aspects are being addressed. Further expert input will be sought during the planning process.	Plan ready for approval by Sept 2005. To be approved by July 2006.	Closed - implemented/resolved satisfactorily		
A. ISRP	ISRP-36	ISRP Report, p. 98 (p. 93 in the printed version of the report)	Oil spill & gas associated risks	The Panel's review identified the following general areas of future research: Investigation of the ocean dynamics (currents, tides, winds) in the vicinity of Sakhalin II, the Piltun and offshore feeding habitats and Piltun Lagoon – inter alia this will allow for better modelling of the dynamics of oil spills and improved response strategies.		Sakhalin Energy already records winds. DVNIGMI oceanographic data is extensive in the area and based on field surveys over decades. Sakhalin Energy OSR consider this a more than adequate basis for OSR planning needs	N/A	Closed - implemented/resolved satisfactorily		

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B. Lenders	Vancouver I workshop report, issues table 11.2		Oil spill & gas associated risks	Sakhalin Island and surrounding waters are subject to considerable seismic activity. It is unclear whether estimated spill frequencies and platform/pipeline designs adequately reflect and take account of the region's seismic activity. AEA QRA experts have identified the spill frequencies for pipelines as being within expected range, but it is not clear that the estimated spill frequencies take into account the extraordinary seismic activity in this region.	Sakhalin Energy	This issue has been addressed in the QRA (6, 7). The assessment found no significant difference between the three PA pipeline routes in terms of release frequency, maximum credible spill volume, or oil spill risk; seismic risk factors were incorporated into the assessment. (REFS: 6, 7, 29a). Lender expert consultants could assist with a review of the QRA and offshore seismic risks.		Closed - implemented/resolved satisfactorily		
B. Lenders	Vancouver I workshop report, issues table 11.6		Oil spill & gas associated risks	Further investigation of the ocean dynamics and ecology in and around Piltun lagoon is required to better assess risks to WGW and support route selection. Experts written response to Sakhalin Energy document prior to Gland stated that adequate protection of Piltun lagoon still not clear because the region is still threatened by the risks of a spill from the platforms, as well as the pipelines. Oil spill response documents indicate that spill responses will be guided, in part, by trajectory modeling. The ocean dynamics in the region of the PA-A and PA-B platforms and the Piltun Lagoon will be critical determinants of the impact of spilled oil. Understanding these dynamics prior to a spill is essential for such modeling and to improve the chances of successfully protecting the Lagoon should a spill occur.	Sakhalin Energy	Sakhalin Energy questions the value of the studies suggested by the ISRP and notes that selection of Alternative 1 provides greater spatial separation of the pipeline and Piltun Lagoon. In the unlikely event of a spill, there are identified strategies (such as booms, deflection and collection) that can be used to protect the lagoon entry. The trajectory modeling capability of Sakhalin Energy will be continuously improved. The new model will draw on regional oceanographic data and from Sakhalin Energy's own database. Piltun Lagoon ecology studies have been conducted on behalf of Sakhalin Energy and can be forwarded to the WGWAP. The Piltun Lagoon and the adjacent feeding areas are and will continue to be priority areas for oil spill response.		Closed - implemented/resolved satisfactorily		

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
B. Lenders	Vancouver I workshop report, issues table 11.7		Oil spill & gas associated risks	Risk associated with gas releases requires greater consideration/ evaluation. Some experts at Gland re-iterated ongoing concern on this matter. Some experts' written responses to Sakhalin Energy Issue Table noted that Sakhalin Energy claim that gas or gas-related accidents would not affect the WGW is unsubstantiated. There are two issues here: 1) potential impact of direct contact of whales or their prey/habitat with gas, and 2) what risks are associated with gas accidents at the platform or pipeline. Even if the former is not a significant risk, it is not clear that the latter risks have been addressed in assessments of oil-spills and blowouts.	Sakhalin Energy	Sakhalin Energy believes there to be no possible effects on WGW from gas releases. Frequencies/volumes of gas releases are being assessed for Lunskoye. The need for gas plume modelling for environmental assessment purposes will be reassessed. Gas release is not an OSR issue. This is no longer an issue with the selection of Alternative 1. (REF: 6)		Closed - implemented/resolved satisfactorily		
B. Lenders	Vancouver I workshop report, issues table 12.1		Oil spill & gas associated risks	Information was requested by the ISRP but not received regarding specifications for tankers to be used to transport oil and gas from the Vityaz complex (until it is closed) and from Prigorodnoye. Sakhalin Energy stated in Gland that they are committed to double-hulled tankers.	Sakhalin Energy	Sakhalin Energy has committed to double-hulled tankers year round (21). A tanker vetting procedure in place, which is described in the EIA Addendum on Oil Spill Response (21). Sakhalin Energy discuss with experts what else, if anything, is required. (REF: 21, 29a). Lenders' independent consultant has reviewed Sakhalin Energy's tanker vetting procedure and this may help close-out the issue.		Closed - implemented/resolved satisfactorily		
B. Lenders	Vancouver I workshop report, issues table 14.1		Oil spill & gas associated risks	Monitoring requirements should include a permanent array of monitoring sites and assess benthos/prey, as well as physical and chemical changes over time.	Sakhalin Energy	Sakhalin Energy questions the need for permanent stations as the base pipeline route case was not selected. Sakhalin Energy does not believe prey and physical studies of this nature will have significant value. However Sakhalin Energy is currently commissioning background hydrocarbon monitoring (2005) and this will continue through operations phase and post spill. Sakhalin Energy is currently developing spill and post-spill monitoring plans and procedures (29a,b). (REF: 29a,b). This requires further discussion to establish monitoring requirements. This issue may be addressed under the Terms of Reference of the proposed advisory body. Sakhalin Energy accepts the independent scientists have closed this issue subject to definitions of protocols.		Closed - implemented/resolved satisfactorily		

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
C. IISG	Item 19, p.11 (of IISG report)		Oil spill & gas associated risks	Response strategies (tiers I, II, and III) must be in place before oil and gas extraction begins and should include training and drills to ensure that all response participants are prepared to carry out their responsibilities effectively if a spill occurs.	Sakhalin Energy	Strategies will be in place and approved by RF authorities before operations begin. Several detailed oil spill response plans are under development, covering each asset, and are presently undergoing review by both Russian authorities and an independent international oil spill response consultancy. The former will assess compliance with pertinent elements of applicable Russian Law, whilst the latter is assessing the adequacy of the plans against a number of recognised, robust international standards. As part of the OSR planning process, a comprehensive training programme is being developed and implemented. ACTION: Implement RF approved strategies (tier I, II and III) and training programme.	Redacted version of OSR plans to be publicly available from Q1 2007. Training programme to be complete prior to first oil	Closed - implemented/resolved satisfactorily		
C. IISG	Item 22, p.11 (of IISG report)		Oil spill & gas associated risks	Response efforts should include protection of Piltun Lagoon and the Piltun feeding area used by WGWs.	Sakhalin Energy	Agree. Protection of Piltun and other lagoons, and the Piltun whale feeding area, is a primary objective of the Oil Spill Response Plans (OSRPs) covering those areas.		Closed - implemented/resolved satisfactorily		
C. IISG	Item 25, p.11 (of IISG report)		Oil spill & gas associated risks	Sakhalin Energy commit to and undertake a long-term environmental monitoring program to determine if undetected leaks and spills are contaminating the environment around or downstream of the platforms and pipelines (see Long-Term Environmental Monitoring above).	Sakhalin Energy	Additional to the weekly helicopter flights visual surveys are planned annually using Remote Operated Vehicle (ROV) surveys. These ROV surveys will take about a month to cover all offshore pipelines.	After first oil/gas	Closed - implemented/resolved satisfactorily		
F. WGWAP-2	WGWAP 2/020	WGWAP 2/3 - Section 14.2	Oil spill & gas associated risks	The Panel adopts and recommends implementation of the Terms of Reference for a Task Force as prescribed under Item 14.2 of the main body of this report.	Sakhalin Energy	Sakhalin Energy agrees to participate in the task force process	Nov-07	Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/010	WGWAP 3/3 Section 6.1.1	Oil spill & gas associated risks	Some oil spilled in ice could be released at the late spring thaw, posing a risk to gray whales arriving in the area and therefore requiring further spill response. The Panel **recommends** that prompt and focussed clean-up response for any remaining oil residues should be a priority to minimise this risk at that time.	Sakhalin Energy	Sakhalin Energy will monitor and respond to all oil spills from Sakhalin Energy facilities to minimise environmental impact.		Closed - implemented/resolved satisfactorily		

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G. WGWAP-3	WGWAP 3/011	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The Panel emphasised the value of a flexible response strategy capable of adapting rapidly to the variety of oil spill scenarios that could arise from Sakhalin II, Phase 2 operations. It therefore expressed support for Sakhalin Energy's efforts in working with Russian authorities to achieve such flexibility.	Sakhalin Energy	Sakhalin Energy continues to work with the authorities.		Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/014	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The Panel **recommends** that the oil spill response handbooks be completed and made operational before the initiation of year-round oil production. To be considered operational, all aspects of the handbooks should be ready for application in the event of a spill.	Sakhalin Energy	The following are completed: Lunskoye, Piltun-Astokh, OPF, Prigorodnoye offshore. To be finalised: Onshore pipeline and Prigorodnoye onshore.		Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/017	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The Panel recommends that Sakhalin Energy should maintain its policy of no dispersant use in or near the Piltun feeding area at any time. Under certain circumstances it may be prudent to use dispersant in or near the offshore feeding area, although the Panel anticipates these conditions will be rare and any use of dispersant will require great caution. The Panel recommends that dispersant should not be used when gray whales are present in the offshore feeding area.	Sakhalin Energy	This is accepted and is already in the OSRP.		Closed - implemented/resolved satisfactorily		

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
G. WGWAP-3	WGWAP 3/018	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	Under circumstances where response may pose more risk to the whales and their habitat than a lack of response, the Panel **recommends** that responders be allowed to refrain from recovery efforts in the Piltun feeding area until the oil has moved through the area to the beach where clean-up efforts are more likely to be successful. Doing so could limit the amount of disturbance in the feeding area and, possibly, the amount of oil that is dispersed into the shallow-water sediment and associated benthic community. The Panel recognizes that oil on the beach poses a risk to other wildlife and that immediate and careful judgement on the part of responders in choosing response options will be required. However, the Panel also believes that, given the critically endangered status of the WGW population, it must be given the benefit of added consideration and caution commensurate with such status.	Sakhalin Energy	Sakhalin Energy will take this into account at the time of a spill.		Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/019	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The Panel **recommends** that surf-washing and prop-washing be removed from oil spill response plans as applied to the Piltun area.	Sakhalin Energy	Agree. Plans will be updated to reflect this.	Jun-08	Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/020	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The Panel **recommends** that hazing not be attempted with WGWs until procedures have been evaluated and found to be safe and reasonably effective.	Sakhalin Energy	Agree.		Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/021	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	To avoid secondary problems of contamination, the Panel **recommends** that handling, storage and disposal procedures for oil spill clean-up waste are fully developed prior to the initiation of year-round oil production.	Sakhalin Energy	Sakhalin Energy has RF requirements to meet in this regard.		Closed - implemented/resolved satisfactorily		

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G. WGWAP-3	WGWAP 3/022	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	In view of the difficulty associated with getting an assessment team on site, and the likelihood of added strain on logistical operations and other resources, the Panel **rescinds** the previous recommendation that an independent assessment team be present to monitor response activities in the event of a spill. The Panel **recommends**, however, that all aspects of spill response be carefully documented to ensure rigorous post-spill analysis to identify ways in which strategies might be improved.	Sakhalin Energy	Agree that this should be done.		Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/023	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The Panel **recommends** that any damage to the wetlands, lagoons, beaches and dunes of the Piltun ecosystem be addressed by restoration efforts as soon as possible following spill response activities.	Sakhalin Energy	Agree. The appropriate section from the onshore plan will be included in the offshore plan.	Jun-08	Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/024-1	WGWAP 3/3 Section 6.1.7	Oil spill & gas associated risks	*Focal follows to evaluate whale behaviour* : observations should be recorded on the following: (a) behaviour of whales in the presence of floating oil, including assessments of the ability and inclination of whales to avoid contact with oil; (b) general behavioural patterns of whales (for comparison with data collected during non-spill conditions); (c) changes in whale behaviour associated with spill response activities such as operations of oil recovery vessels and deployment of containment booms; (d) patterns of whale behaviour in the vicinity of areas with known contamination of benthic prey by spilled oil.	Sakhalin Energy	Sakhalin Energy will look into how best to put this in place and revert to the WGWAP. This could include the possibility of training and mobilising local people to collect distribution data and to carry focal follows. Surveys for dead whales will be part of the response events		Closed - implemented/resolved satisfactorily		

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G. WGWAP-3	WGWAP 3/024-2	WGWAP 3/3 Section 6.1.7	Oil spill & gas associated risks	The Panel's discussion focussed on short-term and long-term post-spill monitoring of whales. Short-term monitoring, occurring in the days and weeks immediately following a spill event, **should include**: *Surveys to document whale distribution* : short-term patterns of post-spill distribution should be compared with the following: (a) existing data on whale distribution under non-spill (pre-spill) conditions; (b) observed movement of spilled oil; (c) information on various types of acoustic disturbance associated with response effort; (d) information on the location and extent of incorporation of spilled oil into the benthos in feeding areas.	Sakhalin Energy	Sakhalin Energy will look into how best to put this in place and revert to the WGWAP. This could include the possibility of training and mobilising local people to collect distribution data and to carry focal follows. Surveys for dead whales will be part of the response events		Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/024-3	WGWAP 3/3 Section 6.1.7	Oil spill & gas associated risks	*Surveys for dead whales* : searches for dead whales should be carried out both on shore and on the water. Any dead whales located *must* be evaluated, at a minimum, as follows: (a) characterization of freshness of carcass; (b) description of pattern of oil coverage on the exterior surfaces of the carcass, in the eyes, in the mouth and in the baleen; (c) sampling of skin for genetic characterization; (d) photography of the animal for matching it to identified individuals in the existing photo-ID catalogues and for illustrating the extent of contact with oil.	Sakhalin Energy	Sakhalin Energy will look into how best to put this in place and revert to the WGWAP. This could include the possibility of training and mobilising local people to collect distribution data and to carry focal follows. Surveys for dead whales will be part of the response events		Closed - implemented/resolved satisfactorily		

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G. WGWAP-3	WGWAP 3/026	WGWAP 3/3 Section 6.1.7	Oil spill & gas associated risks	The Panel **recommends** that long-term monitoring of whales following an oil spill, in the several years following a spill event, should largely resemble the monitoring of WGWs that has been conducted in the project area in recent years by Sakhalin Energy and the Russia-US project. As with short-term studies, the primary foci for long-term work should be distribution, behaviour and carcass assessment. To contribute to understanding of long-term effects of oil spill events, existing protocols for whale monitoring should, in the event of a spill, be amended to incorporate the following: (a) Increased effort to study whale distribution and behaviour in areas known to have been subject to significant oiling; (b) Increased effort to study whale distribution and behaviour in areas known to have been subject to significant spill response activity (e.g. vessels, boom deployment and related activities); (c) Increased effort to study whale distribution and behaviour in areas where benthic communities are known to have been subject to significant oil exposure.	Sakhalin Energy	Sakhalin Energy understands the need to have some long term monitoring post an oil spill that has the potential to impact WGWs and will identify what needs to be develop now to facilitate this		Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/028	WGWAP 3/3 Section 6.2	Oil spill & gas associated risks	The Panel requests that Sakhalin Energy provide a clear statement as to what the “redacted” documents referred to in WGWAP 3/INF.13 are.	Sakhalin Energy	Sakhalin Energy are currently reviewing this and will revert to the WGWAP.		Closed - implemented/resolved satisfactorily		
G. WGWAP-3	WGWAP 3/016-Clo	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The Panel **reiterates previous recommendations** that opportunistic daily crew-change flights, dedicated weekly flights of the whole pipeline, ***annual assessment using a subsurface remotely operated vehicle (ROV), ROV assessment after major storm or other events, monthly cleaning pigging, and 5-year intelligent pigging of the pipeline*** are necessary and that they should be carried out as standard operating procedure for the detection of pipeline leaks.	Sakhalin Energy	Sakhalin Energy will review the present status and revert on any updates that may be in place.	Apr-08	Closed - implemented/resolved satisfactorily		Opportunistic daily crew-change flights and dedicated weekly flights of the whole pipeline will not be implemented.

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H. WGWAP-4	WGWAP 4/017	WGWAP 4/4 - Section 11.2	Oil spill & gas associated risks	The Panel **recommends** that updated information on aromatic content, emulsification properties, wave tank or at-sea experiments, in-situ burning and biodegradability, as well as updates on any relevant ongoing studies and their expected completion times, be provided for review at WGWAP-5.	Sakhalin Energy	Sakhalin Energy will review and provide available information to the Panel.	Aug-08	Closed - implemented/resolved satisfactorily		
H. WGWAP-4	WGWAP 4/018	WGWAP 4/4 - Section 11.2	Oil spill & gas associated risks	The Panel recommends that Sakhalin Energy provide for WGWAP-5 an update on: modelling of spills in the Aniva Bay area (including by vessels approaching from the east) in relation to (a) the WGW feeding areas and (b) plausible WGW migration routes, and (c) the potential for increased risks associated with any predicted changes in ship traffic patterns.	Sakhalin Energy	Scope and cost estimate for additional modelling will be developed by Sakhalin Energy and agreed with Panel prior to proceeding.	Dec-08	Closed - implemented/resolved satisfactorily		
H. WGWAP-4	WGWAP 4/019	WGWAP 4/4 - Section 11.2	Oil spill & gas associated risks	The Panel therefore recommends that formal arrangements to use other vessels and provide relevant training for their crews be put in place by Sakhalin Energy.	Sakhalin Energy	Formal arrangements and training will be further developed.	Dec-08	Closed - implemented/resolved satisfactorily		
H. WGWAP-4	WGWAP 4/020	WGWAP 4/4 - Section 11.2	Oil spill & gas associated risks	The Panel **requested** that further information on exercises be provided prior to WGWAP-5, including a list of those remaining in 2008 and planned for 2009 along with brief written reports on the completed exercises identifying lessons learned.	Sakhalin Energy	Offshore exercises carried out between WGWAP 4 & 5 will be reported.	Dec-08	Closed - implemented/resolved satisfactorily		
H. WGWAP-4	WGWAP 4/021	WGWAP 4/4 - Section 11.2	Oil spill & gas associated risks	Revised versions of the plans had been provided for comment recently to the advisers for potential lenders (PCCI) and the Panel **recommends** that these be provided to the Panel for its review and comment.	Sakhalin Energy	Revised versions will be provided to WGWAP.	Jul-08	Closed - implemented/resolved satisfactorily		

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H. WGWAP-4	WGWAP 4/022	WGWAP 4/4 - Section 11.2	Oil spill & gas associated risks	Sakhalin Energy reported that waste-disposal issues were being negotiated with Sakhalin Oblast. The proposed site at Smyrnik has been established; it is designed to accommodate 50,000m³ of oily waste. The site is located between Yuzhno and Nogliki. A second site in the southern part of the island is currently under negotiation with Sakhalin Oblast. The Panel welcomed these developments and requests that regular updates be provided at future Panel meetings.	Sakhalin Energy	Sakhalin Energy is managing waste through onshore facilities and this will not impact WGW.		Closed - implemented/resolved satisfactorily		
I. WGWAP-5	WGWAP 5/008	Section 13.2	Oil spill & gas associated risks	The Panel requested to see Sakhalin Energy's NEBA (net environmental benefit assessment) documentation presented to the Russian authorities in support of the pre-approval application and Bell agreed to provide this.	Sakhalin Energy	Complete Delivered January 31	End of January 2009	Closed - implemented/resolved satisfactorily		
J. WGWAP-6	WGWAP-6/023	Item 10	Oil spill & gas associated risks	The OSRPs identify the need for monitoring but contain no details. They state that the details appear in two other Sakhalin Energy publications. The Panel requests that copies of these other documents be made available for review by the Environmental Monitoring Task Force.	Sakhalin Energy	Sakhalin Energy agrees with this.	1 July 2009	Closed - implemented/resolved satisfactorily		
J. WGWAP-6	WGWAP-6/024	Item 10	Oil spill & gas associated risks	Given the importance of aromatic compounds in oil to the potential environmental impacts of a spill, the Panel recommends that Sakhalin Energy conduct further, more detailed analyses of the crude oil.	Sakhalin Energy	Sakhalin Energy agrees with this.	December 2009	Closed - implemented/resolved satisfactorily		
A. ISRP	ISRP-23	ISRP Report, p. 51 (p. 47 in the printed version of the report)	Oil spill & gas associated risks	Key Scientific Information and Gaps: Prediction of oil spill effects will be enhanced by several types of information currently not available, including: (vi) Potential for spill-derived contaminants to concentrate through the food chain and become detrimental to WGW health and population parameters.		There is very little evidence for accumulations of these in food chains as a result of spills and even less on the significance of HC's that have been detected.	N/A.	Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		

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A. ISRP	ISRP-25	ISRP Report, p. 52 (p. 47 in the printed version of the report)	Oil spill & gas associated risks	Key Scientific Information and Gaps: Prediction of oil spill effects will be enhanced by several types of information currently not available, including: (vii) Potential patterns of acute and chronic toxicity and health impairment of gray whale prey in the event of spillage of drilling muds, domestic sewage or other toxic pollutants from offshore drilling platforms or other categories of project infrastructure.		Sakhalin Energy could possibly support a better inventory of non-oil spill risk –including plume distributions of non-oil losses and discharges but it needs further discussion with the Panel to determine whether this will significantly add to our knowledge. Waste management plans are in place for all platforms and vessels.	May-05	Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		
A. ISRP	ISRP-27	ISRP Report, p. 55 (p. 50 in the printed version of the report)	Oil spill & gas associated risks	As tanker-based transportation is known to constitute a significant risk of a spill, specific information was requested on all tankers that have loaded at the Vityaz Marine terminal and those that will be used to carry oil from the Prigorodnoye export terminal. All that was provided was a list of names, ages and hull configurations for tankers that have loaded to date. Thus, a credible characterisation of the fleet with regard to spill risk was not possible.		Information on future vessel traffic was not available at the time of publishing the CEA. No tankers have loaded at Prigorodnoye to date. It is unlikely that this will represent future tanker traffic at Aniva. If possible, Sakhalin Energy could try to obtain this data.	May-05	Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		
A. ISRP	ISRP-28	ISRP Report, p. 57 (p. 52 in the printed version of the report)	Oil spill & gas associated risks	The CEA did not model the worst-case scenario, I.e. that of a platform blow-out, but such modelling is essential for a thorough and unbiased assessment of risk. The CEA did not model spills occurring during winter months when weather conditions may be more severe than those modelled (10-year averages for spring, summer and autumn) and when the sea may be covered with ice. Again, such modelling is essential for a thorough and unbiased assessment of risk.		This comment has been taken into consideration and further work will be undertaken during OSRP planning.	End of July 2006	Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
B. Lenders	Vancouver I workshop report, issues table 11.1 (PART 1)		Oil spill & gas associated risks	Further work is required to demonstrate that impacts are ALARP. CEA risk assessment does not assess the actual risks of oil spills (i.e. frequency and impact) but only provides estimates of frequency, volume, and selected excursion envelopes. The ISRP report estimates a 24% probability of a pipeline spill and a 3% likelihood of a platform blowout over the project's 40-year lifecycle. Impacts on feeding grounds (e.g. portion affected, prey lost) have not been quantitatively assessed. Persistence, emulsification effects, etc. are not adequately described, confounding attempts to link changes in oil condition to impacts on benthos. Existing documents lack information regarding toxic effects on prey and prey food chain. (continued below)	Sakhalin Energy	Future analytical work will be carried out on persistence times, etc., for Oil Spill Response Plans (OSRPs) (21). Sakhalin Energy notes that excursion envelopes are based on conservative assumptions about persistence. Work has been commissioned to assess the characteristics of Vityaz oil including mixing realistic energies for emulsification. These studies are ongoing (21). Oil spill response planning assumes damage/harm on impact and does not require detailed toxicological or other work designed to quantify potential damage. Sakhalin Energy maintains that the spill frequencies and volumes stand up well against what could be expected industry-wide (although comparisons are difficult as there are far fewer oil spill QRAs than ones for personnel risk). The maximum credible spill sizes, even taking a 10,000 year return period, are less than the RF figures for a Platform "design" spill (21, 35). Detected pipeline release volumes are also less than this figure. Undetected rates can be larger, but these relate to long term low leak rate spills below the Atmos system detection threshold. At sea, these look very likely to weather faster than the leak rate. The spill probability and volumes from the new platforms are relatively low (35). Sakhalin Energy has commissioned a full event tree analysis, and demonstrated that protection against spills has been built in to an ALARP level - increasing protection against spills could only be done with significant detriment to risk to life (e.g. by enclosed wellbays which would increase the explosion risk). Sakhalin Energy has analysed the pollution potential from blowouts using data in the unpublished section of the SINTEF database (35). We have analysed the full database held by SGS, and it shows that significant pollution from blowouts is unusual - all the blowouts in the database that caused a medium level of pollution (around 2-4000m3) related to hurricane damage. (continued below)		Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
B. Lenders	Vancouver I workshop report, issues table 11.1 (PART 2)		Oil spill & gas associated risks	(continuation from above; Vancouver I workshop report, issues table 11.1 (PART 1)) A Lender review noted that a more detailed risk assessment (impact and frequency) is required to demonstrate risks are ALARP. The CEA does not define risk acceptability for oil spills as required under ALARP demonstration. The need to assess oil impacts on benthos/prey was re-iterated by experts' written responses to the Sakhalin Energy Issue Table for the Gland workshop.		(continuation from above; Vancouver I workshop report, issues table 11.1 (PART 1)) The database does only include events from certain parts of the world (US GOM, Europe and some other events) but it does relate to those areas where well engineering controls are to a high standard, as they will be in Sakhalin. Sakhalin Energy has a good argument for demonstrating that the probability of pollution resulting from a blowout is substantially less (at least one order of magnitude) than the SINTEF based blowout probability itself. QRA is used as a comparative rather than absolute tool in order to select from alternatives (35). It is likely to over-estimate risks due to conservatisms in the assumptions. Sakhalin Energy has included controls in place within the QRA frequency and consequence assessments, and believes that a strong case for ALARP in leak prevention has been built. (REFS: 20, 21, 29a, 35, 38). Sakhalin Energy has developed a scope of work to examine the potential effects of an oil spill on western gray whale feeding habitat. This study will examine the probability of a spill of varying sizes reaching the feeding area and what impacts, if any, it is likely to have in that area (38). Sakhalin Energy has also commissioned D. Bonsall of Risktec to provide a comprehensive review of engineering design that will fully demonstrate the minimization of spill risk (20). Sakhalin Energy accepts that this issue will go to the WGWAP.		Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		
B. Lenders	Vancouver I workshop report, issues table 11.4		Oil spill & gas associated risks	The CEA did not assess the risks of platform blowout. At the least, these risks should be assessed by review of the company's historical record and experience with blowouts. In addition, Sakhalin Energy could have provided a description of the operations that occur on or under the platform and the steps taken to avoid blowout at each operational stage.	Sakhalin Energy	Blowouts have been considered in the QRAs undertaken to date and are being reconsidered in QRAs for OSRPs (REFS: 20). Sakhalin Energy note that the QRA was produced for the basic platform design in 2003. The independent assessment referred to by the panel is an assessment of the QRA process, rather than the risks associated with design and operations.		Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		
B. Lenders	Vancouver I workshop report, issues table 11.5		Oil spill & gas associated risks	Risk associated with spills from the construction and operation of the Tanker Loading Unit have not been adequately assessed and described. Similarly, tanker risks have not been properly assessed. Some experts identified these risks as significant and stated that further analysis of possible risk scenarios is required.	Sakhalin Energy	A QRA update (35) has been commissioned for Tanker Loading Unit risks (all operations are being reassessed for OSRPs). A tanker risk assessment is being commissioned (37). Trajectory studies for a range of tanker spills have been undertaken and probabilities of shoreline impacts have been calculated for OSR planning purposes. This issue is not considered relevant to WGW except perhaps during migration. (REFS: 35, 37). Although not relevant to the WGW, an assessment is to be initiated on sensitivity mapping available on Hokkaido. Sakhalin Energy accepts that this issue will go to the WGWAP.		Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
B. Lenders	Vancouver I workshop report, issues table 11.8		Oil spill & gas associated risks	The CEA did not assess in detail the relative consequences of spills associated with the pipeline alternatives.	Sakhalin Energy	The CEA provided a comparative risk assessment not a quantitative environmental risk assessment. Alternative 1 has also now been selected.		Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		
C. IISG	Item 15, p.10 (of IISG report)		Oil spill & gas associated risks	The IISG recommends that IUCN urge UNESCO to make a special effort to ensure that surveys for dead Steller's sea eagles are conducted on both coasts of the Shiretoko Peninsula, and that any carcasses are examined in detail to determine the cause of death. Information from the current spill is of particular interest and value because of the presence of sea ice in the spill area.	IUCN			Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		
C. IISG	Item 16, p.10 (of IISG report)		Oil spill & gas associated risks	The IISG recommends that Sakhalin Energy work with appropriate Russian and Japanese governments to determine the time, place, and source of the oil spill off the coast of Hokkaido late 2005, so that the data and specimens can be used to examine retrospectively the behaviour of the spill and its effects. Such information may prove valuable for modelling oil spill trajectories, and related exercises.	Sakhalin Energy	Sakhalin Energy has used its contacts to obtain information about this particular spill and considers it unlikely that more information can be retrieved. It is important to note that because this spill was not connected with Sakhalin II project activities, and because it was concentrated in Japanese waters, the Company had no opportunity for involvement, nor was it called upon for assistance.		Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot	WGWAP-2/019	
F. WGWAP-2	WGWAP 2/019	WGWAP 2/3 Section 14.1	Oil spill & gas associated risks	The Panel recommends that IUCN: - determine whether oil on dead birds in 2005 and the winter of 2006/07 can be fingerprinted to establish if it came from the same source; - consider whether archived satellite photographs are likely to provide additional evidence of the source and movement of spilled oil; and - consider preparing a summary report on the Hokkaido spill, after consultation with authorities at the UNESCO World Heritage Site on the Shiretoko Peninsula.	IUCN			Closed - no longer relevant but had not been implemented satisfactorily at the time it became moot		

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
A. ISRP	ISRP-19	ISRP Report, p. 50 (p. 46 in the printed version of the report)	Oil spill & gas associated risks	These [persistence time] estimates indicate that sea surface temperature and wind speed are important determinants of persistence time, but the CEA does not give the year-round information on regional sea surface temperature and wind speed needed to predict their actual influence on persistence times of spilled oil.		Provision of this data was not required given the scope of the CEA but was of course used in determining trajectories. The influence of time and energy on fate of the oil slick was modelled and this can be related back to the distribution of wind speeds and temperatures in the region to determine the probability of persistence. This work has no implication or use for OSR, but if deemed significant for environmental impact assessment, can be done. A reassessment of the physical character of the Phase 2 crude oil (spreading coefficients, viscosity, evaporation rates under a range of conditions, emulsification rates under realistic conditions etc) and also chemical characteristics of the crude oil and weathered residuals is also intended. Some laboratory weathering studies are also planned.	Phase 1 at end of 2005, Phase 2 at end of 2006	Closed - superseded by a new recommendation	WGWAP-3/013	
A. ISRP	ISRP-20	ISRP Report, p. 51 (p. 46 in the printed version of the report)	Oil spill & gas associated risks	The available information is not sufficient to determine persistence patterns or rule out persistence times that are sufficiently long to expose the feeding areas, whales and prey populations to oil and at least some portion of its more toxic components.		Available information does not allow this to be quantified with absolute certainty but available literature and oil characteristics do allow for a qualitative prediction. The approach taken in the CEA was conservative and trajectories used assumed persistence.	Phase 1 at end of 2005, Phase 2 at end of 2006	Closed - superseded by a new recommendation	WGWAP-4/017 & 6/024	
A. ISRP	ISRP-21	ISRP Report, p. 51 (p. 47 in the printed version of the report)	Oil spill & gas associated risks	The CEA does not explicitly consider effects of possible emulsification processes on persistence time, and as a result may be underestimating the persistence of oil spills at sea. Underestimates of persistence time contributes to important biases in estimating both trajectories and excursion envelopes for spilled oil. As a consequences, sizes of excursion envelopes presented in the CEA are very likely biased downwards.		Vityaz crude oil can be emulsified but the emulsion is unstable. The characterisation work undertaken did not specify mixing energies used to emulsify oil. This work is being redone. However, the excursion envelopes assume persistence and so are conservative. Actual envelopes will be smaller.	Dec-05	Closed - superseded by a new recommendation	WGWAP-4/018	

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
A. ISRP	ISRP-24	ISRP Report, p. 51 (p. 47 in the printed version of the report)	Oil spill & gas associated risks	Key Scientific Information and Gaps: Prediction of oil spill effects will be enhanced by several types of information currently not available, including: (i) Direct acute toxicity of spilled oil to prey, by prey species, (ii) Pattern of change over time in acute toxicity of oil to prey, by prey species, due to natural weathering of spilled oil, (iv) Chronic effects of spilled oil on prey health and life history, including age-specific survival threats, age-specific fecundity rates, feeding efficiency and population-level resilience to additional disturbances, both natural and anthropogenic (e.g. a second spill) and (v) Acute and chronic effects of spilled oil on prey food supply.		Obtaining meaningful toxicity data on indigenous amphipods will take a considerable time and is a complex task (RU labs to be assessed and calibrated or getting suitable test species. / individuals overseas for testing). Problems with specificity of tests, i.e. similar amphipods at similar temperatures etc need to be found.	N/A	Closed - superseded by a new recommendation	WGWAP-3/012	
A. ISRP	ISRP-29	ISRP Report, p. 59 (p. 55 in the printed version of the report)	Oil spill & gas associated risks	The leak detection system proposed by Sakhalin Energy is capable of detecting leaks equal to 1% of the daily amount of oil transported. However, a more effective leak detection (0.4%) has been reported for the TransAlaska Pipeline System (U.S. Bureau of Land Management 2003). This system employs a combination of deviation alarms for pressure and flow rate, line volume balance leak detection, and transient volume balance leak detection systems. This might be considered a 'best practice' but the CEA does not explain why such a system (with a corresponding level of detection) is not proposed for use in Sakhalin II Phase 2.		Sakhalin Energy should look at available systems as part of internal QA/QC to verify ALARP.	Apr-05	Closed - superseded by a new recommendation	WGWAP-3/016	
A. ISRP	ISRP-31	ISRP Report, p. 62 (p. 58 in the printed version of the report)	Oil spill & gas associated risks	Information is needed on the following topics for a comprehensive analysis of risks associated with Phase 2: (I) Risks related to construction and operation of Prigorodnoye Oil and Gas Export Terminal.		This comment has been taken into consideration and further work will be undertaken.	Jul-05	Closed - superseded by a new recommendation	WGWAP-4/018	

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
A. ISRP	ISRP-37	ISRP Report, p. 98 (p. 93 in the printed version of the report)	Oil spill & gas associated risks	The Panel's review identified the following general areas of future research: If one or more spills or releases occur, investigation of (1) any direct, acute effects of oil and gas on whales and (2) the effects of chronic exposure should spilled oil remain present for a prolonged period.		Sakhalin Energy commits to undertaking monitoring in this area.	N/A	Closed - superseded by a new recommendation	WGWAP-3/022; 3/024; & 3/026.	
B. Lenders	Vancouver I workshop report, issues table 11.3		Oil spill & gas associated risks	The region in question is under ice for about half of the year. Successful mechanisms for responding to oil spills under ice have not been identified and it is not clear that Sakhalin Energy has a plan and can respond to such a spill.	Sakhalin Energy	Oil spill trajectory modelling in winter/ice conditions has been conducted for some areas and will be undertaken in all areas as part of the development of the OSRP (21). A three volume report on Oil Spill Behavior and Oil Spill Response in Ice Conditions is now available (33). This review estimates ice conditions in the area of Sakhalin Energy operations, compares ice conditions with other areas, establishes appropriate strategies for oil spill response in accordance with ice conditions, evaluates different response equipment effectiveness, and provides an estimate of the equipment required. A number of oil recovery systems are known to work in ice conditions (e.g. rope mops) and these are being assessed (21, 33). (REFS: 21, 29a, 33). Sakhalin Energy continues to develop its winter spill response plans through industry workshops, equipment assessment programmes, and additional commissioned studies. Sakhalin Energy accepts that this issue will go to the WGWAP.		Closed - superseded by a new recommendation	WGWAP-3/012 & 3/013.	
B. Lenders	Vancouver I workshop report, issues table 12.2		Oil spill & gas associated risks	Pipelines contain leak detection systems that may not detect leakage of hundreds of barrels of oil per day, which in turn may pose a significant risk to the whales and their habitat. The ISRP questioned whether the existing leak detection system is the best available. In addition, the ISRP raised questions about the ability to detect leaked oil given ice coverage during half the year, darkness, fog, and rough seas. Scientists' written response to Sakhalin Energy Issue Table (provided at Gland) noted that the Sakhalin Energy response was unclear on this and greater detailed is required to demonstrate ALARP.	Sakhalin Energy	Leak detection for Sakhalin Energy pipelines will use a variety of strategies (15, 21). Stated detection level of the proposed Sakhalin Energy leak detection system is 1% of daily flow (cf 0.4% claimed on TAPS; [17]). Sakhalin Energy will assess systems to verify ALARP. ATMOS system meets detection criteria. A study of system sensitivity has been completed and is in review (17). Relocation of the pipeline to Alternative 1 has also lessened the risk to the feeding area (15). The EIA Addendum (21) provides additional information on leak detection systems to be employed. (REFS: 15, 17, 21, 29a)		Closed - superseded by a new recommendation	WGWAP-3/016	

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
B. Lenders	Vancouver I workshop report, issues table 13.1		Oil spill & gas associated risks	Information is required on the oil spill response plans in order for comprehensive assessment to be made. This includes recovery under ice conditions.	Sakhalin Energy	Sakhalin Energy is preparing, developing, researching and implementing a comprehensive OSR strategy as part of the overall management of OSR risk issues (3, 13, 31). Research into oil recovery in ice conditions ongoing by Sakhalin Energy and in July 2005 a three-volume Oil in Ice project was completed (33). The EIA Addendum provides extensive detail on OSR issues (21). The EIA Addendum includes a table (Table 2.10) that provides a summary of the main study projects for OSRP development and related activities. (REFS: 3, 13, 21, 29a, 31, 33). Sakhalin Energy has a number of OSRP in development: Corporate Operations OSRP, OPF, LUN, PA, OET/LNG-Onshore, Aniva Bay Marine, and Pipeline (Onshore). Further discussion required, can this be addressed in the future by the advisory body? Sakhalin Energy accepts that this issue will go to the WGWAP.		Closed - superseded by a new recommendation	WGWAP-3/010; 3/011 & 3/012	
B. Lenders	Vancouver I workshop report, issues table 13.2		Oil spill & gas associated risks	Use and effects of dispersants require further discussion and evaluation, including investigation of the potential toxic effects of dispersants.	Sakhalin Energy	Sakhalin Energy has no intention to use dispersants near the WGW feeding area. OSRPs being developed and will include development of protocols for use of dispersants. A risk assessment relating to dispersant use is being conducted. (REF: 29a)		Closed - superseded by a new recommendation	WGWAP-3/017	
B. Lenders	Vancouver I workshop report, issues table 14.2		Oil spill & gas associated risks	In the event of a spill, investigations will be required to assess direct acute and chronic effects on WGW.	Sakhalin Energy	Sakhalin Energy accepts that this issue will go to the WGWAP.		Closed - superseded by a new recommendation	WGWAP-3/024 & 3/026	
C. IISG	Item 17, p.11 (of IISG report)		Oil spill & gas associated risks	Continued work is needed to develop response strategies and methods for oil spilled on or under the ice. The degree to which such oil can be recovered is highly uncertain, but progress has been made by Sakhalin Energy both independently and in concert with other oil and gas companies. Important studies are underway to assess the costs and benefits of burning oil, retrieving it from under the ice, and retrieving it by various technologies (skimmers and mops) from the ice or open leads in the ice. These studies should be continued to maximize the probability of an effective response.	Sakhalin Energy	Agreed. Sakhalin Energy will continue its work and also continue to support joint industry initiatives aimed at developing spill prevention, spill management, response systems and equipment for OSR in ice conditions.		Closed - superseded by a new recommendation	WGWAP-3/010; 3/011 & 3/012	
C. IISG	Item 20, p.11 (of IISG report)		Oil spill & gas associated risks	As described in reports from the September WGW workshop in Vancouver, regular (biweekly) flights are needed to detect leaks from pipelines.	Sakhalin Energy	Sakhalin Energy confirms that helicopter flights are planned on a weekly basis to detect any irregularity along the pipelines.	After first oil	Closed - superseded by a new recommendation	WGWAP-3/016	

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C. IISG	Item 23, p.11 (of IISG report)		Oil spill & gas associated risks	Dispersants should not be used in areas where they may affect WGWs and, particularly, their habitat.	Sakhalin Energy	Agree. Sakhalin Energy will not use dispersants in or near WGW feeding areas or in areas where WGWs are observed.		Closed - superseded by a new recommendation	WGWAP-3/017	
C. IISG	Item 24, p.11 (of IISG report)		Oil spill & gas associated risks	The IISG recommends that, should a spill occur, an assessment team be convened to determine the nature and extent of damage caused by the spill. The assessment team should be independent of the response effort.	Sakhalin Energy	Agree. This has been incorporated into the offshore OSRPs. It will also be incorporated into the Long-term Monitoring Plan that is being developed. ACTION: Development of Monitoring Plan with further consideration of logistical aspects, particularly if the participation of non-Russian whale experts is intended.	Before first oil	Closed - superseded by a new recommendation	WGWAP-3/022	
D. WGWAP-1	WGWAP 1/029	WGWAP 1/3 - Section 13.0	Oil spill & gas associated risks	The Panel **affirms** its continued interest in knowing more about the oil spill that occurred in the vicinity of Hokkaido in January 2006 (and considered by the IISG) and **requests** that both Sakhalin Energy and IUCN make further inquiries and report on progress at the next WGWAP meeting.	IUCN/Sakhalin Energy	IUCN is currently following this up with the Japan Coast Guard and will also be writing to the Ministry for Foreign Affairs and the Japanese IUCN Committee. A progress report will be provided to the WGWAP at its next meeting.	Apr-07	Closed - superseded by a new recommendation	WGWAP-2/019	
G. WGWAP-3	WGWAP 3/012	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The panel encourages active research by Sakhalin Energy in a number of subject areas and, in particular, recommends research on the toxicity of Vityaz crude oil, the efficacy of in situ burning of oil in ice, detection and response options in ice, and general behaviour of Vityaz crude oil in the conditions characteristic of the Sakhalin marine environment.	Sakhalin Energy	Sakhalin Energy has a program for research in 2008 and 2009 that we will share with the WGWAP.	Apr-08	Closed - superseded by a new recommendation	WGWAP-4/017	
G. WGWAP-3	WGWAP 3/013	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The panel **recommends** that studies of the behaviour of Vityaz crude oil in the marine environment be conducted to provide information that will maximize Sakhalin Energy's oil spill response capabilities.	Sakhalin Energy	This ties in with the research being conducted but is unlikely to include open water trials.		Closed - superseded by a new recommendation	WGWAP-4/017	
H. WGWAP-4	WGWAP 4/016	WGWAP 4/4 - Section 11.2	Oil spill & gas associated risks	The Panel **recommends** that it be provided with the information on aromatic hydrocarbons detailed in the report (Section 11.2).	Sakhalin Energy	Sakhalin Energy will review the information and provide details to the Panel.	Aug-08	Closed - superseded by a new recommendation	WGWAP-6/024	

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G. WGWAP-3	WGWAP 3/025	WGWAP 3/3 Section 6.1.7	Oil spill & gas associated risks	If carcasses are found in the water, they need to be towed to locations where detailed post-mortem examinations can be carried out. Carcasses found stranded or brought ashore must be examined in detail by personnel with appropriate expertise. The Panel **recommends** the development of priority-ranked post-mortem guidelines to optimise the quality and amount of information collected from carcasses. This should include the acquisition of data on tissue contamination by oil.	Sakhalin Energy	Sakhalin Energy is legally obliged to cooperate with the relevant Russian authorities and their specialists that include veterinarians to conduct or consult on the samples from carcasses. Sakhalin Energy will approach relevant authorities on this issue.		Open - in progress		Referred to Environmental Monitoring Task Force
K. WGWAP-7	WGWAP-7/020	Item 11	Oil spill & gas associated risks	The exercise and training matrix provided by Sakhalin Energy during the site visit was difficult to comprehend. Instead of such a matrix, the Panel recommends that in the future, Sakhalin Energy should provide for each Panel meeting a list of the exercises conducted and planned along with a brief summary report on each drill.	Sakhalin Energy	A simplified list of exercises and outcomes will be provided to the panel for 2010 exercises.	Annually	Open - in progress		
C. IISG	Item 21, p.11 (of IISG report)		Oil spill & gas associated risks	Sakhalin Energy should continue the development of models for predicting the trajectory of oil spilled under ice. The IISG agrees that such models are essential and supports their development.	Sakhalin Energy	Agree. Sakhalin Energy is and will be continuing this programme.		Open - no action yet taken		
G. WGWAP-3	WGWAP 3/027	W GWAP 3/3 Section 6.1.7	Oil spill & gas associated risks	The Panel **recommends** that existing studies of WGW distribution, behaviour and carcass evaluation in non-spill environments should be maintained to ensure that appropriate baseline information (including natural variation) is available. Modified long-term studies following oil spill events should be *in addition to* , rather than in place of, established, ongoing studies. It also may be useful and informative to sample both living and dead gray whales in the vicinity of a previous spill (recent or relatively long-past) to determine levels of contaminants (e.g., polyaromatic hydrocarbons) in tissues.	Sakhalin Energy	Sakhalin Energy is committed to the monitoring of the WGWs. Sakhalin Energy will review the possibility of doing biopsies on living whales and if agreed approach RPN for permission to do so in the event of an oil spill. A protocol has to be developed for this and Sakhalin Energy will seek WGWAP approval and advice on this with regard to impacting the WGWs.		Open - no action yet taken		

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K. WGWAP-7	WGWAP-7/019	Item 11	Oil spill & gas associated risks	An important omission from the programme is that to date no drills have been carried out on shorelines near the gray whale feeding areas. The Panel recommends that some drills be conducted in these areas.	Sakhalin Energy	An oil spill exercise in the Piltun lagoon area will be considered taking into account all safety issues and the need to limit any impact on the environment.	30-Nov-10	Open - no action yet taken		
L. WGWAP-8	WGWAP-8/011	Item 7	Oil spill & gas associated risks	The Panel recommends that the company provide an update for WGWAP-9 on progress with the two documents, one a manual on spill response in ice and the other a handbook for monitoring and assessment of oil spill response operations (see WGWAP-7 report).	Sakhalin Energy	Sakhalin Energy will follow-up on these and provide as they are available.	WGWAP-9	Open - no action yet taken		
L. WGWAP-8	WGWAP-8/012	Item 7	Oil spill & gas associated risks	The Panel requests that Sakhalin Energy make the PCCI report available for Panel prior to WGWAP-9.	Sakhalin Energy	Sakhalin Energy will follow-up on these and provide as they are available.	WGWAP-9	Open - no action yet taken		
G. WGWAP-3	WGWAP 3/016-Rej	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The Panel **reiterates previous recommendations** that ***opportunistic daily crew-change flights*** , ***dedicated weekly flights of the whole pipeline*** , annual assessment using a subsurface remotely operated vehicle (ROV), ROV assessment after major storm or other events, monthly cleaning pigging, and 5-year intelligent pigging of the pipeline are necessary and that they should be carried out as standard operating procedure for the detection of pipeline leaks.	Sakhalin Energy	Sakhalin Energy will review the present status and revert on any updates that may be in place.	Apr-08	Rejected by Sakhalin Energy (partially)		Opportunistic daily crew-change flights and dedicated weekly flights of the whole pipeline will not be implemented; other elements have been implemented.
G. WGWAP-3	WGWAP 3/015	WGWAP 3/3 Section 6.1.6	Oil spill & gas associated risks	The Panel **reiterates the previous recommendation** for rigorous, systematic collection of baseline information from both Piltun Lagoon and the Piltun feeding area to provide an adequate baseline for measuring the effects of oil and gas operations, including in the event of an oil spill.	Sakhalin Energy	As part of the joint WGW monitoring program data is collected each year from a number of locations in the WGW feeding areas offshore Sakhalin. Also, from time to time data is collected in Piltun lagoon. In addition to this there is data collected as part of other monitoring programs in this area and as a result, Sakhalin Energy regard this data as sufficient at this time.	Apr-08	Rejected by Sakhalin Energy		

Meeting	Reference	Cross-Reference	Topic	Recommendation	Party resp.	Response	Target completion date	Status	Superseded by	Comments
M. WGWAP-10	WGWAP-10/017	Item 7.2.2	Oil spill & gas associated risks	Evans provided an update on recommendation WGWAP-8/011 concerning Sakhalin Energy's manual for oil spill response in ice and the related handbook on environmental monitoring. Both documents have been subjected to external review by PCCI and the Lenders. Consequent revisions are expected to be completed by the third quarter of 2011. The Panel recommends that it receive (via IUCN) the updated and revised manual and handbook for further technical review and comment as soon as they are available and before they are finalised, preferably in advance of WGWAP-11.	Sakhalin Energy	Agreed, SEIC will endeavour to meet the timeframe suggested by the WGWAP, but reserves the right to prioritise resources against other operational requirements.	WGWAP-11	Open - in progress		