

Questions and Requests for Information to Enbridge regarding the Straits Pipelines  
Contingency Planning and Spill Response: Question 4b & 4c

Prepared by: LP Environment US

June 4, 2014

#4b) How much would it cost to clean up a worst-case discharge? The estimated cost to clean-up a worst-case discharge in the Straits would range between \$450MM and \$1B depending on seasonal conditions.

#4c) How long would it take to clean-up a worst-case discharge? The clean-up of a worst-case discharge in the Straits would require 4 to 9 months based on seasonal conditions followed by one year of remedial assessment and 5 years of post-cleanup monitoring.

The response to question 4b and 4c assumes a worst case discharge of 8583 barrels and an overall response contingency of 25%. These estimates also assume a 24 hour operation and use conventional style clean-up techniques. In addition, the following costs were not included in the estimates below:

- ROW access and property damage claims
- Legal fees and settlements
- Fines and penalties
- Document control and retention by regulators
- Pipeline repair costs

Risks include NRDA (Natural Resource Damage Assessment) and SCAT (Shoreline Cleanup Assessment Technique). A release impacting the shoreline would significantly increase costs and extend the duration of the clean-up.

Two scenarios were evaluated to determine cleanup costs. Scenario 1 assumes the following:

- Release occurred in the spring or summer
- Clean-up (bulk recovery) time would be approximately 4 months with one year of remedial assessment followed by a 5 years post clean-up monitoring program
- Bulk Oil remained in the Straits area with minimal migration out of the Straits

Cost Summary – Scenario 1 (Spring/Summer):

|   |                      |
|---|----------------------|
| Operations Bulk Oil Recovery                | \$217,196,400        |
| Environmental (Initial 4 months)            | \$37,738,680         |
| Environmental Long Term (assess,monitor)    | \$35,528,370         |
| Federal and State Regulators                | \$39,726,120         |
| Misc. (wildlife, air op's, water treatment) | <u>\$123,446,242</u> |
| Total                                       | \$453,635,812        |

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Scenario 2 assumes the following:

- Release occurred in the fall or winter months
- Straits have partial to complete ice cover
- Clean-up (bulk recovery) time would be approximately 9 months with a 1 year remedial investigation and a 5 year monitoring program
- Bulk Oil migrated out of the Straits area

Cost Summary – Scenario 2 (Fall/Winter):

|  |                      |
|--|----------------------|
| Operations Bulk Oil Recovery                 | \$488,691,900        |
| Environmental Initial                        | \$84,912,030         |
| Environmental Long Term (assess,monitor)     | \$35,528,370         |
| Federal and State Regulators                 | \$89,383,770         |
| Misc. ( wildlife, air op's, water treatment) | <u>\$277,754,044</u> |
| Total  | \$976,270,114        |