

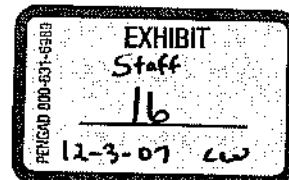
BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DOCKET NO. HP07-001

IN THE MATTER OF THE APPLICATION OF TRANSCANADA KEYSTONE PIPELINE, LP  
FOR A PERMIT UNDER THE SOUTH DAKOTA ENERGY CONVERSION AND  
TRANSMISSION FACILITY ACT TO CONSTRUCT THE KEYSTONE PIPELINE PROJECT

Surrebuttal Testimony of David Schramm on Behalf of the  
Staff of the South Dakota Public Utilities Commission

November 28, 2007



**I. Surrebuttal Testimony**

**Q. WHAT IS YOUR NAME AND OCCUPATION?**

A. David Schramm, Vice-President and Senior Project Manager, Pipeline Integrity and Corrosion for EN Engineering.

**Q. DID YOU PROVIDE DIRECT TESTIMONY IN THIS PRECEEDING?**

A. Yes.

**Q. IN THIS SURREBUTTAL, TO WHOSE REBUTTAL TESTIMONY ARE YOU RESPONDING?**

A. In this surrebuttal, I am responding to the rebuttal testimony of Meera Kothari who has provided additional information in response to my direct testimony questions 9, 15, 16, 22, 23, 24 and 26.

**Q. CAN YOU COMMENT ON THE ADDITIONAL INFORMATION PROVIDED WITH REGARD TO YOUR DIRECT TESTIMONY, QUESTION 9?**

A. In my direct testimony, additional documentation with regard to Keystone's Supervisor Qualifications in the area of corrosion control was recommended as a condition of issuing a construction permit.

With regard to this recommendation, the rebuttal testimony of Meera Kothari provides additional information documenting the intent of Keystone to use qualified personnel from TransCanada's Asset Reliability Engineering and Operations Department to address §195.402(c)(3). Supervisors are to be registered professional engineers or registered professional technicians who hold certification and maintain continued education/professional development from industry bodies such as the National Association of Corrosion Engineers (NACE). Keystone acknowledges the requirements of USDOT 49CFR Part 195.555.

1 Based on the review of this additional information, Keystone's intent meets the  
2 requirements of this section of code (§195.557) and the conditional  
3 recommendations in my direct testimony are removed from Question 9.  
4

5 **Q. CAN YOU COMMENT ON THE ADDITIONAL INFORMATION PROVIDED**  
6 **WITH REGARD TO YOUR DIRECT TESTIMONY, QUESTION 15?**  
7

8 A. In my direct testimony, additional documentation with regard to corrosion control  
9 test leads (§195.567) was recommended as a condition of issuing a construction  
10 permit.  
11

12 With regard to this recommendation, the rebuttal testimony of Meera Kothari  
13 provides additional information documenting the intent of Keystone to meet the  
14 requirements for the installation of test leads as required in the PHMSA Special  
15 Permit and commits to the use of industry recognized standards for their  
16 specification, location and use including: CGA's recommended practice, OCC-  
17 1, NACE Internationals Recommended Practice, RPO169, NACE International's  
18 Test Methods under TMO-4 and all applicable federal, state, local and district  
19 laws, codes and regulations.  
20

21 Based on the review of this additional information, Keystone's intent meets the  
22 requirements of this section of code (§195.567) and the conditional  
23 recommendations in my direct testimony are removed from Question 15.  
24

25 **Q. CAN YOU COMMENT ON THE ADDITIONAL INFORMATION PROVIDED**  
26 **WITH REGARD TO YOUR DIRECT TESTIMONY, QUESTION 16?**  
27

28 A. In my direct testimony, additional documentation with regard to the examination  
29 of exposed portions of buried pipe was recommended as a condition of issuing a  
30 construction permit.  
31

1 With regard to this recommendation, the rebuttal testimony of Meera Kothari  
2 provides additional information documenting the intent of Keystone to use  
3 existing TransCanada procedures and applicable industry practices and NACE,  
4 API, ASME codes for coating examination and non-destructive examination of  
5 the pipeline should excavations be required based on in-line inspection data. It  
6 is indicated that the non-destructive methods for examination which will be used  
7 by TransCanada are industry best practices and include magnetic particle  
8 inspection of defects, seams, and girth welds; and in addition, digital mapping of  
9 defects to calculate remaining strength of pipe so as to determine the  
10 appropriate repair methods required. Keystone indicates that they will meet the  
11 requirements of US DOT 49 CFR Part 195.569.

12  
13 Based on the review of this additional information, Keystone's intent meets the  
14 requirements of this section of code (§195.569) and the conditional  
15 recommendations in my direct testimony are removed from Question 16.

16  
17 **Q. CAN YOU COMMENT ON THE ADDITIONAL INFORMATION PROVIDED**  
18 **WITH REGARD TO YOUR DIRECT TESTIMONY, QUESTION 22?**  
19

20 **A.** In my direct testimony, additional documentation with regard to Atmospheric  
21 Corrosion per US DOT 195.581 was recommended as a condition of issuing a  
22 construction permit.

23  
24 With regard to this recommendation, the rebuttal testimony of Meera Kothari  
25 provides additional information documenting the intent of Keystone's  
26 atmospheric corrosion program. With regard to the special considerations of air-  
27 to-soil interfaces, Keystone's intent is to use liquid epoxy or FBE coating applied  
28 to the buried pipe extending to approximately 18 inches above grade.  
29 Afterwards a liquid epoxy will be painted (as a protective coating) down to grade  
30 level to prevent damage (*to the liquid or fusion bonded epoxy*) from the sun's  
31 ultraviolet rays. Keystone acknowledges its intent to meet the requirements of  
32 US DOT49 CFR Part 195.581.

1 Based on the review of this additional information, Keystone's intent meets the  
2 requirements of this section of code (§195.581) and the conditional  
3 recommendations in my direct testimony are removed from Question 22.

4  
5 **Q. CAN YOU COMMENT ON THE ADDITIONAL INFORMATION PROVIDED**  
6 **WITH REGARD TO YOUR DIRECT TESTIMONY, QUESTION 23?**

7  
8 **A.** In my direct testimony, additional documentation with regard to monitoring for  
9 atmospheric corrosion (§195.583) was recommended as a condition of issuing a  
10 construction permit.

11  
12 With regard to this recommendation, the rebuttal testimony of Meera Kothari  
13 provides additional information documenting the intent of Keystone, as part of its  
14 integrity management program, to inspect for atmospheric corrosion at least  
15 once every three years but with intervals not to exceed 39 months as required  
16 under US DOT 195.583(a). Keystone indicates its intent to repair any coating  
17 as required by this inspection and indicates that they will meet the requirements  
18 of US DOT 49 CFR Part 195.583.

19  
20 Based on the review of this additional information, Keystone's intent meets the  
21 requirements of this section of code (§195.583) and the conditional  
22 recommendations in my direct testimony are removed from Question 23.

23  
24 **Q. CAN YOU COMMENT ON THE ADDITIONAL INFORMATION PROVIDED**  
25 **WITH REGARD TO YOUR DIRECT TESTIMONY, QUESTION 24?**

26  
27 **A.** In my direct testimony, additional documentation with regard to US DOT 49 CFR  
28 Part 195.585 - repairs to corroded pipe was recommended as a condition of  
29 issuing a construction permit.

30  
31 With regard to this recommendation, the rebuttal testimony of Meera Kothari  
32 provides additional information documenting the intent of Keystone, to conduct

1 as part of its integrity management program, in-line inspection of the pipeline  
2 within the first three years of operation. Any repairs resulting from engineering  
3 analysis of the inspection data will be repaired using industry best practices in  
4 accordance with acceptable repair methods within ASME B31.4 and US DOT 49  
5 CFR 195. Keystone indicates its intent to meet the requirement of US DOT 49  
6 CFR Part 195.585.

7  
8 Based on the review of this additional information, Keystone's intent meets the  
9 requirements of this section of code (§195.585) and the conditional  
10 recommendations in my direct testimony are removed from Question 24.

11  
12 **Q. CAN YOU COMMENT ON THE ADDITIONAL INFORMATION PROVIDED**  
13 **WITH REGARD TO YOUR DIRECT TESTIMONY, QUESTION 26?**

14  
15 **A.** In my direct testimony, additional documentation with regard to the standards that  
16 will apply for the use of direct assessment (DA) under the provisions of §195.588  
17 was recommended as a condition of issuing a construction permit.

18  
19 With regard to this recommendation, the rebuttal testimony of Meera Kothari  
20 provides additional information documenting the intent of Keystone to use  
21 TransCanada's direct assessment procedure and follow the NACE Standard  
22 RP-0502. Keystone indicates its intent to meet the requirements of US DOT 49  
23 CFR Part 195.588

24  
25 Based on the review of this additional information, Keystone's intent meets the  
26 requirements of this section of code (§195.588) and the conditional  
27 recommendations in my direct testimony are removed from Question 26.

28  
29  
30 **Q. IS THERE ANYTHING ELSE YOU WOULD LIKE TO ADD WITH REGARD**  
31 **TO THIS SURREBUTTAL?**

32  
33 **A.** There are two (2) items that I would like to add:

1 1. For the most part, Subpart "H" of US DOT CFR 49 Part 195 focuses on  
2 the operational aspects of a pipeline facility; and as such, how a pipeline  
3 company responds to this section is typically detailed in the Company's  
4 operating procedures (i.e., policies, procedures, standards, and  
5 specifications).

6  
7 To date, Keystone (TransCanada) provides only high level summary  
8 information to document their intent to meet code requirements along with  
9 appropriately referenced supportive industry standards. Keystone has not  
10 provided any significant detail as to actual Company operational  
11 procedures, guidelines and actions that will be followed especially with  
12 regard to the TransCanada procedures or documents as referenced.  
13 Operating documents of this type are required under US DOT CFR Part  
14 195.402. With respect to these Company Operating documents I cannot  
15 provide any comment or response.

16  
17 As such, the focus of my testimony has been on the discovery and intent  
18 contained in those documents submitted as part of testimony, rebuttal or  
19 surrebuttal and those originally provided as part of the revised April 10,  
20 2007 – Petition of Trans Canada and the April 30, 2007 – PHMSA Grant  
21 of Waiver as it relates to US DOT CFR Part 195, Subpart "H".

22  
23 As documented, Keystone has the intent to meet the code requirements  
24 contained in US DOT CFR Part 195, Subpart "H" and provides applicable  
25 and appropriate industry reference documents and standards that  
26 Keystone will use. For some sections of code, Keystone is taking a more  
27 proactive approach to exceed code requirements whether done voluntarily  
28 or as directed under the Grant of Waiver.

29  
30 2. In the TransCanada 7-10 data request, Keystone's proposed pipeline  
31 routing response to collocation with existing pipelines indicates three (3)

1 locations of collocation. These locations were discussed in my testimony  
2 under Question 20 and Exhibit M.

3  
4 Based on follow-up review, several other pipeline crossings within the  
5 State of South Dakota were noted. These are:  
6

Other Pipeline Crossing Locations

Approximate MP	Operator	Description
260.2	Northern Natural Gas (MidAmerican Pipeline)	Lateral to Webster
274.2	Northern Border Pipeline	Interstate Transmission Line (42")
292.9	Northern Natural Gas (MidAmerican Pipeline)	Mainline from Sioux Falls to Aberdeen
319.6	Northern Natural Gas (MidAmerican Pipeline)	Lateral to Huron
375.7	Northern Natural Gas (MidAmerican Pipeline)	Lateral to Mitchell

7  
8  
9  
10 Collocation or cohabitation is when differently operated pipelines, or even  
11 electrically and independently isolated pipelines are installed in common  
12 rights-of way. When multiple pipelines are installed in common rights-of-  
13 way, additional measures are required to ensure that representative pipe-  
14 to-soil potentials are obtained over the line being inspected. At times, this  
15 can also increase the difficulty in locating the pipeline. This is not an  
16 issue as TransCanada indicates that there are only three (3) actual  
17 pipeline collocations with other regulated pipeline facilities in South Dakota  
18 and minimal common rights-of-way congestion.

19  
20 Code requires a 12-foot minimal spacing between electrically independent  
21 structures. Although spacing between facilities plays a role in stray  
22 current interference, the detection of stray current interference relies more  
23 on the understanding of where foreign operated cathodic protection  
24 systems are located with respect to the pipeline being tested and, based



1 on those locations, where interference might occur. Once determined,  
2 specific site testing is performed to confirm or rule-out if this condition  
3 exists. Typically, uncongested rights-of-way (as in the case reported by  
4 TransCanada) reduce the number of locations that would need to be  
5 assessed. This condition is also affected by the soil resistivity values  
6 along the pipeline rights-of-way.

7  
8 Based on the information provided by TransCanada, the testing as  
9 proposed is consistent with that required to detect, monitor and mitigate  
10 stray current interference at the additional locations referenced above.

11  
12 **Q. Does this conclude your surrebuttal?**

13  
14 **A. Yes it does.**