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## SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

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January 13, 2010

Ms. Patricia Van Gerpen  
South Dakota Public Utilities Commission  
500 E. Capitol Ave  
Pierre, SD 57501

RE: Pipeline Integrity Management

Dear Ms. Van Gerpen:

TransCanada Keystone Pipeline corresponded with Commission staff this week regarding integrity management activities on its South Dakota pipeline. Integrity management is an essential element in proper pipeline management and safety. Although the federal Pipeline and Hazardous Materials Safety Administration (PHMSA) is the regulatory agency charged with interstate hazardous liquid pipeline safety compliance, Staff appreciates the interest this Commission has in such regulation.

On January 11, 2010, the Commission received an informational letter from TransCanada (see attached) regarding recent hydrostatic test procedures. One weld did not function up to company and PHMSA standards after a hydrostatic test at 125 percent of the maximum pipeline operating pressure. The problematic weld resulted in additional company investigation, PHMSA involvement, and Staff questions.

On January 12, 2010, Commission Staff communicated directly with PHMSA officials and TransCanada officials to better understand the details surrounding the weld failure. Central Region PHMSA Inspector Hans Shieh provided important context. He explained one weld failure system-wide is less than anticipated as most pipelines have more than one weld in need of repair after the hydrostatic test. Staff also sent a list of 16 questions to TransCanada officials. The company answered these questions in the attached January 13, 2010 correspondence. This correspondence details the initial test results and resulting investigation.

Staff will continue to monitor the results of this particular integrity management procedure and advise the Commission if others become necessary. Staff values its close working relationship with PHMSA as well as TransCanada's communication regarding its internal procedures. Please advise me if any additional follow-up is necessary.

Sincerely,

Kara Semmler  
Staff Attorney



January 11, 2010

Patricia Van Gerpen  
Executive Director  
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Dear Ms. Van Gerpen:

As you are aware, we are conducting final construction-related activities on the Keystone Pipeline in eastern South Dakota prior to filling the line with oil. This week, Keystone will initiate a series of validation excavations of several field welds in the state. The process will involve excavation of the pipe at the location of the welds, non-destructive examination of weld integrity and restoration of the affected areas. We want to inform the Commission of the planned work and provide some relevant information.

Each of these welds has been non-destructively examined, hydrostatically tested at 125 percent of the maximum operating pressure of the system, and inspected using an in-line construction caliper tool. Overall, our quality control program to date demonstrates that Keystone continues TransCanada's longstanding commitment to quality. Of the more than 60,000 welds on the Keystone Pipeline, only one weld was shown by hydrostatic testing to require repair.

However, because hydrostatic testing identified the need to repair one weld, we are taking additional steps to further validate the integrity of the pipeline prior to filling the line with oil. The problem in the one weld was introduced by very unusual circumstances, which occurred after initial weld validation. To further validate the integrity of the system, Keystone has decided to excavate and examine welds that share some of the key characteristics of the problem weld. Keystone expects to examine 6 welds.

As required for any repairs identified through Keystone's hydrostatic testing program, the results of this hydrostatic test as well as the subsequent root cause analysis have been reviewed by the Pipeline Hazardous Materials Safety Administration.

In addition to advising the Commission, we will contact affected landowners to notify them prior to conducting the work. Landowners who seek additional information may contact their agent, or Sarah Metcalf, the South Dakota Pipeline Liaison Officer, or Keystone Project at (866)585-7063.

Sincerely,

Robert Jones  
Vice President  
TransCanada Keystone Pipeline LP

cc: Brett Koenecke, May, Adam, Gerdes and Thompson LLP

January 13, 2010

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Dear Ms. Van Gerpen:

Following is additional background information related to our letter of January 11, 2010 to provide further detail about the weld that leaked during hydrostatic testing and about the planned follow-up inspections.

The weld is a transition weld which joined two pipes of different wall thicknesses, at an open cut road crossing. Following the initial radiography test, the transition weld had been repaired to correct a defect on one of the upper layers of weld material.

Our investigation indicates the leak during the hydrostatic test was caused by a minor defect in the initial root weld (the first pass) joining the two pieces of pipe with different wall thicknesses. This area was likely stressed first by the repair of the defect in a higher layer of weld material. The weld was likely further stressed during fit-up of the subsequent tie-in downstream of the road crossing. This unique combination weakened the weld such that it leaked upon hydrostatic test at nearly 125 percent of the system's maximum operating pressure.

Evidence of a defect in the original radiography test was not revealed when comparing the defect evident on the post-hydrostatic test inspection to digitally enhanced versions of the radiographs taken during construction (both before and after initial weld repair).

The affected weld was cut out and replaced with a new weld which passed the radiography test and a subsequent hydrostatic test.

The key characteristics of the weld that required repair are as follows:

1. Transition weld
2. Open cut construction road crossing
3. Weld was subject to a repair
4. Lifting required to fit up the weld for tie in

There are a total of four welds on Spread 3 that share these key characteristics. The six welds to be excavated and examined include these four and two other welds chosen to be evaluated as control samples.

Keystone has advised the Pipeline Hazardous Materials & Safety Administration (PHMSA) of the basis for choosing the inspection locations and has received PHMSA concurrence on the inspection plan.

It is important to note that each of these welds already successfully has been inspected, radiographed, and hydrostatically tested to 125 percent of the maximum operating pressure of the system. Additionally, the radiographs taken during construction for these locations have been re-evaluated by digital enhancement (which sharpens the image), and no concerns have been identified.

The purpose of hydrostatic testing is to ensure the integrity of the pipeline by eliminating any defect that might threaten the pipeline's ability to sustain its maximum operating pressure, or to determine that no defects exist. The detection of a leak during hydrostatic testing demonstrates that Keystone's pipeline integrity management program is working appropriately. The affected weld was weakened after it was radiographed by unique circumstances associated with the work site and the weld. The segment was retested successfully, demonstrating the integrity of the repair.

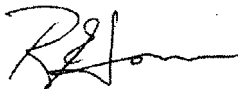
As pointed out in Keystone's letter of January 11, 2010, this is the only weld on the Keystone project to date identified by hydrostatic testing to require repair. In addition, TransCanada has not experienced a pre-service new construction hydrostatic test failure in 11 years. This leak is considered to be an isolated incident due to a specific set of construction circumstances.

The point of the excavations and re-examination of additional welds is two-fold: first, it seeks to validate the root cause analysis by ensuring the failure was not caused by some other mechanism which may be evident in these welds; second, it will determine if any defects may have been introduced following radiography by mechanisms similar to that which caused the hydrostatic test leak. The results of the examination will be evaluated against the weld quality and compliance standard in API 1104. If there are any defects that exceed acceptance criteria, they will be repaired or cut out and replaced with pre-tested pipe.

The work planned should have minimal impact on landowners and their tenants. The six sites include one in Beadle County, two in Kingsbury County, one in Miner County, one in McCook County, and one in Hutchinson County. An area of approximately 20 feet wide by 50 feet long and eight feet deep will be impacted during excavation. The work is scheduled to start Thursday morning (January 14, 2010) and is expected to be complete in approximately two weeks. These locations will be backfilled and cleaned up. Final restoration will occur in the spring when conditions allow.

Keystone will report the results of the validation excavations both to PHMSA and to this Commission.

Sincerely,



Robert Jones  
Vice President  
TransCanada Keystone Pipeline LP

cc: Brett Koenecke, May, Adam, Gerdes and Thompson LLP