

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION ) HP 07-001  
BY TRANSCANADA KEYSTONE PIPELINE, )  
LP FOR A PERMIT UNDER THE SOUTH )  
DAKOTA ENERGY CONVERSION AND ) REBUTTAL TESTIMONY  
TRANSMISSION FACILITIES ACT TO ) OF HEIDI TILLQUIST  
CONSTRUCT THE KEYSTONE PIPELINE )  
PROJECT )

1. State your name and occupation

A: Heidi Tillquist, Senior Project Manager and Environmental Toxicologist, ENSR, Fort Collins, CO.

2. Did you provide direct testimony in this proceeding?

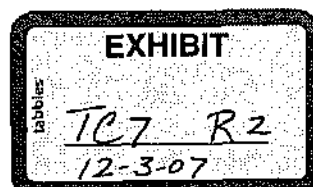
A. Yes

3. In rebuttal, to whose direct testimony are you responding?

A. I am responding to the direct testimonies of Edward Miller and Curt Hohn.

4. Mr. Edward Miller at p. 8 and 9 of his testimony, discusses pipeline spill records from the Office of Pipeline Safety Database. Can you comment?

A. Many of the values reported by Mr. Miller are not reproducible. For example, spill volumes for hazardous liquid pipelines do not average 660 barrels as identified in Exhibit C (Table 1).



TC 7 - R(2)

**Table 1 Spill Volumes Based on the PHMSA Database**

	All Hazardous Liquid Pipelines	Crude Oil Pipelines <sup>1</sup>
Mean (barrels)	287	164
Median (barrels)	3.0	3.0
Minimum (barrels)	0.0	0.0
Maximum (barrels)	49,000	33,000

<sup>1</sup> Values if database is modified to remove non-petroleum hydrocarbons (e.g., ammonia, CO<sub>2</sub>), highly volatile liquids (e.g., ethane, propane), offshore pipelines, and aboveground facilities not associated with Keystone (e.g., aboveground storage tanks).

5. Mr. Miller, in Item 22 and 23, indicates that it is inappropriate to use pipeline data sources outside of North America. Can you comment?

A. Inclusion of pipeline data from other countries is relevant. This data source was used to evaluate the probability of external force damage. This data is more robust than information available in the US. Further, the risk of external force damage is independent of the commodity transported. Thus, use of these data strengthens the DNV analysis.

Additionally, 67 percent of the pipelines in the US are pre-modern pipelines, i.e., they are constructed before 1970. These older pipelines were not manufactured, designed, constructed, or operated under the same standards as modern pipelines. Pipelines in most other countries are significantly younger in comparison and can offer insights on improved safety of modern pipelines.

6. Mr. Hohn discusses the amount of soil that could be contaminated. Can you comment?

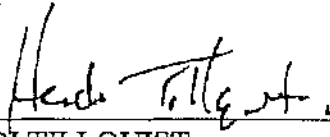
A. The information cited by Mr. Hohn references Keystone's Risk Assessment. This assessment conservatively calculated the potential volume of soil that might be contaminated by a 2,000 barrel spill. Examination of the PHMSA database shows that these values are extremely

conservative. For spills greater than 2,000 barrels occurring since 2002, PHMSA data indicate that the median volume of soil remediated was 2,500 cubic yards.

7. Does this conclude your rebuttal testimony?

A. Yes it does.

Dated this 26th day of November, 2007.

  
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HEIDI TILLQUIST