BEFORE THE
PUBLIC UTILITIES COMMISSION
STATE OF SOUTH DAKOTA

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

DOCKET HP14-001

PREFILED TESTIMONY OF DAVID SCHRAMM
ON BEHALF OF THE COMMISSION STAFF
APRIL 2, 2015
Q. Please state your name and business address.
A. My name is David Schramm. My business address is 28100 Torch Parkway, Warrenville, Illinois, 60555.

Q. By whom are you employed and in what capacity?
A. I am employed as a Vice President-Senior Project Manager by EN Engineering, an engineering and consulting firm specializing in pipeline design, codes compliance, integrity, and automation services for the oil and gas industry.

Q. Please describe your educational background and professional experience.
A. I hold a B.S. degree from Iowa State University (Ames, Iowa) and I am a NACE Institute No. 3178 Certified Cathodic Protection Specialist and Certified Corrosion Technologist (confirm certification at www.naceinstitute.org). My professional experience consists of employment in the pipeline industry with EN Engineering, NICOR Technologies, NICOR Gas (Northern Illinois Gas), Corrpro Companies, Inc., and Harco Corporation.

My responsibilities in these positions includes nearly 35-years of extensive experience in the assessment and application of pipeline integrity and corrosion control programs including: corrosion control engineering, analysis and design, process control and measurement, internal “smart” tooling, cathodic protection design, installation and maintenance, computerized close interval potential survey, direct current voltage gradient survey, telluric current monitoring, measurement and investigation, stray DC and AC interference testing and mitigation, coating selection and inspection and material selection and purchasing.
I am currently responsible for the technical support of the Corrosion Control and Integrity Field service offerings including: the technical oversight of project performance and standards, the development and maintenance of technical guidelines, standards and procedures, quality assurance (ISO 9001) for corrosion control, cathodic protection, field failure and integrity management projects and proposals, and the qualification and training of corrosion control field failure, and system integrity personnel.

Within the corrosion control and cathodic protection industry, I have served in a Chair position for NACE T-10-A-11: Gas Industry Corrosion Problems (1995 through 2001), NACE International Certification Committee (2001 through 2005), Chair and Vice-Chair for the NACE International Professional Activities Committee (PAC), and currently serving as the Chair of the NACE Institute Certification Commission.

In addition, I am a certified Craft Instructor for the National Center for Construction Education (NCCER) as it relates to the American Petroleum Institute (API) Operator Qualification Program, a Veriforce Operator Qualification Evaluator, and served as a member of numerous NACE task or industry groups including the NACE Cathodic Protection Training and Certification Program task group, the Chicago Region Committee on Underground Corrosion (CRCUC) and the Michigan Electrolysis Committee (MEC).

My resume is attached to this document as Exhibit DS-1.
Q. On whose behalf was this testimony prepared?
A. This testimony was prepared on behalf of the Staff of the South Dakota Public Utilities Commission (Staff).

Q. Please state the purpose of your testimony in this proceeding.
A. There are three main objectives of the Staff in this testimony. First, to ensure that the proposed changes to the Findings of Fact in the Decision, as identified by TransCanada Keystone Pipeline’s (the Applicant) Tracking Table of Changes, comply with the Federal Pipeline Safety Regulations 49CFR 195, Transportation of Hazardous Liquids by Pipeline. Secondly, the objective is to ensure that the Applicant has met any new requirements imposed by the Federal Pipeline Safety Regulations 49CFR 195 since the Amended Final Decision and Order was issued on June 29, 2010 with respect to the application for a permit (Permit) to construct and operate a crude oil pipeline in South Dakota. Lastly, the objective is to ensure that the amended permit conditions, and any project changes, are still able to meet the conditions upon which the permit was issued, specifically focusing on pipeline design, integrity management and compliance with PHMSA regulations (49CFR 195).

This testimony deals specifically with updates made to the project as provided by Keystone on the Tracking Table of Changes, specifically as they relate to 49 CFR Part 195 Subpart H.

Q. Keystone updated project specifications as they relate to Finding 68 in the Amended Final Decision and Order to indicate that TransCanada has experienced no evidence of corrosion on fusion bonded epoxy lines except for one instance
where an adjacent foreign utility interfered with the cathodic protection system.

Do requirements set forth in 49 CFR Part 195 and / or the safety measures set forth in the DOS Final SEIS adequately address interference currents?

A. Stray DC corrosion interference testing, assessment, and mitigation is prescribed under Table 4, Special Conditions as recommended by PHMSA, page 87, item 36. The program stipulated by PHMSA should address the detection and mitigation of stray DC current effects. As interpreted, the PHMSA program requirements are considered more stringent than Part 195, Subpart H – as additional timing requirements have been established.

Q. Are there any other interference conditions that might lead to the development of corrosion on fusion bonded epoxy coated pipelines?

A. The phenomenon of AC stray current interference is becoming a more prominent concern within the industry; especially, but not exclusively, associated with FBE and/or Epoxy ARO (Abrasion Resistant Overcoat) protectively coated pipeline systems. This issue is addressed and prescribed under Table 4, Special Conditions as recommended by PHMSA, page 80, item 21. The program stipulated by PHMSA should address the detection and mitigation of stray AC current effects. As interpreted, the PHMSA program requirements stipulate that control of induced AC from parallel electric transmission lines and other interference issues (e.g., crossings, substations, transpositions or capacitive or conductive coupling (fault)) are to be incorporated into pipeline design and addressed during the construction phase. This program recommendation is also consistent with the notice contained in the DOT/OPS Advisory: 68FR64189 – 11/12/2003. If not already provided, a copy of the construction
techniques for the mitigation of AC stray current, the testing for, engineering analysis, modeling, and mitigation design for AC interference should be made available to SDPUC for record.

Q. Are there any other operational conditions that might lead to the development of corrosion on fusion bonded epoxy coated pipelines?

A. Pipeline coating requirements are prescribed under Table 4, Special Conditions as recommended by PHMSA, page 73, item 9 and on page 74, item 10 and 11. These are considered more stringent than 195, Subpart H – as additional inspection and inspection voltages are required at both the coating mill and when coating is applied at field locations. Item 15 on page 75 addresses the impact from higher operating temperatures (120-degrees F or above) and prescribes requirements for notification and operational response and follow-up testing should this occur under defined durations.

Q. Does the update made to Finding 68 violate any requirements set forth in 49 CFR Part 195 Subpart H?

A. 195.577 and 195.575 requires pipelines exposed to stray current to have a program in place to identify, test for, and minimize the detrimental effects of such currents. In addition, the design and installation of any impressed current or galvanic anode cathodic protection system must be designed to minimize any adverse effects on existing adjacent metallic structures. As such this update does not violate any requirements set forth in 49 CFR Part 195 Subpart H and does not violate the DOT/OPS Advisory: 68FR64189 – 11/12/2003 issued.

Q. Does the update made to Finding 68 violate any mandates set forth in the original or amended permit conditions?
A. As noted above, the update made to Finding 68 is adequately addressed by the incorporation of all PHMSA recommendations into the original or amended permit conditions. As such, this update does not violate any requirements set forth in the original or amended permit condition.

Q. Do any of the other project changes identified in the Tracking Table of Changes provided by Keystone violate the mandates set forth in 49 CFR Part 195 Subpart H?

A. No they do not.

Q. As they relate to 49 CFR Part 195 Subpart H, do any other project changes identified in the Tracking Table of Changes provided by Keystone violate the mandates set forth in the original or the amended Permit Conditions?

A. No they do not.

Q. Does this conclude your testimony?

A. Yes.