

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF SOUTH DAKOTA**

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IN THE MATTER OF THE PETITION OF  
TRANSCANADA KEYSTONE PIPELINE,  
LP FOR ORDER ACCEPTING  
CERTIFICATION OF PERMIT ISSUED IN  
DOCKET HP09-001 TO CONSTRUCT THE  
KEYSTONE XL PIPELINE

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) Docket 14-001  
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) **TESTIMONY OF CINDY MEYERS**  
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**Statement for the South Dakota Public Utilities Commission (“PUC”)**

My name is Cindy Myers, R.N. My address is 87925 468th Ave., PO Box 104, Stuart, NE 68780.

This testimony is submitted regarding Amended Conditions: 2, 34, 35, 36, 40, 46 and Finding of Facts: 41, 50, 107 of the Amended Final Decision and Order in HP 09-001.

**Introduction**

Benzene, a potent carcinogen, has increasingly become the most threatening of all environmental toxins. Cancer is primarily an environmental disease. Allowing one of the largest pipelines filled with the world’s dirtiest oil, under the most extreme pressure to funnel benzene and other toxins into South Dakota is a major public health threat. The lifeblood of South Dakota, the Missouri River, which supplies water to over 50% of the state must be protected. The pristine High Plains Aquifer in Tripp County will have this mega toxic infrastructure immersed in water which supplies a municipal well and several private wells. Water protection and Medical Response Planning are not sufficiently considered for this project.

SDCL 49-41 B-22 states: The applicant for a facility construction permit has the burden of proof to establish that:

“The facility will not substantially impair the health, safety or welfare of the inhabitants.”

TransCanada Keystone Pipeline, LP (“TransCanada”) has failed to meet this burden of proof. TransCanada has failed the most important condition of this application: the health, safety and welfare of South Dakotans. I ask the PUC to put aside economic benefits for a foreign company and instead think about what is in the best interest of the good people of South Dakota.

## **Testimony**

As a Registered Nurse, I believe two issues are of paramount importance in ensuring the health, safety, and welfare of South Dakota's residents: (1) clean drinking water, and (2) medical preparedness. If the PUC approves the proposed KXL Pipeline, I believe the health, safety, and welfare of citizens will be impaired or at risk.

## **Toxicity**

Benzene is a potent carcinogen. According to E.P.A. standards, the maximum contamination goal in water is zero. The allowable limit in drinking water is only 5 parts per billion! This is so dilute, you can't taste, see or smell this toxic amount in drinking water. It can only be discovered by testing. Therefore, it would be possible to drink benzene unknowingly. Benzene is a component of oil and the diluent used to thin heavy tar sands oil. We don't know the exact amount because this information is kept from the public by TransCanada, even though such minute amounts of benzene can have major adverse health effects.

NAPHTHA is the primary diluent for bitumen. It is a brew of chemicals, including benzene. Up to 50% of the tar sands product is diluent, meaning 10,000,00 gallons a day of this poison would be gushing through South Dakota daily through a 36 inch pipe under extremely high pressure. NAPHTHA is a known carcinogen, but also capable of causing birth defects and reproductive harm. Scientists and medical professionals in Utah are connecting benzene to a host of severe medical diagnoses, thinking benzene, toluene, and xylenes cross the placental barrier, resulting in dead babies and birth defects.

TransCanada admits: "Benzene can result in health impacts from short-term exposure or long-term exposure." But according to John Stansbury, Ph.D., Associate Professor of Environmental/Water Resources Engineering at U.N.L., TransCanada has failed to adequately study benzene: "If the leak does go undetected for 90 days as the TransCanada document reports, a groundwater user could be exposed to unacceptable concentrations of benzene for a significant period of time. There should have been a human health risk assessment that would have estimated the increased risk of cancer, but there isn't any such assessment. They simply indicate that there could be a significant, undetected release of benzene which could be consumed by human receptors and leave it at that."

The 2010 permit clearly indicates concern about chemicals in the KXL product: BTEX (benzene, toluene, ethyl benzene, xylene). The 2010 permit directs: "At least forty-five days prior to construction, Keystone shall publish a notice in each newspaper of general circulation in each county through which the Project will be constructed advising landowners and public water supply systems of this condition."

Dr. Cleve Trimble is a Nebraska physician concerned about health impacts from the unknown chemical composition and the difficulty in providing treatment.

## **Aquifers**

This massive toxic infrastructure is routed to go straight through the Ogallala Aquifer in Tripp County. This is a major health threat to people drinking from the several private wells and public water system drinking water from that source. Condition of Permit #35 states “The evidence in the record demonstrates that in some reaches of the Project in southern Tripp County, the High Plains Aquifer is present at or very near ground surface and is overlain by highly permeable sands permitting the uninhibited infiltration of contaminants.” Residents are not even informed if they live in a “high consequence area” and risks associated with that designation.

I live where the first KXL route was to cross in Nebraska. That route was moved because of the high water table and sandy soil, similar to the situation in Tripp County which is also underlain by the Ogallala Aquifer. If this was reason to change the route in Nebraska, how come it is still acceptable in South Dakota?

Neither TransCanada nor SD have plans to do prophylactic analyses for the very potential undetected leaks, choosing only to do analyses “in the event of a release.” TransCanada ran the route straight through the Ogallala Aquifer to get the shortest route to the Bakken Oil, telling me: “Meeting the proposed project’s purpose and need, including the extent to which additional infrastructure (pipeline) is necessary to access Bakken crude oil.” The priority here should be the people who drink water in Tripp County.

TransCanada admits other aquifers may not be identified until construction, implying that a thorough pre-evaluation of route has not been accomplished. Oil migrates deep into the ground. In the wheat field near Tioga, ND, 50 feet of soil was required to be removed to evacuate all the spilled oil.

## **Waterways**

TransCanada plans to route KXL through major river valleys in South Dakota: Little Missouri, Cheyenne and White River. These waterways feed into the life blood of South Dakota, the Missouri River. Intakes from the Cheyenne and Missouri Rivers provide drinking water to many cities and reservations across the state, stretching from the Pine Ridge Reservation in western SD to Sioux Falls near the state’s eastern border.

We know the tar sands spill into Michigan’s Kalamazoo River spread several miles downstream. Visible oil from the 2011 Silvertip pipeline break into the Yellowstone River was found 70 miles downstream. An oil sheen was seen an estimated 100 miles downriver three days after the Jan 2012 pipeline break in the Yellowstone River near Glendive, MT. What we don’t know and see is exactly how far and where the benzene plumes migrate to down the rivers.

Arden Davis and John Stansbury both estimate hundreds of miles. The Department of State's environmental study, relied on by South Dakota, only takes into consideration the impact of spills 10 miles downstream.

<b>Waterway Crossing</b>	<b>Distance to Missouri River</b>	<b>Public Water Intake</b>	<b>Distance from KXL to Water Intake</b>
<b>Cheyenne River</b>	89.5 miles	Cheyenne Reservation	50-60 miles, est.
<b>Cheyenne River</b>	89.5 miles	OSRWSS	89.5, est.
<b>Cheyenne River</b>	89.5 miles	Chamberlain	156 miles, est.
<b>White River</b>	82.4 miles	Yankton	222 miles, est
<b>White River</b>	82.4 miles	Sioux Falls	unknown location

### **Health Impact Assessment**

The Commission's 2010 permit relies on the federal EIS, prepared by the Department of State.

SDCL 49-41 B-21: "Environmental impact statement. Prior to the issuance of a permit, the commission may prepare or require the preparation of an environmental impact statement that complies with the provisions of chapter 34A-9"

The federal EIS, required for a cross-border Presidential permit, is not sufficient to adequately address concerns pertinent to South Dakota, particularly health concerns

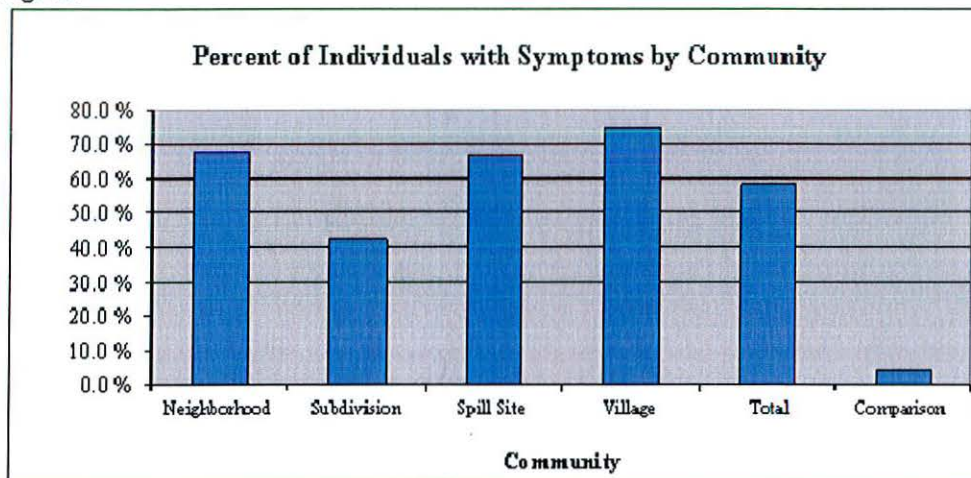
The FSEIS has several chapters. There are chapters exclusively for wildlife, fisheries and threatened and endangered species. There is even a chapter just about terrestrial vegetation, but....there is not even one chapter devoted to how KXL will impact people! The federal study does not include a health impact assessment and the state of SD did not do a health impact assessment.

### **Medical Preparedness**

Tar sands oil spills into Michigan's Kalamazoo River and into the community of Mayflower, Arkansas have demonstrated that medical communities must be prepared to respond to major oil spills and the specifics of benzene toxicity. Emergency response is mentioned in the 2010 permit, implying a response plan for cleaning up spills, but this does not describe an emergency medical response plan.

Acute Health Effects of the Enbridge Oil Spill (Kalamazoo) Michigan Department of Health identified 320 (58%) of 550 individuals with adverse health effects from four community surveys along the impacted waterways.

Figure 3



TransCanada's pamphlet "Oil Pipeline for Emergency Responders", contains absolutely no information geared toward health care providers. It simply says to "Monitor for I-EL, H S and benzene if possible". What lay person knows what that means? Are first responders equipped to test for benzene in the air?

TransCanada declares "Public disclosure of the emergency response plan could commercially disadvantage keystone." Not preparing the medical community for tar sands oil spills could physically disadvantage South Dakotans.

TransCanada has not communicated with Indian Health Services or South Dakota health care facilities medical information such as specifics about tar sands oil product, KXL spill scenarios, and staff education and training for effective treatment of people exposed to benzene. Treating adverse health effects from massive benzene toxicity is not usual for most health professionals.

The "Draft" TransCanada-Keystone Emergency Response Plan in the FSEIS, Appendix Q does not include medical response planning, only a place to list the nearest hospital.

I visited with Kevin Schlosser, Emergency Management Coordinator Avera McKennan in Sioux Falls (Assists Avera St. Mary's, Pierre, SD) He has not seen a Safety Data Sheet, SDS, describing chemicals involved in tar sands oil. He would like to know "What are we dealing with? What is the time-frame? When would it would reach us (in the water). I have not seen any of that. For decontamination purposes and for treating patients, we rely on a SDS. If they would provide a SDS, it would be kept in the Emergency Department to have readily available."

Kevin is not aware of education or training to prepare medical communities to affectively respond to major oil spills. TransCanada directed me to the FSEIS when I asked about an MSDS. The FSEIS gave samples of an MSDS, but stated they do not represent the actual product that would flow through the proposed Keystone XL pipeline. TransCanada has responded "TransCanada is not a medical provider and does not provide medical



information. The local medical authority has jurisdiction during an incident or emergency.”

### **Contamination of Public Water Intakes**

GLENDIVE MONTANA, January 2015

“Breach in pipeline found; cancer-causing agent detected in water “

--- Billings Gazette

What happened in Glendive MT, could happen in SD. After an oil pipeline spilled miles upstream, benzene was found to be up to triple the mcl in the public water system. The residents weren’t warned not to drink the water until two days later! Because water treatment plants do not remove benzene, water plants must be shut down.

### **Are Water Treatment Plants Prepared in SD?**

I contacted three water treatment plants using Missouri River water. Two plants responded they were unaware of any emergency plan in response to a tar sands oil spill directly or indirectly affecting the Missouri. One plant stated the Bureau of Reclamation would notify them if an oil spill threatened the water supply. Another plant stated DNR usually sends out information, but “haven’t heard a word from them” when asked what he knew about tar sands spillage into water. One plant thought benzene analysis was done quarterly and another plant thought benzene analysis was done yearly. The third plant did say a spill kit (for water analyses) is available for emergencies.

### **Dr. Madden Testimony**

Testimonial analysis by Dr. Madden is woefully inadequate to meet SDCL 49-41 B-22. which requires the project must protect the health, safety and welfare of SD residents. He is not a medical doctor, but an economist

INDUSTRY	SOURCE OF ECONOMIC IMPACTS	DIRECTION OF IMPACT	NET IMPACT
HEALTH	Revenue	Positive	Positive
	Labor Costs	None Significant	
	Displacement of Traditional Users	None	

## **Conclusion**

Who is responsible for the health,safety and welfare of SD citizens? TransCanada responded these concerns were addressed by the commission, but the law clearly states the applicant is responsible.

SDCL 49-41 B-22 states: The applicant for a facility construction permit has the burden of proof to establish that:

“The facility will not substantially impair the health, safety or welfare of the inhabitants.”

TransCanada has not met the burden of proof establishing this project will not impair the health, safety or welfare of the good people of South Dakota and the many other US citizens living downstream.

TransCanada affirmed to me “Keystone has not asserted that the project would have ‘no impact on the health, safety and welfare of SD’”.

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CINDY MYERS, R.N.

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April 2, 2015