

**WESTERN GRAY WHALE ADVISORY PANEL**

**4<sup>th</sup> Meeting**

**Agenda Item: (11)**

**WGWAP 4/INF.17**

**11 April 2008**

**ENGLISH**

**OIL SPILL PREVENTION, PREPAREDNESS AND RESPONSE**

**Summary of recommendations from OSTF**

**Submitted by Brian Dicks**

## **Oil Spill Task Force report and recommendations made to SEIC**

SEIC indicated that a number of studies were to be conducted as part of their ongoing research efforts or as a result of recommendations or queries raised at the OSTF workshop in Lausanne. This note lists those items from the OSTF workshop report for follow up at WGWAP 4.

### *Oil characteristics*

The following were to be further investigated by SEIC to characterise the Vityaz crude oil more fully:

- Proportions and types of aromatics in Vityaz crude (note that aromatic content is pertinent to toxicity issues)
- Oil emulsification properties and the stability of emulsions once formed. Of particular importance was whether and under what conditions emulsions break back to oil and water and the rate at which that process takes place under differing conditions.
- Oil behaviour in the environment. Given that laboratory studies do not truly predict oil behaviour once spilled to the sea, the company were to consider wave tank studies or the possibility of at-sea experiments. A particular question was raised regarding the formation of natural dispersions of oil in sea water and their stability.
- In-situ burning is being considered as a spill response option in ice conditions, and SEIC indicated that further studies were to be conducted regarding how Vityaz crude oil burns and the quantity and nature of burn residues. Field trials were also to be conducted to investigate the efficiency of in-situ burning for the Vityaz crude before finalising the inclusion of this response option in OSR plans.

### *Biodegradation*

- The biodegradability of the crude is not well understood and further studies were understood to be in hand.

### *Spill trajectory modelling*

Three issues were raised regarding possible interactions between spills in the Aniva Bay area and WGWs or their habitat.

- The first issue pertained to the potential for spills in the Aniva Bay area to reach or affect WGWs or their feeding areas off the north-eastern coast of Sakhalin. Studies to date concluded this to be unlikely, but SEIC agreed to review their modelling to confirm this conclusion and better quantify whether vessels approaching from the east to Aniva Bay posed any different risk.
- The second issue pertained to the potential overlap of WGW migratory routes and spill trajectories in and near Aniva Bay and toward La Perouse Strait. SEIC agreed to revisit trajectory modelling in relation to whale migration times to assess whether changes to spill response options might be appropriate.
- The third issue involved potential future changes to shipping patterns. Should changes in vessel traffic occur, the task force agreed that it would be prudent to model the potential increase in risk from an oil spill and implement precautionary measures according to the results.

#### *Use of support and standby vessels for spill response*

- Discussions at the OSTF workshop identified this is an area where further consideration is needed to determine if more can be done to prepare vessels associated with Sakhalin II, Phase 2, to provide assistance during spills from vessels and other passing traffic.

#### *Exercising under realistic conditions*

- SEIC outlined plans to conduct spill response exercises in winter conditions.

#### *Discrepancies between OSR plans and practical planning documents*

- SEIC agreed to resolve the discrepancies and also make the plans functional documents for guiding on-site response (i.e., boiling them down to the essentials)

#### *Response options*

- SEIC agreed to modify OSR plans to more closely reflect likely constraints imposed by adverse weather (e.g. on proposed defensive boom deployments) and to reflect discussions at the workshop of prop-washing, use of dispersants in shallow waters, surf-washing and in-situ burning as a response technique
- One of the many interesting discussions at the OSTF meeting was about the state of the art for responding to spills under ice. Frank Marcinkowski

contributed a lot to this discussion re: detection and tracking, modelling, and mechanical and non-mechanical response options. SEIC agreed to stay on top of these developments in this rapidly evolving field, and an update on progress would be helpful.

#### *Sensitive areas/sites*

- The task force agreed that the Piltun (nearshore) and offshore feeding areas and the Piltun lagoon warrant priority protection because of their potential sensitivity to spilled oil and the significance of such impacts for WGWs and other important species. SEIC agreed to advise the panel on changes in plans to reflect this.

#### *Pre-spill monitoring studies*

- The task force further agreed that sampling of benthic biota should be augmented by sampling of organic and heavy metal residues and that analysis of sediments for hydrocarbon residues should be done using gas chromatographic and mass spectrometric methods.
- Further studies of the Piltun lagoon were identified as important to establish a baseline given the sensitivity and likely importance of the lagoons to whale food resources.

#### *Post-spill monitoring*

- The task force agreed that OSR plans should include post-spill monitoring of benthic communities in the whale feeding areas as they are the food resource of the whales. The primary elements of the existing benthic monitoring programme led by Dr. V.I. Fadeev should be maintained and enhanced in the event of a spill.
- There was considerable discussion of the possible range of post-spill monitoring studies that might be considered, as well as possible restoration options for spill-damaged habitats such as wetlands. There are at least three components of such monitoring studies: (1) to assess the immediate impacts of the spill on the whales (including physical and behavioural effects) and their habitat, (2) to assess long-term effects, and (3) to assess the adequacy of the spill response. SEIC agreed to report on developments since WGWAP 3.

*Waste disposal*

- There was some discussion about waste disposal capacities at the workshop. SEIC were to review whether identified waste handling capacities were both adequate and realistic.

In addition to the above-listed points drawn from the OSTF Workshop report, the following points/issues were documented in the GWAP 3 panel recommendations and are included here for consideration:

- Obtaining tissue samples from dead whales for genetic and contaminant analysis
- MMO programme issues agreed to be reported at GWAP 4, 5 and/or 6;
- GW population assessment recommendations and their implementation;
- Post-spill monitoring of whales and any carcasses;
- Long term monitoring programme for GW;
- Noise monitoring issues;
- Potential for hazing whales

4<sup>th</sup> April 2008