ACTION ITEM

Sponsor: Tom Kuckertz, Joe Banta, Roy Robertson and Linda Swiss

Project number and name or topic: 564 ANS Crude Properties

1. **Description of agenda item:** Some of the physical parameters of Alaska North Slope Crude Oil, such as API gravity, temperature, viscosity, dispersability and emulsification factor and chemical properties such as hydrocarbon species content and toxicity are important with respect to resources that need to be available to meet the clean up requirements of an oil spill. Some of physical characteristics of ANS crude oil may have changed significantly since production began on the North Slope such that assumptions that rely on these properties may not be valid with respect to cleaning up a spill or assessing the environmental effects of a spill. Regulators and citizen stakeholders need the latest information on ANS properties if they are to best accomplish their respective missions.

After a prototype skimmer test at OHMSETT, the shippers are proposing use of a new oleophilic disk skimmer reputed to be considerably more efficient than the presently used skimmers. If the efficiency of the skimmer can be verified, the ratio of oil to water of the skimmed liquids will be considerably higher than that now attainable. The volume of storage for skimmed liquids needed to satisfy the response requirements of tanker contingency plans would be then be reduced. Currently, the skimmer efficiencies associated with use of ANS crude have not been verified. Knowledge of the properties of ANS crude is thought to be necessary to verify expected performance of the new skimmers.

ATC provided samples from the same batch of ANS crude oil on January 18, 2010 to SL Ross and Environment Canada. Both Environment Canada and SL Ross have completed their analyses of the samples and provided reports to their respective clients PWSRCAC and ATC on behalf of the RPG. The following properties were measured: API gravity, density, dynamic viscosity, kinematic viscosity, emulsion formation, interfacial tension, pour point, flash point, SARA (saturates, aromatics, resins, asphaltenes), and distillation curve. A comparison of the analyses was performed by staff. The analyses were not exactly parallel with respect to methodology and/or property reported. Differences were observed; however, it is unknown whether these are significant or if the differences are relevant to skimmer performance.

Staff will present a comparison of results and will request acceptance of the Environment Canada analytical report.

2. **Why is this item important to PWSRCAC:** Having all the information necessary to maximize the effectiveness of a response to an oil spill is very important to achieving PWSRCAC’s mission of “citizens promoting environmentally safe operation of the Alyeska terminal and associated tankers.”

3. **Previous actions taken by the Board on this item:**

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<td>9/18/10</td>
<td>Board</td>
<td>Approved sending a letter to the Alyeska Owner Companies requesting the properties of ANS crude oil.</td>
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4. **Summary of policy, issues, support or opposition:** None known.

5. **Committee Recommendation:** TOEM and SAC have been briefed and consulted on the oil properties efforts.

6. **Relationship to LRP and Budget:** Project 564 - ANS Crude Properties is in the approved FY2011 budget and annual work plan. Please refer to item 2-2 in your notebook for up-to-date budget amounts (item 2-2 to be provided at or just before the meeting).

7. **Action Requested of the Board of Directors:** Accept the report titled “Review of the North Slope Oil Properties Relevant to Environmental Assessment and Prediction,” by Merv Fingas, Spill Science, Edmonton, Alberta, Canada, June 2010 as meeting the terms and conditions of PWSRCAC’s contract.

8. **Alternatives:** None

9. **Attachments:**

   B: “Spill Related Properties of ANS 2010 Crude Oil” by SL Ross Environmental Research Ltd., March 2010