

**SUMMARY OF RECOMMENDATIONS FROM THE 3<sup>RD</sup> MEETING OF THE GWAP**

**Last Updated 28 January 2008**

Reference	Cross-Reference	GWAP Recommendation & Requests	Responsible Party	Target Completion Date	SEIC Response
<b>ITEM 3: MMO PROGRAMME</b>					
GWAP 3/001	GWAP 3/3 Section 3.1	The Panel <b>recommends</b> that as a minimum, Sakhalin Energy request general permission from the Russian Ministry of Natural Resources to collect small tissue samples from dead GWs for genetic analyses.	SEIC	April 2008	SEIC will approach the Authorities.
GWAP 3/002	GWAP 3/3 Section 3.2.3	The Panel <b>recommends</b> that from now on at least the following data be collected by the MMO Programme: <ul style="list-style-type: none"> <li>• time and position of each start or change of vessel activity (including those when no MMO is on watch);</li> <li>• visibility (including time and position when it changes);</li> <li>• start and end time and position of each MMO watch period;</li> <li>• time and position of each whale sighting.</li> </ul>	SEIC	June 2008	All the data listed are already part of the MMO protocol during daylight. In 2008 MMOs will be instructed to collect data on time and position of each change of vessel direction during nighttime. However, this requires that the records are available in the vessel's log book.
GWAP 3/003	GWAP 3/3 Section 3.2.3	The Panel <b>requests</b> that after each season, summaries of the MMO data be presented to the Panel that show: <ul style="list-style-type: none"> <li>• the number of trips by operating support vessels;</li> <li>• the proportion of each trip that occurs in poor visibility (e.g., darkness, fog);</li> <li>• the proportion of each trip that observers were on watch;</li> <li>• hours of observation;</li> <li>• numbers and locations of sighted whales.</li> </ul>	SEIC	Nov 2008	To be presented at the Nov 2008 GWAP-5 or April 2009 GWAP-6.

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WGWAP 3/004	WGWAP 3/3 Section 3.2.3	The detection probability from vessels is an important factor in the effectiveness of mitigation measures for seismic surveys and the Panel <b>recommends</b> that the issue of estimating detection function probability should be addressed by the Seismic Survey Task Force.	Seismic Survey Task Force		
WGWAP 3/005	WGWAP 3/3 Section 3.3	The skewed distribution of MMO sightings from crew change vessels – the vast majority came from one of the three vessels – raised concern on the part of the Panel and requires further investigation. The Panel <b>requests</b> that SEIC analyzes this discrepancy and reports its findings at the next meeting.	SEIC	April 2008	An analysis will be presented at the next WGWAP meeting and included in the 2007 MMO Close-out Report.
WGWAP 3/006	WGWAP 3/3 Section 3.3	The Panel <b>reiterates its previous recommendation</b> that MMOs should be placed on the crew change vessel operating between Nogliki and LUN-A at all times.	SEIC	June 2008	SEIC will endeavour to place MMOs on crew change vessel operating between Nogliki and LUN-A at all times. The only limitation is the accommodation on the vessels.
<b>ITEM 5: UPDATED POPULATION ASSESSMENT</b>					
WGWAP 3/007	WGWAP 3/3 Section 5.1	The Panel <b>recommends</b> that steps be taken to facilitate use of the combined data in a population assessment.	Photo-ID Task Force		
WGWAP 3/008	WGWAP 3/3 Section 5.3	The Panel <b>recommends</b> that a preliminary analysis be carried out on the possible effects of disturbance on reproductive success or other aspects of demography.	Panel		
WGWAP 3/009	WGWAP 3/3 Section 5.3	The Panel <b>recommends</b> , as suggested by the Photo-ID Task Force, that data on body condition be incorporated into a population assessment if possible.	Panel		
<b>ITEM 6: OIL SPILL PREVENTION, PREPAREDNESS AND RESPONSE</b>					

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WGWAP 3/010	WGWAP 3/3 Section 6.1.1	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 <b>recommends</b> that prompt and focussed clean-up response for any remaining oil residues should be a priority to minimise this risk at that time.	SEIC		SEIC will monitor and respond to all oil spills from SEIC facilities to minimise environmental impact.
WGWAP 3/011	WGWAP 3/3 Section 6.1.6	The Panel <b>emphasised</b> 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 <b>expressed support</b> for SEIC's efforts in working with Russian authorities to achieve such flexibility.	SEIC		SEIC continues to work with the authorities.
WGWAP 3/012	WGWAP 3/3 Section 6.1.6	The panel <b>encourages</b> active research by SEIC in a number of subject areas and, in particular, <b>recommends</b> 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.	SEIC	April 2008	SEIC has a program for research in 2008 and 2009 that we will share with the WGWAP.
WGWAP 3/013	WGWAP 3/3 Section 6.1.6	The panel <b>recommends</b> 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.	SEIC		This ties in with the research being conducted but is unlikely to include open water trials.
WGWAP 3/014	WGWAP 3/3 Section 6.1.6	The Panel <b>recommends</b> 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.	SEIC		The following are completed:: Lunskoye, Piltun-Astokh, OPF, Prigorodnoye offshore.  To be finalised: Onshore pipeline and Prigorodnoye onshore.
WGWAP 3/015	WGWAP 3/3 Section 6.1.6	The Panel <b>reiterates the previous recommendation</b> 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.	SEIC	April 2008	SEIC will submit the data from the 2007 surveys to the panel, who should advise if this is adequate.
WGWAP 3/016	WGWAP 3/3 Section 6.1.6	The Panel <b>reiterates previous recommendations</b> 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	SEIC	April 2008	SEIC will review the present status and revert on any updates that may be in place.

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		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.			
WGWAP 3/017	WGWAP 3/3 Section 6.1.6	The Panel <b>recommends</b> that SEIC 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 <b>recommends</b> that dispersant should not be used when gray whales are present in the offshore feeding area.	SEIC		This is accepted and is already in the OSRP.
WGWAP 3/018	WGWAP 3/3 Section 6.1.6	Under circumstances where response may pose more risk to the whales and their habitat than a lack of response, the Panel <b>recommends</b> 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.	SEIC		SEIC will take this into account at the time of a spill.
WGWAP 3/019	WGWAP 3/3 Section 6.1.6	The Panel <b>recommends</b> that surf-washing and prop-washing be removed from oil spill response plans as applied to the Piltun area.	SEIC	June 2008	Agree. Plans will be updated to reflect this.
WGWAP 3/020	WGWAP 3/3 Section 6.1.6	The Panel <b>recommends</b> that hazing not be attempted with WGWs until procedures have been evaluated and found to be safe and reasonably effective.	SEIC		Agree.
WGWAP 3/021	WGWAP 3/3 Section 6.1.6	To avoid secondary problems of contamination, the Panel <b>recommends</b> that handling, storage and disposal procedures for oil spill clean-up waste are fully developed prior to the initiation of year-round oil production.	SEIC		SEIC has RF requirements to meet in this regard.
WGWAP 3/022	WGWAP 3/3 Section 6.1.6	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 <b>rescinds</b> the previous recommendation that an independent assessment team be present to monitor response activities in the event of a spill. The Panel <b>recommends</b> , however,	SEIC		Agree that this should be done.

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		that all aspects of spill response be carefully documented to ensure rigorous post-spill analysis to identify ways in which strategies might be improved.			
WGAP 3/023	WGAP 3/3 Section 6.1.6	The Panel <b>recommends</b> 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.	SEIC	June 2008	Agree. The appropriate section from the onshore plan will be included in the offshore plan.
WGAP 3/024	WGAP 3/3 Section 6.1.7	<p>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, <b>should include</b>:</p> <p><i>Surveys to document whale distribution</i>: short-term patterns of post-spill distribution should be compared with the following:</p> <ul style="list-style-type: none"> <li>a) existing data on whale distribution under non-spill (pre-spill) conditions;</li> <li>b) observed movement of spilled oil;</li> <li>c) information on various types of acoustic disturbance associated with response effort;</li> <li>d) information on the location and extent of incorporation of spilled oil into the benthos in feeding areas.</li> </ul> <p><i>Focal follows to evaluate whale behaviour</i>: observations should be recorded on the following:</p> <ul style="list-style-type: none"> <li>a) behaviour of whales in the presence of floating oil, including assessments of the ability and inclination of whales to avoid contact with oil;</li> <li>b) general behavioural patterns of whales (for comparison with data collected during non-spill conditions);</li> <li>c) changes in whale behaviour associated with spill response activities such as operations of oil recovery vessels and deployment of containment booms;</li> <li>d) patterns of whale behaviour in the vicinity of areas with known contamination of benthic prey by spilled oil.</li> </ul> <p><i>Surveys for dead whales</i>: searches for dead whales should be carried out both on shore</p>	SEIC	Nov 2008	SEIC will look into how best to put this in place and revert to the WGAP. 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.

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		<p>and on the water. Any dead whales located <i>must</i> be evaluated, at a minimum, as follows:</p> <ul style="list-style-type: none"> <li>a) characterization of freshness of carcass;</li> <li>b) description of pattern of oil coverage on the exterior surfaces of the carcass, in the eyes, in the mouth and in the baleen;</li> <li>c) sampling of skin for genetic characterization;</li> <li>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.</li> </ul>			
WGAP 3/025	WGAP 3/3 Section 6.1.7	<p>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 <b>recommends</b> 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.</p>	SEIC	Nov 2008	<p>SEIC 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.</p> <p>SEIC will approach relevant authorities on this issue.</p>
WGAP 3/026	WGAP 3/3 Section 6.1.7	<p>The Panel <b>recommends</b> 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 SEIC 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:</p> <ul style="list-style-type: none"> <li>a) Increased effort to study whale distribution and behaviour in areas known to have been subject to significant oiling;</li> <li>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);</li> <li>c) Increased effort to study whale distribution and behaviour in areas where benthic communities are known to have been subject to significant oil exposure.</li> </ul>	SEIC	Nov 2008	<p>SEIC 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.</p>

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WGWAP 3/027	WGWAP 3/3 Section 6.1.7	The Panel <b>recommends</b> 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 <i>in addition to</i> , 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.	SEIC	Nov 2008	SEIC is committed to the monitoring of the WGWs. SEIC 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 SEIC will seek WGWAP approval and advice on this with regard to impacting the WGWs.
WGWAP 3/028	WGWAP 3/3 Section 6.2	The Panel <b>requests</b> that SEIC provide a clear statement as to what the “redacted” documents referred to in WGWAP 3/INF.13 are.	SEIC	April 2008	SEIC are currently reviewing this and will revert to the WGWAP.
<b>ITEM 7: MONITORING AND MANAGEMENT OF CONTINUOUS NOISE</b>					
WGWAP 3/029	WGWAP 3/3 Section 7.1.1	The Panel understood that in rare cases the company could decide that it was infeasible to observe these criteria strictly, i.e., even with careful planning to minimize noise, some activities would, unavoidably, produce sufficient noise to breach the criteria. In such cases, the Panel <b>recommends</b> SEIC implement additional mitigation measures to minimize the risk to whales.	SEIC	April 2008	SEIC will include this in its comments to 3/030 below.
WGWAP 3/030	WGWAP 3/3 Section 7.1.3	At WGWAP-3, the Panel proposed a single revision to its earlier-proposed criteria for continuous noise. This revision related to the “low-level cutoff,” i.e. the level below which industrial noise can be ignored and need not be counted as part of the overall dose received by the whales. The Panel <b>recommends</b> that the low-level cutoff be set at 107 dB re 1µPa <sub>RMS</sub> , the value resulting in the Panel’s recommended maximum dose of sound energy for a 24-hour period (i.e., the extension of the function set out in WGWAP2/15).	SEIC	April 2008	SEIC acknowledge that the use of dose based criteria are becoming the norm and will revert formally to WGWAP on this. The clarification on low-level cut-off is welcomed.
WGWAP 3/031	WGWAP 3/3 Section 7.1.3	The Panel <b>recommends</b> that adequate equipment should be made available to ensure that the most appropriate mitigation measures are followed and that the necessary monitoring data are collected.	SEIC		SEIC is constantly working with its acoustic contractors to improve the quality of the monitoring equipment. A

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					special effort is being dedicated to equipment improvement in the lead-up to the acoustic monitoring of the seismic survey currently planned for 2009, in order to ensure accurate and high-availability data on which to base all mitigation measures.
WGWAP 3/032	WGWAP 3/3 Section 7.3	The Panel <b>recommends</b> that a full report on both the acoustic and whale behaviour/distribution data from the 2007 construction season should be submitted for review at WGWAP-4. The acoustic reports should be in approximately the same form as WGWAP 2/INF.14 and WGWAP 2/INF.14a. Whale distribution data should be reported for the whole season, in 1 km <sup>2</sup> blocks for 7-day moving averages. The behaviour data should be provided in a form similar to that of WGWAP 2/INF.6.	SEIC	April 2008	SEIC will, as in previous years, make available the full 2007 acoustic data analysis report from POI as well as the interpreted 2007 season acoustic report from JASCO. The latter will include an analysis of the noise distribution within the monitored region of the feeding area based on all available AUAR recordings and model-based interpolation.  SEIC will provide report on 2007 behaviour monitoring in the similar form as requested.
<b>ITEM 8: PHOTO-IDENTIFICATION</b>					
WGWAP 3/033	WGWAP 3/3 Section 8.1	The Panel <b>endorses</b> the findings and recommendations of the Task Force and <b>requests</b> that SEIC, the two photo-ID research teams, and other relevant parties implement the recommendations as expeditiously as possible.	SEIC and others		
WGWAP 3/034	WGWAP 3/3 Section 8.9	The Panel <b>recommends</b> that the Task Force should continue its work according to the revised terms of reference.	Photo-ID Task Force		

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<b>ITEM 9: 4-D SEISMIC SURVEY</b>					
WGAP 3/035	WGAP 3/3 Section 9.3	The Panel <b>recommends</b> that a table of the estimated directional profile of sound energy (for example, sound levels at 5° or finer intervals around the clock, at a fixed nominal distance from the array) be prepared and circulated to the Task Force.	SEIC	March 2008	SEIC will make available to the Task Force the frequency dependent directional profiles of sound energy generated by the airgun array model, in the format that is used by the Company's acoustics consultants for all acoustic footprint modeling and SEL estimations.
WGAP 3/036	WGAP 3/3 Section 9.4	The Panel <b>recommends</b> that the Seismic Surveys Task Force be reconstituted with the revised terms of reference and working approach given in Annex 5.	Seismic Survey Task Force		
<b>ITEM 10: PULSE NOISE</b>					
WGAP 3/037	WGAP 3/3 Section 10.1.2	In view of the information and concerns outlined in sections 10.1.1 and 10.1.2 of the report, the Panel <b>recommends</b> that SEIC should make every reasonable effort to ensure that full-scale acoustic and behaviour monitoring of the Piltun feeding area takes place in 2008.	SEIC	April 2008	SEIC plan to monitor sound levels and behaviour in 2008 at the same locations as in previous years. The scope of work is being finalised for 2008 but will be for approximately 75 days
WGAP 3/038	WGAP 3/3 Section 10.1.2	In view of this, the Panel <b>noted</b> that the only potentially available source of information on noise levels generated by non-SEIC operations in 2008 would likely be from independent monitoring efforts sponsored by NGOs, and <b>requested</b> that IUCN make contact with SUCH GROUPS regarding the possibility of obtaining information.	IUCN		
WGAP 3/039	WGAP 3/3 Section 10.2	The Panel recalls that the effects of seismic surveys on WGWs have been studied on at least three previous occasions (Weller et al. 2006a, 2006b; Gailey et al. 2007), and the Panel <b>recommends</b> that the results from all three studies should be carefully considered by the Task Force.	Seismic Survey Task Force		

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<b>ITEM 15: WGW MONITORING BY NON-SEIC GROUPS</b>					
WGWAP 3/040	WGWAP 3/3 Section 15	The Panel <b>reiterated its request</b> from WGWAP-2 that in cases where independent groups studying WGWs wish to receive comments from the Panel, they need to provide written documents well in advance of meetings to ensure adequate time for review.	3 <sup>rd</sup> parties		
<b>ITEM 17: OTHER BUSINESS</b>					
WGWAP 3/041	WGWAP 3/3 Section 17.3	No clear way forward on this problem [little information on third parties' activities on the Sakhalin shelf] was identified although the Panel acknowledged IUCN's previous efforts to establish communication links with other operators. The Panel <b>recommends</b> that such efforts be accorded high priority and continue to be made.	IUCN/SEIC		The problem mentioned here is the lack of timely information on the activities of other companies operating in the region. Where SEIC has data that other companies authorise us to pass on we will do so.