

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

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

HP14-001

**KEYSTONE'S RESPONSES TO
STANDING ROCK SIOUX TRIBE'S
FIRST SET OF
INTERROGATORIES**

Applicant TransCanada makes the following responses to interrogatories pursuant to SDCL § 15-6-33. These responses are made within the scope of SDCL 15-6-26(e) and shall not be deemed continuing nor be supplemented except as required by that rule. Applicant objects to definitions and directions in answering the discovery requests to the extent that such definitions and directions deviate from the South Dakota Rules of Civil Procedure.

GENERAL OBJECTION

Keystone objects to the instructions and definitions contained in Standing Rock Sioux Tribe's First Set of Interrogatories to the extent that they are inconsistent with the provisions of SDCL Ch. 15-6. Keystone's answers are based on the requirements of SDCL §§ 15-6-26, 15-6-33, 15-6-34, and 15-6-36.

INTERROGATORIES

INTERROGATORY NO. 1 State the name, job title, address, telephone number and email address of the person answering these interrogatories.

ANSWER: See Keystone's response to interrogatory no. 4.

INTERROGATORY NO. 2 Identify each person who assisted with the preparation of answers to these interrogatories, and include the name, job title, address, telephone number and email address of each such person.

ANSWER: See Keystone's response to interrogatory no. 4.

INTERROGATORY NO. 3 Identify each person whom TransCanada intends to be called as an expert witness at the hearing in this matter, and include:

- a. the name, job title, address, telephone number and email address of the expert;
- b. the subject matter on which the expert is expected to testify;
- c. the substance of the facts and opinions to which the expert is expected to testify;
- d. a summary of the grounds for each opinion; and
- e. all legal proceedings in which such person has provided expert testimony

in the last 10 years.

ANSWER: Keystone does not intend to call any retained experts as witnesses, although it expects that its witnesses will offer opinion testimony.

INTERROGATORY NO. 4 Identify each person whom TransCanada intends to be called as a witness, who was not included in the answer to Interrogatory No. 3, and include:

- a. the name, job title, address, telephone number and email address of the witness; and
- b. the subject matter on which the witness is expected to testify.

ANSWER: Keystone will offer prefiled direct testimony from the following persons, each of whom will testify to the changes identified in Keystone's tracking table for that person's area of expertise:

- (1) Corey Goulet, President, Keystone Projects, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-2546; Project purpose, Overall description; Construction schedule; Operating parameters; Overall design; Cost; Tax Revenues
- (2) Steve Marr, Manager, Keystone Pipelines & KXL, TransCanada Corporation, Bank of America Center, 700 Louisiana, Suite 700, Houston, TX 77002; (832) 320-5916; same; CMR Plan, Con/Rec Units, HDD's
- (3) Meera Kothari, P. Eng., 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (832) 320-5190; same; Design and Construction; PHMSA compliance
- (4) David Diakow, Vice President, Commercial, Liquids Pipeline, 450 1st Street S.W., Calgary, AB Canada T2P 5H1; (403) 920-6019; Demand for the Facility
- (5) Jon Schmidt, Vice President, Environmental & Regulatory, exp Energy Services, Inc., 1300 Metropolitan Boulevard, Suite 200, Tallahassee, FL 32308; (850) 385-5441; Environmental Issues; CMR Plan, Con/Rec Units, HDD's
- (6) Heidi Tillquist, Senior Associate, Stantec Consulting Ltd., 2950 E. Harmony Rd., Suite 290, Fort Collins, CO 80528; (970) 449-8609; High Consequence Areas, Spill Calculations

INTERROGATORY NO. 5 Identify each person involved with preparation of the applicant's "Tracking Table of Changes" dated September 15, 2014 and filed herein, and include the name, job title, address, telephone number and email address of each such person.

ANSWER: Various persons were involved in preparing Appendix C. The witnesses identified in no. 4 have responsibility for each item in Appendix C.

INTERROGATORY NO. 6 Identify each person who has been retained or specially employed by TransCanada in anticipation of this proceeding and who is not expected to be called as a witness at the hearing in this matter.

ANSWER: Keystone has not retained any person for this proceeding who will not be called as a witness.

INTERROGATORY NO. 7 What is the relationship between the applicant and TransCanada Northern Border, Inc.?

OBJECTION: This request is not relevant and not likely to lead to the discovery of admissible evidence.

INTERROGATORY NO. 8 What is the relationship between the ConocoPhillips and TransCanada Northern Border, Inc.?

OBJECTION: This request is not relevant and not likely to lead to the discovery of admissible evidence.

INTERROGATORY NO. 9 Describe your understanding of TransCanada's obligation to consult with the Standing Rock Sioux Tribe and other Sioux Tribes on the Keystone XL Pipeline project.

ANSWER: To the extent that there is an obligation to consult with the Tribes with respect to the Keystone XL Project, that legal obligation would lie with the Department of State under Section 106 of the NHPA. TransCanada has an active Tribal engagement program that it implements on a voluntary basis.

INTERROGATORY NO. 10 Did you consult with the Standing Rock Sioux Tribe on the project? If the answer is "yes," describe the details of such consultation, including the times, dates, topics of discussion and individuals involved.

ANSWER: Keystone consulted with Standing Rock representatives in March and April 2009 regarding the project.

INTERROGATORY NO. 11 Describe your understanding of the significance and extent of subsistence hunting and fishing conducted by the members of the Standing Rock Sioux Tribe in the area of the project, and include the basis for your response and the sources of such information.

ANSWER: Given the distance between the Standing Rock reservation boundary and the proposed route, the fact that the route crosses privately owned and occupied lands, and the

limited geographic impact of the right of way once the pipeline is constructed, it seems unlikely that subsistence hunting and fishing by tribal members would be influenced.

INTERROGATORY NO. 12 Describe your understanding of the significance and extent of the gathering of medicinal and culturally-significant plants conducted by the members of the Standing Rock Sioux Tribe in the area of the project, and include the basis for your response and the sources of such information.

ANSWER: Given the distance between the Standing Rock reservation boundary and the proposed route, the fact that the route crosses privately owned and occupied lands, and the limited geographic impact of the right of way once the pipeline is constructed, it seems unlikely that subsistence plant gathering by tribal members would be influenced.

INTERROGATORY NO. 13 Describe in detail the training to be provided to contractors and other project personnel.

ANSWER: Training to be provided to contractors and other project personnel for construction, and for normal and abnormal operations of the project is described in the following documents:

- Keystone XL Project, "Construction, Mitigation and Reclamation Plan", April 2012, Rev. 4 (CMRP)
- United States Department of State, "Final Supplemental Environmental Impact Statement for the Keystone XL Project", January 2014 (FSEIS)

The following CMRP and FSEIS excerpts and/or summaries provide details on the training to be provided to contractors and other project personnel.

CMRP: 2.0 General Conditions / 2.1 Training

1st paragraph: Experienced, well-trained personnel are essential for the successful implementation of this Plan. Keystone and its Contractors shall undergo prevention and response, as well as safety training. The program shall be designed to improve awareness

of safety requirements, pollution control laws and procedures, and proper operation and maintenance of equipment. (CMRP, page 1)

2nd paragraph: The construction contractor (Contractor), and all of his subcontractors shall ensure that persons engaged in Project construction are informed of the construction issues and concerns and that they attend and receive training regarding these requirements as well as all laws, rules and regulations applicable to the work. Prior to construction, all Project personnel will be trained on environmental permit requirements and environmental specifications, including fuel handling and storage, cultural resource protection methods, stream and wetland crossing requirements, and sensitive species protection measures. (CMRP, page 1)

3rd paragraph: Different levels of training shall be required for different groups of Contractor personnel. Contractor supervisors, managers, field foremen, and other Contractor personnel designated by Keystone shall attend a comprehensive environmental training session. All other Contractor personnel shall attend a training session before the beginning of construction and during construction as environmental issues and incidents warrant. Additional training sessions shall be held for newly assigned personnel prior to commencing work on the Project. (CMRP, page 1)

4th paragraph: All Contractor personnel shall attend the training session prior to entering the construction right-of-way. All Contractor personnel shall sign an acknowledgement of having attended the appropriate level of training and shall display a hard hat sticker that signifies attendance at environmental training. In order to ensure successful compliance, Contractor personnel shall attend repeat or supplemental training if compliance is not satisfactory or as new, significant new issues arise. (CMRP, page 1)

5th paragraph: All visitors and any other personnel without specific work assignments shall be required to attend a safety and environmental awareness orientation. (CMRP, page 1)

CMRP: 2.0 General Conditions / 2.11 Hazardous Wastes

1st paragraph: The Contractor shall ensure that all hazardous and potentially hazardous materials are transported, stored, and handled in accordance with all applicable legislation. Workers exposed to or required to handle dangerous materials shall be trained in accordance with the applicable regulator and the manufacturer's recommendations. (CMRP, page 6)

CMRP: 2.0 General Conditions / 2.19 Cultural Resources

4th paragraph: Prior to commencing construction, Keystone also will provide an appropriate level of training to all construction personnel so that the requirements of any

unanticipated discovery plan or Programmatic Agreement are understood and unanticipated discoveries quickly identified. (CMRP, page 12)

CMRP: 3.0 Spill Prevention and Containment / 3.1.2 Construction Right-of-Way

4th paragraph: The following preventive measures apply to refueling and lubricating activities on the construction right-of-way:

- *2nd bulleted point:* Refueling and lubricating of construction equipment shall be restricted to upland areas at least 100 feet away from streams and wetlands. Where this is not possible (e.g., trench dewatering pumps), the equipment shall be fueled by designated personnel with special training in refueling, spill containment, and cleanup. The Environmental Inspector shall ensure that signs are installed identifying restricted areas. (CMRP, page 15)

CMRP: 5.0 Drain Tile Systems / 5.6 Inspection/Acceptance of Drain Tile Repairs

2nd paragraph: Keystone shall designate inspector(s) for the sole purpose and responsibility for inspection of all repairs of drain tiles. These inspectors shall be, if possible, employed from local drain tile installation contractors, local farmers with extensive drain tile experience, or previously employed or retired employees of local jurisdictions familiar with drain tile installation and repair. In the event that a sufficient quantity of inspectors from these sources is not available, Keystone shall conduct in-the-field training seminars on drain tile repair for additional inspection personnel. (CMRP, page 50)

FSEIS: 2.1 Overview of the Proposed Project / 2.1.10 Construction Schedule, Workforce, and Environmental Inspection / 2.1.10.1 Schedule and Workforce

2nd paragraph: Keystone anticipates a peak workforce of approximately 5,000 to 6,000 construction personnel. These personnel would consist of Keystone employees, contractor employees, construction inspection staff, and environmental inspection staff. All workers would be trained and certified, as appropriate, for their specific field of work (e.g., welders would be qualified as required by 49 CFR 195.222 and PHMSA Special Condition 18). (FSEIS, page 2.1-69)

FSEIS: 2.1 Overview of the Proposed Project / 2.1.11 Operations and Maintenance / 2.1.11.1 Normal Operations and Routine Maintenance

1st paragraph: Keystone would prepare the manuals and written procedures for conducting normal operations, maintenance, inspection, and monitoring activities as required by the PHMSA regulations, particularly as required by 49 CFR 195.402 and in the applicable PHMSA Project-specific special conditions (see Appendix B, Potential

Releases and Pipeline Safety). This would include development and implementation of an annual Pipeline Maintenance Program to ensure the integrity of the pipeline. The Pipeline Maintenance Program would include valve maintenance, periodic inline inspections, and CP readings to ensure facilities are reliable and in service. Data collected in each year of the program would be incorporated into the decision-making process for the development of the following year's program. The proposed Project OCC (Operations Control Center) would be manned by experienced and highly trained personnel 24 hours per day, every day of the year in Calgary, Canada. In addition, a fully redundant backup OCC has been constructed and is also being operated and maintained in Canada. Primary and backup communications systems would provide real-time information from the pump stations to field personnel. The control center would have highly sophisticated pipeline monitoring systems including a leak detection system capable of identifying abnormal conditions and initiating visible and audible alarms. Automatic shut-down systems would be initiated if a valve starts to shut and all pumps upstream would turn off automatically. All other pipeline situations would require human response. (FSEIS, page 2.1-70)

FSEIS: 2.1 Overview of the Proposed Project / 2.1.11 Operations and Maintenance / 2.1.11.2 Abnormal Operations

Emergency Response Procedures (FSEIS, page 2.1-74)

11th paragraph: Keystone has reviewed the NTSB 2012 Marshall, Michigan Accident Report including the conditions that led to operational failures on the pipeline that resulted in the spill. Keystone has stated they would include lessons learned from this spill, including the following:

- *2nd bulleted point:* Pre-qualify a large contractor network: Contractors would be used to supplement any response Keystone would make to an oil spill. By ensuring a large pool of trained/skilled contractors along the length of the pipeline have been pre-qualified and contracted with Keystone, the response time would be minimized and resources (equipment and personnel) available are maximized. (FSEIS, page 2.1-76)
- *4th bulleted point:* Equipment resources required for sunken and submerged oil: Keystone would further identify equipment resources required to respond to sunken and submerged oil and ensure personnel are appropriately trained on the equipment. A primary strategy for oil spill response would still be to contain and recover as much oil as possible as quickly as possible to prevent oil from weathering and therefore potentially becoming submerged and sinking. In addition, Keystone already owns and practices the use of containment devices that would prevent downstream migration of submerged and sunken oil such as dams. This type of equipment would be further identified and procured for the proposed Project. (FSEIS, page 2.1-77)

15th paragraph: The publicly available portion of the Draft Keystone Oil Pipeline System ERP for the southern portion of the Keystone pipeline is included as Appendix I (parts of the ERP and the PSRP are considered confidential by PHMSA and the U.S. Department of Homeland Security). As described in Section 4.13, Potential Releases, the existing Keystone Oil Pipeline Project documents would be used as templates for the plans for the proposed Project. Project-specific information would be inserted into the plans as it becomes available. In addition, response equipment, including equipment and materials designated for containment and recovery of submerged oil, would be procured and strategically positioned along the route, staff would be trained in spill response and the Incident Command System, and emergency services and public officials would be educated on all aspects of the proposed Project and what their roles would be if an accidental leak were to occur. If a spill were to occur, Keystone and its contractors would be responsible for recovery and cleanup. PHMSA would require a certification from Keystone that necessary emergency response equipment is available in the event of an unplanned spill prior to providing Keystone with an authorization to begin operating the proposed Project. (FSEIS, page 2.1-77)

Remediation (FSEIS, page 2.1-80)

2nd paragraph: If, during construction, tanks or contamination are found, they would be managed according to federal, state, and/or local regulations. Further, Keystone would make individuals available who are trained in identifying and disposing of hazardous materials during construction. (FSEIS, page 2.1-80)

FSEIS: 4.1 Geology / 4.1.3 Potential Impacts / 4.1.3.2 Paleontological Resources

Construction (FSEIS, page 4.1-6)

5th paragraph: South Dakota requires a permit from the South Dakota Commissioner of School and Public Lands to survey, excavate, or remove paleontological resources from state land and to determine the repository or curation facility for paleontological collections from state lands. Condition 44 of the proposed Project's permit from the South Dakota Public Utilities Commission specifies the need for surveys in accordance with the procedures described for the South Dakota paleontological field surveys. Condition 44 also mandates the following mitigation measures:

- *1st bulleted point:* "Following the completion of field surveys, Keystone shall prepare and file with the Commission a paleontological resource mitigation plan. The mitigation plan shall specify monitoring locations, and include Bureau of Land Management (BLM) permitted monitors (Footnote 2). The onsite monitor would be required to hold a valid Paleontological Resource

Use Permit from the BLM, authorizing the monitor to survey and collect paleontological resources in anticipation or in conjunction with a land-use action and proper employee and contractor training to identify any paleontological resources discovered during construction and the procedures to be followed following such discovery. Paleontological monitoring will take place in areas within the construction ROW that are underlain by rock formations with high sensitivity (PFYC Class 4) and very high sensitivity (PFYC Class 5), and in areas underlain by rock formations with moderate sensitivity (PFYC Class 3) where significant fossils were identified during field surveys. Footnote 2: The onsite monitor would be required to hold a valid Paleontological Resource Use Permit from the BLM, authorizing the monitor to survey and collect paleontological resources in anticipation or in conjunction with a land-use action. (FSEIS, page 4.1-7; repeated at FSEIS, Appendix Z, page 2)

FSEIS: 4.3 Water Resources / 4.3.1 Introduction / Summary

Summary (FSEIS, page 4.3-2)

5th paragraph: Potential impacts to groundwater resources during the operational phase of the proposed Project and connected actions include altered groundwater quantity and quality. Measures to avoid and minimize these impacts include pipeline system testing spill and maintenance training, pipeline inspection, periodic system updates and maintenance, and others addressed in Section 4.13, Potential Releases. Federal, state, and local regulatory agency permit requirements would further reduce potential impacts to groundwater resources from construction, maintenance, and operational activities. For instance, Keystone has agreed to incorporate into its operations and maintenance plan a requirement to conduct ground inspections of all intermediate valves and non-staffed pump stations during the first year of operation to ensure that small leaks or potential failures in fittings and seals are identified. Keystone has also agreed to Pipeline and Hazardous Material Safety Administration (PHMSA) Project-specific Special Conditions developed by stakeholders to address pipeline concerns. Those conditions are presented in Appendix B, Potential Releases and Pipeline Safety. (FSEIS, page 4.3-3)

FSEIS: 4.4 Wetlands / 4.4.3 Potential Wetland Impacts

21st paragraph: Commitments described in the proposed Project CMRP (see Appendix G, Sections 6 and 7) and additional Keystone correspondence to protect and restore wetlands include the following general measures (refer to the CMRP for additional details and figures):

- *23rd bulleted point:* Install trench plugs and/or seal the trench to maintain the original wetland hydrology, where the pipeline trench may drain a wetland. Trench plugs would also be used at wetland and waterbody crossings, at the direction of the Environmental Inspector, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the waterbody. Perform all equipment maintenance, repairs, and refueling of all construction equipment in an upland area at least 100 feet from a wetland boundary, if possible. Where this is not possible (e.g., trench dewatering pumps), the equipment would be fueled by designated personnel with special training in refueling, spill containment, and cleanup. Keystone would prepare a Spill Prevention, Control, and Countermeasure Plan prior to introducing the subject fuel, oil, or hazardous material to a given location. (FSEIS, page 4.4-17; repeated at FSEIS, Appendix Z, page 22)

FSEIS: 4.8 Threatened and Endangered Species and Species of Conservation Concern / 4.8.3 Potential Impacts / 4.8.3.1 Endangered Species Act Federally Protected, Proposed, and Candidate Species

Interior Least Tern — Endangered (FSEIS, page 4.8-13)

6th paragraph: Federally Protected and Candidate Birds - The following USFWS conservation measures would apply if construction-related activities, including HDD and hydrostatic testing, were to occur during the interior least tern nesting season (May 1 to September 1):

- *13th bulleted point:* Keystone would mark and maintain a 100-foot area from river crossings, free from hazardous materials, fuel storage, and vehicle fuel transfers. These buffers would be maintained during construction except when fueling and refueling the water pump near a river edge that is required for the HDD crossing and hydrostatic test water withdrawal. Water pump fueling would be completed by trained personnel using secondary containment, and a spill kit would be onsite. (FSEIS, page 4.8-16; repeated at FSEIS, Appendix Z, page 44)

American Burying Beetle — Endangered (FSEIS, page 4.8-21)

10th paragraph: General conservation measures developed during consultation between USFWS, the Department, state agencies, and Keystone that would avoid or minimize potential impacts to the American burying beetle include:

- *12th bulleted point:* Keystone would train all workers operating in American burying beetle habitat and would include discussion of American burying beetle habitat, biology, reasons for their decline, and responsibilities of all workers for the protection of the American burying beetle (including removing food wastes from the ROW each day, reporting any American burying beetle sightings to an environmental inspector, and avoiding bringing

dogs and cats to the ROW). Keystone would produce a full color Endangered Species Card with a picture of the American burying beetle and all of this information summarized on the card. The card would be handed out to all construction workers operating in American burying beetle habitat. (FSEIS, page 4.8-27; repeated at FSEIS, Appendix Z, page 49)

FSEIS: 4.13 Potential Releases / 4.13.6 Additional Mitigation / 4.13.6.2 Safety and Spill Response

2nd paragraph: The Keystone Oil Pipeline System ERP was previously developed for the existing Keystone Mainline and Cushing Extension project and approved by PHMSA. The Keystone ERP would be used as a template for the ERP for the proposed Project and would include the necessary proposed Project-specific information. A review of the Keystone ERP (not the Keystone XL-specific plan) provided in Appendix I, SPCC and ERP, shows that response personnel, whether Keystone employees or contractors, must complete the appropriate Keystone and OSHA training in line with their responsibilities in order to implement a safe and effective response action to oil spills. All Keystone and contractor personnel are expected to follow the facility-specific safety plan for addressing a spill. Several of the aspects of responder training are provided below as listed in the ERP in Appendix I:

- Any concern regarding health or safety issues should be immediately addressed.
- The First Responder must consider the spill site as dangerous and the local atmosphere explosive until air monitoring procedures prove that the area is safe.
- The First Responder must exit the area against or across the wind, if possible, and must also evacuate others who are working in the area.
- All injuries, no matter how minor, must be reported to the Incident Commander in a timely manner.
- Prior to entering a spill area, a qualified person must perform an initial safety and health evaluation of the site. (FSEIS, page 4.13-98)

Notification Procedures (FSEIS, page 4.13-99)

3rd paragraph: Keystone would reach out to first responders at least annually via a public awareness program which includes, as a baseline, contact information, pipeline location, and how to respond. Additionally, Keystone would conduct multiple exercises and training sessions annually, which first responders would be invited to attend and participate. Training and exercises include Incident Command System (ICS), table top, deployment, and full scale exercises. Exercise planners would invite first responders to full scale exercises, which include the development of an incident management team and the simultaneous deployment of equipment resources to approximate a real event. These exercises would be conducted in various locations along the pipeline system. Keystone has stated that they would commit in their ERP to spill drills and exercises that address both floating and submerged oil. (FSEIS, page 4.13-99)

Response Actions (FSEIS, page 4.13-101)

1st paragraph: The ERP provides guidance on how first responders are to classify a spill to the environment or a complaint made within the community. These classifications—minor, serious, major, or critical—are based on the potential for impacts to public safety and the environment. Provided in the ERP is the checklist of actions to be taken to minimize the potential impact of a release as shown below:

- *6th bulleted point:* Take necessary fire response actions by trained staff and responding fire departments; (FSEIS, page 4.13-101)

Response Teams (FSEIS, page 4.13-102)

9th paragraph: The Incident Commander would request additional resources in terms of personnel, equipment, and materials from the Tier 2 and if necessary, the Tier 3 response teams. Once containment activities have been successfully concluded, efforts would then be directed toward the recovery and transfer of free oil. Site cleanup and restoration activities would then follow, all of which would be conducted in accordance with the ERP and in conjunction with regulatory agencies having jurisdiction. Keystone is required to prepare to respond to a worst-case discharge (WCD) by regulations in 49 CFR Part 194. This consists of calculating and identifying where the WCD may potentially occur, plans to ensure that adequate personnel and equipment resources are available to respond, and scenario development. By developing such plans for a WCD, Keystone could be better prepared to respond to a large-scale incident such as the 20,000 bbl spill on the Kalamazoo River in Marshall, Michigan, in 2010. Keystone would ensure internal personnel are trained to respond to oil spills through annual exercises and training sessions including full scale field exercises held in various locations in various operating environments and weather. (FSEIS, page 4.13-105)

10th paragraph: When developing the ERP, Kalamazoo River Spill lessons learned would be considered, including ensuring consultants are contracted as appropriate to facilitate a large-scale and prompt response; developing source containment plans including strategies and tactics; minimizing response times with appropriate equipment; identifying equipment resources required to respond to sunken and submerged oil, and ensuring personnel are appropriately trained. (FSEIS, page 4.13-105)

Facility Response Plan (FSEIS, page 4.13-108)

11th paragraph: Keystone has employed industry best construction and inspection practices whereby all construction and inspection staff are trained and verified to

perform activities in accordance with Special Condition 20. The final inspection of the pipeline via hydrostatic testing, high resolution deformation ILI, and physical verification of reported ILI results help ensure the pipeline's reliability and integrity prior to crude oil service. (FSEIS, 4.13-110)

Lessons Learned (FSEIS, page 4.13-111)

3rd paragraph: Environmentally, the lessons learned from the Marshall, Michigan, dilbit spill and related response implications include the following:

- *1st bulleted point:* The total volume of dilbit released to a river would not float on water indefinitely, and dilbit characteristics, water temperature, and particulate load in the water could result in much of the oil being submerged in the water column (USEPA 2013). Keystone has asserted that, in the event of a release to a body of water, Keystone would focus initially on timely containment and recovery efforts to remove floating material. However, Keystone response teams would be prepared to lend additional efforts for timely detection, containment, and recovery of submerged oil, as well, particularly in colder-temperature waterbodies with significant suspended sediment loads. Response personnel and contractors would be trained for the proper deployment and use of a number of submerged oil containment options (e.g., net booms, silt curtains, bottom-hugging weighted booms and watergate dams) and recovery alternatives (e.g., weighted sorbent, vacuum systems, dredging.) (FSEIS, 4.13-111)
- *2nd bulleted point:* Submerged oil could be suspended in the water column, suspended just above the river bed, or intermixed with sediment and trapped in the river bed and shoreline (USEPA 2013). Keystone has asserted that their response teams and contractors would be trained and prepared to employ multiple remedial alternatives for effective removal of floating, submerged, and suspended oil. To contain and recover suspended oil, multiple types of underwater filters are available and may be replaced as needed for continued recovery. (FSEIS, 4.13-111)

4th paragraph: The NTSB 2012c Marshall, Michigan, Accident Report identified conditions that led to operational failures on the pipeline and resulted in the spill. Keystone would include mitigations learned from this event, including the following:

- *2nd bulleted point:* Pre-qualify a large contractor network: Contractors would be used to supplement any response Keystone would make to an oil spill. By ensuring that a large pool of trained/skilled contractors along the length of the pipeline have been pre-qualified and contracted with Keystone, the response time would be minimized and the resources (equipment and personnel) available would be maximized. (FSEIS, 4.13-112)
- *4th bulleted point:* Equipment resources required for sunken and submerged oil: Keystone would further identify equipment resources required to respond to sunken and submerged oil and ensure personnel are appropriately trained. A

primary strategy for oil spill response would still be required to contain and recover as much oil as possible, as rapidly as possible, to prevent oil from weathering and therefore potentially becoming submerged and sinking. In addition, Keystone already owns and practices the use of containment devices that would prevent downstream migration of submerged and sunken oil such as dams. This type of equipment would be further identified and procured for the proposed Project. (FSEIS, 4.13-113)

FSEIS: 4.14 Greenhouse Gases and Climate Change / 4.14.2 Direct and Indirect Greenhouse Gas Emissions / 4.14.2.1 Construction Emissions

4th paragraph: Keystone would minimize the extent of land clearing for ROWs and expect that contractors would maintain construction equipment and vehicles in accordance with manufacturer's recommendations. Keystone would implement the following measures to minimize production of GHGs during construction:

- *1st bulleted point:* Contractors would be required to ensure that motorized equipment is operating only when required (no unnecessary idling); this requirement would be reinforced during training of the construction workforce and during construction. (FSEIS, 4.14-16)

FSEIS: APPENDIX B Potential Releases and Pipeline Safety / 2.0 Special Conditions Recommended by PHMSA

- Special Condition Recommended by PHMSA No. 10 – Field Coating: Field coating applicators must use valid qualified coating procedures and be trained to use these procedures. This condition is more prescriptive than 49 CFR Section 195.204 which requires inspection, but does not require level of specificity. This condition helps to ensure that personnel are trained and aware of the requirements when applying field joint corrosion protection. (FSEIS, Appendix B, page 6; repeated at FSEIS, Appendix Z, page 74)
- Special Condition Recommended by PHMSA No. 18 – Welding Procedures for New Pipeline Segments or Pipe Replacements: Part c) All welding procedures, AUT procedures and pipe lifting procedures for field construction crews must be documented in construction procedures and field construction crews must be trained in the procedure requirements prior to conducting welding and girth weld AUT in accordance with API 1104, Appendix A. 49 CFR Sections 195.228, 195.230, and 195.234 are less prescriptive, and only requires that 10 percent of each welder's girth welds made each day to be nondestructively tested. This condition, and Keystone's normal practices, help ensure that every weld is inspected. (FSEIS, Appendix B, page 10; repeated at FSEIS, Appendix Z, page 77)

- Special Condition Recommended by PHMSA No. 20 – Construction Tasks: Keystone must prepare and follow an Operator Qualification Program for construction tasks that can affect pipeline integrity. The Construction Operator Qualification Program must comply with 49 CFR 195.501 and must be followed throughout the construction process for the qualification of individuals performing tasks on the pipeline. If the performance of a construction task can affect the integrity of the pipeline segment, the operator (Keystone) must treat that task as a covered task, notwithstanding the definition in 49 CFR 195.501(b), and must implement the requirements of Subpart G. Keystone must retain qualification records for each individual performing covered tasks during and after the construction of the pipeline, whether company or contract employee. The requirements of 49 CFR 195 are in general, less prescriptive with respect to construction personnel training. This condition helps ensure that girth weld inspection and repair, and other tasks related to pipeline construction, are performed by qualified individuals. (FSEIS, Appendix B, page 11; repeated at FSEIS, Appendix Z, page 79)
- Special Condition Recommended by PHMSA No. 25 – SCADA System – General: Part b) iii) SCADA controller training must include simulator for controller recognition of abnormal operating conditions, in particular leak events. A generic simulator or simulation must not be allowed by itself as a means to meet this requirement. A full simulator (console screens respond and react as actual console screens) must be required and used for training of abnormal operating conditions wherever possible. 49 CFR 195 requirements are in general, less prescriptive, although most items are either explicitly listed or inferred as part of the Control Room Management (CRM) regulations through Code Section 195.446. This condition provides NTSB findings are included from previous pipeline failure investigations. (FSEIS, Appendix B, page 13; repeated at FSEIS, Appendix Z, page 81)
- Special Condition Recommended by PHMSA No. 29 – SCADA Training: The entirety of this condition, parts a) through m), covers the training and qualification plan (including simulator training) for controllers. 49 CFR 195 is in general, less prescriptive, although most items are either explicitly listed or inferred as part of the CRM (Control room management) regulations through Code Section 195.446. This condition helps provide state-of-the-art monitoring and control of the pipeline. The training and qualification plan (including simulator training) for controllers must :

 - a) Emphasize procedures for detecting and mitigating leaks,
 - b) Include a fatigue management plan and implementation of a shift rotation schedule that minimizes possible fatigue concerns and that is scientifically based, sets appropriate work and rest schedules, and considers circadian rhythms and human sleep and rest requirements in line with NTSB recommendation P-99-12 issued June 1, 1999,
 - c) Define controller maximum hours of service limitations,

- d) Meet the requirements of regulations developed as a result of the guidance provided in the American Society of Mechanical Engineers Standard B31Q, Pipeline Personnel Qualification Standard (ASME B31Q, September 2006), for developing qualification program plans,
- e) Include and implement a full training simulator capable of replaying for training purposes near-miss or lesson learned scenarios,
- f) Implement tabletop and field exercises no less than five times per year that allow controllers to provide feedback to the exercises, participate in exercise scenario development, and be active participants in the exercise,
- g) Include field visits for controllers accompanied by field personnel who will respond to call outs for that specific facility location,
- h) Provide facility specifics regarding the position to which certain equipment devices will default upon power loss,
- i) Include color blind and hearing provisions and testing if these are required to identify alarm priority or equipment status. This review must be implemented and performed at any location on the Keystone XL system where a SCADA system is used and where an individual(s) is assigned the responsibility to monitor and respond to alarm information (such as for tanks, terminals, or other associated facilities),
- j) Task-specific abnormal operating conditions and generic abnormal operating conditions training components,
- k) If controllers are required to respond to “800” calls, include a training program conveying proper procedures for responding to emergency calls, notification of other pipeline operators in the area when affecting a common pipeline corridor, and education on the types of communications supplied to emergency responders and the public using API RP 1162, Public Awareness Programs for Pipeline Operators (1st edition, December 2003, or the most recent version incorporated in 49 CFR 195.3).
- l) Implement on-the-job training component intervals established by performance review to include thorough documentation of all items covered during oral communication instruction
- m) Implement a substantiated qualification program for requalification intervals addressing program requirements for which circumstances will result in qualifications being revoked; implementing procedure documentation regarding how long a controller can be absent before a review period, shadowing, retraining, or re-qualification is required; and addressing interim performance verification measures between requalification intervals. (FSEIS, Appendix B, page 16; repeated at FSEIS, Appendix Z, page 84)

FSEIS: APPENDIX E Amended Programmatic Agreement and Record of Consultation - E1 Amended Programmatic Agreement

V. Keystone XL Project – Pipeline Construction

Part F. Construction (FSIES, Programmatic Agreement, page 15)

Subpart 1: Lead Environmental Inspector (EI): Prior to initiating vegetative clearing or construction, Keystone will employ the Lead EI whose responsibilities will include ensuring compliance with the terms of this PA. In meeting this responsibility, the Lead EI will rely on the technical expertise of on-site professionals who meet the standards established in Stipulation I.A and tribal monitors with experience outlined in Stipulation V.E.3.

- *Numbered item 2: Training:* Keystone will ensure that, if the Lead EI does not meet the professional qualification standards established in Stipulation I.A, the Lead EI will receive appropriate training in historic preservation from a professional who meets the standards established in Stipulation I.A in order to perform the requirements of this PA. Keystone also will provide an appropriate level of training in historic preservation conducted by a professional who meets the standards established in Stipulation I.A to all construction personnel (including new, added, replaced workers) so that PA requirements are understood and unanticipated discoveries quickly identified. Keystone will conduct this training prior to initiating vegetative clearing or construction activities on a spread. Keystone also will conduct periodic refresher training during construction of the spread. (FSIES, Programmatic Agreement, page 16)

Attachment E - Tribal Monitoring Plan

1.0 Background (FSEIS, Programmatic Agreement, Attachment E, page 1)

4th paragraph: Arising from these efforts, the DOS has required, through Stipulation V.E. of the PA, that Keystone provide Indian tribes the opportunity to participate as tribal monitors during construction to further reduce the potential for Project effects to previously unidentified historic properties. This Tribal Monitoring Plan provides procedures for the hiring, training, and supervising of Tribal monitors and other relevant topics. (FSEIS, Programmatic Agreement, Attachment E, page 1)

2.0 Summary (FSEIS, Programmatic Agreement, Attachment E, page 1)

2nd paragraph: The tribal monitors are required to have adequate safety training to work on the right-of-way and must follow protocols developed by Keystone while in the field. For the Keystone XL Pipeline Project, the tribal monitors shall be selected by the individual Indian tribes and

recognized as having experience in the identification of historic properties. Construction activities affecting land used historically by one or several Indian tribes should be monitored by representatives of those Indian tribes claiming historical use of that land. Their role will be to alert the Lead Environmental Inspector (Lead EI) of any previously unidentified historic properties uncovered during construction activities. (FSEIS, Programmatic Agreement, Attachment E, page 2)

5.0 Environmental Inspector (FSEIS, Programmatic Agreement, Attachment E, page 2)

3rd paragraph: Keystone will ensure that, if the Lead EI does not meet the professional qualification standards established in the PA, the Lead EI will receive appropriate training in historic preservation from a professional who meets the standards established in the PA so that the PA requirements are understood and unanticipated discoveries are quickly identified. Keystone, for the same reason, will provide an appropriate level of training in historic preservation conducted by a professional who meets the standards established in the PA to all construction personnel. Keystone will conduct this training prior to initiating vegetative clearing or construction activities on a spread, and conduct periodic refresher training, as deemed necessary, during construction of the spread. (FSEIS, Programmatic Agreement, Attachment E, page 2)

6.0 Tribal Monitors (FSEIS, Programmatic Agreement, Attachment E, page 3)

Position Description:

- *6th bulleted point:* Monitors are part of the construction team and as such, are required to participate in the safety and environmental training on site as well as in tailgate meetings. They must abide by all safety rules and wear personal protective equipment at all times while on site. (FSEIS, Programmatic Agreement, Attachment E, page 4)

8.0 Training (FSEIS, Programmatic Agreement, Attachment E, page 4)

1st paragraph: All monitors will be required to satisfactorily complete a one-day comprehensive training focused on the activities on the pipeline right-of-way. Monitors must also attend pre-construction training as coordinated by the prime contractor, including environmental and safety trainings provided to all on-site personnel. Keystone will make reasonable efforts to ensure that these trainings are accessible to tribal monitors and alternates. (FSEIS, Programmatic Agreement, Attachment E, page 4)

Attachment F - Historic Trail and Archaeological Monitoring Plan

2.0 Summary (FSEIS, Programmatic Agreement, Attachment F, page 2)

2nd paragraph: Monitors are required to meet the qualifications identified in Section 7 of this document, must have adequate training to work on the right-of-way, and must follow strict communication protocols while in the field. (FSEIS, Programmatic Agreement, Attachment F, page 3)

5.0 Cultural Resource Monitors (FSEIS, Programmatic Agreement, Attachment F, page 3)

Position Description:

- *6th bulleted point:* Monitors are responsible for reporting daily and weekly activities in a manner that describes the areas and activities monitored during the week, any issues or concerns that were encountered, and how the issues or concerns (if any) were resolved. The reports should be submitted in writing to the Lead EI. Monitors are part of the construction team and, as such, are required to participate in safety and environmental training on site, as well as in tailgate meetings. They must abide by all safety rules and wear the required protective equipment at all times while on site. (FSEIS, Programmatic Agreement, Attachment F, page 4)

7.0 Training (FSEIS, Programmatic Agreement, Attachment F, page 4)

1st paragraph: All monitors will be required to satisfactorily complete a one-day comprehensive training focused on the activities on the pipeline right-of-way. Completion of this program is compulsory. It is required that the monitors also attend the multi-day environmental/safety trainings provided to all on-site personnel. (FSEIS, Programmatic Agreement, Attachment F, page 4)

2nd paragraph: All monitors will be required to attend the pre-construction training as coordinated by the prime contractor prior to any monitoring activity. The training program consists of two phases: environmental training and safety training. These training programs are conducted by the Keystone prime contractor's environmental and safety professionals and will commence in the morning of the first day of monitoring for each spread. (FSEIS, Programmatic Agreement, Attachment F, page 4)

FSEIS: APPENDIX I Spill Prevention Control and Countermeasure Plan and Emergency Response Plan

- 1) Keystone XL Pipeline Project Spill Prevention, Control and Countermeasure Plan
DRAFT

SPCC: Section 2 Contractor Supplied Site-Specific Information

2nd paragraph: The following information must be supplied by the Contractor for review and approval by Keystone at least 30 days prior to construction activities.

- *3rd major bulleted point:* Contractor's training program for fuel truck drivers and mechanics (FSEIS, page SPCC-2)

SPCC: Section 3 Prevention / 3.1 Training

1st paragraph: Personnel accountable for carrying out the procedures specified in this plan will be designated before construction and informed of their specific duties and responsibilities with respect to environmental compliance and hazardous materials. The Contractor will be required to provide additional spill prevention, response and hazardous materials handling training to all of their staff who handle hazardous materials, fuels and lubricants on a regular basis. The Contractor will provide the details of this training to Keystone prior to the start of work (Attachment D). At a minimum, training will include:

- A review of this SPCC Plan;
- An overview of all regulatory requirements;
- Waste minimization practices;
- Proper storage and handling methods for hazardous materials, fuels, lubricants, gases, etc.;
- Spill prevention, clean-up, and reporting requirements;
- Proper disposal techniques for hazardous materials, fuels, lubricants, etc.;
- Proper procedures for transferring fuels and containing fluids while doing maintenance on vehicles;
- Special requirements for refueling within 100 feet of wetlands and waterbodies;
- The location of the MSDSs and the SPCC Plan;
- The proper use of personal protective equipment;

- Emergency and spill response material locations, proper use, and maintenance;
- Emergency contact information and notification procedures; and
- Procedures for documenting spills and standard spill information to be provided to Keystone for agency notification.

2nd paragraph: All personnel working on the Project, including all Contractor personnel, are required to attend a Project-sponsored training session prior to starting work. Keystone will conduct training to ensure all responsible Contractor employees know of and comply with all project-specific environmental and TransCanada environmental policy requirements. The environmental training program will address refueling restrictions, hazardous materials handling, spill prevention and cleanup requirements, as well as other Project environmental and safety topics. (FSEIS, Appendix I, page SPCC-2)

Note that Attachment D is the Contractor's Training Program. Keystone currently has retained no contractor for the construction of the proposed project.

SPCC: Section 4 Spill Control and Countermeasures

1st paragraph: It is Keystone's goal to promptly stop spills, however the safety and health of Project personnel and the public is the foremost priority. Personnel should only respond to a spill if they have adequate training to do so safely. (FSEIS, Appendix I, page SPCC-8)

2) Emergency Response Plan

ERP: Executive Summary

2nd paragraph: A critical aspect of operating the Keystone Pipeline system is to have a comprehensive Emergency Management System. A key component of the system includes having an Emergency Response Plan. The Keystone emergency response plan was prepared to achieve a number of goals: ensure regulatory compliance, appropriate for all key stakeholders including field operations, include all emergencies and response measures, timely internal and external notification procedures, and training requirements. In addition, the plan contains information related to worst case discharge, company owned equipment, environmental sensitivities, contract resources, and public officials, and

tactical control plans. (FSEIS, Appendix I, page Emergency Response Plan 2)

4th paragraph: The Keystone Emergency Response Plan is combined with a rigorous training program,, retention of and access to the industry's most known response experts, and a state of the art pipeline integrity and maintenance program making emergency response for the Keystone pipeline system a priority fully endorsed at all levels within TransCanada. (FSEIS, Appendix I, page Emergency Response Plan 2)

ERP: APPENDIX D Training and Drills

References to training requirements are interspersed throughout the ERP document. Appendix D Training and Drills encapsulates the training regimen in great detail. Only the table of contents of Appendix D is provided here (FSEIS, Appendix I, Emergency Response Plan, page D. Training & Drills 1)

D.1 Response Team Training

- Emergency Response Plan Review
- Hazardous Waste Operations and Emergency Response (29 CFR 1910.120)
- Incident Command System
- Training Records Maintenance
- Contractor Training
- Training Qualifications

D. 2 Response Team Exercises

- Quarterly QI Notification Exercise
- Annual Equipment Deployment Exercise
- Annual Response Team Tabletop Exercise
- Government-Initiated Unannounced Exercise
- Area Exercises
- Exercise Documentation

D. 3 Purpose of Review and Evaluation

- Outline of Review
- Detection
- Notification
- Assessment/Evaluation
- Mobilization
- Response -Strategy

Response -Resources Used
Response -Effectiveness
Command Structure
Measurement
Government Relations
Public Relations

INTERROGATORY NO. 14 Identify the contractor that provided assistance in the preparation of the Emergency Response Plan.

ANSWER: Witt O'Briens.

INTERROGATORY NO. 15 Describe the notification procedures and identify the contact information for appropriate agencies for emergency response, for an emergency relating to the project in South Dakota.

ANSWER: External Notifications - External notifications are those made to entities outside of the Company including Federal, Province/State and local regulatory agencies, as well as railroad and utility companies. These notifications include both verbal and written requirements. The Keystone ERP meets these notification regulatory requirements. The Keystone ERP will be amended to accommodate Keystone XL. (Keystone ERP Sec.2.2). The contact information for "appropriate agencies during an emergency response" are listed in the Keystone ERP. A redacted version thereof is located at Appendix I to the FSEIS.

INTERROGATORY NO. 16 For each county in which the project would be located, identify the locations of emergency responders, the routes to be used and the anticipated response deployment times.

ANSWER: The Keystone Emergency Response Plan identifies and lists resources for use in an emergency. The ERP additionally lists possible Command Posts that may be utilized during an incident. The Keystone ERP will be amended to accommodate Keystone XL. (Keystone ERP, Sec.2.6).

INTERROGATORY NO. 17 For each county in which the project would be located, identify the equipment available to respond to a release of oil during the operation of the pipeline, the location of the equipment to be used in the clean-up, the routes to be used to transport equipment to each respective county, and the anticipated response deployment times.

ANSWER: Oil spill response equipment (amounts, types and locations) that are owned by TransCanada are listed in Appendix A of the Keystone Emergency Response Plan. The Keystone ERP will be amended to accommodate Keystone XL. PHMSA requires response times as outlined in the table below. TransCanada locates equipment and people that are transported by air, land and water to ensure that regulatory guidelines are meant.

INITIAL RESPONSE ACTIONS - SUMMARY			
PERSONNEL AND PUBLIC SAFETY IS FIRST PRIORITY			
RESPONSE TIMES*			
High Volume Area	6 HR	30 HR	54 HR
All Other Areas	12 HR	36 HR	60 HR
CONTROL			
<ul style="list-style-type: none"> • Eliminate sources of ignition • Isolate the source of the discharge, minimize further flow 			
NOTIFY			
<ul style="list-style-type: none"> • Make internal and external notifications • Activate local Company personnel as necessary • Activate response contractors and other external resources as necessary 			
CONTAIN			
<ul style="list-style-type: none"> • Begin spill mitigation and response activities • Monitor and control the containment and clean-up effort • Protect the public and environmental sensitive areas 			

* Response resources and personnel available to respond within time specified after discovery of a worst case discharge per US DOT 49 CFR Part 194.115 (Keystone ERP Sec.3.1)

INTERROGATORY NO. 18 Identify the national response contractor with access to and the ability to provide large quantities of equipment to meet Oil Spill Response Organization (OSRO) requirements, the location of the equipment, the routes to be used to transport equipment as may be necessary to each respective county in which the project is located, and the anticipated response and deployment times for each county.

ANSWER: TransCanada has agreements/contracts with corporations such as the National Response Corp. that meet the Oil Spill Response Organization (OSRO) requirements (Keystone ERP, Appendix I to FSEIS).

INTERROGATORY NO. 19 Identify the local contractors to be used to provide emergency response assistance.

ANSWER: The resources will be secured from a Company approved contractor.

INTERROGATORY NO. 20 For each county in which project would be located, identify the housing that is available for response and clean-up crews in the event of an oil spill in that county.

ANSWER: Where response workers are housed and fed depends on the location of the incident. This will be determined at the time of the incident. However, the Keystone XL ERP will have a listing of resources that may be utilized (Hotels, Motels, Lodging).

INTERROGATORY NO. 21 Describe the training requirements for contractors and project personnel contained in the Emergency Response Plan.

ANSWER: Prior to in service of Keystone XL it is regulated that there is Emergency Response Training. After the pipeline is operational, TransCanada reaches out to first responders at least annually via our public awareness program which includes as a baseline our contact info, where our pipeline is, and how to respond. Additionally, we conduct exercises and training sessions annually to which first responders are invited to attend and participate. Training and exercises include ICS, table top, deployment and full scale exercises. Our exercise planners are required to invite first responders to full

scale exercises which includes the development of an incident management team and the simultaneous deployment of equipment resources to proximate a real event. These exercises are conducted in various locations along the pipeline system.

INTERROGATORY NO. 22 Describe the notification procedures and contact information or appropriate agencies contained in the Emergency Response Plan.

ANSWER: External Notifications - External notifications are those made to entities outside of the Company including Federal, Province/State and local regulatory agencies, as well as railroad and utility companies. These notifications include both verbal and written requirements are outlined in the Keystone ERP and will be amended to accommodate Keystone XL. (Keystone ERP Sec.2.2.)

INTERROGATORY NO. 23 Describe the provisions in the Emergency Response Plan addressing human error in the operation of the pipeline or in the response to an oil spill.

ANSWER: The Keystone ERP addresses a variety of incidents that potentially may occur. Addressing the human error factor is an issue that all energy organizations and companies have to prioritize

INTERROGATORY NO. 24 Identify the members of the Spill Management Team, and include the name, address and job title of each such person.

ANSWER: The first Company person on scene (First Responder) will function as the Incident Commander and person-in-charge until relieved by an authorized supervisor who will then assume the position of Incident Commander (IC). Transfer of command will take place as more senior management contract support respond to the incident. For response operations within the control of the Initial Response Team, the role of IC will typically be assumed and retained by the Qualified Individual. The number of positions/personnel required to staff the Incident Management Team will depend on the size and complexity of the incident. The duties of each position may be performed by the IC directly or delegated as the situation demands. The IC is always responsible for directing the response activities and

will assume the duties of all the primary positions until the duties can be delegated to other qualified personnel.

A complete functional ICS organization is shown in Figure 4.1. The Incident Commander should try to fill the necessary positions within the Incident Management Team and request additional support from both the Regional and Corporate Emergency Operations Centers to fill/back up all the positions as the incident may dictate. Detailed job descriptions of the primary response team positions are provided in Section 4.7.

REGIONAL EMERGENCY PREPAREDNESS TEAM (EPT).

The Emergency Preparedness Team (EPT) will activate a Regional Emergency Operations Center (EOC) to support the Initial Response Team/Incident Management Team. The number of positions/personnel required to staff the Regional EOC will depend on the size and complexity of the incident.

The Regional EOC is staffed by personnel from various Regional locations. The Regional EOC provides necessary information to the appropriate Federal, State/Province, and Local authorities with designated response roles, including the National Response Center (NRC), the Canadian National Energy Board (NEB), if necessary, State Emergency Response Commission (SERC) Provincial Ministry, and local response agencies.

INTERROGATORY NO. 25 Identify the high volume areas in which the project would be located?

OBJECTION: This request seeks information that is governed by federal law and is within the province of PHMSA. It is therefore beyond the scope of the PUC's jurisdiction and Keystone's burden under SDCL § 49-41B-27.

INTERROGATORY NO. 26 Describe with specificity the characteristics and composition of all oil products to be transported by the project.

ANSWER: This issue is addressed in the Department of State FSEIS, Chapter 3, Section 3.13.3. The Material Safety Data Sheets for the crude oil are located at Appendix Q to the FSEIS.

INTERROGATORY NO. 27 Identify the site or sites for the disposal of recovered oil products that could be released during the operation of the project, and, for each county in which the project would be located, the routes to be used for transportation to the disposal site or sites.

ANSWER: All these wastes need to be classified and segregated (i.e., oily, liquid, etc.), transported from the site, and treated and/or disposed at approved disposal sites. Specific disposal sites and transportation routes will be identified in the Keystone ERP.

INTERROGATORY NO. 28 Identify the source or sources of support to conduct the monitoring and post-use effectiveness evaluation required by the applicable Local or Area Contingency Plan, in the event of an oil spill.

ANSWER: TransCanada will refer to the Local Area Contingency Plan in the event of a spill. TransCanada is responsible for ensuring technical resources are utilized.

INTERROGATORY NO. 29 For each county in which the project would be located, describe the availability of adequate temporary storage capacity to sustain effective daily recovery of oil products that could be released during the operation of the project.

ANSWER: TransCanada will calculate how much storage is sufficient and necessary. This storage may be company-owned or be third party.

INTERROGATORY NO. 30 Describe in detail all circumstances surrounding the external corrosion of pipe that is described on page 5, finding 68, in the Tracking Table of Changes filed by the applicant, including the name and location of the pipeline, identification of the foreign utility, the effects of the corrosion and identify any resulting release of liquid or gas.

ANSWER: Base Keystone experienced a localized external corrosion wall loss due to DC stray current interference from foreign utility colocation which caused sacrificing significant amounts of

protective current to other pipelines in the shared Right-of-Way. This adversely affected CP current distribution to the Keystone line. This anomaly was found during proactive and routine high resolution in-line inspection. This issue has been reviewed, remediated and updates to the CP design where collocation occur have been implemented. In South Dakota specifically, no such location exists for collocation of multiple pipelines in a shared Right-of-Way. However, Keystone's has applied these updates to its design and existing CP "construction bridge to energization" plan to address potential for DC stray current interference due to foreign utility crossings and paralleling utilities.

INTERROGATORY NO. 31 What are acceptable airborne dust levels during construction of the project?

ANSWER: The acceptable airborne dust levels during construction of the project are identified in Table 3.12.2 Federal and Montana Ambient Air Quality Standards in the Department of State FSEIS (2104). This table contains the National Ambient Air Quality Standards for particulate matter (PM). PM includes inhalable coarse particles with aerodynamic diameter of 10 microns and less (PM10) and fine particles with an aerodynamic diameter of 2.5 microns and less (PM2.5). The State of South Dakota has adopted the Ambient Air Quality Standards equivalent to the National Ambient Air Quality Standards for PM.

INTERROGATORY NO. 32 Describe the precautions to be taken to prevent fugitive emissions during sand blastings in the course of construction.

ANSWER: The Department of State FSEIS (2014) in Section 4.12.3.1 states: "Contractors would place curtains of suitable material, as necessary, to prevent wind-blown particles as a result of sand blasting operations from reaching any residence or public building. Additional dust control measures may be required by state or local ordinances."

INTERROGATORY NO. 33 What hazardous materials shall be used by contractors or other project personnel in the course of construction?

ANSWER: The contractor(s) have not been identified or hired at this point in the Project planning process. All hazardous material that would be used by the contractor(s) would be identified within the Project's Spill Prevention Control and Countermeasures (SPCC) Plan(s). Appendix I of the Department of State FSEIS (2014) contains a draft template of the SPCC Plan. The SPCC Plan(s) will be finalized by each contractor based on all required site-specific information.

INTERROGATORY NO. 34 Identify the disposal site or sites to be used upon clean-up and remediation, in the event of a release of hazardous materials during construction.

ANSWER: The TransCanada environment department will determine the disposal sites, for hazardous materials, at the time of the incident.

INTERROGATORY NO. 35 Identify and describe the equipment or materials to be kept on the construction sites to contain a spill of hazardous materials during construction?

ANSWER: This issue is addressed in the SPCC..

INTERROGATORY NO. 36 Describe the specific measures to be utilized by contractors and project personnel during construction to contain a spill of hazardous materials during construction.

ANSWER: The specific measures to be utilized by contractors and project personnel during construction to contain a spill of hazardous materials during construction will be identified within Section 3.0 of the CMR Plan Rev4 and the Project's SPCC Plan(s). Appendix I of the Department of State FSEIS (2014) contains a draft template of the SPCC Plan. The SPCC Plan(s) will be finalized by each contractor based on all required site-specific information.

INTERROGATORY NO. 37 Identify the water bodies to be crossed in South Dakota through use of the following crossing methods:

- (a) horizontal direction drilling;
- (b) horizontal bore crossing;
- (c) flowing open cut method;

- (d) non-flowing open cut method;
- (e) dry-flume method; and
- (f) dry-dam pump method.

ANSWER: The following water bodies will be crossed by the horizontal directional drill (HDD) method: Little Missouri River, Cheyenne River, Bridger Creek, Bad River and White River. The crossing method for all other water bodies will be determined at the time of construction

INTERROGATORY NO. 38 Explain why the plan for crossing the Bridger Creek has been changed, including any new information that was unavailable during the initial determination that it would be crossed using the open-cut method.

ANSWER: During the detailed engineering design phase of the Project, the Bridger Creek area was redesigned as an HDD in order to mitigate construction safety risk to personnel and equipment, long term slope stability and pipe integrity concerns due to installation within steeper undulating terrain entering and leaving the area.

INTERROGATORY NO. 39 What steps shall be required of contractors to limit the use of equipment operating in water bodies?

ANSWER: The contractor will be required to comply with all measures that are outlined in Section 7.0, Waterbodies and Riparian Areas of the Project's CMR Plan Rev4 and all measures in Appendix Z of the Department of State FSEIS (2014), as well as measured in any applicable permits from the U.S. Army Corps of Engineers.

INTERROGATORY NO. 40 Identify with specificity the sites for hydrostatic testing.

ANSWER: Sites for hydrostatic testing will be divided along the pipeline to meet the pressure testing requirements in accordance with 49 CFR 195 Subpart E.

INTERROGATORY NO. 41 How much water is estimated to be needed for hydrostatic testing?

ANSWER: The estimated water requirements for hydrostatic testing in South Dakota are approximately 133 million gallons.

INTERROGATORY NO. 42 Identify all water bodies and the points of diversion for the withdrawal of water for use in hydrostatic testing.

ANSWER: The following are the water bodies anticipated to be utilized for hydrostatic testing: Little Missouri River, Lake Gardner, North Fork Moreau River, Cheyenne River, Bad River and White River. The point of diversion will be in proximity to the pipeline and each water body.

INTERROGATORY NO. 43 How much water is estimated to be needed for during the construction of the project for:

- a. dust suppression; and
- b. construction de-watering.

ANSWER: The estimated water requirements for dust suppression in South Dakota are approximately 79 million gallons. The construction de-watering requirements are unknown as this is dependent on conditions at the time of construction.

INTERROGATORY NO. 44 Identify all water bodies and the points of diversion for water for use for dust suppression and construction de-watering.

ANSWER: The following water bodies have been identified as potential sources to be utilized for dust suppression: Dipping Vat Creek, Little Missouri River, Lake Gardner, South Fork Grand River, Clarks Fork Creek, South Fork Moreau River, Sulphur Creek, Bridger Creek, Bad River, Dry Creek and White River.

INTERROGATORY NO. 45 Identify the approved sources for water trucks supplying water for pre-testing of roads or railroad crossings.

ANSWER: Road and railroad crossings are not pre-tested. Therefore, no water sources have been identified.

INTERROGATORY NO. 46 Identify the locations for the discharge of hydrostatic test water.

ANSWER: Hydrostatic test water will be discharged in the same watershed from which it was diverted.

INTERROGATORY NO. 47 What specific steps shall be required of contractors to ensure there is no discharge of water containing oil or other contaminants?

ANSWER: The hydrostatic test water will be monitored for contaminants per permitting requirements.

INTERROGATORY NO. 48 Identify Keystone's Public Liaison Officer for South Dakota, including such person's name, job title, qualifications, address, telephone number, email address and web site address.

ANSWER:

Sarah Metcalf
Public Liaison Officer
PO Box 904
Aberdeen, SD 57402
1-888-375-1370
Smetcalf12@gmail.com

Metcalf does not maintain a website, but her reports to the PUC are a matter of public record.

See <https://puc.sd.gov/dockets/hydrocarbonpipeline/2009/publicliaisonreports.aspx>

Sarah Metcalf worked as the public liaison officer for Phase I of the Keystone Pipeline. Her appointment was approved by the PUC in both Docket HP07-001 and HP09-001. A copy of her resume is attached as Keystone 0645-0646.

INTERROGATORY NO. 49 Describe the advertisements that have been purchased by TransCanada relating to the project in any South Dakota media, such as television, radio, newspaper or billboard, including the cost for each advertisement, the medium in which it was aired or published, and the date or dates of the advertisements.

OBJECTION: This request is not relevant and is not likely to lead to the discovery of admissible evidence. It is not related to or within the scope of Amended Condition 7, which relates to the public liaison officer, and which requires that Keystone maintain a website.

INTERROGATORY NO. 50 Describe TransCanada's understanding of its obligations under:

a. National Historic Preservation Act of 1966, as amended, 16 U.S.C. §§470- 470x-6. Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. §§3001-3013.

b. Archeological Resources Protection Act of 1979, 16 U.S.C. §§470aa-470mm.

ANSWER: Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by ACHP. The regulations place emphasis on consultation with Indian tribes and Native Hawaiian organizations, in keeping with the 1992 amendments to NHPA. Consultation with an Indian tribe must respect tribal sovereignty and the government-to-government relationship between the Federal Government and Indian tribes. Keystone assists the State Department in its compliance with Section 106; it does not supplant the State Department in its government-to-government consultation role with affected Tribes. Obligations under NAGPRA are summarized in a National Park Service posting available at:

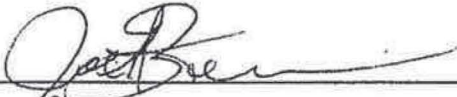
<http://www.nps.gov/archeology/tools/Laws/nagpra.htm>.

Obligations under ARPA are summarized in a National Park Service posting available at:

<http://www.nps.gov/archeology/tools/Laws/arpa.htm>.

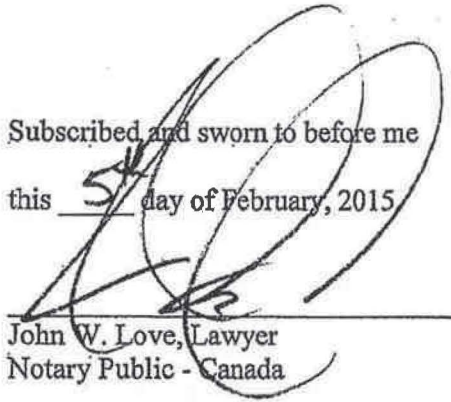
Dated this 5th day of February, 2015.

TRANSCANADA KEYSTONE PIPELINE, LP
by its agent, TC Oil Pipeline Operations, Inc.

By 
Its Director, Authorized Signatory

Subscribed and sworn to before me

this 5th day of February, 2015

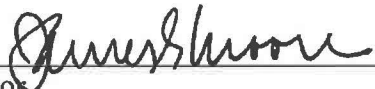

John W. Love, Lawyer
Notary Public - Canada

OBJECTIONS

The objections stated to Standing Rock Sioux Tribe's First Set of Interrogatories were made by James E. Moore, one of the attorneys for Applicant TransCanada herein, for the reasons and upon the grounds stated therein.

Dated this 6th day of February, 2015.

WOODS, FULLER, SHULTZ & SMITH P.C.

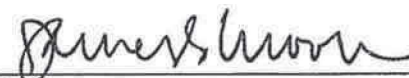
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Attorneys for Applicant TransCanada

CERTIFICATE OF SERVICE

I hereby certify that on the 6th day of February, 2015, I sent by e-mail transmission, a true and correct copy of Keystone's Responses to Standing Rock Sioux Tribe's First Set of Interrogatories, to the following:

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One of the attorneys for TransCanada