

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

IN THE MATTER OF THE APPLICATION	)	HP 07-001
BY TRANSCANADA KEYSTONE PIPELINE,	)	
LP FOR A PERMIT UNDER THE SOUTH	)	
DAKOTA ENERGY CONVERSION AND	)	<b>APPLICANT'S INITIAL</b>
TRANSMISSION FACILITIES ACT TO	)	<b>POST-HEARING BRIEF</b>
CONSTRUCT THE KEYSTONE PIPELINE	)	
PROJECT	)	

Pursuant to the briefing schedule established by the Commission at the close of the evidentiary hearing in this proceeding, TransCanada Keystone Pipeline, LP (“Keystone”) hereby submits its initial post-hearing brief in support of its application for a Permit under the South Dakota Energy Conversion and Transmission Facilities Act, with respect to the proposed Keystone Pipeline project.

**I. PROJECT DESCRIPTION**

Keystone proposes to construct and operate a crude oil pipeline and related facilities from Hardisty, Alberta, Canada, to Patoka, Illinois, and Cushing, Oklahoma. The Keystone pipeline would carry incremental crude oil production from the Western Canadian Sedimentary Basin (WCSB) to meet growing demand by refineries and markets in the United States. This supply will serve to replace U.S. reliance on less stable and less reliable sources of offshore crude oil. The initial phase of the project to Wood River and Patoka, Illinois will have a nominal capacity of 435,000 barrels per day (bpd). As the result of a successful open season, Keystone has received sufficient shipper commitments to support the extension of the project to Cushing, Oklahoma, which will include additional pumping capacity to expand the nominal capacity to 591,000 bpd. TC-1 at 1; Jones TC-2D at 2; T. 40:18-24.

The proposed pipeline route enters South Dakota at the North Dakota/South Dakota border in Marshall County and extends in a southerly direction, exiting the state underneath the Missouri River in Yankton County. The length of the pipeline route within South Dakota will be approximately 220 miles and will cross Marshall, Day, Clark, Beadle, Kingsbury, Miner, Hanson, McCook, Hutchinson, and Yankton Counties. TC-1 at 1; Jones TC-2D at 2.

The pipeline will have a 30-inch nominal pipe size diameter and be constructed using API 5LPSL2 X70 high-strength steel. An external fusion bonded epoxy (FBE) coating will be applied to the pipeline and all buried facilities to protect against corrosion. Cathodic protection will be provided by impressed current. The pipeline will have batching capabilities and will be able to transport products ranging from light crude oil to heavy crude oil. TC-1 at 2.2.1; T. 267:23-24. The pipeline will operate at a maximum operating pressure of 1,440 psi. TC-1 at 2.2.1; TC-6D at 2. The current estimated cost of the Keystone project in South Dakota is \$ 500 million. T. 42:11-12.

The Keystone pipeline will have four pump stations in South Dakota, located in Day, Beadle, Miner, and Hutchinson Counties. The stations and pumps will be electrically driven and will be required to pump the crude oil through the pipeline. Pump units will be installed to meet the nominal design flow rate of 591,000 bpd. Kothari TC-6D at 2. The pump stations are described at Section 2.2.2 of Keystone's application and a typical pump station layout is provided at Exhibit 4 of the application.

Keystone plans to construct 14 mainline valves along the pipeline in South Dakota. Seven valves will be remotely controlled, to isolate sections of the line in the event of an emergency to minimize impacts or for operational or maintenance reasons. Four valves are

check sets, which are comprised of one manual valve and one check valve. Check sets are installed downstream of water bodies which meet a specific design criteria, such as Logan/Fordham Dam and Wolf Creek. TC-1 at 2.2.3; Kothari TC-6D at 3. Valves will mitigate the magnitude of impacts of a potential pipeline leak on sensitive resources.

The pipeline will be constructed within a 110-foot wide corridor, consisting of a temporary 60-foot wide construction right-of-way and a 50-foot permanent right-of-way. Additional workspace will be required for stream, road, and railroad crossings, as well as hilly terrain and other features. Keystone will reduce the construction right-of-way to 85 feet in certain wetlands to minimize impacts. TC-1 at 2.2.4.

The Keystone pipeline will be designed, constructed, tested, and operated in accordance with all applicable requirements, including the U.S. Department of Transportation, Pipeline Hazardous Materials and Safety Administration (PHMSA) regulations set forth at 49 C.F.R. Part 195. These federal regulations are intended to ensure adequate protection for the public and the environment and to prevent crude oil pipeline accidents and failures. TC-1 at 2.2; Kothari TC-6D at 2.

Keystone proposes to commence construction of the pipeline in South Dakota in April 2008, and to complete construction in November 2009. Keystone expects to place its pipeline in service in November 2009. This in-service date is consistent with the requirements of Keystone's shippers who have made the contractual commitments that underpin the viability and need for the project. TC-1 at 1; Jones TC-2D at 3.

## **II. KEYSTONE'S PERMIT APPLICATION**

As a "transmission facility" under S.D. Codified Laws § 49-41B-2.1(3), Keystone requires a permit from the South Dakota Public Utilities Commission (Commission) under the Energy Conversion and Transmission Facilities Act. S.D. Codified Laws § 49-41B-4. On April 27, 2007, Keystone filed a siting permit application with the Commission for the South Dakota portion of the Keystone Pipeline Project. The Commission caused to be filed a copy of the application and exhibits in each of the counties crossed by the proposed route and also placed a complete file in electronic form on the Commission's website. In June 2007, the Commission held public hearings in Yankton, Alexandria, Clark, and Britton, South Dakota which were attended by hundreds of interested South Dakotans. None of the hearings concluded until all interested persons had been heard.

Upon receipt of Keystone's application for a permit, the Commission admitted numerous intervenors to the proceeding, directed its Staff to retain experts and to study Keystone's proposal, received prepared testimony from Keystone, Staff, and Intervenor witnesses, and scheduled formal evidentiary hearings. The Commission held formal hearings beginning on December 3, 2007, and concluding on December 11, 2007, at the State Capitol in Pierre. All parties to the docket were provided the opportunity to appear at the hearings, offer testimony, and examine witnesses. Written and oral evidence was presented by Keystone, several experts retained by the Commission's Staff, a number of State agency officials, and numerous intervenors. In addition, the Commission held a further public hearing on the evening of December 6th at the State Capitol in Pierre to hear comments from the general public, including interested organizations.

Based on the information presented in its application and the evidence presented at the hearing, Keystone submits that it has met the required burden of proof for issuance of a permit under the governing South Dakota law. Accordingly, and for the reasons more fully set forth below, Keystone respectfully requests that the Commission issue the requested permit in a timely manner.

### **III. RELEVANT STATUTES**

The applicant's burden of proof in a proceeding seeking a Permit under the South Dakota Energy Conversion and Transmission Facilities Act is established by the applicable statute at S.D. Codified Laws § 49-41B-22. Pursuant to the statute, Keystone, as the applicant, has the burden of proof to establish that:

- (1) The proposed facility will comply with all applicable laws and rules;
- (2) The facility will not pose a threat of serious injury to the environment nor to the social and economic condition of inhabitants or expected inhabitants in the siting area;
- (3) The facility will not substantially impair the health, safety or welfare of the inhabitants; and
- (4) The facility will not unduly interfere with the orderly development of the region with due consideration having been given the views of governing bodies of affected local units of government.

In addition, certain other statutory provisions are applicable to this proceeding. Pursuant to S.D. Codified Laws § 49-41B-24, the Public Utilities Commission has 12 months from the receipt of the initial application for a permit to make findings and render a decision regarding whether a permit should be granted, denied, or granted upon such terms, conditions or modifications of the construction, operation, or maintenance as the commission may deem appropriate. Keystone filed its application for a permit on April 27, 2007. Moreover, pursuant

to S.D. Codified Laws § 49-41B-36, the authority to route or locate a transmission facility is not delegated to the Commission.

#### **IV. ARGUMENT**

Keystone submits that it has satisfied each element of the statutory burden of proof through the evidence adduced and admitted in this proceeding. Keystone will address each element of the required burden of proof and summarize the evidence supporting the conclusion that Keystone has met the statutory burden of proof. In further support of its position, Keystone adopts and incorporates by reference each of the statements of fact filed contemporaneously herewith in its Proposed Findings of Fact and Conclusions of Law.

##### **A. THE KEYSTONE PROJECT WILL COMPLY WITH ALL APPLICABLE LAWS AND RULES.**

Keystone will comply with all applicable laws and rules. Robert Jones, TransCanada Vice President in charge of the Keystone project, testified under oath to Keystone's commitment to comply with all applicable laws and rules. T. 44:17; T. 85:10-14. As previously noted, Keystone has committed in its application to design, construct, test, and operate its pipeline in accordance with all applicable requirements, including the U.S. Department of Transportation, Pipeline Hazardous Materials and Safety Administration (PHMSA) regulations set forth at 49 C.F.R. Part 195. TC-1 at 2.2; Kothari TC-6D at 2. Meera Kothari, Keystone engineer, testified further as to a number of federal pipeline safety regulations which Keystone will meet or exceed. TC-6D at 2-4, 7-8; TC -6R1 at 3; TC-6R2 at 4-5.

A number of Commission Staff witnesses also testified that Keystone is complying with all laws and rules within those witnesses' areas of expertise. No Staff witness testified to a failure by Keystone to comply with any applicable law or rule.

Staff witness William Walsh reviewed Keystone's compliance with a number of elements of 49 C.F.R. Part 195, including Subpart C (Design Requirements); Subpart D (Construction); Subpart E (Pressure Testing); Subpart F (Operation and Maintenance). Staff-10 at 1:39-45. Mr. Walsh testified as to his opinion that Keystone will comply with those elements of 49 C.F.R. Part 195. T. 1439:5-8.

Staff witness David Schramm reviewed Keystone's compliance with 49 C.F.R. Part 195, Subpart H (Corrosion Control). Staff-8 at 2:30-35. Mr. Schramm testified as to his opinion that Keystone will comply with 49 C.F.R. Part 195, Subpart H. T. 1465:17-22.

Staff witness Jenny Hudson testified with respect to Keystone's compliance with 49 C.F.R. Section 195.452, which sets forth the federal requirements in the area of integrity management. Staff-9 at 1:38-43. Ms. Hudson testified that it is acceptable, from a Code standpoint, not to have a written integrity plan at this time, as the plan does not have to be completed until one year after commencing operations. T. 1474:12-17. She testified that, at this stage in the process, Keystone is meeting the requirements of 49 C.F.R. Section 195.452. T. 1474:18-21. Ms. Hudson testified further that the process Keystone has used for identifying High Consequence Areas to date is in compliance with 49 C.F.R. Section 195.452. T. 1474:23-25.

Staff witness Bryan Murdock reviewed Keystone's compliance with the requirements that it identify and plan with respect to High Consequence Areas (HCAs). Staff-2 at 1:29-30. Mr. Murdock testified that, based on his review of the work done by Keystone to date, he has not identified any shortcomings in that area. T. 1542:15-20. *See also* Staff-4 at 52.

Further, a number of witnesses from the South Dakota Department of Environment and Natural Resources, and Department of Game, Fish & Parks testified at the hearing. No State witness pointed to a law or rule with respect to which the proposed Keystone project would not or could not fully comport and comply. *See* T. 1188:22, 1190:11, 1192:25, 1199:5, 1196:23, 1197:2.

Intervenor Curt Hohn makes a number of allegations in his prepared testimony that Keystone is in violation of a number of laws. Mr. Hohn's testimony and allegations in this regard do not withstand analysis.

First, Mr. Hohn states that Keystone has violated 49 C.F.R. Part 195 by allegedly failing to provide protection for High Consequence Areas and Unusually Sensitive Areas.<sup>1</sup> Mr. Hohn has no legal background and no expertise in the identification of HCAs. On the other hand, as noted above, both Staff expert witnesses who addressed the issue of HCAs found that Keystone is in compliance with the law in this area. Staff witness Hudson testified that the process Keystone has used for identifying HCAs to date is in compliance with 49 C.F.R. Section 195.452. T. 1474:23-25. Staff witness Murdock reviewed Keystone's compliance with the requirements that it identify and plan with respect to HCAs. Staff-2 at 1:29-30. Mr. Murdock

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<sup>1</sup> At the close of the hearing, Mr. Hohn made allegations that there are unidentified areas that should have been designated as HCAs. T. 1707-1722. It should be noted that the Commission's hearing process provided Mr. Hohn with every opportunity to put on specific evidence regarding additional areas that he believes should have been designated as HCAs, and to conduct examination of Keystone's witnesses in this area. In fact, unique among all parties to this case, Mr. Hohn was afforded the right to cross examine all witnesses twice – once by WEB's counsel and once by Mr. Hohn. No distinction was made between cross-examination on behalf of WEB Water and Mr. Hohn as an individual. Despite this ample opportunity to present evidence and procedural courtesy, he chose not to specify any of these alleged missing HCAs. Instead, Mr. Hohn opted to make vague references to HCAs as the "small man behind the curtain." T. 1713:24-1714:2. While Mr. Hohn may have found this amusing, it does nothing to inform the record and does not establish any "violation of law" by Keystone in this area.



testified that, based on his review of the work done by Keystone to date, he has not identified any shortcomings in that area. T. 1542:15-20. Mr. Murdock testified that Keystone has additional work to do and noted that Keystone has up until the time the pipeline begins operation to identify any new HCA's. Murdock, T. 1516:1-7.

Keystone witness Heidi Tillquist is an environmental toxicologist with 17 years of experience regarding environmental toxicology and risk assessment. She explained that HCAs were developed by PHMSA in cooperation with federal, state, and non-governmental organizations. Tillquist TC-7R1 at 3. PHMSA uses recognized organizations and data sources for mapping HCA information. If previously unidentified HCAs are identified by Keystone through the consultation process with the South Dakota Department of Environment and Natural Resources, Keystone will incorporate any new HCAs within one year of identification, as required by 49 C.F.R. Section 195.452(d)(3). *Id.* at 4.

Mr. Hohn alleges that the National Environmental Policy Act (NEPA) process conducted by the U.S. Department of State (Department of State) with regard to Keystone's application for a Presidential Permit is inadequate in a number of respects. WEB-7 at 5-6. The adequacy of the NEPA process is not an issue before this Commission. Further, the legal requirement to conduct a NEPA review falls on the Department of State, not Keystone. In any event, Mr. Hohn has participated in the NEPA process and is free to contest the adequacy of the NEPA process before the Department of State or in another appropriate forum. Notably, subsequent to the close of the hearing in this proceeding, the Department of State issued a Final Environmental Impact Statement (Final EIS), which concludes that:

[T]he proposed Keystone [project], if designed, constructed, and operated in accordance with the Project Description in Section 2.0 of this Final EIS as amended by additional approaches and mitigations agreed to by Keystone as a result of this environmental analysis and as further amended by specific permit conditions to be assigned by the state and federal agencies with permit jurisdiction along the pipeline corridor would result in limited adverse environmental impacts.

Final EIS for the Keystone Oil Pipeline Project, United States Department of State, January 2008, at ES-35.

Mr. Hohn argues that there is no “national interest” requiring the Keystone project. WEB-7 at 6. This is the very issue that will be determined by the Department of State in deciding whether to grant Keystone a Presidential Permit. This issue is not before the Commission. Finally, Mr. Hohn complains about the confidential treatment that was afforded some of the documents filed in support of Keystone’s application and complains further that the Commission left only limited time for public input at the public meetings. WEB-7 at 6. It is not clear how these allegations, even if they were true, could rise to the level of a violation of law. In any event, the Commission provided for the public release of all materials filed in this proceeding, except for the HCA locational maps, which are required to be kept confidential by PHMSA for homeland security reasons, and certain cultural resource. All material was available to parties pursuant to Commission procedural orders regarding confidentiality. Further, Mr. Hohn reviewed those maps, pursuant to those appropriate confidentiality procedures. T. 1373:7-9. Moreover, the Commission did not close any of its public meetings until any person wishing to speak had that opportunity.

**B. THE PROPOSED KEYSTONE FACILITY DOES NOT POSE A THREAT OF SERIOUS INJURY TO THE ENVIRONMENT NOR TO THE SOCIAL AND ECONOMIC CONDITION OF INHABITANTS OR EXPECTED INHABITANTS IN THE SITING AREA.**

The overwhelming testimony in this regard was that the normal operation of the pipeline poses absolutely no threat of serious injury to the environment or to the social and economic condition of inhabitants or expected inhabitants in the siting area. The siting, construction, design, and operation of the Keystone pipeline all support a finding that the project will not threaten the environment or inhabitants with serious injury. Moreover, while there is a remote possibility that abnormal operation of the proposed Keystone pipeline could pose some threat of an event that could cause serious injury to the environment, such as a substantial pipeline leak or spill, the record demonstrates that there will be plans, procedures, processes, and regulations in place designed to avoid, mitigate, and remediate any such injury. In addition, the record demonstrates that the project does not pose a threat of injury to the social or economic condition of the current or expected inhabitants in the siting area.

The Commission's Staff commissioned an application review report from its outside expert consultant, Bay West, Inc. The Bay West report concluded that the construction of the proposed Keystone project "presents both significant and insignificant risk to the environment and inhabitants of South Dakota." The Bay West report concludes, however, that:

[t]he proper implementation of the regulatory design requirements, construction and operational requirements, TransCanada's proposed mitigation measures, and the recommendations provided within this document, reduces, to currently recognized industry standards, the threat (risk) of serious injury to the environment or the inhabitants within the siting area; [and the risk of] impairment of the health, safety or welfare of the inhabitants in the siting area....

Staff-4 at 52.

**1. The siting and routing of the pipeline was carefully conducted to minimize affects to the environment.**

As described in its application and the testimony of Keystone witness Michael Koski, Keystone's proposed route in South Dakota was developed through an extensive, iterative process, which involved the participation of multiple disciplines, acting under Mr. Koski's direction, and which included the solicitation and incorporation of input from the public, as well as relevant state and federal agencies. TC-1 at 4.0; Koski TC-3D at 2. Subsequent to the identification of an initial proposed route, agency discussions resulted in a number of further refinements to the route. TC-3D at 2. The major route refinements are discussed at Section 4.2 of Keystone's application, as well as Mr. Koski's testimony. TC-3D at 2-4. These refinements include: (i) the 55-mile Hecla Sandhills reroute to avoid crossing environmentally sensitive areas consisting of US Fish & Wildlife Service (USFWS) grasslands easements, and to reduce wetland crossings; (ii) a reroute in Day County to avoid impacts to native prairie easements; (iii) a reroute to minimize impacts to the habitat of the Raymond Prairie Chicken Leks; and (iv) a reroute in the vicinity of the City of Yankton to accommodate future growth in the area. During the routing process, Keystone also assessed existing linear facilities that could serve as possible co-location opportunities. Mr. Koski's testimony sets forth the co-location locations along the proposed route. TC-3D at 5. As the only qualified expert in pipeline routing to testify in this proceeding, Mr. Koski provided his opinion that the proposed location of the Keystone pipeline has minimal adverse impacts on the environment, natural resources, and citizens of South Dakota. TC-3D at 6.

Mr. Koski further testified as to why the Interstate-29 (I-29) corridor was not selected as the best route for the Keystone pipeline. He explained that Keystone considered the use of the I-29 corridor at one point in the project development. Mr. Koski explained further that Keystone

did not consider locating the project within the I-29 corridor because that is not allowed due to safety issues and the impediment that the facility would create to highway maintenance and expansion. In addition, Keystone rejected the option of locating the pipeline adjacent to the I-29 right-of-way because: (i) I-29 includes numerous overpasses and interchanges which would require the route to deviate away from the corridor at frequent locations, increasing the length and impact of the pipeline; (ii) I-29 connects areas of development, such as Watertown, Brookings, and Sioux Falls, which would require additional deviation from the corridor, further increasing the length and impact of the project; and (iii) I-29 is not consistent with control points of the project, including the US/Canada border crossing and the Missouri River crossing location and a route which traversed along the I-29 corridor and respected these control points would increase the overall length and environmental impact of the project. TC-3D at 8-9.

**2. In conjunction with the State Department NEPA review, Keystone conducted extensive environmental and cultural resource studies, which support the conclusion that the project would have limited adverse environmental impacts.**

The development of the Keystone pipeline project has been subject to exhaustive environmental study. As discussed in Keystone's application and in the testimony of Keystone witness Scott Ellis, because Keystone is required to obtain a Presidential Permit from the Department of State authorizing the construction of facilities across the international border, NEPA requires the Department of State to prepare an Environmental Impact Statement (EIS) for the entirety of the proposed pipeline route. TC-1 at 5.0; Ellis TC-4D at 2-3. The extensive environmental studies that Keystone provided to the Department of State and attached as Exhibit C to Keystone's South Dakota permit application are summarized in the Application. TC-1 at 25-26. These studies included surveys for threatened and endangered species and associated habitat, wetlands, native grasslands, as well as extensive surveys for cultural resources.

Mr. Ellis further testified with regard to the extensive consultations that Keystone conducted with federal and state environmental agencies in developing its application. Ellis TC-4D at 3. Numerous federal and state agencies have either regulatory jurisdiction over aspects of construction of the Keystone project or input into the NEPA process. Specific examples include the U.S. Army Corps of Engineers, which exercises permitting authority under Section 404 of the Clean Water Act; the U.S. Fish and Wildlife Service (USFWS), which is responsible for compliance with Section 7 of the Endangered Species Act; and the State Historical Preservation Office (SHPO), which works with the Department of State and the federal Advisory Council on Historic Preservation (ACHP) to ensure compliance with Section 106 of the National Historic Preservation Act.

Through the NEPA process, the Department of State issued a Draft EIS (DEIS) in August 2007. The DEIS tentatively concluded that the Keystone project would result in limited adverse impacts both during construction and operation, and would be an environmentally acceptable action. Ellis TC-4D at 3; TC-15 at ES-33. As noted above, subsequent to the close of the record in this proceeding, the Department of State issued a Final EIS (FEIS) in January 2008. The FEIS reiterated that the Keystone project would result in limited adverse environmental impacts, if constructed and operated consistent with Keystone's plans and applicable permit conditions. *See* Final Environmental Impact Statement for the Keystone Oil Pipeline Project, United States Department of State, January 2008, at ES-35.

Keystone's permit application filed herein summarized the environmental impacts that are expected to remain after its Construction Mitigation and Reclamation Plan (CMR Plan) is implemented. TC-1 at Table 3. As reflected in that summary, and as described in more detail in the text of the application and Mr. Ellis's testimony, these impacts are generally short-term,

minimal, and/or the subject of compensation. Ellis TC-4D at 4-16. Further, Mr. Ellis testified that the project will be compatible with the predominant land use along the route, which is rural agriculture, because the pipeline will be buried to a depth of four feet in agricultural areas and will not interfere with normal agricultural operations. TC-4D at 13.

**3. Keystone will implement an extensive Construction Mitigation and Restoration Plan and other appropriate plans and procedures to minimize impacts from construction.**

L.A. “Buster” Gray, Engineering and Construction Manager for the U.S. portion of the Keystone project, sponsored and testified with respect to Keystone’s CMR Plan, which was filed as Exhibit B to Keystone’s permit application. The CMR Plan contains detailed construction impact mitigation and reclamation measures that will be used throughout the project, in all types of lands, including uplands, wetlands, and water bodies, with subsections to address specific environmental conditions. TC-1 at 2.2.5; Gray TC-5D at 2. Specific mitigation measures of the CMR Plan are also described at Chapters 5 and 6 of Keystone’s application.

The CMR Plan establishes procedures to address a multitude of construction-related issues, including but not limited to the following:

- Training
- Advance Notice of Access
- Depth of Cover
- Noise Control
- Weed Control
- Dust Control
- Fire Prevention and Control
- Spill Prevention and Containment
- Irrigation Systems
- Clearing
- Grading
- Topsoil removal and storage
- Temporary Erosion and Sediment control

- Clean up
- Reclamation and Revegetation
- Compaction relief
- Rock removal
- Soil additives
- Seeding
- Construction in Residential and Commercial/Industrial areas
- Drain Tile Damage Mitigation and Repair

Staff witness Tom Janssen reviewed the CMR Plan and generally found that the measures contained therein were sufficient to mitigate environmental impacts during construction and effectively restore the project area to preconstruction conditions. T. 1661:13-18. Janssen did recommend that Keystone implement trench plus spoil side or full right of way topsoil segregation techniques, unless the landowner specifically approved otherwise. Janssen, T. 1662:17-21. Keystone witness Buster Gray is not in favor of stripping topsoil from the entire right-of-way, unless the landowner specifically requests that method on his or her property. Gray, T. 1691:25. Gray testified that in his experience landowners do not want that much soil disturbed and advocated implementing trench-only topsoil stripping as the default process, unless the landowner requested additional topsoil removal. T. 1692:11-23.

Keystone will use special construction methods and measures to minimize and mitigate impacts where warranted by site specific conditions. These special techniques will be used when constructing across paved roads, highways, railroads, water bodies, and wetlands, and in fenced areas. These special techniques are described in Keystone's application. TC-1 at 13-14; TC-5D at 2.

Mr. Gray testified further that water use for hydrostatic testing during construction would not result in contamination, since the pipe is cleaned prior to testing and the discharge water quality is monitored and tested. TC-5D at 3. In addition, Mr. Gray testified that Keystone will



acquire permits authorizing the crossing of county and township roads. These permits typically require Keystone to restore roads to their pre-construction condition. Further, it is Keystone's policy that if its construction equipment causes damage to county or township roads, Keystone will be responsible for the repair of those roads to pre-construction condition. TC-5D at 11.

The procedures in the CMR Plan and the other construction plans and procedures that Keystone has adopted will ensure that the impacts to the environment and the social and economic condition of inhabitants from construction of the pipeline will be minimized.

**4. The Design of the Keystone Pipeline will meet or exceed all applicable pipeline integrity standards.**

The Keystone pipeline will be designed, constructed, tested, and operated in accordance with all applicable requirements, including the U.S. Department of Transportation, PHMSA regulations set forth at 49 C.F.R. Part 195. These federal regulations are intended to ensure adequate protection for the public and the environment and to prevent crude oil pipeline accidents and failures. TC-1 at 2.2; Kothari TC-6D at 2. Keystone's compliance with these comprehensive regulations and standards will ensure that the pipeline does not pose the threat of serious injury to the environment or inhabitants of the State.

Keystone's application, as summarized by Keystone's pipeline engineering witness Meera Kothari, discusses the safety features of Keystone's operations' as governed by 49 C.F.R. Part 195. TC-1 2.3.1; Kothari TC-6D at 3. The pipeline will be inspected aurally 26 times per year, not to exceed an interval of three weeks in accordance with federal regulations. The right-of-way will be maintained to allow for accessibility. Keystone will continually monitor the pipeline to identify any potential integrity concerns. A sophisticated Supervisory Control and

Data Acquisition (SCADA) system will be used to monitor the pipeline at all times. Kothari TC-6D at 3.

Ms. Kothari testified that Keystone conducted a pipeline threat analysis as part of the requirements for the NEPA process, using the pipeline industry published lists of threats under ASME B31.8S and PHMSA to determine the applicable threats to the Keystone pipeline. This analysis identified the following threats: (i) manufacturing defects; (ii) construction damage; (iii) corrosion; (iv) mechanical damage; and (v) hydraulic events. Keystone then developed and will implement specific safeguards to protect against each of these potential threats. Kothari TC-6D at 7-8. Ms. Kothari articulated those safeguards in her testimony. TC-6D at 8-10.

One of the key safeguards discussed at length at the hearing is Keystone's use of Fusion Bonded Epoxy (FBE) pipe coating. The FBE coating is a corrosion-inhibiting coating that is applied at the coating plant. Ms. Kothari described the application process in detail in her testimony. T: 272:12-273:5. After the coating is applied and inspected, the pipe is transported to the project location. Once delivered, the pipe is again inspected for any coating damage and any necessary repairs are made. T. 273:6-12. Finally, FBE coating is applied in the field to the joints where two lengths of pipe are welded together. T. 273:18-274:2. Ms. Kothari testified that TransCanada has utilized FBE coating for 28 years, over 9,042 miles of its system, and there have been no failures related to external corrosion on FBE coated pipelines on the TransCanada system. T. 272:8-11; 351:25-352:2.<sup>2</sup>

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<sup>2</sup> David Schramm was staff's expert on corrosion control and pipeline integrity. Schramm testified that the information received from Keystone met or exceeded the requirements found in 49 C.F.R. 195 Subpart H. Schramm, T. 1449:1-10. For some sections of the code, Keystone is taking a more proactive approach to exceed the code requirements. Schramm, T. 1451:1-3.

With respect to mechanical damage, Ms. Kothari testified that the steel specified for the Keystone pipeline is high strength steel with engineered puncture resistance of approximately 51 tons of force. TC-6D at 10. In response to a Commissioner question at the hearing, Keystone provided an exhibit addressing the weight of farm equipment that can pass over the pipeline without being required to provide prior notice to Keystone. That exhibit demonstrates that the largest and heaviest agricultural implements in TransCanada's experience are grain carts, and the largest presently known, single axle grain carts can safely cross the pipeline without exceeding stress limits found in the Code. TC-26 at 5-6.

Ms. Kothari testified that the pipe mills where Keystone will be obtaining pipe are also required to comply with numerous industry standards and PHMSA regulations, as well as TransCanada's own specifications. The mills were pre-qualified by TransCanada and Ms. Kothari personally visited each mill in performing due diligence with respect to their compliance with these standards. As a result of her due diligence, Ms. Kothari is confident that each of the pipe mills will be able to meet the applicable requirements, standards, and specifications. T. 269:6-270:24.

Hazardous liquid pipeline segments through HCA's are subject to the Integrity Management Rule. 49 C.F.R. § 195.452. To assure the integrity of pipeline segments that could affect HCAs, 49 C.F.R. Section 195.452 requires an operator to conduct a variety of assessments. The assessments include baseline and continual integrity assessments of the line pipe and periodic evaluations of entire pipeline systems, to assure the integrity of pipeline segments that could affect HCAs. This is accomplished through the continual identification and remediation of potential problems. Keystone will comply with this, and there was testimony to that end at the hearings. Tillquist, T. 441:16; Kothari, T. 319:4, 303:1, 304:4, 352:22. Keystone will have to

perform a “fate and transport” analysis as a part of their integrity management plan. Murdock, T. 1539:3.

Keystone received a “special permit” from PHMSA in 2007. The Pipeline Safety Act allows a pipeline operator to apply for a special permit allowing for a deviation from the otherwise applicable pipeline safety regulations. Keystone applied for a special permit to allow it to design and operate the Keystone pipeline using a 0.8 design factor (also referred to as operating at hoop stresses up to 80 percent of specified minimum yield strength or SMYS). PHMSA previously has granted special permits to four natural gas pipeline operators to operate at hoop stresses up to 80 percent SMYS, although the Keystone pipeline project represents the first request for such a special permit by a hazardous liquid pipeline operator in the U.S. Canadian standards already allow operators to operate hazardous liquid pipelines at 80 percent SMYS. TC-6D at 12; TC-11 at 16.

Application of the 0.8 design factor and API 5LPSL2 X70 high-strength steel pipe results in use of pipe with a 0.386 inch wall thickness, as compared with the 0.429 inch wall thickness under the otherwise applicable 0.72 design factor. TC-6R1 at 1. This “thinner” wall pipe does not reduce the safety of the pipeline. The pipe is engineered with puncture resistance and fracture control that exceeds the requirements of the current codes and standards for crude oil pipelines. The pipeline safety factor does not decrease as a result of the 0.8 design factor. The pipe is hydrostatically tested in the mill to a pressure which represents a 0.95 design factor, as compared to the 0.90 hydrostatic test threshold applicable to 0.72 design factor pipe. In addition, proactive integrity management programs, in-line inspection and repairs, cathodic protection monitoring, and public awareness programs mitigate any safety concerns. TC-6D at 13-14.

TransCanada operates approximately 11,000 miles of pipelines in Canada at a 0.8 design factor and requested the special permit to ensure consistency across its system. Moreover, PHMSA has moved to adopt this design factor for new and existing US natural gas pipelines, as of 2006. Further, there is an economic benefit from use of the 0.8 design factor. TC-6D at 12-13; T. 275:3-13.

An application was filed with PHMSA and a rigorous review was undertaken by the technical committee at PHMSA. A public comment period was opened, comments were allowed to be submitted, and they were evaluated by the technical committee. PHMSA granted a special permit. PHMSA attached 51 conditions related to the design, construction and operation of the Keystone Pipeline. *See* TC-11. In granting the special permit, PHMSA made two specific findings regarding safety. First, PHMSA found that granting the special permit to Keystone was “not inconsistent with pipeline safety.” TC-11 at 2. Second, PHMSA found that granting the special permit, subject to the 51 conditions “will provide a level of safety equal to, or greater than, that which would be provided if the pipelines were operated under the existing regulations.” TC-11 at 2.

There are four categories of areas which are not covered under the special permit. Those include commercially navigable waterways, population areas, highway, railroad and road crossings, and pump station valve assemblies and pigging and measurement facilities. T. 275:3-276:23. In these areas, Keystone will operate its pipeline at the 0.72 design factor. These areas are excluded from the special permit primarily because of stress concerns during installation. T. 276:4-278-8. Importantly, if Keystone is determined to violate any conditions of the special permit, the special permit may be revoked by PHMSA and the pipeline pressure would be de-rated such that the design factor would return to 0.72. Kothari, T. 351:6-9

**5. Keystone has conducted a Risk and Consequence Analysis, which demonstrates that the risk of a pipeline spill is low and that any spill is likely to be very small**

Keystone witness Heidi Tillquist testified that a preliminary spill frequency and spill volume risk assessment was conducted for the Keystone project by DNV, an independent firm recognized as an industry expert on spill frequency and volume analysis. DNV used information from a number of sources, including the national database that is controlled by PHMSA. Based on the results of this assessment, Ms. Tillquist and her firm, ENSR, used the spill frequency and volumes to estimate the environmental consequences. TC-7D at 4-5.

DNV estimated the chance of a leak from the Keystone Pipeline to be no more than once every seven to 11 years over the entire length of the pipeline in the U.S., depending on product and throughput. Using the most frequent seven year interval, this equates to a spill no more than once every 41 years at any location along the 220 miles of pipeline in South Dakota. TC-7D at 5.

The objective of the risk assessment is to: (i) provide a range of potential effects for the NEPA environmental review process; (ii) provide a preliminary evaluation of risk as required by the PHMSA regulations for Keystone's Integrity Management program; and (iii) provide input for Keystone's emergency response planning. The spill frequency and volume estimates are conservative by design. In other words, they overestimate risk since the intent is to use the assessment for planning purposes. TC-7D at 5.

The risk assessment overemphasizes the probable size of a spill. The spill data used by DNV was based on a reporting criterion of 50 barrels or more. Since the PHMSA reporting criteria changed in 2002 to require reporting of spills of five barrels or more, the median size of a

crude oil pipeline spill has been three barrels. Thus, if a spill were to occur on the Keystone pipeline, the data affirm that the spill is likely to be very small. TC-7D at 6; TC-7R2 at 2.

The Risk Assessment process is an iterative process, in which information is continually updated and refined in an effort to continually improve the accuracy of the assessment. As Keystone collects additional information, its preliminary risk assessment will continue to evolve. Refinements will include site-specific information. Tillquist TC-7R1 at 5.

Ms. Tillquist further testified regarding the susceptibility of aquifers along the Keystone route to crude oil spills. She noted that 80 percent of the pipeline is underlain by low permeability soils that inhibit the infiltration of released crude oil into aquifers. Additionally, most aquifers are more than 50 feet deep, which significantly reduces the chance of contamination reaching the aquifer. The chance of a spill occurring over an aquifer with high permeability soils is low. Consequently, the chance of a spill from the Keystone pipeline that would affect an aquifer is low. TC-7D at 6.

In the unlikely event that a spill from the Keystone pipeline did reach an aquifer, the impact would be limited. When crude oil accumulates on the groundwater surface, an area of dissolved crude oil constituents develops, forming a contaminant plume that will migrate in the direction of groundwater flow. Groundwater moves faster than the crude oil constituents (particularly benzene, ethyl benzene, toluene, and xylenes, i.e., "BTEX"), due to natural attenuation processes. Ms. Tillquist testified that a recent report evaluated over 500 sites with BTEX contamination in groundwater and found that the contaminant plume was within 250 feet of its source in 75 percent of cases. In 80 percent of cases, the contamination plume was stable or decreasing. TC-7D at 7-8.

**6. Keystone will be well prepared to manage any abnormal operations.**

Brian Thomas, Keystone's Coordinator of Oil Movements, testified regarding Keystone's responsibilities with respect to abnormal operations. Mr. Thomas testified that Keystone is required by PHMSA regulations to prepare manuals and procedures for responding to abnormal operations. Specifically, 49 C.F.R. Section 195.402(a) requires a pipeline operator to prepare and follow a manual of written procedures and maintenance activities and handling abnormal operations and emergencies. Section 195.402(d) requires the manual to include procedures for providing safety when operating design limits have been exceeded. Section 195.402(e) requires the manual to include procedures to provide safety when an emergency condition occurs. Section 195.402(f) requires the manual to include instructions enabling personnel who perform operation and maintenance activities to recognize conditions that potentially may be safety-related conditions that are subject to reporting requirements. TC-8D at 2-5.

Mr. Thomas also testified specifically with regard to the systems and procedures that Keystone will have in place to respond to possible crude oil leaks from the pipeline. These systems and procedures involve the complimentary series of leak detection systems and methods that Keystone will have in place, and the Emergency Response Plan that Keystone is developing, in accordance with PHMSA requirements. These areas are discussed below.

***a. Keystone will implement complimentary leak detection systems and methods.***

Mr. Thomas first described the SCADA system that Keystone will have in place to remotely monitor and control the pipeline system. Mr. Thomas testified that the SCADA system will include (i) a redundant, fully functional back-up system available for service at all times; (ii) automatic features within the system to ensure operation within prescribed limits; and (iii)



additional automatic features at the local pump station level to provide pipeline pressure protection in the event that communications with the SCADA host are interrupted. TC-8D at 7. The SCADA system will be designed independent of other corporate and business-related systems and will use encrypted industrial protocols such that it will be very difficult to hack into. T. 495:11-15.

Mr. Thomas further testified to the complimentary leak detection systems and methods that will be available in the Keystone Operational Control Center, which are overlapping in nature:

- The first leak detection will be remote monitoring performed by the OCC Operator. Remote monitoring consists primarily of pressure and flow data received from pump stations and valve sites and fed back to the OCC by the SCADA system. Remote monitoring is typically able to detect leaks down to approximately 25 to 30 percent of pipeline flow rate. TC-8D at 8.
- The second leak detection system involves software-based volume balance systems that monitor injection and delivery volumes. These systems typically are able to detect leaks down to approximately five percent of pipeline flow rate. TC-8D at 8.
- The third method of leak detection involves Computational Pipeline Monitoring or model-based leak detection systems that break the pipeline into smaller segments and monitor each segment on a mass balance basis. These systems compensate for line pack and typically are capable of detecting leaks down to approximately 1.5 to 2 percent of pipeline flow rate. TC-8D at 8.
- Keystone will use direct observation methodologies, which include aerial patrols,<sup>3</sup> ground patrols and public and landowner awareness programs designed to encourage and facilitate the reporting of suspected leaks and events that may suggest a threat to the integrity of the pipeline. TC-8D at 8.
- Further, Keystone will use computer-based, non-real-time, accumulated gain/(loss) volume trending to assist in identifying low rate or seepage releases below the 1.5 percent by volume detection threshold. This involves performing calculations on routine time intervals (approximately 30 minutes) of the volume of oil gained or lost within a pipeline

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<sup>3</sup> Ms. Kothari testified that, while aerial surveillance would not permit direct detection of crude oil on the surface, there are secondary characteristics associated with oil leaks, such as dead or dying vegetation, that would allow for aerial detection of such a leak. T. 351:10-21.

segment bounded by flow measurement equipment. By accumulating these gain/(loss) results over a succession of time intervals, the cumulative imbalance of the segment can be determined. Once this cumulative imbalance exceeds a prescribed threshold, further investigation and evaluation is undertaken. Thresholds will be established based upon the accuracy and repeatability of flow measurement equipment and the extent to which flow imbalances generated by the normal operation of the pipeline can be tuned out. TC 8R at 1-2.<sup>4</sup>

Mr. Thomas specifically responded to testimony suggesting that oil leaks as large as 372,330 gallons or 1.5 percent of Keystone's flow rate could continue to leak for 90 days before they are detected. He testified that such a conclusion was unrealistic and inconsistent with the capabilities of Keystone's comprehensive leak detection systems. In particular, since Keystone will employ the accumulated gain/(loss) system, as well as direct observation, Mr. Thomas testified that it is not reasonable to assume that a 1.5 percent of pipeline volume leak could continue for 90 days prior to detection. TC-8R at 2.

Mr. Thomas testified that, if Keystone's OCC suspects a leak or a leak is reported to the OCC, the response would be to implement an emergency pipeline shutdown. Such a shut down would involve stopping all operating pumping units at all pump stations and is estimated to take nine minutes. Once the pumps have been shut down, the OCC Operator would close the sectionalizing valves in the vicinity of the leak to limit any further draindown at the leak site. Closure of these valves would take approximately three minutes. TC-8D at 10.

***b. Keystone is responsible for responding to and cleaning up any leaks and developing a comprehensive Emergency Response Plan, in accordance with PHMSA Requirements***

If the Keystone Pipeline should experience a leak, Keystone and TransCanada would be responsible for responding to and cleaning up the leak and repairing the pipeline. Jones, T.

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<sup>4</sup> This system is similar to that recommended by Mr. Richard B. Kuprewicz in a paper prepared for the Pipeline Safety Trust entitled "Observations on Practical Leak Detection for Transmission Pipelines An Experienced Perspective." TC-8R at 2.

85:15-19, 116:9-20. Witnesses from the South Dakota Department of Environment and Natural Resources confirmed that any crude oil releases would be satisfactorily cleaned up and remediated. Their testimony established that the State is able to successfully enforce remediation laws to see that the effects of any pipeline releases are mitigated. Markley, T. 1114:22-23, 1121:5-1123:1, 1128:2. A release from any source would be required by DENR to be cleaned up. McIntosh, T. 1156:17-18. The DENR's experience is that, with time and money, all spills can be cleaned up. McIntosh, T. 1159:8-9.<sup>5</sup>

In this regard, Keystone witness Mr. Thomas testified with respect to the comprehensive Emergency Response Plan (ERP) that Keystone is developing, as required by the PHMSA regulations at 49 C.F.R. Part 194. As Mr. Thomas testified, Keystone filed a preliminary ERP under Exhibit C of its application. Because the ERP is a very detailed document and addresses specific pipeline and related facility locations, the ERP will be finalized after routing and design are finalized. The ERP will require thousands of man hours to develop. The ERP will be completed in the first quarter of 2009 and submitted to PHMSA prior to operations. TC-8R at 10-11.

Emergency response planning takes into account project-specific sensitive areas, identified through the risk and consequence assessment, based on a worst-case scenario. TC-8D at 11; T. 494:8-17, 504: 14-17. In the event of a leak, emergency responders will be available as required by 49 C.F.R. Section 194.115. TC-8D at 11. *See also* Keystone Response to Staff Data Request 2-10. The location of emergency response personnel and resources will be determined as Keystone completes its ERP. Due to its proximity to the Missouri River, Keystone has

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<sup>5</sup> State witness testimony was that existing risks from BTEX in South Dakota are numerous and the state is able to successfully enforce remediation laws to see that the effects are mitigated. Markley, T. 1114:22-23, 1121:5-1123:1, 1128:2.

identified Yankton as one possible location for a pipeline maintenance facility and will have emergency responders and other resources based accordingly. Emergency responders will generally be located in closer proximity to commercially navigable waterways and other crossings, populated and urbanized areas, unusually sensitive areas, including drinking water locations, ecological, historical, and archeological resources. TC-8D at 19. If adverse conditions limit access to a site, emergency responders will be dispatched from multiple locations and will have alternative means of transportation available. TC-8D at 12.

In his testimony, Mr. Thomas addressed the sequence of actions that would occur in a typical emergency response scenario. TC-8D at 12-17. *See also* Keystone Response to Staff Data Request 2-12. He described the positions on emergency response teams and the emergency response equipment that will be pre-positioned for access by Keystone personnel. He testified that local emergency responders may be required to initially secure the scene and ensure the safety of the public, and that Keystone would provide training in that regard. Local responders, however, would not be expected to perform containment or clean up activities. TC-8D at 23.

Clearly, the threat of serious injury to the environment or inhabitants of the State from a crude oil release is substantially mitigated by the leak detection and emergency response processes and procedures that Keystone will implement. When coupled with the remote likelihood of a spill event occurring and the likelihood that any spill or leak that may occur will be small, Keystone submits that its burden of proof in this regard is satisfied.

**C. THE PROPOSED KEYSTONE PIPELINE WILL NOT SUBSTANTIALLY IMPAIR THE HEALTH, SAFETY OR WELFARE OF THE INHABITANTS.**

Section III. B. above supports the conclusion that the Keystone project will not impair the health, safety, or welfare of the inhabitants of the State. Moreover, the relevant socio-economic

evidence presented at the hearing further demonstrates that the welfare of South Dakotan inhabitants will not be impaired by the project.

At the direction of Commission Staff, an outside expert consultant prepared an assessment of the socio-economic impact of the construction and operation of the Keystone project. That report was presented by Staff witness John Muehlhausen. Mr. Muehlhausen concluded that the proposed project, with the incorporation of certain mitigation measures noted in his report, would not, from a socioeconomic standpoint: (i) pose a threat of serious injury to the socioeconomic conditions in the project area; (ii) substantially impair the health, safety, or welfare of the inhabitants in the project area; or (iii) unduly interfere with the orderly development of the region. Staff-5 at 15-16.

The project will pay property taxes to local governments on an annual basis estimated to be in the millions of dollars. S.D. Codified Laws § 10-37; Jones, T. 42:8-43:1; TC-14. The proposed Keystone facility will bring jobs, both temporary and permanent, to the state of South Dakota and specifically to the areas of construction and operation. TC-1 at 55-56. Further, Keystone's application at Section 6.0 discusses the minimal impact that the project will have in the areas of agriculture, commercial and industrial sectors, land values, housing, sewer and water, solid waste management, transportation, cultural and historical resources, health services, schools, recreation, public safety, noise, and visual impacts. All of this evidence demonstrates that the project will not substantially impair the health, safety, or welfare of the inhabitants.

**D. THE PROPOSED KEYSTONE FACILITY WILL NOT UNDULY INTERFERE WITH THE ORDERLY DEVELOPMENT OF THE REGION, HAVING BEEN GIVEN THE VIEWS OF GOVERNING BODIES OF AFFECTED LOCAL UNITS OF GOVERNMENT.**

The overwhelmingly predominant land use along the pipeline corridor in South Dakota is agriculture, and the pipeline will be compatible with that use. Ellis TC-4D at 7-10, 13-14. A number of witnesses testified that there will be little to no interference with normal agricultural operations as a result of the pipeline. *See* Application Exhibit B, The Construction Mitigation and Reclamation Plan; Gray TC-5D at 5, discussing Section 6.1.4 of the Application; Gray TC-5R at 1-4; Ellis TC-4D at 13-14. Similarly, the testimony from Keystone was that Keystone will compensate landowners for crop loss and other disruptions from construction. Gray TC-6R at 2.

All local units of government affected by the Keystone pipeline were served with notice of the application, pursuant to state law. Only a handful determined that it was necessary to obtain party status in the docket. The most notable party in this regard is the City of Yankton. However, no local unit of government, including Yankton, appeared at the hearings. In fact, the testimony was that the City of Yankton and Keystone had been collaborating on location and construction of Keystone facilities such that interference with the future development of Yankton would be minimized or negated. Gray, T. 194:7-22.

The only negative evidence in the record with respect to local government views of the project is a resolution of the Marshall County Commissioners, which was introduced into the record twice. Cassels-2; Moeckly-2. No one representing the Marshall County Board of Commissioners appeared or testified at the hearings. Mr. Cassels testified that he did not know from where the resolution came. T. 753:5-6, 757:25, 761:8. Mr. Moeckly indicated that he and Jim Bush had met with the Marshall County Commissioners, and “lo and behold, while we’re

down here, we find out that this resolution has been passed by the County Commissioners.” T. 1230:15-1231:1.

There was no evidence that the Marshall County Commission heard or considered any evidence themselves or any other points of view. There was no evidence that the County Commission considered the CMR Plan, no evidence that they reviewed and considered the testimony of Ms. Tillquist, Ms. Kothari, Dr. Walsh, and Mr. Murdock. Moreover, the County Commission did not exercise its opportunity to test the credibility or determine the weight of the evidence given by Mr. Markley, Mr. Iles, Ms. McIntosh, and Mr. Walsh. In these circumstances, Keystone submits that the Marshall County Commission resolution is entitled to limited weight.

Keystone did also consult with a number of state agencies prior to filing its application and continuing up to the time of the hearings. Brian Walsh was designated as the DENR’s point of contact coordinator for DENR efforts relative to Keystone. Walsh, T. 1212:8-12. That position entailed a number of meetings and contacts with a number of people. Walsh, T. 1212:16-1214:19, 1218:2-7.

Curt Hohn testified for WEB Water that the construction of the Keystone pipeline would interfere with “planned” utilization of ground water in the Mansfield and Andover communities. Hohn, T. 1317:22-1318:3. But Mr. Hohn also testified that WEB Water is currently in the process of doubling its capacity to pump and treat water from the Missouri River where it currently gets all of its water and is also in the process of increasing its capacity to treat that water and transport it throughout its service territory. Hohn, T. 1344:24, 1345:2. There was no evidence that the Mansfield or Andover ground water locations have been vested with water rights or permitted or any steps taken to utilize water from those sources. Hohn, T. 1408:7-17.

Finally, Mr. Hohn, for WEB Water, raised the issue of damage to existing water distribution facilities from leaking hydrocarbons. The issue first came to light during the summer public hearings. Mr. Hohn declared that pipes made from PVC would be damaged if put in contact with BTEX, and that studies from Iowa State University proved it. However, later, in sworn testimony, he disagreed with the findings of the study. Hohn, T. 1359:17-1360:22.

Keystone witnesses Meera Kothari and Heidi Tillquist testified with respect to the effects of BTEX upon water distribution pipes, as did DENR employee Kim McIntosh. The Iowa State University study, which was put into evidence, concluded that while BTEX compounds are a risk to polyethylene pipes used in the final ties to homes, (e.g. Hohn, T. 1362:17-22, 1366:19-23) the PVC distribution lines are not at such risk, and existing standards for water distribution lines are thought to be excessively conservative. Kothari, T. 312:13-313:12; Tillquist TC-7R1 at 7-8; McIntosh, T. 1164:10-25, 1169:22-1170:14. The effects of BTEX from an unlikely leak on the Keystone pipeline do not constitute a risk to the safety of inhabitants or an undue interference with orderly development.

## **V. FEDERAL LAW PREEMPTS STATE REGULATION OF HAZARDOUS LIQUID PIPELINE SAFETY**

As discussed above, the Keystone project is required to comply with the extensive federal pipeline safety regulations promulgated by PHMSA. Keystone has committed to meet or exceed all of those regulations and has presented detailed testimony regarding its compliance plans. It is important to note in this regard that PHMSA has exclusive jurisdiction over the area of pipeline safety regulation. As discussed below, federal pipeline safety law preempts state regulation in this area. For this reason, the Commission is precluded from attaching conditions to an interstate crude oil pipeline permit that go beyond the PHMSA requirements.



**A. THE FEDERAL STATUTORY SCHEME EXPRESSLY PREEMPTS STATE REGULATION OF PIPELINE SAFETY**

The Supremacy Clause of Article VI of the United States Constitution grants Congress the power to preempt state or local law. U.S. Const. art. VI, § 2; *Northwest Cent. Pipeline Corp. v. State Corp. Comm'n of Kan.*, 489 U.S. 493, 509 (1989); *Fletcher v. Burlington N. & Santa Fe Ry. Co.*, 474 F.3d 1121, 1125-26 (8th Cir. 2007). Under the doctrine of preemption, a federal law can displace state law through express preemption, field preemption, or conflict preemption.<sup>6</sup> *See, e.g., Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 299-300 (1988) (describing these three “circumstances in which federal law pre-empts state regulation” as “familiar”); *California Fed. Sav. & Loan Ass'n v. Guerra*, 479 U.S. 272, 280-81 (1987) (similar).

To determine whether a federal law preempts state or local regulation, one begins with the statutory text. *See Schneidewind*, 485 U.S. at 299. The federal statutes applicable here are the Pipeline Safety Improvement Act of 2002, as amended by the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, and various earlier pipeline safety statutes which are currently codified at 49 U.S.C. § 60101 et seq. (collectively, the “PSA”).<sup>7</sup> The purpose of the

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<sup>6</sup> Express preemption exists where Congress enacts an explicit statutory command that state law be displaced. *See Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 383 (1992) (holding that Airline Deregulation Act “expressly pre-empts the States” from enacting or enforcing guidelines regarding airline fare advertising). Field preemption exists “where the scheme of federal regulation is sufficiently comprehensive to make reasonable the inference that Congress left no room for supplementary state regulation.” *Moldo v. Matsco, Inc. (In re Cybernetic Servs., Inc.)*, 252 F.3d 1039, 1045-46 (9th Cir. 2001) (internal quotation marks omitted); *see Napier v. Atl. Coast Line R.R. Co.*, 272 U.S. 605, 607 (1926) (the main question “is whether the . . . Act has occupied the field . . . so as to preclude state legislation”). Conflict preemption is found “where compliance with both federal and state regulations is a physical impossibility,” *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142-43 (1963), or where state law “stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.” *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941).

<sup>7</sup> Before their recodification as Subtitle VIII of Title 49 of the U.S. Code in 1994, *see* Pub. L. No. 103-272, 108 Stat. 1301 (1994), two separate statutes provided the framework for the federal regulation of pipeline safety. The Natural Gas Pipeline Safety Act of 1968 (“NGPSA”) authorized the DOT to regulate pipeline transportation of natural gas and other gases as well as the transportation and storage of liquefied natural gas. Pub. L. No. 90-481, 82 Stat. 1003 (1968) (formerly 49 U.S.C. § 1671 *et seq.*). The

PSA is to “provide adequate protection against risks to life and property posed by pipeline transportation and pipeline facilities by improving the regulatory and enforcement authority of the Secretary of Transportation.” 49 U.S.C. § 60102(a)(1). Federal legislation in this area seeks to provide “a national hazardous liquid pipeline safety program with nationally uniform minimal standards and with enforcement administered through a Federal-State partnership.” 49 C.F.R. Part 195, app. A (“Delineation Between Federal and State Jurisdiction — Statement of Agency Policy and Interpretation”).

The PSA defines “hazardous liquid” to mean either “petroleum or a petroleum product” or “a substance the Secretary of Transportation decides may pose an unreasonable risk to life or property when transported by a hazardous liquid pipeline facility in a liquid state (except for liquefied natural gas).” 49 U.S.C. § 60101(a)(4). The PSA defines “hazardous liquid pipeline facility” to include “a pipeline, a right of way, a facility, a building, or equipment used or intended to be used in transporting hazardous liquid.” *Id.* § 60101(a)(5). The PSA contains a separate set of definitions and terms applicable to natural gas pipelines.<sup>8</sup>

The PSA differentiates between the regulation of interstate<sup>9</sup> and intrastate<sup>10</sup> hazardous liquid pipelines.<sup>11</sup> In a provision entitled “Preemption,” the PSA expressly preempts State and

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Hazardous Liquid Pipeline Safety Act of 1979 (“HLPSA”), Pub. L. No. 96-129, 93 Stat. 1003 (1979) (formerly 49 U.S.C. §§ 2001-2014), was modeled largely on the NGPSA, and authorized the DOT to regulate pipeline transportation of hazardous liquids. In 1994, Congress combined and recodified the two existing pipeline safety statutes at 49 U.S.C. § 60101 *et seq.* See Pub. L. No. 103-272, 108 Stat. 1301 (1994).

<sup>8</sup> See 49 U.S.C. § 60101(a)(2) (defining “gas” to mean “natural gas, flammable gas, or toxic or corrosive gas”); *Id.* § 60101(a)(3) (defining “gas pipeline facility” as “a pipeline, a right of way, a facility, a building, or equipment used in transporting gas or treating gas during its transportation”); *Id.* § 60101(a)(6) (defining “interstate gas pipeline facility” as “a gas pipeline facility — (i) used to transport gas; and (ii) subject to the jurisdiction of the Commission under the Natural Gas Act (15 U.S.C. § 717 *et seq.*)).”

<sup>9</sup> An “interstate hazardous liquid pipeline facility” is “a hazardous liquid pipeline facility used to

local authorities from regulating the safety of interstate pipelines. For interstate pipelines, “[a] State authority may not adopt or continue in force safety standards for interstate pipeline facilities or interstate pipeline transportation.” 49 U.S.C. § 60104(c).

There are two narrow exceptions to this prohibition, by which a State authority may participate in investigating compliance, neither of which is applicable here. First, a State authority may enter into a certification and pipeline safety agreement with the U.S. Department of Transportation (DOT), through which the DOT authorizes the State authority “to participate in the oversight of interstate pipeline transportation.” *Id.* § 60106(b).

Each such agreement shall include a plan for the State authority to participate in special investigations involving incidents or new construction and allow the State authority to participate in other activities overseeing interstate pipeline transportation or to assume additional inspection or investigatory duties.

*Id.* This narrow exception, however, on its face pertains to inspection and investigatory duties and does not provide a role for the State in imposing safety standards for an interstate pipeline. Indeed, the same statutory section states: “Nothing in this section modifies section 60104(c) [the preemption provision] or authorizes the Secretary to delegate the enforcement of safety standards for interstate pipeline facilities prescribed under this chapter to a State authority.” *Id.* Second, the DOT may designate an agent with delegated authority to conduct inspections of pipeline operators and facilities to ensure compliance with federal safety standards

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transport hazardous liquid in interstate or foreign commerce.” 49 U.S.C. § 60101(a)(7). “Interstate or foreign commerce” is defined in relevant part as commerce between “a place in a State and a place outside that State” or “places in the same State through a place outside the State.” *Id.* § 60101(a)(8)(B).

<sup>10</sup> An “intrastate hazardous liquid pipeline facility” is “a hazardous liquid pipeline facility that is not an interstate hazardous liquid pipeline facility.” *Id.* § 60101(a)(10).

<sup>11</sup> A “hazardous liquid pipeline facility” is a “pipeline, a right of way, a facility, a building, or equipment used or intended to be used in transporting hazardous liquid.” *Id.* § 60101(a)(5).

on behalf of the DOT. *Id.* § 60117(c). However, “[f]ederal preemption of the regulation of interstate pipeline safety in any other manner [than these two narrow exceptions] is manifest in the language of the PSA provision entitled Preemption.” *Olympic Pipe Line Co. v. City of Seattle*, 437 F.3d 872, 878 (9th Cir. 2006), citing 49 U.S.C. § 60104(c).<sup>12</sup>

Regarding intrastate pipelines, the PSA provides:

A State authority that has submitted a current certification under section 60105(a) of this title may adopt additional or more stringent safety standards for intrastate pipeline facilities and intrastate pipeline transportation only if those standards are compatible with the minimum standards prescribed under this chapter.

*Id.* § 60104(c). Thus, a State authority may regulate intrastate pipelines and impose safety requirements in addition to the federal standards only if: 1) the State authority applies and is approved by the DOT through an annual certification process pursuant to § 60105; and 2) the standards are compatible with the federal standards. *Id.* § 60104(c). Alternatively, a State authority may receive authorization from the DOT to inspect an intrastate pipeline under a pipeline safety agreement pursuant to § 60106(a) or through the designation of an agent under § 60117(c).

The foregoing analysis of the PSA demonstrates that it expressly preempts state or local pipeline safety regulation of an interstate pipeline such as Keystone. The imposition of pipeline safety conditions by the Public Utilities Commission is, therefore, expressly preempted by the

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<sup>12</sup> Similarly, the DOT reached the same conclusion regarding the PSA’s predecessor statute (the HLPSA): “The HLPSA leaves to exclusive Federal regulation and enforcement the ‘interstate pipeline facilities,’ those used for the pipeline transportation of hazardous liquids in interstate or foreign commerce.” 49 C.F.R. Part 195, app. A. (2006).

PSA. See 49 U.S.C. § 60104(c); *Olympic Pipe Line Co.*, 437 F.3d at 879-81 (holding that “the PSA expressly preempts Seattle’s attempted safety regulation of [Olympic’s] Seattle Lateral”).

The conclusion that the PSA preempts any attempt by the Commission to impose safety measures on Keystone’s operations also is consistent with and supported by precedents under the prior two statutes, the NGPSA and the HLPSA, that were combined and recodified (see discussion, *supra*, note 2) as the present federal pipeline safety statutes at 49 U.S.C. § 60101 et seq.<sup>13</sup> Indeed, the language in the current preemption provision codified at 49 U.S.C. § 60104(c) pertaining to interstate pipelines is virtually identical to the HLPSA preemption provision previously codified at 49 U.S.C. § 2002(d),<sup>14</sup> thus supporting reliance on prior HLPSA preemption cases. See *Olympic Pipe Line Co.*, 437 F.3d at 881 n.24 (relying on prior HLPSA and NGPSA preemption cases as further support for the conclusion that the current preemption provisions expressly preempt State safety regulation of interstate hazardous liquid pipelines).

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<sup>13</sup> See, e.g., *Kinley Corp. v. Iowa Utils. Bd.*, 999 F.2d 354, 358 (8th Cir. 1993) (holding that the HLPSA expressly preempts an Iowa state statute that established a state program to supervise interstate hazardous liquid pipelines); *Id.* at 360 (“the hearing, permit and inspection provisions of [the Iowa statute] are so related to federal safety regulations that they are preempted” and the “environmental and damage remedies provisions are not severable . . . and thus are preempted as well.”); *ANR Pipeline Co. v. Iowa State Commerce Comm’n*, 828 F.2d 465 (8th Cir. 1987) (holding same Iowa code section preempted under the NGPSA with respect to natural gas pipelines); *Nat’l Fuel Gas Supply Corp. v. Pub. Serv. Comm’n of New York*, 894 F.2d 571, 578 (2d Cir. 1990) (NGPSA “governs safety requirements for interstate gas transmission lines and expressly preempts more stringent regulation of such lines by state agencies”), *cert. denied*, 497 U.S. 1004 (1990). *Natural Gas Pipeline Co. of Am. v. R.R. Comm’n of Texas*, 679 F.2d 51, 52 (5th Cir. 1982) (holding that the NGPSA expressly preempts the application to interstate gas pipelines of a Texas Railroad Commission rule requiring natural gas companies to provide procedures and safeguards to protect the public from accidental releases of gases from their facilities); *Williams Pipe Line Co. v. City of Mounds View*, 651 F. Supp. 551, 566 (D. Minn. 1987) (holding that the HLPSA expressly preempts city and county efforts to regulate hazardous liquid pipeline safety because the Act “clearly expresses Congressional intent to preempt state efforts to establish safety standards for hazardous liquid pipelines”).

<sup>14</sup> The current statutory preemption provision states in relevant part: “A State authority may not adopt or continue in force safety standards for interstate pipeline facilities or interstate pipeline transportation.” 49 U.S.C. § 60104(c). The prior HLPSA preemption provision stated: “No state agency may adopt or continue in force any safety standards applicable to interstate pipeline facilities or the transportation of hazardous liquids associated with such facilities.” *Kinley Corp.*, 999 F.2d at 358 (quoting former 49 U.S.C. § 2002(d)).

Further, while the express language of section 60104(c) is alone sufficient to demonstrate Congress' intent to preempt State safety regulation of interstate hazardous liquid pipelines, the legislative history of the HLPESA further demonstrates Congress' intent. As the Eighth Circuit has held, "[i]n enacting the HLPESA, Congress intended to 'establish a statutory framework similar to the NGPSA to regulate the transportation of hazardous liquids by pipeline.'" *Kinley Corp. v. Iowa Utils. Bd.*, 999 F.2d 354, 358 (8th Cir. 1993) (quoting S. Rep. No. 182, 96th Cong., 1st Sess., reprinted in 1979 U.S.C.C.A.N. 1971, 1975). Further, the NGPSA's express preemption provision<sup>15</sup> was virtually identical to the HLPESA's and that currently found at 49 U.S.C. § 60104(c), causing the Eighth Circuit to hold that its prior NGPSA preemption decision constituted controlling authority for its conclusion that Congress similarly intended to preempt State safety regulation of hazardous liquid interstate pipelines. *Id.* at 358-59.

For the foregoing reasons, the Eighth Circuit's conclusion in *Kinley Corp.* as to the preemptive sweep of the HLPESA is equally applicable and controlling in this case:

Here, Congress granted exclusive authority to regulate the safety of construction and operation of interstate hazardous liquid pipelines to the Secretary of the Department of Transportation. This Congressional grant of exclusive federal regulatory authority precludes state decision-making in this area altogether and leaves no regulatory room for the state to either establish its own safety standards or supplement the federal safety standards.

*Kinley Corp.*, 999 F.2d at 359.

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<sup>15</sup> The NGPSA's express preemption provision provided that "no State agency may adopt or continue in force any such standards [referring to state safety standards for intrastate pipelines] applicable to interstate transmission facilities." *Kinley Corp.*, 999 F.2d at 359 (quoting former 49 U.S.C. App. § 1672(a)(1)).

**B. STATE REGULATION OF PIPELINE SAFETY CONFLICTS WITH EXISTING FEDERAL PIPELINE SAFETY REGULATIONS AND ARISES IN A FIELD THAT CONGRESS SOUGHT TO OCCUPY.**

Congress' express command that "a State authority may not adopt or continue in force safety standards for interstate pipeline facilities," 49 U.S.C. § 60104(c), by itself clearly preempts the State/local regulations proposed here. Nonetheless, while that express ban alone is sufficient, it is worth noting that State regulation of the design of the Keystone pipeline would conflict with the pipeline design specifications of the federal Pipeline and Hazardous Materials Safety Administration (PHMSA). Pursuant to the powers delegated by Congress to the Secretary of Transportation and redelegated to PHMSA, that agency enforces detailed regulations pertaining to the "design" of interstate pipelines carrying petroleum and petroleum products. *See* 49 C.F.R. §§ 195.100-195.134 ("Design Requirements"). These regulations "prescribe[] minimum design requirements for new pipeline systems constructed with steel pipe and for relocating, replacing or otherwise changing existing systems constructed with steel pipe." *Id.* § 195.100. In particular, the Administration's regulations establish the "minimum wall thickness of the pipe" that may be used. *Id.* § 195.106(d). A state permit condition requiring Keystone to adopt a different specification would conflict with existing federal regulation, and with the federal goal of establishing uniform minimum national safety standards for interstate petroleum pipelines. It is therefore subject to conflict preemption, as well as express preemption.

Further, it is apparent from the federal pipeline safety statutes and the detailed regulatory regime they commanded the Secretary of Transportation to create that Congress sought to leave no room for State or local safety regulation of interstate petroleum pipelines.<sup>16</sup> The extensive

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<sup>16</sup> *See Schneidewind*, 485 U.S. at 310 (holding that Michigan statute regulating natural gas pipelines' issuance of securities "impinges on a field that the federal regulatory scheme has occupied" under the Natural Gas Act ("NGA")).

regulatory regime authorized by Congress covers approximately 130 regulatory sections, see 49 C.F.R. §§ 195.0-195.589, and addresses, inter alia, “Design Requirements,” “Construction,” “Pressure Testing,” “Operation and Maintenance,” “Qualification of Pipeline Personnel,” “Corrosion Control,” and “Annual, Accident, and Safety Related Condition Reporting.” The regulatory scheme leaves no room for State regulation of pipeline safety.

## **VI. EMINENT DOMAIN**

The South Dakota Public Utilities Commission enjoys powers which have been granted to it by the Legislature. S.D. Codified Laws Title 49. The Commission is a creation of the Legislature and may exercise only those powers which have been granted to it. The Commission has no grant of authority relative to condemnation or the exercise of eminent domain relative to this proceeding regarding a proposed crude oil pipeline. No statute has been pointed out or exists which contains that authority. That authority rests with the Circuit Courts. S.D. Codified Laws § 21-35.

## **VII. INDEMNITY BOND FOR DAMAGE TO ROADS AND BRIDGES**

The applicable statute at S.D. Codified Laws § 49-41B-38 dictates that the Commission shall set the form, terms and conditions of an indemnity bond for damage to roads and bridges caused by construction or survey work. The required bond shall be in lieu of any county or township indemnity bond pursuant to S.D. Codified Laws §§ 31-12-43 and 31-13-55, and shall run in favor of, and for the benefit of, such townships, counties, or other governmental entities whose property is crossed by such trans-state transmission facility or transmission facility to insure that any damage beyond normal wear to public roads, highways, bridges, or other related facilities shall be adequately compensated.



In a data request, Staff inquired of Keystone as to a number of facts regarding roads and crossings in South Dakota, including a bond amount under the Code as required in SDCL 49-41B-38. Keystone offered a bond amount of \$3 million for 2008 and \$12 million for 2009, based upon the experience of Buster Gray, the proposed construction schedule and the particular route. Response to Staff Data Request 8-7. Staff Expert John Muehlhausen agreed with that amount and that testimony was not contradicted. Muehlhausen, Staff Ex. 5, 13:1-11. Accordingly, Keystone requests that the Commission set the bond amount as the testimony indicates.

### **VIII. CONCLUSION**

As shown by the evidence offered at hearing, and upon the points and authorities recited, Keystone has met its burden and should be granted a permit to construct its facility.

Dated this 11th day of January, 2008.

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