IN THE SUPREME COURT
STATE OF SOUTH DAKOTA

No. 28333

IN THE MATTER OF PUC DOCKET HP 14-001, ORDER ACCEPTING CERTIFICATE OF PERMIT ISSUED IN DOCKET HP 09-001 TO CONSTRUCT THE KEYSTONE XL PIPELINE

Appeal from the Circuit Court
Sixth Judicial Circuit
Hughes County, South Dakota

THE HONORABLE JOHN L. BROWN

APPELLEE'S BRIEF

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Notice of Appeal filed July 20, 2017

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Jurisdictional Statement

On September 15, 2014, Appellee TransCanada Keystone Pipeline, LP ("Keystone") filed an application under SDCL § 49-41B-27 with the South Dakota Public Utilities Commission to certify that the Keystone XL Pipeline, for which the Commission had previously granted a permit authorizing construction and operation, continued to meet the conditions on which the permit was granted. On January 21, 2016, the South Dakota Public Utilities entered a Final Decision and Order Finding Certification Valid and Accepting Certification. After an appeal by some of the intervenors in the Commission proceedings, on June 19, 2017, the Circuit Court, the Honorable John L. Brown presiding, entered a memorandum decision and a final order affirming the Commission's decision. Dakota Rural Action timely filed a notice of appeal on July 20, 2017.

Statement of the Issues

1. DRA challenges a number of the Commission's findings of fact as clearly erroneous. By statute, this Court must affirm findings of fact unless they are clearly erroneous, meaning that the Court is left with a definite and firm conviction that a mistake has been made and substantial rights of the appellant have been prejudiced; the question is not whether this Court would have made the same findings. Were the challenged findings of fact clearly erroneous?

   The circuit court did not amend or reverse any of the Commission's finding of fact.

SDCL § 1-26-36(5)
Peterson v. Evangelical Lutheran Good Samaritan Society, 2012 S.D. 52, 816 N.W.2d 843
Olson v. City of Deadwood, 480 N.W.2d 770 (S.D. 1992)

2. Under SDCL § 49-41B-27, Keystone had to "certify" that it continued to meet the conditions attached to the permit, which was granted by the Public Utilities Commission four years earlier in an underlying docket, for the construction and operation of the Keystone XL Pipeline. The Commission concluded in this proceeding that Keystone bore the burden

of proof; that Keystone met its burden of proof through a verified certification and direct testimony of multiple witnesses that certain changes to the project since it was permitted did not affect Keystone's ability to meet the permit conditions; and that the intervenors offered no evidence that Keystone could not meet any permit conditions in the future. Did the Commission misstate or misapply the burden of proof?

The circuit court found no legal error in the Commission's interpretation or application of SDCL § 49-41B-27.

SDCL § 49-41B-27
In re Black Hills Power, Inc., 2016 S.D. 92, 889 N.W.2d 631
Certify, Black's Law Dictionary (10th ed. 2014)

3. To obtain a permit to operate and construct the Keystone XL Pipeline, Keystone had to prove to the Commission in the underlying 2009 docket that the project met the standards established in SDCL § 49-41B-22. In this docket, the governing statute required Keystone to certify that the project continues to meet the conditions on which the permit was previously granted. In this certification proceeding, was Keystone obligated to again prove that the project met the standards of SDCL § 49-41B-22?

SDCL § 1-26-36
Jundt v. Fuller, 2007 S.D. 62, 736 N.W.2d 508
Goetz v. State, 2001 S.D. 138, 636 N.W.2d 675

4. This Court reviews discovery orders, like the admission of evidence, establishing a scheduling order, or narrowing the scope of discovery, for abuse of discretion. An abuse of discretion is defined as a fundamental error of judgment, a choice outside the range of permissible choices, or a decision that is arbitrary or unreasonable. In excluding exhibits that were not timely disclosed, refusing to compel disclosure of communications between counsel for the parties, and in defining the scope of discovery at the outset of the case, did the Commission abuse its discretion?

SDCL § 15-6-37(c)(1)
Dakota, Minn. & Eastern R.R. Corp. v. Acuity, 2009 S.D. 69, 771 N.W.2d 623
In re Jarman, 2015 S.D. 8, 860 N.W.2d 1

Statement of the Case

1. The permit proceedings in Docket HP09-001

TransCanada announced plans to construct and operate the Keystone XL Pipeline in 2008. On March 12, 2009, Keystone filed an application with the

South Dakota Public Utilities Commission under SDCL Ch. 49-41B, the South Dakota Energy Facility Permit Act. By statute, a common carrier seeking to construct and operate a pipeline to transport liquid hydrocarbons, a "transmission facility" under SDCL § 49-41B-2.1, must acquire a permit from the Commission. SDCL § 49-41B-4. Keystone bore the burden of proving: (1) that the pipeline will comply with all applicable laws and rules; (2) that it will not pose a threat of serious injury to the environment or the social and economic conditions in the siting area; (3) that it will not substantially impair the health, safety or welfare of the inhabitants of the siting area; and (4) that it will not unduly interfere with the orderly development of the region, with due consideration given to the views of governing bodies, including local units of government. SDCL § 49-41B-22.

The Commission opened Docket HP09-001 for the 2009 application. The Commission granted party status to 15 intervenors, including Dakota Rural Action ("DRA"). The Cheyenne River Sioux Tribe, the Yankton Sioux Tribe, and the Intertribal Council on Utility Policy ("COUP") were not parties. After discovery, the Commission conducted a contested-case hearing that lasted three days beginning on November 2, 2009. The hearing participants were Keystone, DRA, and the Commission Staff. After post-hearing briefing, the Commission entered an Amended Final Order and Decision dated June 29, 2010, granting Keystone a permit to construct and operate the Keystone Pipeline subject to the conditions attached to the permit. (DRA App. at 66.)

Fifty permit conditions addressed compliance with laws, regulations, permits, and standards; reporting and relationships; construction; pipeline

operations, leak detection and emergency response; environmental conditions; cultural and paleontological resources; and enforcement and liability for damages. (*Id.* at 90-103.) The Commission has the authority to revoke or suspend any permit for failure to comply with the terms and conditions of the permit. SDCL § 49-41B-33. Although the Commission's final decision and order granting the permit was appealable under SDCL § 1-26-32, no party appealed.

2. Keystone's certification

Under SDCL § 49-41B-27, if construction of a permitted project begins more than four years after the permit was issued, "then the utility must certify to the Public Utilities Commission that such facility continues to meet the conditions upon which the permit was issued." Construction of the Keystone XL Pipeline was proposed to begin in May 2011 and to be completed in 2012. (Keystone's App. at 4.) Because of delays in receipt of a Presidential Permit, Keystone did not commence construction within four years following the Commission's 2010 order granting the permit.

Because the Keystone XL Pipeline is an international project that crosses the border with Canada, Keystone was required by Executive Order 11423 of August 16, 1968, and Executive Order 13337 of April 30, 2004, to obtain a Presidential Permit allowing construction of the border crossing segment of the pipeline. Keystone filed its application for a Presidential Permit on September 19, 2008. (*Id.*) The application for a Presidential Permit was still being reviewed by the United States Department of State more than four years after June 29, 2010, the date that the Commission granted a permit for the project. (*Id.*) Keystone was

therefore obligated under SDCL § 49-41B-27 to certify that the project continues to meet the conditions on which the permit was issued.

Keystone chose to make the certification required under SDCL § 49-41B-27 before construction. Thus, on September 15, 2014, Keystone filed a Certification and a Petition for Order Accepting Certification with the Commission. (*Id.* at 1-3.) The certification was signed under oath by Corey Goulet, the President of the Keystone Pipeline business unit. Goulet attested that: (1) the conditions upon which the Commission issued the facility permit continued to be satisfied; (2) Keystone was in compliance with the conditions to the extent that they applied in the then-current preconstruction phase of the project; and (3) Keystone would meet and comply with all applicable permit conditions during construction, operation, and maintenance of the project. (*Id.* at 1-2.)

Three appendices were attached to the Certification and Keystone's Petition for Order Accepting Certification. Appendix A was an overview map of the project. Appendix B was a quarterly report to the Commission dated June 30, 2014, as required by condition 8 of the Commission's permit. (*Id.* at 9.) Included with the quarterly report is a table showing the status of implementation of each permit condition. (*Id.* at 19-38.) Appendix C was a Tracking Table of Changes, in which Keystone identified each finding of fact from the Commission's Amended Final Decision and Order with respect to which changes had occurred between the date of the permit and the date of the certification. (*Id.* at 39-43.)

3. The proceedings in Docket HP14-001

The Commission opened a new docket, HP14-001, for the certification proceeding. Forty-three persons, tribes, and environmental groups applied for intervention. Forty-two were granted party status. (DRA App. at 38-39.) The Commission entered a scheduling order on December 17, 2014, addressing discovery deadlines, dates for pre-filed testimony, and scheduling an evidentiary hearing from May 5-8, 2015. (Administrative Record at 1528-29.) In the same order, the Commission limited discovery to any matter relevant to (i) whether the proposed Keystone XL Pipeline continues to meet the permit conditions and (ii) the factual changes identified in Keystone's tracking table of changes attached to its certification petition. (*Id.*) After extensive written discovery, including motion practice on objections and motions to compel discovery, the Commission entered an amended scheduling order dated July 2, 2015, that the evidentiary hearing would begin on July 27, 2015, and continue through August 4, 2015. (*Id.* at 8419-21.)

The hearing began on July 27 and lasted nine days. Ten lawyers representing intervenors participated in the hearing. Another dozen intervenors appeared on their own behalf. Twenty-seven witnesses testified and thousands of pages of exhibits were received. The Commission considered post-hearing motions and briefs, and Keystone proposed findings of fact and conclusions of law that were briefed and argued.

On November 6, 2015, President Obama denied Keystone's application for a Presidential Permit after Secretary of State John Kerry recommended that it be denied because it would send the wrong signal about the leadership of the

United States on climate-change issues to the international community. Based on this action, all of the intervenors joined in a November 9, 2015 motion to dismiss and to revoke the permit. (*Id.* at 31,347-31,355.) They argued that Keystone could not comply with permit condition 2, requiring that Keystone obtain all applicable permits, including a Presidential Permit. Keystone opposed the motion, contending that the permit condition was prospective and it could obtain a Presidential Permit in the future. On December 29, 2015, the Commission entered an order denying the joint motion to dismiss. (*Id.* at 31,643-31,644.) On January 21, 2016, the Commission entered a Final Decision and Order Finding Certification Valid and Accepting Certification. (DRA App. at 38.)

4. The appeal to circuit court

The Yankton Sioux Tribe, the Cheyenne River Sioux Tribe, Dakota Rural Action, COUP, and thirteen individual intervenors (all of whom were represented on appeal by the same lawyer) filed notices of appeal under SDCL § 49-41B-30. The circuit court consolidated the appeals and set a briefing schedule. Briefing was completed in August, 2016.

Subsequently, on January 24, 2017, President Trump issued a Presidential Memorandum inviting Keystone to reapply for a Presidential Permit and directing the Secretary of State to facilitate its expeditious review. On January 26, 2017, Keystone submitted a new application for a Presidential Permit. On March 6, 2017, Keystone moved that the circuit court take judicial notice of these documents. (Settled Record at 1875.)[1] The appeal was argued on March 8, 2017.

[1] The Settled Record references are to the index prepared by the Clerk of Courts for Civ. 16-33.

By order dated March 29, 2017, the court granted Keystone's motion to take judicial notice. (*Id.* at 1927.) Before the appeal was decided, the Department of State issued a Record of Decision on March 23, 2017, finding that the Keystone XL Pipeline would serve the national interest. (Keystone's App. at 44-74.) On the same day, the State Department, acting under delegated Presidential authority, issued a Presidential Permit authorizing construction of the Keystone XL Pipeline at the international border. (*Id.* at 75-79.) Keystone filed a motion to supplement the record with, or take judicial notice of, these documents. (Settled Record at 1883.) The circuit court granted the motion by order dated June 16, 2017, taking judicial notice. (*Id.* at 1974.) On June 19, 2017, the circuit court issued a memorandum decision and entered an order affirming the decision of the Commission. (*Id.* at 1975.) The appeals to this Court followed.

Statement of Facts

1. The Keystone XL Pipeline project

The Keystone XL Pipeline was developed after the Keystone Pipeline, which was permitted by the Commission on April 25, 2008, constructed in 2009-10, and began operations in 2010. The original Keystone Pipeline transports crude oil from the Western Canadian Sedimentary Basin, starting in Hardisty, Alberta, Canada to Steele City, Nebraska, and from there to terminals at Wood River and Patoka, Illinois, and to a crude oil hub at Cushing, Oklahoma. The Keystone Pipeline enters South Dakota in Marshall County and travels generally south to Yankton, where it crosses the Missouri River into Nebraska.

The Keystone XL Pipeline was proposed in 2009 to transport oil in three segments: (1) the Steele City segment, from Hardisty to Steele City, Nebraska;

(2) the Gulf Coast Segment, from Cushing, Oklahoma to Liberty County, Texas; and (3) the Houston Lateral Segment, from Liberty County, Texas, to refinery markets near Houston, Texas. (DRA App. at 72, ¶ 15; 54, ¶ 12.) Due to the Department of State's long delay in acting on Keystone's application for a Presidential Permit, the second and third segments of the Keystone XL Pipeline have been constructed and are in operation. Those segments and the original Keystone Pipeline currently constitute the Keystone Pipeline system.

As of September 15, 2014, the date when Keystone filed its certification, the project consisted of only the Steele City Segment. (*Id.* at 54, ¶ 13.) That segment would follow a different path from Hardisty to Steele City than the Keystone Pipeline. It would enter South Dakota in Harding County northwest of Buffalo, travel generally southeast through Butte, Perkins, Meade, Pennington, Haakon, Jones, and Lyman counties, and leave the State in Tripp County southeast of Winner. (*Id.* at 72, ¶ 16.) It was proposed and permitted as a 36-inch diameter pipeline with a maximum nominal capacity of 900,000 barrels per day (bpd); the 2017 Presidential Permit is for a nominal capacity of 830,00 bpd. (*Id.* at 72-73, ¶¶ 18, 20.) The Keystone XL Pipeline route in South Dakota does not pass through Indian Country or cross any tribally-owned lands. (*Id.* at 56, ¶ 27.)

2. Keystone's certification and tracking table of changes

To explain what had changed between June 29, 2010, when the permit was granted, and September 2014, Keystone attached a "tracking table of changes" to its certification petition. (Keystone's App. at 39-43.) In the tracking table, Keystone updated certain findings from the Commission's Amended Final Decision and Order dated June 29, 2010. The first section of the tracking table

identifies changes to the project in findings 14-20, 22, and 23. (*Id.* at 39-40.) For instance, the project currently consists of only the Steele City Segment. The mileage is therefore reduced in the United States, and the initial construction date of May 2011 obviously no longer applies. The number of pump stations in South Dakota is the same, but the number of mainline valves increased from 16 to 20, and the maximum design flow rate was reduced to 830,000 barrels per day. The estimated cost of the project increased from $921.4 million to $1.974 billion.

In the second section, findings 24-29, the tracking table addresses demand for the project, updates facts and statistics, and concludes that market demand remains strong. (*Id.* at 40-41.) The next section addresses environmental conditions, noting that the project's Construction Mitigation and Reclamation Plan ("CMR Plan") continues to be revised, that updated project maps will be submitted to the Commission before construction, that some site-specific crossing plans for two waterbody crossings were changed to horizontal directional drilling, and that the total length of the project affecting high consequence areas (HCA's, as defined by federal regulation), has been reduced. (*Id.* at 41-42.)

In the fourth section, addressing design and construction, the tracking table explains that Keystone withdrew its request to its federal regulator, the Pipeline Hazardous Materials Safety Administration (PHMSA), for a special permit to operate at 80% of the steel pipe's specified minimum yield strength. (*Id.* at 42-43.) Instead, Keystone committed to implement 59 additional safety measures set forth in the Department of State's Final Supplemental Environmental Impact Statement ("FSEIS"). In the last section, addressing

finding 107 related to socio-economic factors, the tracking table noted that the increased project cost could result in increased tax revenue to counties that host the pipeline. (*Id.* at 43.)

In its certification, Keystone attested that nothing about these factual changes altered either its compliance with conditions that applied in the pre-construction phase of the project or its ability to comply in the future with all applicable prospective permit conditions during construction, operation, and maintenance of the project. As stated in Keystone's certification petition, "to the extent that there have been changes in the underlying facts, those changes are either neutral or positive to the Commission's concerns. In sum, the need, impacts, efficacy, and safety of the Project have not changed since the Amended Final Decision and Order." (Keystone's App. at 8.)

3. Appendix B

The latest quarterly report submitted to the Commission, dated July 29, 2014, was attached to Keystone's petition as Exhibit B. (*Id.* at 19-38.) As part of the report, Keystone included an approximately four-page narrative about the project's status, a table showing recent consultations with the South Dakota Department of Environment and Natural Resources, and a table addressing the current status of each of the 50 permit conditions. The latter is Table 2, entitled "Status of Implementation of South Dakota PUC Conditions." It recites each condition and then describes the "status of other measures required by" each condition. It comprises 20 pages of the quarterly report. (*Id.* at 19-38.)

As found by the Commission in Finding 31, nearly all of the permit conditions are prospective—they require that Keystone do something at a future

date, such as during construction or reclamation, or address maintenance or operation of the pipeline after construction is completed. (DRA App. at 56, ¶ 31.) Condition 1, for instance, states in its first sentence that "Keystone shall comply with all applicable laws and regulations in its construction and operation of the Project." (*Id.* at 90, ¶ 1.) Keystone addressed this condition in Appendix B by stating: "Construction of the project has not been initiated. Keystone will comply with all applicable laws and regulations during construction and operation of the Project." (Keystone's App. at 19.) The other prospective conditions are similarly addressed in Appendix B.

In Finding 31, the Commission found that "[n]one of the updates identified in Appendix C [Keystone's tracking table of changes] to Keystone's Certification Petition affects Keystone's ability to meet the conditions on which the permit was issued." (DRA App. at 56, ¶ 31.) With respect to the prospective conditions, the Commission found that "[n]o evidence was presented that Keystone cannot satisfy any of these conditions in the future." (*Id.*)

4. The Commission's specific findings on the non-prospective permit conditions

In its findings, the Commission addressed the conditions that it found were not prospective. Condition 4 provided that the permit is not transferrable without the Commission's approval. (*Id.* ¶ 32.) Conditions 7-9 required the appointment of a public liaison officer and the submission of quarterly reports, both of which the Commission found had been done. (*Id.* ¶ 33.) Condition 10 requires a program of contact with local emergency responders no later than six months before construction; the Commission found that Keystone had already started

making such contacts and that it would continue. (*Id.* ¶ 34.) The Commission further found that even though this condition does not refer to Tribal governments or officials, Keystone presented evidence that it would contact Tribal emergency responders. (*Id.*)

Condition 15 requires consultation with the NRCS to develop con/rec units, which the Commission found had been done. (*Id.* ¶ 36.) Condition 19 requires that landowners be compensated for tree removal, and that Keystone address that issue when acquiring easements. (*Id.* ¶ 37.) The Commission found no evidence that Keystone cannot continue to meet the condition. Condition 34 requires that Keystone continue to evaluate and perform assessment activities regarding HCAs. (*Id.* ¶ 38.) The Commission found that the process was ongoing. Condition 41 requires that Keystone follow all protective and mitigation efforts recommended by the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish, and Parks, as well as consult with SDGFP to identify greater prairie chicken and greater sage and sharp-tailed grouse leks, and that the process was ongoing. (*Id.* ¶¶ 39-40.)

Condition 16(m) requires Keystone to reseed disturbed lands with comparable crops, grass, or a native-species mix to be approved by the landowner. Condition 49 provides that Keystone must pay commercially reasonable costs and indemnify landowners for any loss or damage resulting from Keystone's use of the easement. (*Id.* ¶ 41.) The Commission found that the only testimony bearing on these two conditions was from Sue Sibson, a landowner along the Keystone Pipeline who was not satisfied with the reclamation of her

property. (*Id.*) The Commission further found that Sibson's testimony was not evidence that Keystone could not comply with the reclamation conditions, as reclamation efforts are ongoing, and that Keystone was committed to continuing reclamation at the Sibson property until Mrs. Sibson and her husband were satisfied. (*Id.*)

Condition 50 provides that the Commission's complaint process be available to landowners threatened with damage or the consequences of Keystone's failure to comply with any of the conditions. The Commission found no evidence that Keystone could not comply with this condition. (*Id.* ¶ 42.)

5. The Commission's findings on other hearing testimony

The evidentiary hearing before the Commission lasted nine days. (*Id.* at 46.) Twenty-seven witnesses testified. The Commission entered an order at the outset of the case requiring pre-filed testimony. (Administrative Record at 1528-29.) Keystone submitted pre-filed direct testimony from five witnesses. (*Id.* at 2622-2702.) In addition to Corey Goulet's testimony noted above, Keystone submitted pre-filed testimony from Heidi Tillquist, an environmental toxicologist who is a contractor to the project and who conducted a risk analysis for the project. Her pre-filed testimony covered spill scenarios and potential impact to groundwater resources.

Jon Schmidt, Ph.D., who is also a contractor to the project, acting as its regulatory and permitting manager, offered pre-filed testimony about the CMR Plan, project mapping, river crossings, and the development of con/rec (construction/reclamation) units in consultation with the NRCS. Meera Kothari, P.E., who is a TransCanada employee and the project's lead engineer, filed

written testimony addressing Keystone's application with PHMSA for a special permit, the use of high-strength steel and operating pressures, fusion bond epoxy coating for the pipe, and the 59 special conditions that Keystone committed to follow. Keystone also submitted rebuttal testimony from Goulet, Kothari, Schmidt, and Tillquist, as well as from Dan King and Rick Perkins. (*Id.* at 7601-7965.) King, TransCanada's chief engineer, testified about pipeline integrity and welding procedures. Perkins testified about the proposed work camps to house workers during construction.

Commission Staff offered the pre-filed testimony of ten witnesses, many of whom testified in docket HP09-001, in which the permit was issued. The Intervenors offered the testimony of 16 witnesses, including experts and lay persons. The parties collectively filed rebuttal or sur-rebuttal testimony from 19 witnesses. Not all of the witnesses for whom pre-filed testimony was submitted actually testified at the hearing, but 27 witnesses took the witness stand and were subject to cross-examination, which was extensive. Meera Kothari, for example, was cross-examined by the intervenors for almost 13 hours.

Based on this testimony, the Commission made further factual findings addressing a number of issues and concerns raised by the intervenors. These include the possible adverse effects on groundwater resources; the testimony of Dr. Arden Davis about possible adverse effects on the Ogallala aquifer and others; the potential for landslides along the project right of way; possible benzene exposures from a leak or spill; proximity of the right of way to the City of Colome's water wells; the threat to tribal water rights; the possible disturbance of

contaminated sediments in the Cheyenne River; consultation with Tribal officials about the project and emergency response; whether the socio-economic analysis done by the Department of State as part of the FSEIS presented a flawed cost-benefit analysis; concerns about the proposed work camps in proximity to the Yankton Sioux Reservation; concerns about threats to cultural and historic sites; and the concerns of Evan Vokes, a former TransCanada employee, who testified about a variety of engineering concerns, including weld testing, pipe manufacture, and welding practices. (DRA App. at 57-63, ¶¶ 42-77.) The Commission found that the testimony on these issues did not establish that Keystone failed, or would be unable in the future, to meet any permit condition. (*Id.* at 57-63, ¶¶ 42, 43, 44, 46, 49, 50, 51, 52, 54, 55, 60, 61, 65, 68, 77.)

6. The circuit court's decision on appeal

The circuit court issued a 36-page memorandum decision dated June 16, 2017, affirming the decision of the Commission. (DRA App. at 2.) In its separate order affirming the Commission's decision, the court stated that its memorandum decision constituted its findings of fact and conclusions of law. (*Id.* at 1.) Except for taking judicial notice of the federal documents related to the Department of State's Record of Decision and the Presidential Memorandum pursuant to which a Presidential Permit was granted, the circuit court did not consider any new evidence, independently find any facts, or reject any of the Commission's findings of fact as clearly erroneous. The circuit court's decision addresses each of the arguments raised on appeal.

Argument

1. The standard of review

a. Findings of fact are reviewed for clear error, while interpretation of a statute is reviewed de novo

DRA's appeal is authorized by SDCL § 49-41B-30, which provides that the appeal is subject to SDCL § 1-26-36. This statute directs that the circuit court "give great weight" to the findings made and inferences drawn by the Commission on questions of fact and reverse or modify only if "substantial rights of the appellant have been prejudiced because the administrative findings are . . . clearly erroneous in light of the entire evidence in the record." SDCL § 1-26-36(5). *See generally Peterson v. Evangelical Lutheran Good Samaritan Society*, 2012 S.D. 52, ¶ 12, 816 N.W.2d 843, 846.

The Commission's interpretation of SDCL § 49-41B-27 is a question of law, subject to de novo review. *Knapp v. Hamm & Phillips Service Co., Inc.*, 2012 S.D. 82, ¶ 11, 824 N.W.2d 785, 788.

In considering whether the facts satisfy the legal standard of proof, this Court's review is de novo. *In re Black Hills Power, Inc.*, 2016 S.D. 92, ¶ 17, 889 N.W.2d 631, 636. The burden of proof in an administrative hearing is a preponderance of the evidence. *Id.*

b. Discovery orders are reviewed for abuse of discretion

Discovery orders are reviewed under an abuse-of-discretion standard. *Dakota, Minn. & Eastern R.R. Corp. v. Acuity*, 2009 S.D. 69, ¶ 47, 771 N.W.2d 623, 636. An abuse of discretion is defined as "'a fundamental error of judgment, a choice outside the range of permissible choices, a decision, which on full

consideration, is arbitrary or unreasonable.'" *In re Jarman*, 2015 S.D. 8, ¶ 19, 860 N.W.2d 1, 9 (quoting *Thurman v. CUNA Mut. Ins. Soc'y*, 2013 S.D. 63, ¶ 11, 836 N.W.2d 611, 616).

c. The public trust doctrine does not alter the standard of review

DRA argues that the Court should adopt and apply a "heightened fiduciary standard" for reviewing the Commission's decision based on the public trust doctrine recognized in *Parks v. Cooper*, 2004 S.D. 27, ¶ 46, 676 N.W.2d 823, 848. (DRA Br. at 20-21.) DRA suggests that "the Commission should have set a higher bar" for Keystone's certification, but does not specifically define a standard. Nor does DRA cite any authority in which the public trust doctrine has created a stricter standard of review for permitting of a pipeline project.

The public trust doctrine doctrine originated in the late nineteenth century with the United States Supreme Court decision in *Illinois Central R. Co. v. State of Illinois*, 13 S.Ct. 110 (1892), in which the Court held that the ownership of submerged lands "is held by the state, by virtue of its sovereignty, in trust for the public." *Id.* at 119. The doctrine was the basis for the South Dakota Supreme Court's conclusion in *Parks* that "the State of South Dakota retains the right to use, control, and develop the water in these lakes as a separate asset in trust for the public." *Id.* ¶ 46, 676 N.W.2d at 838.

This Court has considered the doctrine only in connection with issues related to the ownership of water and the rights of riparian landowners. *Id.* ¶ 46, 676 N.W.2d at 838-39. The Court concluded in *Parks* that "the public trust doctrine imposes an obligation on the State to preserve water for public use. It

provides that the people of the State own the waters themselves, and that the State, not as a proprietor, but as a trustee, controls the water for the benefit of the public." *Id.* ¶ 53, 676 N.W.2d at 841.

The Court has never held that the doctrine converts state administrative agencies into trustees or imposes a fiduciary duty on them to apply some undefined but heightened standard of scrutiny to issues involving natural resources. The doctrine has no application whatsoever to this appeal.

Moreover, DRA's failure to cite any authority that the public trust doctrine would apply in this context constitutes a waiver. *See Niesche v. Wilkinson*, 2013 S.D. 90, ¶ 15, 841 N.W.2d 250, 255 ("Because Niesche cites no authority for this novel proposition, it is waived."); *Kostel v. Schwartz*, 2008 S.D. 85, ¶ 34, 756 N.W.2d 363, 377 (appeal arguments must be supported by authority).

2. The findings challenged by DRA are not clearly erroneous

In its statement of facts, DRA challenges a number of the Commission's findings as clearly erroneous. (DRA Br. at 8-18, 25-27.) Findings are clearly erroneous only if the Court is left with a definite and firm impression that a mistake has been made. *Sopko v. C&R Transfer Co., Inc.*, 1998 S.D. 8, ¶ 6, 575 N.W.2d 225, 228-29.

a. Findings 18 and 20 are not clearly erroneous

DRA challenges findings 18 and 20 because Meera Kothari testified that after Keystone withdrew its application to PHMSA for a special permit, it agreed to nevertheless adopt and adhere to the 59 special conditions that PHMSA had developed in connection with Keystone's application for a special permit. (DRA Br. at 9.) DRA argues that while Kothari testified that Keystone's adoption was

voluntary, its compliance with the Final Environmental Impact Statement (FEIS) is mandatory, and the 59 special conditions are part of the FEIS. (*Id.*) That does not, however, explain why these findings were erroneous.

Finding 18 states:

> "The Pipeline will be constructed using API 5L X70M high-strength steel. This was one of the design options presented in the original permit application. Petition, App. C, ¶ 18; Ex. 2003, ¶ 5. Keystone withdrew its application to PHMSA for a special permit and adopted 59 special conditions developed by PHMSA as set forth in Appendix Z to the Department of State Final Supplemental Environmental Impact Statement (FSEIS). Petition ¶¶ 60, 90; TR 215, 302. As a result of this change, Keystone will construct the Pipeline using the as-proposed stronger steel, but will operate the Pipeline at a lower maximum pressure, 1,307 psig. Ex. 2003, ¶ 8; Petition, App. C, ¶¶ 18, 19, 63."

Finding 20 states:

> "Keystone has committed to meet the 59 special conditions proposed by PHMSA as set forth in Appendix Z to the FSEIS. TR 215; Ex. 2001, ¶ 13."

In fact, the findings are amply supported by the record and Kothari's testimony. It is undisputed that Keystone stated that it would comply with the special conditions. (Tr. at 215; 302; 1105-06.)[2] Kothari's statement that Keystone agreed to adhere to the conditions despite withdrawing the special permit application does not negate Keystone's commitment, which is what the Commission found. There is no basis to conclude that the findings are clearly erroneous.

[2] In the Administrative Record, the transcript is entered each day of the hearing, starting at page 23,931, and ending at page 27,437.

b. Finding 25 is not clearly erroneous

DRA challenges that part of Finding 25 addressing Heidi Tillquist's calculation of spill frequency in an area that could affect a High Consequence Area ("HCA"). Based on Tillquist's calculation, the Commission found that "a spill that could affect an HCA would occur no more than once in 460 years." (DRA App. at 55, ¶ 25.) DRA does not challenge the calculation, but rather Tillquist's qualifications. DRA first challenges her qualifications because she did not know what a black swan event was. (Tr. at 850.) DRA offered no evidence in the record to explain why that meant she is either unqualified to do a risk assessment or that, as DRA argues, she has "no formal training in risk analysis." Her resume amply supports her testimony. (Administrative Record at 23,677.)

DRA then argues that the risk assessment is flawed because the engineering analysis that is done as part of the process was not completed as of the hearing date. (DRA Br. at 10; Tr. at 825-26.) Tillquist testified that the engineering analysis was underway. (Tr. at 826.) The fact that the process would not be completed until a later stage of construction does not establish a flaw in the risk assessment that was done.

DRA cites to Tillquist's testimony that one of the purposes of the risk assessment is "to help communicate to the public and to regulatory agencies," which DRA interprets to mean that the risk assessment is just a public-relations tool. (DRA Br. at 10; Tr. at 846-47.) This quotation does not even address the calculation contained in the risk assessment, and therefore is not a basis for the Court to conclude that Tillquist's assessment was not based on sound

methodology. DRA's witness in this area did not challenge Tillquist's spill frequency calculation, and testified that he did not conduct an independent risk assessment. (Tr. at 1808.)

Finally, DRA cites to the 14 leaks involving fittings at several pump stations that occurred during start up of the Keystone Pipeline because the fittings were not sufficiently tightened. (DRA Br. at 11; Tr. at 2285-86.) DRA argues that these leaks are inconsistent with Tillquist's analysis. (DRA Br. at 11.) There is no connection, however, between the failed fittings and the spill frequency analysis involving HCA's stated in Finding 25. In other words, the testimony DRA cites and its entire argument on this issue is not specific to HCA's, which is what is addressed in Finding 25. There is no basis to conclude that Finding 25 is clearly erroneous.

c. Finding 28 is not clearly erroneous

In Finding 28, the Commission found that TransCanada has thousands of miles of pipe in operation coated with fusion bonded epoxy (FBE), and no evidence of external corrosion except for one instance in Missouri involving interference from another pipeline with the cathodic protection system. (DRA App. at 56, ¶ 28.) The Commission further found that Keystone discovered the problem in Missouri through its own in-line inspection program. (Tr. at 293-94, 2315-16.) In subsequent construction Keystone has been installing passive anodes to protect the pipeline during construction from a similar incident of interference with the cathodic protection system. (Tr. at 265, 309-10.)

DRA responds to this finding by arguing that the Missouri incident proves that the Keystone Pipeline is not safe (DRA Br. at 12-15), but its argument is not a basis to conclude that any part of Finding 28 is clearly erroneous. DRA cites no evidence in the record of any instance in which the FBE coating has failed or there has been external corrosion; no evidence that Keystone did not discover the problem in Missouri through its own in-line inspection; and no evidence that Keystone has not subsequently corrected the problem by installing passive anodes.

DRA argues that Meera Kothari's testimony that a similar situation could not occur on the Keystone XL Pipeline because there were no shared utility corridors was "patently false" because the Keystone XL Pipeline will cross the Mni Waconi water line in Jones County. (DRA Br. at 14.) A pipeline crossing, however, is not a shared utility corridor. Moreover, Kothari testified that Keystone worked with the Bureau of Reclamation, which had oversight responsibility for the Mni Waconi crossing, and that BOR's "requirements for that particular line, and those design requirements for cathodic protection as well as crossing designs were incorporated into our crossing design." (Tr. at 1187.) DRA offered no evidence or testimony that the Mni Waconi crossing presents any risk of the cathodic protection issue that existed in Missouri. DRA's argument on this point is not directly responsive to Finding 28 or any of the permit conditions.

DRA also argues that Keystone failed to properly protect the FBE coating on stored pipe from exposure to ultraviolet light. (DRA Br. at 15.) DRA quotes bits and pieces of testimony, but the issue was thoroughly discussed in some

detail by Kothari at pages 1163-80 of the transcript. Kothari testified that Keystone had applied a protective coating to stored pipe and that the coating was typically applied "[a] year to 18 months" after manufacture as "a way to mitigate any potential degradation." (Tr. at 1176.) Kothari further testified that before pipe can be installed, Keystone has to prove that the FBE coating meets federal regulations. "So our regulations require us to ensure we have corrosion control on our pipe, and we have to prove that our pipe meets these corrosion controls before they are installed. And if they don't meet those requirements, then we simply recoat the pipe." (Tr. at 1179.) There was no contrary evidence before the Commission that Keystone would not follow this process or that the delay in constructing the Keystone XL Pipeline would affect the integrity of the FBE coating.

d. Finding 41 is not clearly erroneous

DRA argues that Finding 41 is clearly erroneous based on the testimony of Sue Sibson. (DRA Br. at 16-17.) Finding 41 relates to two permit conditions, 16(m) and 49, requiring that Keystone reclaim the right of way after construction by re-seeding with a landowner-approved seed mix and pay the costs of repairing any damage caused by Keystone's use of the easement. (DRA App. at 57, ¶ 41.) Sibson is a landowner on the Keystone Pipeline some of whose property has not been reclaimed to her satisfaction. In Finding 41, the Commission found that Sibson's testimony did not establish that Keystone cannot meet the reclamation conditions.

First, the Commission specifically addressed Sibson's concerns and testimony in Finding 41 and concluded that her concerns were not evidence that Keystone could not meet the permit condition. Second, DRA ignores Corey Goulet's testimony that reclamation on the Sibson property is not complete and that Keystone will continue its efforts until the Sibsons are satisfied. (Tr. at 306-07.) Out of 535 tracts of land on the Keystone Pipeline, reclamation continues on only 9 tracts. (Tr. at 306.) Given this undisputed fact, Finding 41 is not clearly erroneous.

e. Findings 44-48 are not clearly erroneous

In arguing that the Commission ignored geological risks, DRA mentions Findings 44-48, which address the testimony of Dr. Arden Davis, a geologist who is retired from the South Dakota School of Mines and Technology. (DRA Br. at 17-18.) In Finding 44, the PUC found that Dr. Davis testified to concerns about the possible effects of a pipeline spill on aquifers, rivers, and groundwater along the right of way. The PUC concluded that the concerns, which were relevant to Keystone's burden under SDCL § 49-41B-22, did not specifically address any permit condition.

In Finding 45, the Commission found that Dr. Davis's testimony did not challenge Heidi Tillquist's testimony about the likelihood of adverse impacts to the areas of concern. His testimony was therefore not sufficient to warrant any changes to findings of fact made in the Commission's Amended Final Decision and Order.

In Finding 46, the Commission addressed Keystone's obligation to treat the Ogallala aquifer in Tripp County and the wind-blown Sand Hills type material crossed by the proposed right of way as a hydrologically sensitive area. It found that Dr. Davis did not testify that such treatment was inappropriate or that Keystone could not meet that condition.

In Finding 47, the Commission noted Dr. Davis's testimony about possible benzene exposures from a leak or spill, but found that such exposures at a level that would cause health concerns were unlikely because of the low persistence of benzene and expected emergency response measures. In other words, the Commission found that despite Dr. Davis's concern, he failed to respond to Tillquist's testimony establishing that a harmful exposure of that sort was not likely.

In Finding 48, the Commission noted that Dr. Davis had relied in his testimony on a report referred to as the Stansbury report. The Commission also found that Tillquist had specifically addressed flaws in the Stansbury report, to which Dr. Davis did not respond.

In its brief, DRA does not challenge these particular findings.

Having failed to address any of the specifics of Findings 44-48, DRA instead argues that Dr. Davis testified that the pipeline route is in an area of high landslide potential, and that contrary testimony from Meera Kothari and Jon Schmidt was not credible. (DRA Br. at 17.) Dr. Davis testified that 150 miles of the route would travel through areas of Pierre Shale, which according to a USGS map are at high risk for landslides. (*Id.*) By contrast, Kothari testified that only

1.6 miles of the route were high-risk landslide areas. (*Id.*). DRA entirely ignores the basis for Kothari's testimony, which was that the USGS map on which Dr. Davis relied was "an extremely high level map" based on a scale of 1 to 7 million, which was not intended for pipeline routing. (Tr. at 1097, 1101.) The legend expressly states that the map is not intended for site-specific decisions, like routing. (*See* http://landslides.usgs.gov/hazards/nationalmap/ ("because the map is highly generalized, owing to the small scale and the scarcity of precise landslide information for much of the country, it is unsuitable for local planning or actual site selection"). Thus, Keystone used this map only at the outset of the project, and then progressed through detailed engineering, field visits, and other site-specific work to refine the design and determine the best route. (Tr. at 1097-98.) Kothari's testimony is unrefuted that, using this process, only 1.6 miles of the pipeline route were in areas of high landslide potential. Dr. Davis specifically testified that he did not know the basis for Kothari's testimony. (*Id.* at 1810-11.) There is no evidence in the hearing record for the Court to find either that the Commission's findings were clearly erroneous, or that Keystone is unable to meet any permit condition because of the testimony on which DRA relies related to landslide potential.

3. The Commission did not erroneously shift Keystone's burden of proof under SDCL § 49-41B-27 to the Appellants

DRA argues that, despite recognizing from the outset that Keystone bore the burden of proof (DRA Br. at 22), the Commission improperly shifted the burden of proof to the intervenors. (*Id.* at 23-24.) It bases this argument on the Commission's various findings that with respect to a particular permit condition,

there was no evidence that Keystone did not or could not continue to meet the condition. (*Id.* at 24.)

a. Keystone's burden under SDCL § 49-41B-27 was to certify that it continued to meet the permit conditions

The Commission expressly found in its final order that Keystone "has the burden of proof to show that its certification is valid." (DRA App. at 64, ¶ 4.) Keystone does not and did not dispute this.

As the Commission correctly concluded, the Permit granted by the Amended Final Decision and Order dated June 30, 2010, in Docket HP09-001 was not appealed and constitutes a final order. (DRA App. at 63, ¶ 2.) The Commission also correctly concluded under SDCL § 49-41B-27 that the permit granted in Docket HP09-001 has not lapsed or expired, so that "Keystone therefore has no legal obligation to again prove that it meets the requirements of SDCL § 49-41B-22," the statute that establishes what Keystone needed to prove to obtain the initial permit. (*Id.* at 64, ¶ 3.)

The certification statute requires that Keystone "must certify to the Public Utilities Commission that such facility continues to meet the conditions upon which the permit was issued." SDCL § 49-41B-27. There are no reported cases addressing this statute. This Court's review of the Commission's interpretation of SDCL § 49-41B-27 is therefore deferential. "When faced with an agency's interpretation of a statute that it administers, 'so long as the agency's interpretation is a reasonable one, it must be upheld.'" *Mulder v. South Dakota Department of Social Services*, 2004 S.D. 10, ¶ 5, 675 N.W. 2d 212, 214 (quoting *Emerson v. Steffen*, 959 F. 2d 119, 121 (8th Cir. 1992)).

The plain language of the statute provides that Keystone must "certify" that it can continue to meet the "conditions" on which the permit was granted. The Court must give the language of the statute its ordinary and plain meaning. *See, e.g., Peters v. Great Western Bank*, 2015 S.D. 4, ¶ 7, 859 N.W.2d 618, 621. "Certify" means "to authenticate or verify in writing," or "to attest as being true or as meeting certain criteria." BLACK'S LAW DICTIONARY at 275 (10th ed. 2014). To "attest" means "to affirm to be true or genuine; to authenticate by signing as a witness." (*Id.* at 153.) These are narrow and precise terms. An agency may not "'enlarge the scope of the statue by an unwarranted interpretation of its language.'" *Paul Nelson Farm v. South Dakota Department of Revenue*, 2014 S.D. 31, ¶ 24, 847 N.W. 2d 550, 558 (quoting *In re Yanni*, 2005 S.D. 59, ¶ 16, 697 N.W. 2d 394, 400).

Thus, Keystone's burden in this case was to verify in writing or to affirm as true that it continues to meet the conditions on which the permit was granted. As stated by the Commission, Keystone's burden was to prove "that its certification is valid." (DRA App. at 64, ¶ 4.)

b. The Commission's findings and conclusions are consistent with established case law addressing the burden of going forward with the evidence

Much of the dispute about the burden of proof hinges on the fact that most of the 50 permit conditions are prospective—they require Keystone to do something in the future. DRA contends that Keystone was obligated to present affirmative evidence that it can meet each of those conditions in the future, even if nothing has changed since the permit was granted. (DRA Br. at 22-23.)

Keystone took a different approach. When the Commission granted Keystone a permit in 2010, it found that Keystone had met its burden of proof under SDCL § 49-41B-22. It granted the permit based on various conditions, some of which necessarily could be met only in the future. Thus, Keystone did not have to prove in docket HP09-001 that it did or could meet *all* 50 permit conditions. The Commission required that Keystone meet the conditions, concluding that it had authority to impose the conditions under SDCL § 49-41B-24, that they were reasonable, and that they would help ensure that the project met the standards under SDCL § 49-41B-22.

By contrast, in this certification proceeding Keystone had to certify that it "continues to meet the conditions upon which the permit was issued." SDCL § 49-41B-27. The Commission construed "conditions" as used in the statute to mean the permit conditions. (DRA App. at 64, ¶ 5.) DRA does not challenge that conclusion.

Given that many of the conditions are prospective, Keystone complied with this statute by offering evidence of changes related to the project since 2010 and then addressing whether anything about those changes would prevent it from meeting the permit conditions. Keystone supported its sworn certification with Appendix C, a tracking table of changes related to the Commission's findings of fact in Docket HP09-001, and Appendix B, a table addressing the status of each condition. Keystone's pre-filed testimony similarly addressed the various subject matter areas covered by the permit conditions and stated that nothing had changed that would prevent Keystone's compliance.

In this context, DRA misconstrues the Commission's statements that there was no evidence that Keystone could not in the future meet a particular condition as evidence that the burden of proof was shifted. (DRA Br. at 24.) This argument is not only illogical, it is contrary to this Court's understanding of a party's burden of going forward with the evidence.

As this Court has held, the term "burden of proof" encompasses two distinct elements: "'the burden of persuasion,' i.e., which party loses if the evidence is closely balanced, and the 'burden of production,' i.e., which party bears the obligation to come forward with the evidence at different points in the proceeding." *In re Estate of Duebendorfer*, 2006 S.D. 79, ¶ 42, 721 N.W.2d 438, 448 (Zinter, J., concurring). The burden of persuasion rests with the party having the affirmative side of an issue and does not change, but the burden of going forward with the evidence may shift. *Id.* That is what happened here. After Keystone submitted its certification, accompanying documents and testimony per SDCL § 49-41B-27, the Appellants, as challengers to Keystone's certification who chose to present evidence, bore the burden of production. That is, they had to convince the Commission that Keystone's certification was invalid because Keystone could not in fact meet some of the permit conditions.

The concept that the burden of going forward with the evidence can shift is hardly novel. It exists in all cases in which a presumption arises. *See* SDCL § 19-11-1. It exists in cases involving allegations of a confidential relationship and undue influence. *See, e.g., In re Estate of Duebendorfer*, ¶ 32, 721 N.W.2d at

446-47. It exists in employment cases involving allegations of retaliatory discharge. *Johnson v. Kreiser's, Inc.*, 433 N.W.2d 225, 227-28 (S.D. 1988). It exists in family-law cases involving a defense of inability to pay alimony, which shifts the burden of proof to establish inability to pay. *Rousseau v. Gesinger*, 330 N.W.2d 522, 524 (S.D. 1983). It exists in workers compensation cases involving the odd-lot doctrine. *McClaflin v. John Morrell & Co.*, 2001 S.D. 86, ¶ 7, 631 N.W.2d 180, 183. And it exists in every civil case when a party seeking summary judgment meets its initial burden, shifting the burden to the non-moving party to identify facts disputing the moving party's allegations. *Dakota Indus. v. Cabela's.com, Inc.*, 2009 S.D. 39, ¶ 14, 766 N.W.2d 510, 514.

Given this authority, there was nothing extraordinary or legally incorrect about the Commission's conclusions: (1) that Keystone met its burden of proof through the certification signed under oath by Corey Goulet and the direct testimony of its witnesses related to updates to the project; and (2) with respect to future conditions, that "[n]o evidence was offered demonstrating that Keystone will be unable to meet the conditions in the future." (DRA App. at 64, ¶¶ 8-9.)

4. Keystone met its burden of proof.

The record contains abundant evidence that Keystone met its burden under SDCL § 49-41B-22. The hearing transcript is 2,507 pages; the evidentiary hearing took nine days; and seven witnesses testified for Keystone. The certification proceeding took 16 months and created a 31,425-page record, not including a nine-day evidentiary hearing at which 27 witnesses testified. The Commission entered a 28-page decision with 78 findings of fact and 13 conclusions of law.

Most of the permit conditions are prospective in nature. They require that Keystone do something in the future. The Commission in its findings of fact identified the conditions that, like these examples, are prospective. (*Id.* at 56, ¶ 31 (identifying Conditions 1-3, 5 6.a-6.f, 11-14, 16.1-16.p, 17, 18, 19.a, 20-34.a, 35-40, 41.b, and 42-48 as prospective conditions).) The Commission then concluded that there was no evidence in the record that Keystone could not satisfy any of these conditions. (*Id.* at 64, ¶ 9.)

The logic of the Commission's decision is clear. Keystone was unable to prove present compliance with future conditions, either in 2010 when the permit was first issued or on the date of the certification, because the conditions relate to future events. Keystone can do no more than verify its promise to comply with the future condition and establish that no factual change has occurred that would prevent its future compliance. This logic alone defeats DRA's reliance on its "tracking table of non-evidence." (DRA Br. at 23.) Moreover, DRA's argument is fatally flawed based on Exhibit B, which presented the current status of Keystone's compliance with each condition, and to which DRA did not respond before the Commission and does not respond here. The Commission's findings and conclusions with respect to prospective conditions are logical and supported by the evidence.

5. The standard under SDCL § 49-41B-27 is different than under § 49-41B-22

DRA argues that the Commission failed to consider the effects of a possible pipeline leak on South Dakota's water resources. DRA explicitly attributes this alleged failure to the Commission's refusal to require Keystone to

again meet its burden of proof under SDCL § 49-41B-22, which is the statute that governed the 2009 permit proceeding.[3] (DRA Br. at 27-29.) DRA contends that the first permit condition requires compliance with "all applicable laws," and that includes SDCL § 49-41B-22. (DRA Br. at 28.)

This reading would nullify the plain language of SDCL § 49-41B-27 and the fact that the permit granted in 2009 does not expire. Rather, the only statutory limits on a permit once issued are the certification required by SDCL § 49-41B-22 and the Commission's ability to revoke or suspend the permit for enumerated reasons under SDCL § 49-41B-33. The permit issued in docket HP09-001 was final and not appealed, so it is entitled to preclusive effect. *Jundt v. Fuller*, 2007 S.D. 62, ¶ 12, 736 N.W.2d 508, 513.

This certification proceeding was not a chance for the Commission to reconsider its decision. "Nothing in South Dakota's Administrative Procedures Act authorizes an administrative agency to reconsider a decision in a contested case." *Id.* ¶ 7, 736 N.W.2d at 512. The statutory requirement that Keystone "certify" that it continues to meet the conditions upon which the permit was issued cannot reasonably be read to require Keystone to prove everything that it had to prove to obtain a permit under SDCL § 49-41B-22. This Court may not alter the language of the statute, and must give words their plain and ordinary meaning. *Goetz v. State*, 2001 S.D. 138, ¶ 15, 636 N.W.2d 675, 681. DRA's argument violates these principles.

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[3] Notwithstanding the legal flaws in DRA's argument, it is factually inaccurate to say that the Commission did not consider the effects of a possible leak on South Dakota's water resources. To the contrary, it considered that issue as it relates to the permit conditions, as Findings 43-53 demonstrate.

6. The Commission did not abuse its discretion in addressing discovery

a. The initial scheduling order was proper

DRA challenges the Commission's order dated December 17, 2014, limiting discovery to (1) whether the proposed Keystone XL Pipeline continues to meet the 50 permit conditions; and (2) the changes to the project identified in Appendix C to Keystone's permit application. (Administrative Record at 1528-1529.) The order was based on the language of SDCL § 49-41B-27 and the Commission's determination that the certification docket was not an opportunity to relitigate whether the permit should have been granted in HP09-001 based on the criteria established by SDCL § 49-41B-22. To the extent that DRA challenges this conclusion (DRA Br. at 31-32), its argument is no different than that addressed in the preceding section of this brief.

While DRA contends that the Commission arbitrarily limited the broad scope of discovery contemplated by SDCL § 15-6-26(b)(1) (*id.* at 32), DRA does not identify the relevant issues that it could not explore. As it was, DRA served 86 interrogatories and 56 broad-ranging requests for production of documents on Keystone. (Administrative Record at 3160-3353.) The evidentiary hearing lasted nine days. The administrative record is over 31,000 pages long. In the face of the extensive inquiry allowed by the Commission, DRA's unspecific argument is at best not persuasive. At worst it is fatally flawed for failure to show prejudice. *Cf., e.g., Milstead v. Johnson,* 2016 S.D. 56, ¶¶ 22-25, 883 N.W.2d 725, 734-35 (personnel records of law enforcement officers are discoverable only if the party seeking production establishes "a factual predicate showing that it is reasonably likely that the requested file will bear information both relevant and material").

To prove an abuse of discretion on appeal, DRA should bear the burden of proving what difference the Commission's order made to its case.

This Court reviews the Commission's order for abuse of discretion. *See, e.g., Bertelsen v. Allstate Ins. Co.*, 2011 S.D. 13, ¶ 57, 796 N.W.2d 685, 703-04. The Commission's order was appropriate considering that it had granted party status to 42 Intervenors, some of whom had raised issues in their applications for party status that were well beyond the scope of SDCL § 49-41B-27. These overbroad issues included the effects of the proposed pipeline on the Nebraska Sandhills; whether the project is in the national interest; whether Keystone is entitled to exercise the right of eminent domain; and whether development of the Canadian oil sands harms the environment and contributes to levels of CO2 in the atmosphere.[4] (Administrative Record at 278-342.) Having granted liberal intervention and seeing the broad construction that some of the Intervenors placed on the certification statute, the Commission acted reasonably to restrict the proceedings to issues that were relevant to the narrow scope of SDCL § 49-41B-27—Keystone's continued compliance with the permit conditions. The Commission's order was not an abuse of discretion.

b. Communications between counsel for the parties were not relevant

DRA argues that the Commission erred in entering an order on April 22, 2015, denying a motion to compel discovery of communications between

[4] DRA's own brief highlights these issues when it states that the proceedings here are "one piece of a larger national argument" that "encompasses the role the fossil fuel industry plays in global climate change," among other national issues. (DRA Br. at 4.)

Commission Staff lawyers and Keystone's lawyers. (DRA Br. at 29-30.) In seeking a reversal of the discovery order, DRA must show that the Commission abused its discretion. *Dakota, Minn. & Eastern R.R. Corp.*, 2009 S.D. 69, ¶ 47, 771 N.W.2d at 636.

DRA contends that government should be open and transparent, and that regulatory capture is at issue. (DRA Br. at 29-30.) DRA's argument misunderstands the role of Commission Staff in the proceeding. Staff's role was to independently evaluate the technical merit of Keystone's application and to answer Commission questions related to the application. Staff was a party to the proceeding—it hired experts, conducted discovery, and participated in the entire docket, including the evidentiary hearing, as a party separate from the Commission. Staff was separately represented by counsel, just as the Commission was represented by John J. Smith, who also conducted the hearing on behalf of the Commissioners. The role of counsel for Staff was to advocate Staff's position before the Commission. Counsel for Staff did not speak for the Commission. Communications between counsel for Keystone and counsel for Staff were, therefore, communications between two parties to a case. They were not communications between Keystone and the Commission.

Given this role in the proceeding, DRA cannot show that the Commission abused its discretion in not compelling production of discovery related to communications between counsel for two parties to the proceeding. The Commission's decision was not a "fundamental error of judgment" or a choice "outside the range of permissible choices."

c. DRA's untimely exhibits were properly excluded

DRA argues that the Commission erred in granting Keystone's motion in limine to exclude exhibits that had not been timely disclosed. (DRA Br. at 32.) Keystone filed a motion in limine on July 10, 2015, prohibiting DRA from offering any exhibit that had not been timely disclosed in discovery. (Administrative Record at 9474-9480.) The evidentiary hearing was set to start two weeks later, on July 25, 2016.

The basis for Keystone's motion was that DRA's exhibit list included 1,073 documents, all but 36 of which had not been produced in discovery despite Keystone's outstanding request that DRA produce all documents that it intended to offer as exhibits. (*Id.*) Included in DRA's untimely exhibit list were: documents numbered 67-128 from Evan Vokes that were not previously produced; photographs numbered 397-409 taken by Sue Sibson, who testified as a witness for DRA; geologic reports numbered 1058-1062; and photographs taken by Vokes of pipeline construction in Texas numbered 1067-1073. (*See generally* Administrative Record at 9662-19792.) DRA asserted that the rest of the documents on its exhibit list came from Keystone's document production, but by disclosing documents for the first time on July 7, 2015, DRA was sandbagging. Its exhibit list was disclosed after Keystone had filed its rebuttal testimony. (*Id.* at 9100-9106.)

Under SDCL § 15-6-26(e), a party must supplement its discovery responses at appropriate intervals. Under SDCL § 15-6-37(c), a party who fails to timely supplement its discovery responses, "is not, unless such failure is harmless, permitted to use as evidence at a trial, at a hearing, or on a motion any witness or

information not so disclosed." SDCL § 15-6-37(c)(1). s Keystone argued to the Commission, it prepared its defenses to DRA's claims based on DRA's document production and pre-filed testimony and would have been prejudiced at the hearing if DRA had been allowed to introduce hundreds of exhibits that had not been disclosed in discovery. Under SDCL § 15-6-37(c), DRA was required to provide substantial justification for its failure to timely supplement its document production. It made no effort to do so before the Commission, and its argument on appeal does not cite to the applicable statutory framework that guided the Commission's decision. DRA's one-paragraph argument on this issue (DRA Br. at 32) is entirely insufficient for this Court to conclude that the Commission abused its discretion in granting Keystone's motion.

Conclusion

DRA openly contends that it should have been allowed to relitigate the permit granted to Keystone in docket HP09-001. It further argues that the Commission should have imposed no limits on its discovery or evidentiary presentation. These arguments plainly contradict the narrow and precise language of SDCL § 49-41B-27. The Commission's more measured approach was not unreasonable and not unfair to DRA. Absent clear error in the Commission's findings this Court is left with no reason to reverse. Keystone respectfully requests that the Commission's order be affirmed.

Dated this 5th day of December, 2017.

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Certificate of Compliance

In accordance with SDCL § 15-26A-66(b)(4), I certify that this brief complies with the requirements set forth in the South Dakota Codified Laws. This brief was prepared using Microsoft Word 2010, Times New Roman (12 point) and contains 9,938 words, excluding the table of contents, table of authorities, jurisdictional statement, statement of legal issues and certificate of counsel. I have relied on the word and character count of the word-processing program to prepare this certificate.

Dated this 5th day of December, 2017.

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Certificate of Service

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Appendix

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

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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	:	DOCKET NUMBER HP _____
	:	CERTIFICATION

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City of Calgary)
) **ss**
Alberta, Canada)

TransCanada Keystone Pipeline, LP ("Keystone") hereby certifies that the conditions upon which the South Dakota Public Utilities Commission granted the facility permit in Docket HP09-001 for the Keystone XL hydrocarbon pipeline (the "Project") under the Energy Conversion and Transmission Facilities Act continue to be satisfied. The basis for this certification is set forth in the accompanying Petition for Order Accepting Certification under SDCL 49-41B-27. Keystone is in compliance with the conditions attached to the June 29, 2010 Amended Final Decision and Order in this docket, to the extent that those conditions have applicability in the current pre-construction phase of the Project. Keystone certifies that it will meet and comply with all of the applicable permit conditions during construction, operation, and maintenance of the Project.

Case Number: HP ____

STATUTORY DECLARATION

[redacted], of [redacted], in the Province of Alberta, Canada, do solemnly declare as follows:

[redacted]

And I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as is made under oath.

DECLARED before me at the City of Calgary in the Province of Alberta, this 12th day of September, A.D. 20 14.

COREY GOULET

A Commissioner for Oaths/Notary Public

(PRINT OF STAMP NAME HERE)

[redacted]

(Must be legibly printed or stamped in legible printing if appointed under section 1 of the act)

MY APPOINTMENT EXPIRES

SHANNON R. ONOOK
A Notary Public in and for the Province of Alberta. My Commission expires at the pleasure of the Lieutenant Governor-in-Council

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

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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	:	DOCKET NUMBER HP ____ PETITION FOR ORDER ACCEPTING CERTIFICATION UNDER SDCL § 49-41B-27

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Petitioner TransCanada Keystone Pipeline, LP (Keystone) sought and obtained a permit from the South Dakota Public Utilities Commission (Commission) in 2010 to construct and operate the Keystone XL hydrocarbon pipeline project (Project) through western South Dakota. The Commission granted a final permit in Docket No. HP09-001 on June 29, 2010. More than four years have passed since that time. State law provides that permits are perpetual but if construction has not commenced within four years of issuance, the applicant must certify to the Commission, prior to commencing construction, that the Project continues to meet the conditions upon which the permit was issued (SDCL 49-41B-27). By this filing, Keystone makes the required certification and requests that the Commission issue an order accepting Keystone's certification and finding that the Project continues to meet the conditions upon which the permit was issued.

I.
BACKGROUND

On March 12, 2009, Keystone filed an application in Docket HP 09-001 seeking a permit to construct and operate the Project in South Dakota. A hearing was held before the Commission from November 2-4, 2009. Keystone, Commission staff, and Dakota Rural Action were parties to the proceeding and participated in the hearing. The Commission issued a Final Decision and Order dated March 12, 2010. The Commission issued an Amended Final Decision and Order dated June 29, 2010, to which 50 conditions are attached.

As stated in the Amended Final Decision and Order, the Project originally was proposed to be developed in three segments: the Steele City Segment from Hardisty, Alberta, to Steele City, Nebraska; the Gulf Coast Segment from Cushing, Oklahoma, to Liberty County, Texas; and the Houston Lateral Segment from Liberty County, Texas to refinery markets near Houston, Texas. The Project was conceived to transport incremental crude oil production from the Western Canadian Sedimentary Basin to refineries and markets in the United States. Construction of the Project was proposed to begin in May 2011 and to be completed in 2012.

The Project, as proposed, has been delayed. A Presidential Permit required by Executive Order 11423 of August 16, 1968, and Executive Order 13337 of April 30, 2004, allowing the pipeline to cross the border between Canada and the United States, is still under review before the United States Department of State (DOS), Keystone submitted a Presidential Permit application to the DOS on September 19, 2008. After that application was denied without prejudice due to the Administration's inability to complete its review by a Congressionally imposed deadline, Keystone submitted a revised application on May 4, 2012. Drawing upon an

extensive public record and multiple draft and final Environmental Impact Statements, DOS issued a Final Supplemental Environmental Impact Statement (Final SEIS) on January 31, 2014.[1] In the Final SEIS, the DOS concluded, among other things, that:

- Keystone has long-term commitments to ship both Canadian and Bakken oil to Gulf Coast refineries, production of Canadian and Bakken oil is projected to increase, and there is existing demand by Gulf Coast area refiners for stable sources of crude oil. (Final SEIS §§ 1.3.1, 1.4.)

- The analyses of potential impacts associated with construction and normal operation of the pipeline "suggest that significant impacts to most resources are not expected along the proposed Project route" assuming that the Project complies with applicable laws, regulations, and permit conditions. (Final SEIS § 4.16.)

- Due to market developments, the transportation of Canadian crude by rail is already occurring in substantial volumes (an estimated 180,000 bpd), with a greater risk of leaks and spills, as well as injuries and fatalities, than if the oil were transported by pipeline. (Final EIS, §§ E.S. 3.1, E.S.5.4.3.)

On April 18, 2014, the Administration announced an indefinite delay in the current Presidential Permit review process, referencing on-going litigation related to the approval of a revised pipeline route in Nebraska.[2]

During the pendency of the current Presidential Permit application, Keystone proceeded with the Gulf Coast Segment as a stand-alone project based on its independent utility. Construction is complete and that pipeline from Cushing, OK to Liberty County, Texas was placed in service on January 22, 2014. Construction of the Houston Lateral segment is currently

[1] http://keystonepipeline-xl.state.gov/finalseis/index.htm.

[2] In 2012, the Nebraska Legislature approved legislation giving the Governor authority to approve a revised route for the pipeline in that State. After an extensive public review process led by the Department of Environmental Quality, the Governor approved Keystone's proposed re-route in Nebraska. In February 2014, a Nebraska lower court declared the legislation unconstitutional. That case is currently on appeal to the Nebraska Supreme Court and the effect of the lower court's decision is stayed pending the outcome of that appeal.

under way. The currently pending Presidential Permit application involves consideration of the former Steele City segment only (see Appendix A; map of the current proposed Project).

Since the Amended Final Decision and Order, the Bakken Marketlink Project has been made part of the Project. Bakken Marketlink includes a five-mile pipeline, pumps, meters, and storage tanks near Baker, Montana, to deliver light sweet crude oil from the Bakken formation in Montana and North Dakota for transportation through the Project. Bakken Marketlink became commercial after the Amended Final Decision and Order in this case, as the result of a successful open season that closed on November 19, 2010. Bakken Marketlink will deliver up to 100,000 bpd of domestically-produced crude oil into the Keystone XL Pipeline. Approximately 700,000 bpd of Bakken formation production is currently being shipped by rail. Bakken Marketlink may relieve the need for some of that rail transportation while providing improved ratability and lower transportation costs for American producers.

The material aspects of the proposed construction and operation of the Project in South Dakota remain essentially unchanged since the Commission granted its approval in 2010. The Project will extend 315 miles, use 36-inch nominal diameter pipe made of high-strength steel, and be protected by an external fusion bonded epoxy coating and cathodic protection by impressed current. The route corridor through South Dakota is largely unchanged from the route analyzed by the Commission as part of the permitting process.[3] The pipeline will have batching capabilities and will be able to transport products ranging from light crude oil to heavy crude oil.

[3] Keystone has implemented minor route variations designed to accommodate landowner concerns and improve constructability. As required by Condition No. 6 of the Amended Final Decision and Order, any material route changes will be provided to the Commission for review prior to construction.

Since the Amended Final Decision and Order, Keystone has filed seventeen quarterly reports with the Commission as required by Condition No. 8 of the Amended Final Decision and Order. Each report is submitted by Keystone's public liaison officer and addresses the status of land acquisition, construction, permitting, and other items. The most recent quarterly report was submitted on July 29, 2014, and a copy of this report is attached hereto as Appendix B.

II.
THE PROJECT CONTINUES TO MEET THE CONDITIONS UPON WHICH THE PERMIT WAS ISSUED

Accompanying this petition is a Certification, signed by the President of the Keystone Pipeline business unit, attesting that: (i) the conditions upon which the Commission issued the facility permit in this docket continue to be satisfied; (ii) Keystone is in compliance with the conditions attached to the June 29, 2010 order, to the extent that those conditions have applicability in the current pre-construction phase of the Project; and (iii) Keystone will meet and comply with all of the applicable permit conditions during construction, operation, and maintenance of the Project. Compliance with those conditions is further reflected in Keystone's July 29, 2014 Quarterly Report (Appendix B). Thus, Keystone has satisfied the statutory requirement to certify that the Project continues to meet the conditions upon which the Commission's approval was issued.

In addition, Keystone submits that the circumstances and factual underpinnings of the Project that led the Commission to issue the facility permit remain valid. The factual findings underlying the Commission's decision are set forth in the June 29, 2010 Amended Final Decision and Order. In support of this petition, Appendix C hereto presents those findings of fact from the

Commission's Amended Final Decision and Order that have changed since 2010 and describes the nature of those changes. As Appendix C makes clear, to the extent that there have been changes in the underlying facts, those changes are either neutral or positive to the Commission's concerns. In sum, the need, impacts, efficacy, and safety of the Project have not changed since the Amended Final Decision and Order.

III.
CONCLUSION

The attached Certification, together with this petition and the supporting appendices, provides the necessary basis for the Commission to find that the Project continues to meet the conditions upon which the June 2010 permit was issued. Accordingly, Keystone respectfully requests that the Commission accept its certification under SDCL § 49-41B-27.

Dated this 15th day of September, 2014.

WOODS, FULLER, SHULTZ & SMITH P.C.

By _____

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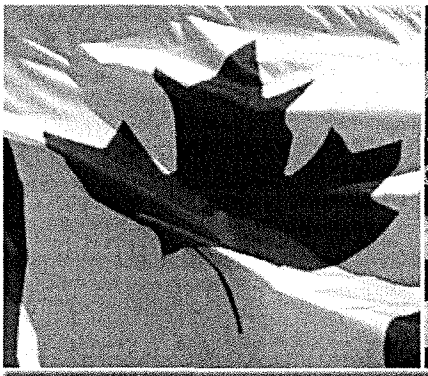

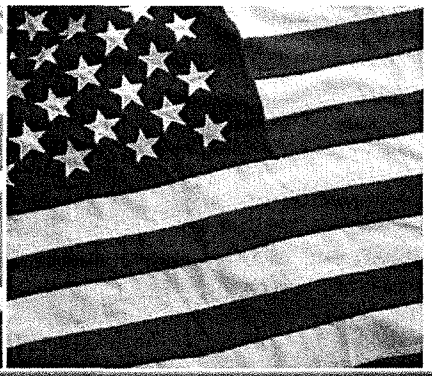

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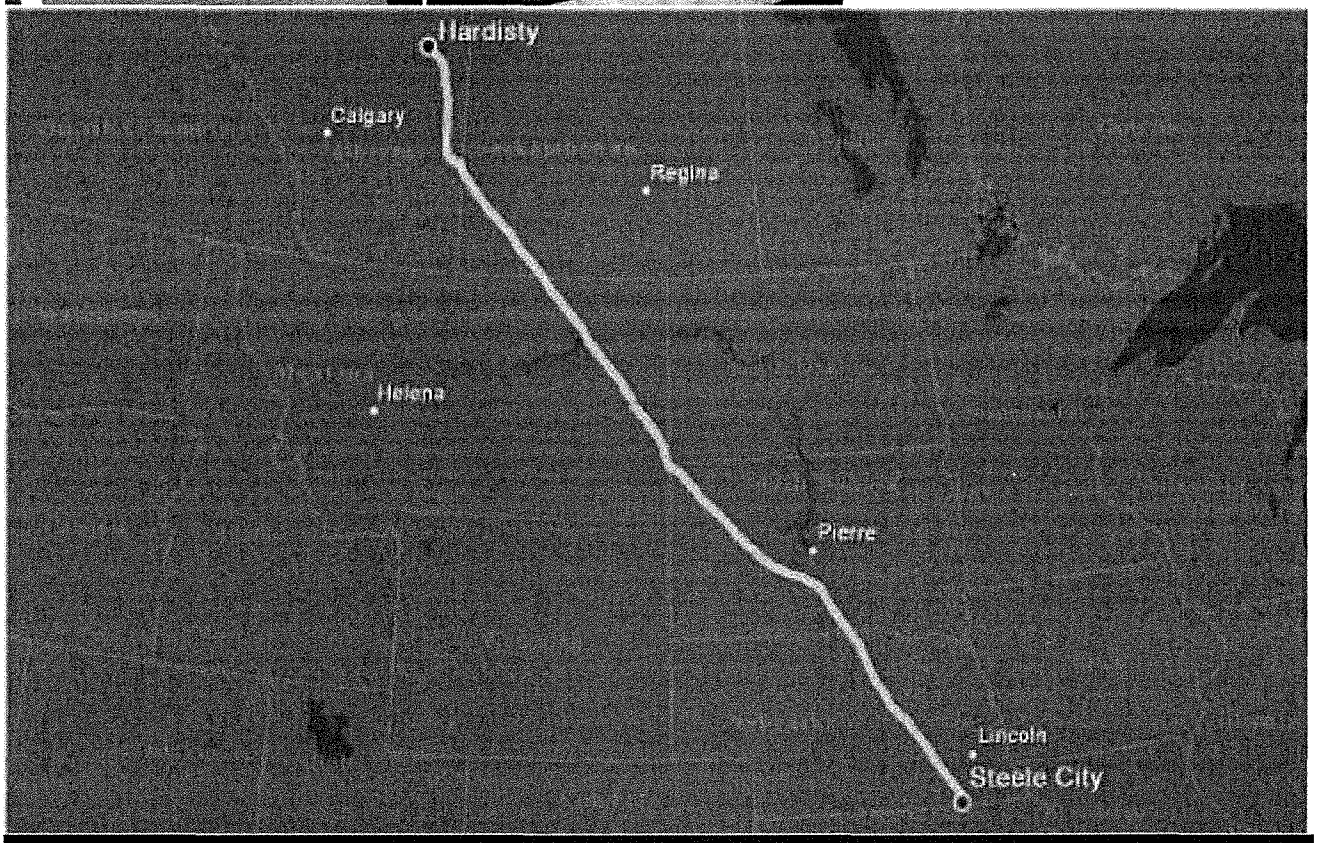

KEYSTONE XL PIPELINE PROJECT

SOUTH DAKOTA PUBLIC UTILITIES COMMISSION QUARTERLY REPORT

For the Quarter Ending: **June 30, 2014**

APP. 009

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1.0 EXECUTIVE SUMMARY

TransCanada filed a new a Presidential Permit application with the Department of State on May 4, 2012 and on January 31, 2014 the Department of State issued a Final Supplemental Environmental Impact Statement (FSEIS). The project is currently in the National Interest Determination period of the Presidential Permit process. Construction activities have not taken place, or will take place, in South Dakota until the required permits and regulatory approvals are obtained for any proposed construction site. Project personnel are continuing to review the proposed pipeline route to identify any potential construction issues before construction. The construction plan for the portion of the Keystone XL Pipeline Project through South Dakota is dependent on the timing of final regulatory approvals and may include three or four spreads.

Keystone will implement the conditions of federal and state permits at the times specified by those permits. (See Appendix A for a table of the Summary of Consultations with the South Dakota Department of Environmental and Natural Resources.)

2.0 PROJECT DESCRIPTION

The project will include approximately 1,204 miles of 36 inch diameter pipeline from Hardisty, Alberta to Steel City, Nebraska, including approximately 313 miles in South Dakota.

3.0 LAND ACQUISITION STATUS (South Dakota)

3.1 Pipeline Right-of-Way Acquisition

The pipeline centerline crosses property owned by 301 landowners. Keystone has acquired easements from over 99% of the landowners. Easements have been acquired from the vast majority of all private landowners. Acquisition of tracts owned by the State of South Dakota is in process.

3.2 Pump Stations

The pump stations will be located in Harding, Meade, Haakon, Jones, and Tripp County, South Dakota. Keystone has purchased all seven pump station sites. The size of each pump station site is approximately 10 acres.

3.3 Pipe and Contractor Yards

Keystone has leased 11 pipe yards and six contractor yards in South Dakota. The leases were originally for 36 months, commencing on October 10, 2010. The leases have been extended an additional 24 months, expiring on October 1, 2015. The yards are in Harding, Butte, Meade, Haakon, Jones, Lyman and Tripp Counties. Each yard is approximately 30 acres in size.

3.4 Contractor Housing Camps

As outlined in the Keystone XL FSEIS, in Section 2.1.5.4 - Construction Camps, some remote areas in South Dakota do not have sufficient temporary housing near the proposed route to house all construction personnel working on spreads in those areas. In those remote areas, temporary work camps would be constructed to meet the housing needs of the construction workforce. Details of the construction camp configuration will depend on the final construction spread configuration and construction schedule, which is dependent on receipt of the final federal approval.

4.0 Non-Environmental Permitting Status (South Dakota)

4.1 County Roads

102 crossing permit applications have been filed for the pipeline to cross under all county road rights-of-way. Of the 102 applications filed, 101 have been acquired as of September 30, 2013.

4.2 State Roads

Thirteen (13) crossing permits and twenty-four (24) temporary approach permit applications have been filed with the state of South Dakota Department of Transportation (SD DOT) for the pipeline to cross under the state road rights-of-way. All crossing and temporary approach permits have been received from the SD DOT.

4.3 Railroads

Two crossing easement permits are being negotiated for the pipeline to cross under existing railroad rights-of-way. The South Dakota State Railroad application was received November 23, 2012. Canadian Pacific Railway was sold to the Genesee & Wyoming Railway; All permitting was transferred and is pending a signed license agreement.

4.4 Pump Stations

The special use permits required for the two Harding County pump stations were approved on September 28, 2010. Of the remaining five pump stations, four do not require a special use permit, leaving only one special use permit needed for the pump station in Jones County.

4.5 Contractor Camps

All construction camps will be permitted, constructed and operated consistent with applicable county, state, and federal regulations. (See Table 2.1-11 of the FSEIS for relevant regulations and permits required for the construction.)

5.0 ENVIRONMENTAL PERMITTING STATUS (South Dakota)

Keystone is awaiting or will be preparing and submitting all remaining applications for required federal and state environmental permits for work in South Dakota and will obtain the required permits in advance of pipeline construction activities.

6.0 FEDERAL PERMITS

TransCanada filed a Presidential Permit application with the U.S. Department of State on May 4, 2012 to authorize the international border crossing for the Keystone XL Project. On January 31, 2014 the US Department of State issued a Final Supplemental Environmental Impact Statement addressing Keystone's May 2012 Presidential Permit application. The project is currently in the National Interest Determination phase. The route through South Dakota is largely unchanged from the route analyzed for the SDPUC permit.

The former "Gulf Coast Segment" of the Keystone XL Project (a pipeline from Cushing Oklahoma to the Gulf Coast in Texas) was determined to have independent utility and was constructed as the stand-alone Gulf Coast pipeline separate from the Keystone XL Project.

Keystone XL pipeline will also file permit applications with the US Army Corps of Engineers for the necessary authorizations under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

6.1 Permit Compliance

Keystone will implement the conditions of federal and state permits at the times specified by those permits. (See Appendix A for a table of the Summary of Consultations with the South Dakota Department of Environmental and Natural Resources.)

7.0 CONSTRUCTION STATUS

No construction activities have taken place, or will take place, in South Dakota until the required permits and regulatory approvals are obtained for any proposed construction site. Project personnel are continuing to review the proposed pipeline route to identify any potential construction issues before construction.

8.0 ENVIRONMENTAL CONTROL ACTIVITIES

Environmental control activities, as required by applicable permit conditions, will be implemented when construction activities start in South Dakota.

9.0 STATUS OF EMERGENCY RESPONSE AND INTEGRITY MANAGEMENT PLANS

9.1 Emergency Response Plan

Development of the Keystone Pipeline Project operational Emergency Response Plan for the U.S. is ongoing and will be submitted to Pipeline and Hazardous Materials Safety Administration (PHMSA) six months before pipeline in-service. New TransCanada-owned emergency response equipment trailers are planned for storage in South Dakota.

Through its public awareness program, TransCanada continues to provide various types of information related to Keystone emergency response and pipeline safety awareness.

9.2 Integrity Management Plan for High Consequence Areas

Development of the Integrity Management Plan for the high consequence areas is ongoing. Progress in identifying high consequence areas and creating their subsequent tactical plans is about 70% complete. These tactical plans will be included in the Emergency Response Plan. After further discussions and coordination with PHMSA, the Integrity Management Plan will be formally submitted to PHMSA.

10.0 OTHER COMPLIANCE MEASURES

See Appendix B for the status of implementation of South Dakota Public Utilities Commission (PUC) conditions.

APPENDIX A

Table 1: Recent Consultations with South Dakota Department of Environment and Natural Resources

Date of Contact	Agency / Individual	Purpose of Consultation	Results of Consultation	Follow-up Required
8-3-10	SD DENR Kelli Buscher, John Miller, Albert Spangler, Brian Walsh, Mike DeFea SDGFP Leslie Murphy, John Lott SD DAG Raymond Sowers, Bill Smith	Discuss both state and federal permitting for the Keystone XL Pipeline project in South Dakota as well as to review the current project status and schedule in South Dakota.	Laid out a blue print for State permitting.	Determine if a construction stormwater discharge permit is required for the camps as it is not required for pipeline related construction
10-23-12	SDGFP Silka Kempana, Travis Runia	Coordination with FWS, DOS, SD GFP regarding Keystone Sage Grouse Protection Plan and mitigation plans	Keystone will modify Sage Grouse Protection Plan to account for SD GFP additional input, conduct ambient noise studies and additional modeling, and revise mitigation plans for SD GFP review.	Updating Sage Grouse Protection Plan, mitigation plans and noise modeling
10-25-12	SD DENR Al Spangler	Verification of permit application process	Discussed water withdrawal and discharge permit application and format required	Keystone will prepare permit applications
12-3-12	SD DENR Ashley Brakke	Followed up with SD DENR with the submitted air permit applications for the contractor camps [for emergency generators].	DENR needs a notarized statement from the applicant saying these were the generators that would be used for emergency electric power. Ms. Brakke was about ½ way through with the applications and none yet required the permit.	Prepare statement for SD Camp Contractor(s) to sign, notarize and send to the DENR Air Quality representative when they are on board.
12-5-12	SD DENR Ashley Brakke	Followed up with SD DENR with the submitted air permit applications for the contractor camps [for emergency generators].	DENR stated that they were OK with the notarized letter not being submitted until the camp contractor had been identified and on board.	Prepare statement for SD Camp Contractor(s) to sign, notarize and send to the DENR Air Quality representative when they are on board.

Date of Contact	Agency / Individual	Purpose of Consultation	Results of Consultation	Follow-up Required
4-10-13	SD DENR Al Spangler	Confirm/discuss whether there would be any issues associated with hydrotest water obtained in SD being used to test pipe in Nebraska as long as the water was pushed back and released in SD near the location where the water was withdrawn.	Al Spangler confirmed that he did not see any issue with this approach. He would double-check with the water people and confirm.	Keystone will follow up with SD DENR on the feasibility of using SD test water in NE.
4-15-13	SD GFP Paul Coughlin	Discuss the potential for water withdrawal from Lake Gardner, which is a SD Game Protection Area.	SD GFP was receptive to the potential water withdrawal from Lake Gardner. SD GFP requested a formal written request.	Keystone will prepare a formal written request for the withdrawal of water from Lake Gardner
5-7-13	SD DENR Genny McMat, Marc Rush SDGFP Leslie Murphy, Gene Galinat, John Lott	Discuss the feasibility of the Keystone utilizing Lake Gardner as a source for hydrostatic test water and dust control water	SDGFP conditionally approved of the water withdrawal from Lake Gardner as long as there was adequate water present. SD GFP also stated that they would have to determine of there would be any other conditions that would need to be met to allow for the water withdrawal.	Follow-up with SDGFP on their progress developing a list of conditions that would permit the use of water from Lake Gardner for the proposed use [no further conditions were proposed] Work with SD GFP to fund restoration or conservation project in exchange for water use.
5-9-13	SDGFP Leslie Murphy	Emailed a pdf map of the proposed water withdrawal location for Lake Gardner	Provided the map following May 7, 2013 meeting	None
11-14-13	SD DENR William Marcouiller	Discuss the renewal process for the temporary discharge permit that had been issued to Keystone in April 2013.	SD DENR confirmed that the permit was good through December 31, 2015.	Keystone would need to renew the permit if discharge activities would occur after December 2015.
04-03-14	SD Natural Heritage Program Casey Heimerl	Request for most recent observation records for northern long –eared bat	Being processed	No
04-16-14	SD Natural Heritage Program Casey Heimerl	Request for most recent observation records for northern long –eared bat	Received via email: tabular and GIS (shapefiles) of the observation records of the northern long-eared bat for the counties that the Project crosses.	No

Date of Contact	Agency / Individual	Purpose of Consultation	Results of Consultation	Follow-up Required
05-28-14	SD Natural Heritage Program Casey Heimerl SD Game, Fish and Parks Tom Kirschenmann	Voluntary Informal Conference with US Fish and Wildlife Service to discuss the potential impacts to northern long-eared bat and red knot resulting from the Project. Both species are proposed for listing under the Endangered Species Act.	Keystone to revise habitat assessment report for the northern long-eared bat and red knot based on the comments and guidance provided during the meeting.	Keystone will submit a revised report to USFWS

APPENDIX B

Table 2: Status of Implementation of South Dakota PUC Conditions

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
1	Keystone shall comply with all applicable laws and regulations in its construction and operation of the Project. These laws and regulations include, but are not necessarily limited to: the federal Hazardous Liquid Pipeline Safety Act of 1979 and Pipeline Safety Improvement Act of 2002, as amended by the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, and the various other pipeline safety statutes currently codified at 49 U .S.C. § 601 01 et seq. (collectively, the "PSA"); the regulations of the United States Department of Transportation implementing the PSA, particularly 49 C.F.R Parts 194 and 195; temporary permits for use of public water for construction, testing or drilling purposes, SDCL 46-5-40.1 and ARSD 74:02:01 :32 through 74:02:01 :34.02 and temporary discharges to waters of the state, SDCL 34A-2-36 and ARSD Chapters 74:52:01 through 74:52:11, specifically, ARSD § 74:52:02:46 and the General Permit issued thereunder covering temporary discharges of water from construction dewatering and hydrostatic testing.	Construction of the project has not been initiated. Keystone will comply with all applicable laws and regulations during construction and operation of the Project.
2	Keystone shall obtain and shall thereafter comply with all applicable federal, state and local permits, including but not limited to: Presidential Permit from the United States Department of State, Executive Order 11423 of August 16, 1968 (33 Fed. Reg. 11741) and Executive 'Order 13337 of April 30, 2004 (69 Fed. Reg. 25229), for the construction, connection, operation, or maintenance, at the border of the United States, of facilities for the exportation or importation of petroleum, petroleum products, coal, or other fuels to or from a foreign country; Clean Water Act § 404 and Rivers and Harbors Act Section 10 Permits; Special Permit if issued by the Pipeline and Hazardous Materials Safety Administration; Temporary Water Use Permit, General Permit for Temporary Discharges and federal, state and local highway and road encroachment permits. Any of such permits not previously filed with the Commission shall be filed with the Commission upon their issuance. To the extent that any condition, requirement or standard of the Presidential Permit, including the Final EIS Recommendations, or any other law, regulation or permit applicable to the portion of the pipeline in this state differs from the requirements of these Conditions, the more stringent shall apply.	Construction of the project has not been initiated. Keystone is in the process of obtaining all applicable permits from Federal, State and Local entities. Upon commencement of construction Keystone will follow all applicable laws and conditions related to these permits.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
3	Keystone shall comply with and implement the Recommendations set forth in the Final Environmental Impact Statement when issued by the United States Department of State pursuant to its Amended Department of State Notice of Intent To Prepare an Environmental Impact Statement and To Conduct Scoping Meetings and Notice of Floodplain and Wetland Involvement and To Initiate Consultation Under Section 106 of the National Historic Preservation Act for the Proposed TransCanada Keystone XL Pipeline; Notice of Intent--Rescheduled Public Scoping Meetings in South Dakota and extension of comment period (FR vol. 74, no. 54, Mar. 23, 2009). The Amended Notice and other Department of State and Project Documents are available on-line at: http://www.keystonepipeline-xl.state.gov/clientsite/keystonexl.nsf?Open.	The Department of State re-initiated its NEPA review upon receipt of Keystone's May 4, 2012 application for a Presidential Permit. The Department is in the process of preparing a Supplement to the August 2011 Final Environmental Impact Statement for the project. Construction of the project has not been initiated. Keystone will comply with and implement the Recommendations set forth in the Final Environmental Impact Statement, and the Supplemental Environmental Impact Statement, as reflected in the Record of Decision, when issued by the Department of State.
4	The permit granted by this Order shall not be transferable without the approval of the Commission pursuant to SDCL 49-418-29.	N/A at this time.
5	Keystone shall undertake and complete all of the actions that it and its affiliated entities committed to undertake and complete in its Application as amended, in its testimony and exhibits received in evidence at the hearing, and in its responses to data requests received in evidence at the hearing.	Construction of the project has not been initiated. When construction is initiated, Keystone will undertake the actions committed to during the SDPUC hearings.
6.a	The most recent and accurate depiction of the Project route and facility locations is found on the maps in Exhibit TC-14. The Application indicates in Section 4.2.3 that Keystone will continue to develop route adjustments throughout the pre-construction design phase. These route adjustments will accommodate environmental features identified during surveys, property-specific issues, and civil survey information. The Application states that Keystone will file new aerial route maps that incorporate any such route adjustments prior to construction. Ex TC-1.4.2.3, p. 27.	Keystone will file new aerial route maps reflecting route adjustments prior to construction.
6.b	Keystone shall notify the Commission and all affected landowners, utilities and local governmental units as soon as practicable if material deviations are proposed to the route.	Keystone will continue to work with all landowners, utilities, local government and other affected parties as the final route is being developed and will notify the Commission and all affected parties of any material deviations to the proposed route.
6.c	Keystone shall notify affected landowners of any change in the route on their land.	This is a continuing occurrence during engineering review. Keystone will continue to notify landowners of route changes on their land as well as inform them of associated activities, such as civil and environmental surveys.
6.d	At such time as Keystone has finalized the pre-construction route, Keystone shall file maps with the Commission depicting the final preconstruction route	Construction of the project has not been initiated. Keystone will finalize the route and submit to the Commission new maps depicting the final preconstruction route prior to construction.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
6.e	If material deviations are proposed from the route depicted on Exhibit TC-14 and accordingly approved by this Order, Keystone shall advise the Commission and all affected landowners, utilities and local governmental units prior to implementing such changes and afford the Commission the opportunity to review and approve such modifications.	Keystone has advised the Commission of all material route changes to date and has afforded the commission the opportunity to review and approve such modifications.
6.f	At the conclusion of construction, Keystone shall file detail maps with the Commission depicting the final as-built location of the Project facilities.	Keystone will submit final route maps to the Commission at the conclusion of construction.
7	Keystone shall provide a public liaison officer, approved by the Commission, to facilitate the exchange of information between Keystone, including its contractors, and landowners, local communities and residents and to promptly resolve complaints and problems that may develop for landowners, local communities and residents as a result of the Project. Keystone shall file with the Commission its proposed public liaison officer's credentials for approval by the Commission prior to the commencement of construction. After the public liaison officer has been approved by the Commission, the public liaison officer may not be removed by Keystone without the approval of the Commission. The public liaison officer shall be afforded immediate access to Keystone's on-site project manager, its executive project manager and to contractors' on-site managers and shall be available at all times to the Staff via mobile phone to respond to complaints and concerns communicated to the Staff by concerned landowners and others. Keystone shall also implement and keep an up-dated web site covering the planning and implementation of construction and commencement of operations in this state as an informational medium for the public. As soon as the Keystone's public liaison officer has been appointed and approved, Keystone shall provide contact information for him/her to all landowners crossed by the Project and to law enforcement agencies and local governments in the vicinity of the Project. The public liaison officer's contact information shall be provided to landowners in each subsequent written communication with them. If the Commission determines that the public liaison officer has not been adequately performing the duties set forth for the position in this Order, the Commission may, upon notice to Keystone and the public liaison officer, take action to remove the public liaison officer.	The Commission has approved Sarah Metcalf as the public liaison officer for the Keystone XL project. The liaison can be reached at: Mailing Address: South Dakota Pipeline Liaison Officer PO Box 491 Aberdeen, South Dakota 57402 Phone: (888) 375-1370 Email: smetcalf12@gmail.com Contact information for the South Dakota liaison was sent out in December 2010 to landowners. Notification to law enforcement agencies and local governments in the vicinity of the Project was completed in 1st quarter 2011 in conjunction with notice required by other conditions for these groups. The liaison continues to contact affected counties, townships and other groups as the permit process takes place. The TransCanada Keystone Pipeline website at: http://www.transcanada.com/keystone.html provides general information about planning for construction of the project. When construction commences, more detailed construction information will be posted.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
8	Until construction of the Project, including reclamation, is completed, Keystone shall submit quarterly progress reports to the Commission that summarize the status of land acquisition and route finalization, the status of construction, the status of environmental control activities, including permitting status and Emergency Response Plan and Integrity Management Plan development, the implementation of the other measures required by these conditions, and the overall percent of physical completion of the project and design changes of a substantive nature. Each report shall include a summary of consultations with the South Dakota Department of Environment and Natural Resources and other agencies concerning the issuance of permits. The reports shall list dates, names, and the results of each contact and the company's progress in implementing prescribed construction, land restoration, environmental protection, emergency response and integrity management regulations, plans and standards. The first report shall be due for the period ending June 30, 2010. The reports shall be filed within 31 days after the end of each quarterly period and shall continue until the project is fully operational.	Keystone will continue to submit quarterly reports until the construction and reclamation of the Keystone XL pipeline is complete and the pipeline is operational.
9	Until one year following completion of construction of the Project, including reclamation, Keystone's public liaison officer shall report quarterly to the Commission on the status of the Project from his/her independent vantage point. The report shall detail problems encountered and complaints received. For the period of three years following completion of construction, Keystone's public liaison officer shall report to the Commission annually regarding post-construction landowner and other complaints, the status of road repair and reconstruction and land and crop restoration and any problems or issues occurring during the course of the year	The public liaison officer will comply with this condition and is currently available to affected landowners and parties in the State. Quarterly reporting will begin with active construction activities.
10	Not later than six months prior to commencement of construction, Keystone shall commence a program of contacts with state, county and municipal emergency response, law enforcement and highway, road and other infrastructure management agencies serving the Project area in order to educate such agencies concerning the planned construction schedule and the measures that such agencies should begin taking to prepare for construction impacts and the commencement of project operations.	Keystone has commenced and will continue a program of contacts to inform and coordinate with county and municipal emergency response, law enforcement and highway, road and other infrastructure management agencies regarding planned construction and eventual operation of the Keystone XL Pipeline.
11	Keystone shall conduct a preconstruction conference prior to the commencement of construction to ensure that Keystone fully understands the conditions set forth in this order. At a minimum, the conference shall include a Keystone representative, Keystone's construction supervisor and Staff.	Prior to the start of construction a Keystone representative, the Keystone construction supervisor, and staff will arrange a preconstruction conference with the Commission to ensure a full understanding of the conditions set forth in this order.
12	Once known, Keystone shall inform the Commission of the date construction will commence, report to the Commission on the date construction is started and keep the Commission updated on construction activities as provided in Condition 8.	Keystone will inform the Commission accordingly during the preconstruction conference.
13	Except as otherwise provided in the conditions of this Order and Permit, Keystone shall comply with all mitigation measures set forth in the Construction Mitigation and Reclamation Plan (CMR Plan)	Construction of the project has not been initiated. Keystone will comply with the requirements set forth in the CMR Plan during construction.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
13.a	If modifications to the CMR Plan are made by Keystone as it refines its construction plans or are required by the Department of State in its Final EIS Record of Decision or the Presidential Permit, the CMR Plan as so modified shall be filed with the Commission and shall be complied with by Keystone.	Keystone will submit any modifications to the CMR Plan to the Commission and comply with any modifications to the CMR Plan.
14	Keystone shall incorporate environmental inspectors into its CMR Plan and obtain follow-up information reports from such inspections upon the completion of each construction spread to help ensure compliance with this Order and Permit and all other applicable permits, laws, and rules	Construction of the project has not been initiated. Keystone will utilize environmental inspectors and comply with this condition during the construction of the project.
15	Prior to construction, Keystone shall, in consultation with area NRCS staff, develop specific construction/reclamation units (Con/Rec Units) that are applicable to particular soil and subsoil classifications, land uses and environmental settings. The Con/Rec Units shall contain information of the sort described in response to Staff Data Request 3-25 found in Exhibit TC-16.	Keystone has completed the consultation with NRCS and has received the concurrence of the NRCS for Con/Rec Units to be utilized in South Dakota. Keystone will consult further with the NRCS should alterations to the Con/Rec Units be required.
15.a	In the development of the Con/Rec Units in areas where NRCS recommends, Keystone shall conduct analytical soil probing and/or soil boring and analysis in areas of particularly sensitive soils where reclamation potential is low. Records regarding this process shall be available to the Commission and to the specific land owner affected by such soils upon request	Keystone has completed analytical soil probing and/or soil boring and analysis in areas of particularly sensitive soils where reclamation potential is low. Records regarding the process are available to the Commission and to the specific land owner affected by such soil upon request.
15.b	Through development of the Con/Rec Units and consultation with NRCS, Keystone shall identify soils for which alternative handling methods are recommended.	Keystone has completed the analytical soil probing and/or boring in areas of sensitive soils following the NRCS recommendations.
15.b.1	Keystone shall thoroughly inform the landowner regarding the options applicable to their property, including their respective benefits and negatives, and implement whatever reasonable option for soil handling is selected by the landowner. Records regarding this process shall be available to the Commission upon request.	This is discussed with the landowners and itemized in the "Binding Agreement". These agreements are available to the Commission upon request.
15.c	Keystone shall, in consultation with NCRS, ensure that its construction planning and execution process, including Con/Rec Units, CMR Plan and its other construction documents and planning shall adequately identify and plan for areas susceptible to erosion, areas where sand dunes are present, areas with high concentrations of sodium bentonite, areas with sodic, saline and sodic-saline soils and any other areas with low reclamation potential	Keystone's construction planning and execution process consisted of consultation with the NRCS for identified areas susceptible to erosion, areas where sand dunes are present, areas with high concentration of sodium bentonite, areas with sodic, saline and sodic-saline soils and any other areas with low reclamation potential. The identified areas were addressed in the CON/REC Units, CMR Plan, and will be listed on construction alignment sheets.
15.d	The Con/Rec Units shall be available upon request to the Commission and affected landowners. Con/Rec Units may be evaluated by the Commission upon complaint or otherwise, regarding whether proper soil handling, damage mitigation or reclamation procedures are being followed.	Con/Rec Units will be available upon request to the Commission and affected landowners.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
15.e	Areas of specific concern or of low reclamation potential shall be recorded in a separate database. Action taken at such locations and the results thereof shall also be recorded and made available to the Commission and the affected property owner upon request.	Areas of specific concern or of low reclamation potential will be recorded in a separate database. Action taken at such locations and the results thereof will be recorded and made available to the Commission and the affected property owner upon request.
16	Keystone shall provide each landowner with an explanation regarding trenching and topsoil and subsoil/rock removal, segregation and restoration method options for his/her property consistent with the applicable Con/Rec Unit and shall follow the landowner's selected preference as documented on its written construction agreement with the landowner, as modified by any subsequent amendments, or by other written agreement(s).	This is discussed with the landowners and itemized in the "Binding Agreement".
16.a	Keystone shall separate and segregate topsoil from subsoil in agricultural areas, including grasslands and shelter belts, as provided in the CMR Plan and the applicable Con/Rec Unit.	Keystone will separate and segregate topsoil from subsoil in agricultural areas, including grasslands and shelter belts, as provided in the CMR Plan and the applicable Con/Rec Unit.
16.b	Keystone shall repair any damage to property that results from construction activities	Keystone will address this during or following construction activities.
16.c	Keystone shall restore all areas disturbed by construction to their preconstruction condition, including their original preconstruction topsoil, vegetation, elevation, and contour, or as close thereto as is feasible, except as is otherwise agreed to by the landowner.	Keystone will address this during or following construction activities and will restore disturbed areas as close as feasible to their preconstruction conditions or as otherwise agreed to by the landowner.
16.d	Except where practicably infeasible, final grading and topsoil replacement and installation of permanent erosion control structures shall be completed in non-residential areas within 20 days after backfilling the trench.	Keystone will address this during construction.
16.d.1	In the event that seasonal or other weather conditions, extenuating circumstances, or unforeseen developments beyond Keystone's control prevent compliance with this time frame, temporary erosion controls shall be maintained until conditions allow completion of cleanup and reclamation.	Keystone will address this during construction.
16.d.2	In the event Keystone cannot comply with the 20-day time frame as provided in this Condition, it shall give notice of such fact to all affected landowners, and such notice shall include an estimate of when such restoration is expected to be completed.	Keystone will address this during construction.
16.e	Keystone shall draft specific crop monitoring protocols for agricultural lands.	Keystone is in the process of developing specific crop monitoring protocols for agricultural lands. These protocols will be finalized prior to the start of construction and implemented following construction.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
16.e.1	If requested by the landowner, Keystone shall provide an independent crop monitor to conduct yield testing and/or such other measurements of productivity as he shall deem appropriate. The independent monitor shall be a qualified agronomist, rangeland specialist or otherwise qualified with respect to the species to be restored. The protocols shall be available to the Commission upon request and may be evaluated for adequacy in response to a complaint or otherwise.	If requested by the landowner, Keystone will provide an independent crop monitor and develop appropriate protocols, which will be available to the Commission upon request
16.f	Keystone shall work closely with landowners or land management agencies to determine a plan to control noxious weeds. Landowner permission shall be obtained before the application of herbicides.	Keystone has prepared a noxious weed control plan and provided a draft to the County Weed Boards for review and approval.
16.g	Keystone's adverse weather plan shall apply to improved hay land and pasture lands in addition to crop lands.	Keystone is in the process of developing an adverse weather plan and will include both improved hay lands and pasture lands in addition to crop lands.
16.h	The size, density and distribution of rock within the construction right-of-way following reclamation shall be similar to adjacent undisturbed areas.	Keystone will require the Contractor to remove excess rocks so that the size density and distribution of rock within the construction right-of-way is similar to the adjacent undisturbed areas.
16.h.1	Keystone shall treat rock that cannot be backfilled within or below the level of the natural rock profile as construction debris and remove it for disposal offsite except when the landowner agrees to the placement of the rock on his property. In such case, the rock shall be placed in accordance with the landowner's directions.	Keystone will require the Contractor to treat rock that cannot be backfilled within or below the level of the natural rock profile as construction debris and remove it for disposal offsite except when the landowner agrees to the placement of the rock on his property. In such case, the rock shall be placed in accordance with the landowner's directions and all Federal and State permits.
16.i	Keystone shall utilize the proposed trench line for its pipe stringing trucks where conditions allow and shall employ adequate measures to de-compact subsoil as provided in its CMR Plan. Topsoil shall be de-compacted if requested by the landowner.	Keystone will utilize the trench line for its pipe stringing trucks when site conditions allow and will employ adequate measures to de-compact subsoil as provided in its CMR Plan and in the specified CON/REC unit.
16.i.1	Topsoil shall be de-compacted if requested by the landowner.	Keystone will employ adequate measures to de-compact subsoil as provided in its CMR Plan and in the specified CON/REC unit, and will de-compact topsoil if requested by the landowner.
16.j	Keystone shall monitor and take appropriate mitigative actions as necessary to address salinity issues when dewatering the trench, and field conductivity and/or other appropriate constituent analyses shall be performed prior to disposal of trench water in areas where salinity may be expected.	Keystone will monitor and take appropriate actions as necessary to address salinity issues when dewatering the trench. Field conductivity and/or other appropriate constituent analyses will be performed prior to disposal of trench water in areas where salinity is expected.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
16.j.1	Keystone shall notify landowners prior to any discharge of saline water on their lands or of any spills of hazardous materials on their lands of one pint or more or of any lesser volume which is required by any federal, state, or local law or regulation or product license or label to be reported to a state or federal agency, manufacturer, or manufacturer's representative.	Keystone will notify landowners prior to any discharge of saline water on private lands or of any spills of hazardous materials on private lands of one pint or more or of any lesser volume which is required by any federal, state, or local law or regulation or product license or label to be reported.
16.k	Keystone shall install trench and slope breakers where necessary in accordance with the CMR Plan as augmented by Staff's recommendations in Post Hearing Commission Staff Brief, pp. 26-27	Keystone will install trench and slope breakers where necessary in accordance with the CMR Plan and SDPUC recommendations.
16.l	Keystone shall apply mulch when reasonably requested by landowners and also wherever necessary following seeding to stabilize the soil surface and to reduce wind and water erosion. Keystone shall follow the other recommendations regarding mulch application in Post Hearing Commission Staff Brief, p. 27.	Keystone will apply mulch in accordance with the CMR Plan and the specific CON/REC units to stabilize the soil surface and to reduce wind and water erosion. Keystone will apply mulch at the landowners request when the request is reasonable and in accordance with site reclamation requirements. Keystone will follow the other recommendations regarding mulch application in Post Hearing Commission Staff Brief, p. 27.
16.m	Keystone shall reseed all lands with comparable crops to be approved by landowner in landowner's reasonable discretion, or in pasture, hay or native species areas with comparable grass or forage crop seed or native species mix to be approved by landowner in landowner's reasonable discretion.	Keystone has developed seed mixtures in consultation with the NRCS.
16.m.1	Keystone shall actively monitor revegetation of all disturbed areas for at least two years.	Keystone will monitor revegetation on all disturbed areas for at least two years.
16.n	Keystone shall coordinate with landowners regarding his/her desires to properly protect cattle, shall implement such protective measures as are reasonably requested by the landowner and shall adequately compensate the landowner for any loss.	Keystone will coordinate with landowners and implement reasonably requested protective measures during construction and adequately compensate landowners for any loss.
16.o	Prior to commencing construction, Keystone shall file with the Commission a confidential list of property owners crossed by the pipeline and update this list if route changes during construction result in property owner changes	Prior to commencing construction, Keystone will submit to the Commission a confidential list of property owners crossed by the pipeline and will update this list if route changes result in property owner changes during construction.
16.p	Except in areas where fire suppression resources as provided in CMR Plan 2.16 are in close proximity, to minimize fire risk, Keystone shall, and shall cause its contractor to, equip each of its vehicles used in pre-construction or construction activities, including off-road vehicles, with a hand held fire extinguisher, portable compact shovel and communication device such as a cell phone, in areas with coverage, or a radio capable of achieving prompt communication with Keystone's fire suppression resources and emergency services.	Keystone will address compliance with this condition with Contractor prior to the commencement of construction on the right-of-way. Each vehicle that is subject to this condition will be equipped with fire extinguisher, portable compact shovel, and proper communications devices.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
17	Keystone shall cover open-bodied dump trucks carrying sand or soil while on paved roads and cover open-bodied dump trucks carrying gravel or other materials having the potential to be expelled onto other vehicles or persons while on all public roads.	Keystone will address this with the Contractor. Contractor vehicles carrying sand, soil, or gravel while traveling on paved public roads shall be covered to avoid the potential of expelling the material onto other vehicles or persons.
18	Keystone shall use its best efforts to not locate fuel storage facilities within 200 feet of private wells and 400 feet of municipal wells and shall minimize and exercise vigilance in refueling activities in areas within 200 feet of private wells and 400 feet of municipal wells.	Keystone will address this in the pre-construction planning. Fuel storage tanks and refueling activities shall follow the requirements set forth in the CMRP and Spill Prevention and Containment Plan.
19	If trees are to be removed that have commercial or other value to affected landowners, Keystone shall compensate the landowner for the fair market value of the trees to be cleared and/or allow the landowner the right to retain ownership of the felled trees.	Keystone will comply with this condition during the easement acquisition process.
19.a	Except as the landowner shall otherwise agree in writing, the width of the clear cuts through any windbreaks and shelterbelts shall be limited to 50 feet or less, and the width of clear cuts through extended lengths of wooded areas shall be limited to 85 feet or less. The environmental inspection in Condition 14 shall include forested lands.	Keystone will comply with this condition prior to or during construction.
20.	Keystone shall implement the following sediment control practices: a) Keystone shall use floating sediment curtains to maintain sediments within the construction right of way in open water bodies with no or low flow when the depth of non-flowing water exceeds the height of straw bales or silt fence installation. In such situations the floating sediment curtains shall be installed as a substitute for straw bales or silt fence along the edge or edges of each side of the construction right-of-way that is underwater at a depth greater than the top of a straw bale or silt fence as portrayed in Keystone's construction Detail #11 included in the CMR Plan. b) Keystone shall install sediment barriers in the vicinity of delineated wetlands and water bodies as outlined in the CMR Plan regardless of the presence of flowing or standing water at the time of construction. c) The Applicant should consult with South Dakota Game, Fish and Parks (SDGFP) to avoid construction near water bodies during fish spawning periods in which in-stream construction activities should be avoided to limit impacts on specific fisheries, if any, with commercial or recreational importance.	Keystone will comply with parts (a) and (b) of this condition during construction. Keystone will consult with SDGFP regarding spawning periods. The current construction schedule will avoid impacts to streams during the spawning season.
21	Keystone shall develop frac-out plans specific to areas in South Dakota where horizontal directional drilling will occur. The plan shall be followed in the event of a frac-out.	Keystone has developed a draft frac-out plan and HDD plan in South Dakota. The plan will be finalized with the input from the Contractor. The plan will be followed in the event of a frac-out.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
21.a	If a frac-out event occurs, Keystone shall promptly file a report of the incident with the Commission. Keystone shall also, after execution of the plan, provide a follow-up report to the Commission regarding the results of the occurrence and any lingering concerns.	Keystone will comply with this section in the event of a frac-out.
22.	Keystone shall comply with the following conditions regarding construction across or near wetlands, water bodies and riparian areas: a) Unless a wetland is actively cultivated or rotated cropland or unless site specific conditions require utilization of Keystone's proposed 85 foot width and the landowner has agreed to such greater width, the width of the construction right-of-way shall be limited to 75 feet in non-cultivated wetlands unless a different width is approved or required by the United States Army Corps of Engineers. b) Unless a wetland is actively cultivated or rotated cropland, extra work areas shall be located at least 50 feet away from wetland boundaries except where site-specific conditions render a 50-foot setback infeasible. Extra work areas near water bodies shall be located at least 50 feet from the water's edge, except where the adjacent upland consists of actively cultivated or rotated cropland or other disturbed land or where site-specific conditions render a 50-foot setback infeasible. Clearing of vegetation between extra work space areas and the water's edge shall be limited to the construction right-of-way. c) Water body crossing spoil, including upland spoil from crossings of streams up to 30 feet in width, shall be stored in the construction right of way at least 10 feet from the water's edge or in additional extra work areas and only on a temporary basis. d) Temporary in-stream spoil storage in streams greater than 30 feet in width shall only be conducted in conformity with any required federal permit(s) and any applicable federal or state statutes, rules and standards. e) Wetland and water body boundaries and buffers shall be marked and maintained until ground disturbing activities are complete. Keystone shall maintain 15-foot buffers where practicable, which for stream crossings shall be maintained except during the period of trenching, pipe laying and backfilling the crossing point. Buffers shall not be required in the case of non-flowing streams. f) Best management practices shall be implemented to prevent heavily silt-laden trench water from reaching any wetland or water body directly or indirectly. g) Erosion control fabric shall be used on water body banks immediately following final stream bank restoration unless riprap or other bank stabilization methods are utilized in accordance with federal or state permits. h) The use of timber and slash to support equipment crossings of wetlands shall be avoided.	Keystone will comply with all ROW widths, setbacks, and BMPS as detailed by the Commission. Keystone is identifying the appropriate locations for these conditions at or near wetlands, water bodies and riparian areas during the pre-construction process and will identify the ROW widths and setbacks on the construction drawings. BMPs will be installed as detailed in the CMRP.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
	i) Subject to Conditions 37 and 38, vegetation restoration and maintenance adjacent to water bodies shall be conducted in such manner to allow a riparian strip at least 25 feet wide as measured from the water body's mean high water mark to permanently re-vegetate with native plant species across the entire construction right-of way.	
23.	Keystone shall comply with the following conditions regarding road protection and bonding: a. Keystone shall coordinate road closures with state and local governments and emergency responders and shall acquire all necessary permits authorizing crossing and construction use of county and township roads. b) Keystone shall implement a regular program of road maintenance and repair through the active construction period to keep paved and gravel roads in an acceptable condition for residents and the general public. c) Prior to their use for construction, Keystone shall videotape those portions of all roads which will be utilized by construction equipment or transport vehicles in order to document the pre-construction condition of such roads. d) After construction, Keystone shall repair and restore, or compensate governmental entities for the repair and restoration of, any deterioration caused by construction traffic, such that the roads are returned to at least their preconstruction condition. e) Keystone shall use appropriate preventative measures as needed to prevent damage to paved roads and to remove excess soil or mud from such roadways. f) Pursuant to SDCL 49-418-38, Keystone shall obtain and file for approval by the Commission prior to construction in such year a bond in the amount of $15.6 million for the year in which construction is to commence and a second bond in the amount of $15.6 million for the ensuing year, including any additional period until construction and repair has been completed, to ensure that any damage beyond normal wear to public roads, highways, bridges or other related facilities will be adequately restored or compensated. Such bonds shall be issued in favor of, and for the benefit of, all such townships, counties, and other governmental entities whose property is crossed by the Project. Each bond shall remain in effect until released by the Commission, which release shall not be unreasonably denied following completion of the construction and repair period. Either at the contact meetings required by Condition 10 or by mail, Keystone shall give notice of the existence and amount of these bonds to all counties, townships and other governmental entities whose property is crossed by the Project.	During the pre-construction planning period Keystone will develop and implement videotaping of road conditions prior to construction activities. Keystone, Contractor, and County Representatives will be present for evaluation and determination of road conditions. Keystone will notify state and local governments and emergency responders to coordinate and implement road closures. All necessary permits authorizing crossing and construction use of county and township roads will be obtained. Keystone will file the necessary bond prior to construction.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
24	Although no residential property is expected to be encountered in connection with the Project, in the event that such properties are affected and due to the nature of residential property, Keystone shall implement the following protections in addition to those set forth in its CMR Plan in areas where the Project passes within 500 feet of a residence: a) To the extent feasible, Keystone shall coordinate construction work schedules with affected residential landowners prior to the start of construction in the area of the residences. b) Keystone shall maintain access to all residences at all times, except for periods when it is infeasible to do so or except as otherwise agreed between Keystone and the occupant. Such periods shall be restricted to the minimum duration possible and shall be coordinated with affected residential landowners and occupants, to the extent possible. c) Keystone shall install temporary safety fencing, when reasonably requested by the landowner or occupant, to control access and minimize hazards associated with an open trench and heavy equipment in a residential area. d) Keystone shall notify affected residents in advance of any scheduled disruption of utilities and limit the duration of such disruption. e) Keystone shall repair any damage to property that results from construction activities. f) Keystone shall separate topsoil from subsoil and restore all areas disturbed by construction to at least their preconstruction condition. g) Except where practicably infeasible, final grading and topsoil replacement, installation of permanent erosion control structures and repair of fencing and other structures shall be completed in residential areas within 10 days after backfilling the trench. In the event that seasonal or other weather conditions, extenuating circumstances, or unforeseen developments beyond Keystone's control prevent compliance with this time frame, temporary erosion controls and appropriate mitigative measures shall be maintained until conditions allow completion of cleanup and reclamation.	In the event that Keystone constructs within 500 feet of a residence, it will implement these protective measures and those set forth in the CMR Plan.
25	Construction must be suspended when weather conditions are such that construction activities will cause irreparable damage, unless adequate protection measures approved by the Commission are taken. At least two months prior to the start of construction in South Dakota, Keystone shall file with the Commission an adverse weather land protection plan containing appropriate adverse weather land protection measures, the conditions in which such measures may be appropriately used, and conditions in which no construction is appropriate, for approval of or modification by the Commission prior to the start of construction. The Commission shall make such plan available to impacted landowners who may provide comment on such plan to the Commission	Keystone is preparing this adverse weather land protection plan and will submit it to the Commission after the plan has been completed but at least 2 months prior to start of construction in South Dakota.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
26	Reclamation and clean-up along the right-of-way must be continuous and coordinated with ongoing construction.	Keystone will implement this requirement during construction of the project.
27	All pre-existing roads and lanes used during construction must be restored to at least their pre-construction condition that will accommodate their previous use, and areas used as temporary roads during construction must be restored to their original condition, except as otherwise requested or agreed to by the landowner or any governmental authority having jurisdiction over such roadway	Keystone is coordinating with county and state road authorities during the pre-construction planning phase. Pre-construction conditions will be documented and pre-existing roads will be restored to pre-construction condition following construction. Keystone will comply with the condition with respect to temporary roads after construction.
28	Keystone shall, prior to any construction, file with the Commission a list identifying private and new access roads that will be used or required during construction and file a description of methods used by Keystone to reclaim those access roads.	The list of private and new access roads that are being planned for use on the Project is being developed. This list of roads, including the reclamation methods that will be implemented will be provided to the Commission prior to construction.
29	Prior to construction, Keystone shall have in place a winterization plan and shall implement the plan if winter conditions prevent reclamation completion until spring. The plan shall be provided to affected landowners and, upon request, to the Commission.	Keystone will develop and submit to the Commission a winterization plan which addresses these factors.
30	Numerous Conditions of this Order, including but not limited to 16, 19, 24, 25, 26, 27 and 51 relate to construction and its effects upon affected landowners and their property. The Applicant may encounter physical conditions along the route during construction which makes compliance with certain of these Conditions infeasible. If, after providing a copy of this order, including the Conditions, to the landowner, the Applicant and landowner agree in writing to modifications of one or more requirements specified in these conditions, such as maximum clearances or right-of-way widths, Keystone may follow the alternative procedures and specifications agreed to between it and the landowner.	Keystone will comply with this condition and through negotiations with the landowner and any such modifications shall be agreed upon in writing. Note: Through the SDPUC liaison, Keystone has validated a typo in this condition with John Smith, the SDPUC General Counsel. The typo occurs in the first sentence and is a reference Condition 51, which does not exist. This should actually reference Condition 45.
31	Keystone shall construct and operate the pipeline in the manner described in the application and at the hearing, including in Keystone's exhibits, and in accordance with the conditions of this permit, the PHMSA Special Permit, if issued, and the conditions of this Order and the construction permit granted herein	Keystone will comply with this condition during construction and operation of the pipeline. Keystone XL has withdrawn its application to PHMSA for a Special Permit, subject to its right to apply for a Special Permit at a later time.
32	Keystone shall require compliance by its shippers with its crude oil specifications in order to minimize the potential for internal corrosion.	Keystone will require compliance by its shippers with its crude oil tariff specifications.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
33	Keystone's obligation for reclamation and maintenance of the right-of-way shall continue throughout the life of the pipeline.	Keystone will monitor the right-of-way conditions throughout the life of the pipeline.
33.a	In its surveillance and maintenance activities, Keystone shall, and shall cause its contractor to, equip each of its vehicles, including off-road vehicles, with a hand held fire extinguisher, portable compact shovel and communication device such as a cell phone, in areas with coverage, or a radio capable of achieving prompt communication with emergency services.	Keystone will require all Operators to maintain the required equipment in all vehicles on the right-of-way during surveillance and maintenance activities.
34	In accordance with 49 C.F.R. 195, Keystone shall continue to evaluate and perform assessment activities regarding high consequence areas.	Keystone will identify and assess high consequence areas in accordance with 49 C.F.R. 195.
34.a	Prior to Keystone commencing operation, all unusually sensitive areas as defined by 49 CFR 195.6 that may exist, whether currently marked on DOT's HCA maps or not, should be identified and added to the Emergency Response Plan and Integrity Management Plan	Keystone will identify HCA's as defined at 49 CFR 195.6 and add them to the Emergency Response Plan and Integrity Management Plan.
34.b	In its continuing assessment and evaluation of environmentally sensitive and high consequence areas, Keystone shall seek out and consider local knowledge, including the knowledge of the South Dakota Geological Survey, the Department of Game Fish and Parks and local landowners and governmental officials.	Keystone has conducted numerous consultations with South Dakota state agencies, local agencies and landowners and essentially concluded the assessment and evaluation of environmentally sensitive and high consequence areas and has concurrence from stakeholders related to construction and restoration plans within these areas. If new or different information on environmentally sensitive and high consequence areas becomes available, Keystone will assess that information.
35	The evidence in the record demonstrates that in some reaches of the Project in southern Tripp County, the High Plains Aquifer is present at or very near ground surface and is overlain by highly permeable sands permitting the uninhibited infiltration of contaminants. This aquifer serves as the water source for several domestic farm wells near the pipeline as well as public water supply system wells located at some distance and upgradient from the pipeline route. Keystone shall identify the High Plains Aquifer area in southern Tripp County as a hydrologically sensitive area in its Integrity Management and Emergency Response Plans. Keystone shall similarly treat any other similarly vulnerable and beneficially useful surficial aquifers of which it becomes aware during construction and continuing route evaluation	Keystone will identify the High Plains Aquifer area in southern Tripp County and any other similarly vulnerable and beneficially useful surficial aquifers as a hydrologically sensitive area in its Integrity Management and Emergency Response Plans.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
36	Prior to putting the Keystone Pipeline into operation, Keystone shall prepare, file with PHMSA and implement an emergency response plan as required under 49 CFR 194 and a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies as required under 49 CFR 195.402. Keystone shall also prepare and implement a written integrity management program in the manner and at such time as required under 49 CFR 195.452. At such time as Keystone files its Emergency Response Plan and Integrity Management Plan with PHMSA or any other state or federal agency, it shall also file such documents with the Commission. The Commission's confidential filing rules found at ARSD 20:10:01:41 may be invoked by Keystone with respect to such filings to the same extent as with all other filings at the Commission. If information is filed as "confidential," any person desiring access to such materials or the Staff or the Commission may invoke the procedures of ARSD 20:10:01 :41 through 20: 10:01 :43 to determine whether such information is entitled to confidential treatment and what protective provisions are appropriate for limited release of information found to be entitled to confidential treatment.	Keystone will file its Emergency Response Plan and Integrity Management Plan with the Commission upon filing with PHMSA and will invoke the Commission's confidential filing rules.
37	To facilitate periodic pipeline leak surveys during operation of the facilities in wetland areas, a corridor centered on the pipeline and up to 15 feet wide shall be maintained in an herbaceous state. Trees within 15 feet of the pipeline greater than 15 feet in height may be selectively cut and removed from the permanent right-of-way.	Keystone will maintain a corridor centered on the pipeline and up to 15 feet wide in an herbaceous state to facilitate periodic pipeline leak surveys during operation of the facilities in wetland areas.
38	To facilitate periodic pipeline leak surveys in riparian areas, a corridor centered on the pipeline and up to 10 feet wide shall be maintained in an herbaceous state.	Keystone will maintain a corridor centered on the pipeline and up to 10 feet wide in an herbaceous state to facilitate periodic pipeline leak surveys during operation of the facilities in riparian areas.
39	Except to the extent waived by the owner or lessee in writing or to the extent the noise levels already exceed such standard, the noise levels associated with Keystone's pump stations and other noise-producing facilities will not exceed the L 1 0=55dbA standard at the nearest occupied, existing residence, office, hotel/motel or non-industrial business not owned by Keystone. The point of measurement will be within 100 feet of the residence or business in the direction of the pump station or facility. Post-construction operational noise assessments will be completed by an independent third-party noise consultant, approved by the Commission, to show compliance with the noise level at each pump station or other noise-producing facility. The noise assessments will be performed in accordance with applicable American National Standards Institute standards. The results of the assessments will be filed with the Commission. In the event that the noise level exceeds the limit set forth in this condition at any pump station or other noise producing facility, Keystone shall promptly implement noise mitigation measures to bring the facility into compliance with the limits set forth in this condition and shall report to the Commission concerning the measures taken and the results of post-mitigation assessments demonstrating that the noise limits have been met.	Keystone will design pump stations and other noise-producing facilities so that noise will not exceed the L 1 0 = 55dbA standard at the nearest occupied receptor (existing residence, office, hotel/motel or non-industrial business not owned by Keystone). Keystone will utilize a third-party noise consultant, approved by the Commission, to show post-construction compliance with the noise level at each pump station or other noise-producing facility and will file the assessments with the Commission.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
40	At the request of any landowner or public water supply system that offers to provide the necessary access to Keystone over his/her property or easement(s) to perform the necessary work, Keystone shall replace at no cost to such landowner or public water supply system, any polyethylene water piping located within 500 feet of the Project with piping that is resistant to permeation by BTEX.	Keystone will replace polyethylene water piping located within 500 feet of the Project with piping that is resistant to permeation by BTEX when requested and provided access by the landowner or a public water supply system.
40.a	Keystone shall publish a notice in each newspaper of general circulation in each county through which the Project will be constructed advising landowners and public water supply systems of this condition.	Keystone will publish a notice in each newspaper of general circulation in each county through which the Project will be constructed advising landowners and public water supply systems of condition 40.
41	Keystone shall follow all protection and mitigation efforts as identified by the U.S. Fish and Wildlife Service ("USFWS") and SDGFP	Keystone is currently involved in consultation with the USFWS and SDGFP and will follow protection and mitigation efforts agreed to during consultation with the agencies.
41.a	Keystone shall identify all greater prairie chicken and greater sage and sharp-tailed grouse leks within the buffer distances from the construction right of way set forth for the species in the FE IS and Biological Assessment (BA) prepared by DOS and USFWS	Keystone is involved in consultations with SDGFP to identify greater prairie chicken and greater sage and sharp-tailed grouse leks and to develop construction mitigation plans for each species.
41.b	In accordance with commitments in the FEIS and BA, Keystone shall avoid or restrict construction activities as specified by USFWS within such buffer zones between March 1 and June 15 and for other species as specified by USFW Sand SDGFP.	Keystone will address this requirement during pre-construction planning efforts.
42	Keystone shall keep a record of drain tile system information throughout planning and construction, including pre-construction location of drain tiles. Location information shall be collected using a sub-meter accuracy global positioning system where available or, where not available by accurately documenting the pipeline station numbers of each exposed drain tile.	Records will be kept of drain tile system information.
42.a	Keystone shall maintain the drain tile location information and tile specifications and incorporate it into its Emergency Response and Integrity Management Plans where drains might be expected to serve as contaminant conduits in the event of a release.	Keystone will maintain the drain tile location information and tile specifications and incorporate it into its Emergency Response and Integrity Management Plans where drains might be expected to serve as contaminant conduits in the event of a release.
42.b	If drain tile relocation is necessary, the applicant shall work directly with landowner to determine proper location.	Keystone will work directly with landowner to determine proper location should drain tile relocation be necessary.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
42.c	The location of permanent drain tiles shall be noted on as-built maps. Qualified drain tile contractors shall be employed to repair drain tiles.	Keystone will identify the location of permanent drain tiles on as-built maps. Keystone will employ qualified drain tile contractors to repair drain tiles impacted by the project.
43	Keystone shall follow the "Unanticipated Discoveries Plan," as reviewed by the State Historical Preservation Office ("SHPO") and approved by the DOS and provide it to the Commission upon request. Ex TC-1.6.4, pp. 94-96; Ex S-3.	Keystone will comply with the "Unanticipated Discoveries Plan," as reviewed by the State Historical Preservation Office ("SHPO") and approved by the DOS and will provide the plan to the Commission upon request.
43.a	If during construction, Keystone or its agents discover what may be an archaeological resource, cultural resource, historical resource or gravesite, Keystone or its contractors or agents shall immediately cease work at that portion of the site and notify the DOS, the affected landowner(s) and the SHPO.	Keystone will comply with this condition during construction.
43.b	If the DOS and SHPO determine that a significant resource is present, Keystone shall develop a plan that is approved by the DOS and commenting/signatory parties to the Programmatic Agreement to salvage avoid or protect the archaeological resource.	Keystone will develop a treatment plan that is approved by the DOS and commenting/signatory parties to the Programmatic Agreement to salvage, avoid, or protect an archaeological resource that DOS and SHPO determine as significant.
43.c	If such a plan will require a materially different route than that approved by the Commission, Keystone shall obtain Commission and landowner approval for the new route before proceeding with any further construction.	Keystone will obtain approval from the Commission and affected landowner(s) for any materially different route that may be required as a result of unanticipated discoveries prior to further construction.
43.d	Keystone shall be responsible for any costs that the landowner is legally obligated to incur as a consequence of the disturbance of a protected cultural resource as a result of Keystone's construction or maintenance activities.	Keystone will be responsible for costs that the landowner is legally obligated to incur as a consequence of the disturbance of a protected cultural resource as a result of Keystone's construction or maintenance activities.
44.a	Prior to commencing construction, Keystone shall conduct a literature review and records search, and consult with the BLM and Museum of Geology at the S.D. School of Mines and Technology ("SDSMT") to identify known fossil sites along the pipeline route and identify locations of surface exposures of paleontologically sensitive rock formations using the BLM's Potential Fossil Yield Classification system.	Keystone is currently completing consultations with the BLM and Museum of Geology at the S.D. School of Mines and Technology ("SDSMT") to identify known fossil sites along the pipeline route and identify locations of surface exposures of paleontologically sensitive rock formations using the BLM's Potential Fossil Yield Classification system.
44.a.1	Any area where trenching will occur into the Hell Creek Formation shall be considered a high probability area.	Keystone has identified locations along the pipeline route where trenching will occur into the Hell Creek Formation and has identified these locations as areas of high probability to yield fossils.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
44.b	Keystone shall at its expense conduct a pre-construction field survey of each area identified by such review and consultation as a known site or high probability area within the construction ROW. Following BLM guidelines as modified by the provisions of Condition 44, including the use of BLM permitted paleontologists, areas with exposures of high sensitivity (PFYC Class 4) and very high sensitivity (PFYC Class 5) rock formations shall be subject to a 100% pedestrial field survey, while areas with exposures of moderately sensitive rock formations (PFYC Class 3) shall be spot-checked for occurrences of scientifically or economically significant surface fossils and evidence of subsurface fossils. Scientifically or economically significant surface fossils shall be avoided by the Project or mitigated by collecting them if avoidance is not feasible. Following BLM guidelines for the assessment and mitigation of paleontological resources, scientifically significant paleontological resources are defined as rare vertebrate fossils that are identifiable to taxon and element, and common vertebrate fossils that are identifiable to taxon and element and that have scientific research value; and scientifically noteworthy occurrences of invertebrate, plant and trace fossils. Fossil localities are defined as the geographic and stratigraphic locations at which fossils are found	Keystone has conducting pre-construction field surveys of each area identified as high probability to yield fossils within the construction ROW. Keystone is conducting pedestrial field surveys of 100% of areas with exposures of high sensitivity (PFYC Class 4) and very high sensitivity (PFYC Class 5) rock formations utilizing the BLM guidelines as modified by the provisions of Condition 44, including the use of BLM permitted paleontologists. Additionally, Keystone is spot-checking areas of moderately sensitive rock formations (PFYC Class 3). Keystone will avoid scientifically or economically significant surface fossils or will mitigate by collecting them if avoidance is not feasible.
44.c	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 BLM permitted monitors 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.	Keystone will prepare and file with the Commission a paleontological resource mitigation plan upon completion of survey.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
44.d	If during construction, Keystone or its agents discover what may be a paleontological resource of economic significance, or of scientific significance, as defined in subparagraph (b) above, Keystone or its contractors or agents shall immediately cease work at that portion of the site and, if on private land, notify the affected landowner(s). Upon such a discovery, Keystone's paleontological monitor will evaluate whether the discovery is of economic significance, or of scientific significance as defined in subparagraph (b) above. If an economically or scientifically significant paleontological resource is discovered on state land, Keystone will notify SDSMT and if on federal land, Keystone will notify the BLM or other federal agency. In no case shall Keystone return any excavated fossils to the trench. If a qualified and BLM-permitted paleontologist, in consultation with the landowner, BLM, or SDSMT determines that an economically or scientifically significant paleontological resource is present, Keystone shall develop a plan that is reasonably acceptable to the landowner(s), BLM, or SDSMT, as applicable, to accommodate the salvage or avoidance of the paleontological resource to protect or mitigate damage to the resource. The responsibility for conducting such measures and paying the costs associated with such measures, whether on private, state or federal land, shall be borne by Keystone to the same extent that such responsibility and costs would be required to borne by Keystone on BLM managed lands pursuant to BLM regulations and guidelines, including the BLM Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources, except to the extent factually inappropriate to the situation in the case of private land (e.g. museum curation costs would not be paid by Keystone in situations where possession of the recovered fossil(s) was turned over to the landowner as opposed to curation for the public). If such a plan will require a materially different route than that approved by the Commission, Keystone shall obtain Commission approval for the new route before proceeding with any further construction. Keystone shall, upon discovery and salvage of paleontological resources either during pre-construction surveys or construction and monitoring on private land, return any fossils in its possession to the landowner of record of the land on which the fossil is found. If on state land, the fossils and all associated data and documentation will be transferred to the SDSM; if on federal land, to the BLM.	Keystone will comply with this condition during construction.
44.e	To the extent that Keystone or its contractors or agents have control over access to such information, Keystone shall, and shall require its contractors and agents to, treat the locations of sensitive and valuable resources as confidential and limit public access to this information.	To the extent that Keystone or its contractors or agents have control over access to such information, Keystone will, and will require its contractors and agents to treat the locations of sensitive and valuable resources as confidential and limit public access to this information.

NO.	CONDITION	STATUS OF OTHER MEASURES REQUIRED BY CONDITIONS
45	Keystone shall repair or replace all property removed or damaged during all phases of construction and operation of the proposed transmission facility, including but not limited to, all fences, gates and utility, water supply, irrigation or drainage systems.	Keystone will repair or replace all property removed or damaged during all phases of construction and operation of the proposed transmission facility.
45.a	Keystone shall compensate the owners for damages or losses that cannot be fully remedied by repair or replacement, such as lost productivity and crop and livestock losses or loss of value to a paleontological resource damaged by construction or other activities.	Keystone will compensate the owners for damages or losses that result from construction and operation of the proposed transmission facility and cannot be fully remedied by repair or replacement.
46	In the event that a person's well is contaminated as a result of construction or pipeline operation, Keystone shall pay all costs associated with finding and providing a permanent water supply that is at least of similar quality and quantity; and any other related damages, including but not limited to any consequences, medical or otherwise, related to water contamination.	Keystone will pay all costs associated with finding and providing a permanent water supply that is at least of similar quality and quantity and any other related damages related to water contamination in the event that a well is contaminated as a result of construction or pipeline operation.
47	Any damage that occurs as a result of soil disturbance on a persons' property shall be paid for by Keystone	Keystone will compensate for damage that occurs as a result of soil disturbance on a persons' property caused by construction and operation of the Project.
48	No person will be held responsible for a pipeline leak that occurs as a result of his/her normal farming practices over the top of or near the pipeline	Keystone will not hold any person responsible for a pipeline leak that occurs as a result of normal farming practices.
49	Keystone shall pay commercially reasonable costs and indemnify and hold the landowner harmless for any loss, damage, claim or action resulting from Keystone's use of the easement, including any resulting from any release of regulated substances or from abandonment of the facility, except to the extent such loss, damage claim or action results from the gross negligence or willful misconduct of the landowner or its agents.	Keystone will pay commercially reasonable costs and indemnify and hold the landowner harmless for any loss, damage, claim or action resulting from Keystone's use of the easement, including any resulting from any release of regulated substances or from abandonment of the facility, except to the extent such loss, damage claim or action results from the gross negligence or willful misconduct of the landowner or its agents.
50	The Commission's complaint process as set forth in ARSD 20:10:01 shall be available to landowners, other persons sustaining or threatened with damage or the consequences of Keystone's failure to abide by the conditions of this permit or otherwise having standing to obtain enforcement of the conditions of this Order and Permit.	The Commission's complaint process as set forth in ARSD 20:10:01 shall be available to landowners, other persons sustaining or threatened with damage or the consequences of Keystone's failure to abide by the conditions of this permit or otherwise having standing to obtain enforcement of the conditions of this Order and Permit.

Appendix C
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	The Project	
14	The purpose of the Project is to transport incremental crude oil production from the Western Canadian Sedimentary Basin ("WCSB") to meet growing demand by refineries and markets in the United States ("U.S."). This supply will serve to replace U.S. reliance on less stable and less reliable sources of offshore crude oil. Ex TC-1, 1.1, p. 1; Ex TC-1, 3.0 p. 23; Ex TC-1, 3.4 p. 24.	The purpose of the Project is to transport incremental crude oil production from the Western Canadian Sedimentary Basin ("WCSB") and domestic production from the Williston Basin area to meet demand by refineries and markets in the United States ("U.S."). This supply will serve to replace U.S. reliance on less stable and less reliable sources of offshore crude oil and support the growth of crude oil production in the U.S. (See updated Findings 24-29)
15	The Project will consist of three segments: the Steele City Segment, the Gulf Coast Segment, and the Houston Lateral. From north to south, the Steele City Segment extends from Hardisty, Alberta, Canada, southeast to Steele City, Nebraska. The Gulf Coast Segment extends from Cushing, Oklahoma south to Nederland, in Jefferson County, Texas. The Houston Lateral extends from the Gulf Coast Segment in Liberty County, Texas southwest to Moore Junction, Harris County, Texas. It will interconnect with the northern and southern termini of the previously approved 298-mile-long, 36-inch-diameter Keystone Cushing Extension segment of the Keystone Pipeline Project. Ex TC-1,1.2, p. 1: Initially, the pipeline would have a nominal capacity to transport 700,000 barrels per day ("bpd"). Keystone could add additional pumping capacity to expand the nominal capacity to 900,000 bpd. Ex TC-1, 2.1.2, p. 8.	The Project will consist of the Steele City Segment. From north to south, the Steele City Segment extends from Hardisty, Alberta, Canada, southeast to Steele City, Nebraska. It will interconnect with the previously approved and constructed 298-mile-long, 36-inch-diameter Keystone Cushing Extension segment of the Keystone Pipeline System allowing crude oil to be delivered to Gulf Coast Refineries. The pipeline would have a maximum capacity to transport 830,000 barrels per day.
16	The Project is an approximately 1,707 mile pipeline with about 1,380, miles in the United States. The South Dakota portion of the pipeline will be approximately 314 miles in length and will extend from the Montana border in Harding County to the Nebraska border in Tripp County. The Project is proposed to cross the South Dakota counties of Harding, Butte, Perkins, Meade, Pennington, Haakon, Jones, Lyman and Tripp. Ex TC-1, 1.2 and 2.1.1, pp. 1 and 8. Detailed route maps are presented in Ex TC-1, Exhibits A and C, as updated in Ex TC-14.	The Project is an approximately 1202 mile pipeline with about 876 miles in the United States. The South Dakota portion of the pipeline will be approximately 315 miles in length and will extend from the Montana border in Harding County to the Nebraska border in Tripp County. The Project is proposed to cross the South Dakota counties of Harding, Butte, Perkins, Meade, Pennington, Haakon, Jones, Lyman and Tripp.
17	Construction of the Project is proposed to commence in May of 2011 and be completed in 2012. Construction in South Dakota will be conducted in five spreads, generally proceeding in a north to south direction. The Applicant expects to place the Project in service in 2012. This in-service date is consistent with the requirements of the Applicant's shippers who have made the contractual commitments that underpin the viability and need for the project. Ex TC-1, 1.4, pp. 1 and 4; TR 26.	Construction of the Project is proposed to commence when all necessary permits are obtained. Construction in South Dakota will be conducted in three or four spreads, generally proceeding in a north to south direction. The Applicant expects to place the Project in service when construction is completed.
18	The pipeline in South Dakota will extend from milepost 282.5 to milepost 597, approximately 314 miles. The pipeline will have a 36-inch nominal diameter and be constructed using API 5L X70 or X80 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. Ex TC-1, 2.2, 2.2.1, 6.5.2, pp. 8-9, 97 -98; Ex TC-8, ¶ 26.	The pipeline in South Dakota will extend from milepost 285.6 to milepost 600.9, approximately 315 miles. The pipeline will have a 36-inch nominal diameter and be constructed using API 5L X70M 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.
19	The pipeline will operate at a maximum operating pressure of 1,440 psig. For location specific low elevation segments close to the discharge of pump stations, the maximum operating pressure will be 1,600 psig. Pipe associated with these segments of 1,600 psig MOP are excluded from the Special Permit application and will have a design factor of 0.72 and pipe wall thickness of 0.572 inch (X-70) or 0.500 inch (X-80). All other segments in South Dakota will have a MOP of 1,440 psig. Ex TC-1, 2.2.1, p. 9.	At most locations, the pipeline will operate at a maximum operating pressure of 1,307 psig. For location specific low elevation segments close to the discharge of pump stations, the maximum operating pressure will be 1,600 psig. Pipe associated with these segments of 1,600 psig MOP will have a design factor of 0.72 and a nominal pipe wall thickness of 0.572 inch (X-70M). All other segments in South Dakota will have a MOP of 1,307 psig.

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20	The Project will have seven pump stations in South Dakota, located in Harding (2), Meade, Haakon, Jones and Tripp (2) Counties. TC-1, 2.2.2, p. 10. The pump stations will be electrically driven. Power lines required for providing power to pump stations will be permitted and constructed by local power providers, not by Keystone. Initially, three pumps will be installed at each station to meet the nominal design flow rate of 700,000 bpd. If future demand warrants, pumps may be added to the proposed pump stations for a total of up to five pumps per station, increasing nominal throughput to 900,000 bpd. No additional pump stations will be required to be constructed for this additional throughput. No tank facilities will be constructed in South Dakota. Ex TC-1, 2.1.2, p.8. Sixteen mainline valves will be located in South Dakota. Seven of these valves will be remotely controlled, in order to have the capability to isolate sections of line rapidly in the event of an emergency to minimize impacts or for operational or maintenance reasons. Ex TC-1, 2.2.3, pp. 10- 11.	The Project will have seven pump stations in South Dakota, located in Harding (2), Meade, Haakon, Jones and Tripp (2) Counties. TC-1, 2.2.2, p. 10. The pump stations will be electrically driven. Power lines required for providing power to pump stations will be permitted and constructed by local power providers, not by Keystone. Three to five pumps will be installed at each station to meet the maximum design flow rate of 830,000 bpd. No tank facilities will be constructed in South Dakota. Twenty mainline valves will be located in South Dakota. All of these valves will be remotely controlled, in order to have the capability to isolate sections of line rapidly in the event of an emergency to minimize impacts or for operational or maintenance reasons.
22	The Project 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 CFR Part 195, as modified by the Special Permit requested for the Project from PHMSA (see Finding 71). These federal regulations are intended to ensure adequate protection for the public and the environment and to prevent crude oil pipeline accidents and failures. Ex TC-1, 2.2, p. 8.	The Project 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 CFR Part 195, and the special conditions developed by PHMSA and set forth in Appendix Z to the Department of State ("DOS") January 2014 Final Supplemental Environmental Impact Statement ("Final SEIS"). These federal regulations and additional conditions are intended to ensure adequate protection for the public and the environment and to prevent crude oil pipeline accidents and failures.
23	The current estimated cost of the Keystone Project in South Dakota is $921.4 million. Ex TC-1, 1.3, p. 1.	The current estimated cost of the Keystone XL Project in South Dakota is $1.974 billion. The estimated cost of the South Dakota portion of the project has primarily increased due to the new technical requirements (for example, the 59 additional conditions set forth in the DOS Final SEIS), and inflation and additional costs (for example, increased project management; regulatory; and material storage and preservation costs) due to the projected six-year delay in starting construction.
	Demand for the Facility	
24	The transport of additional crude oil production from the WCSB is necessary to meet growing demand by refineries and markets in the U.S. The need for the project is dictated by a number of factors, including increasing WCSB crude oil supply combined with insufficient export pipeline capacity; increasing crude oil demand in the U.S. and decreasing domestic crude supply; the opportunity to reduce U.S. dependence on foreign off-shore oil through increased access to stable, secure Canadian crude oil supplies; and binding shipper commitments to utilize the Keystone Pipeline Project. Ex TC-1, 3.0, p. 23.	The June 29, 2010 order recites Findings of Fact demonstrating the strong demand for the Project. Given the dynamic nature of the crude oil market, there have been changes in the nature of this demand since 2010. As demonstrated below, however market demand for the Project remains strong today. The transport of additional crude oil production from the WCSB continues to be necessary to meet demand by refineries and markets in the U.S. The need for the project is driven by a number of factors, including increasing domestic U.S. and Canadian, crude oil production combined with insufficient pipeline capacity; an energy efficient and safe method to transport this growing production; the opportunity to reduce U.S dependence on foreign offshore crude oil through increased access to North American supplies; and binding shipper commitments to utilize the Keystone Pipeline System.
25	According to the U.S. Energy Information Administration ("EIA"), U.S. demand for petroleum products has increased by over 11 percent or 2,000,000 bpd over the past 10 years and is expected to increase further. The EIA estimates that total U.S. petroleum consumption will increase by approximately 10 million bpd over the next 10 years, representing average demand growth of about 100,000 bpd per year (EIA Annual Energy Outlook 2008). Ex TC-1, 3.2, pp. 23-24.	United States production of crude oil has increased significantly, from approximately 6.5 million barrels per day (bpd) in 2012, and is expected to peak at 9.6 million bpd by 2019. However, even with the domestic production growth, the U.S. is expected to remain a net importer of crude oil. According to the U.S. Energy Information Administration ("EIA"), U.S. demand for crude oil has held steady at approximately 15 million bpd and is expected to remain relatively stable into the future.[1]
26	At the same time, domestic U.S. crude oil supplies continue to decline. For example, over the past 10 years, domestic crude production in the United States has declined at an average rate of about 135,000 bpd per year, or 2% per year. Ex TC-1, 3.3, p. 24. Crude and refined petroleum product imports into the U.S. have increased by over 3.3 million bpd over the past 10 years. In 2007, the U.S. imported over 13.4 million bpd of crude oil and petroleum products or over 60 percent of total U.S. petroleum product	The rise in U.S. crude oil production, predominantly light crude, has replaced most foreign imports of light crude. However the demand persists for imported heavy crude oil by U.S. refineries that are optimally configured to process heavy crude slates.[2] The U.S. Gulf Coast continues to import approximately 3.5 million bpd of heavy and medium sour crude oil.[3]

[1] Energy Information Administration (EIA) Annual Energy Outlook 2014
[2] Id.
[3] Energy Information Administration – Company Level Imports

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	consumption. Canada is currently the largest supplier of imported crude oil and refined products to the U.S., supplying over 2.4 million bpd in 2007, representing over 11 percent of total U.S. petroleum product consumption (EIA 2007). Ex TC-1, 3.4, p.24.	
27	The Project will provide an opportunity for U.S. refiners in Petroleum Administration for Defense District III, the Gulf Coast region, to further diversify supply away from traditional offshore foreign crude supply and to obtain direct access to secure and growing Canadian crude supplies. Access to additional Canadian crude supply will also provide an opportunity for the U.S. to offset annual declines in domestic crude production and, specifically, to decrease its dependence on other foreign crude oil suppliers, such as Mexico and Venezuela, the top two heavy crude oil exporters into the U.S. Gulf Coast. Ex TC-1, 3.4, p. 24.	Canadian production of heavy crude oil continues to grow, the vast majority of which is currently exported to the United States to be processed by U.S. refineries. North American crude oil production growth and logistics constraints have contributed to significant discounts on the price of landlocked crude and led to growing volumes of crude shipped by rail in the United States and, more recently Canada. As the DOS Final SEIS makes clear, in the absence of new pipelines, crude oil will continue to be transported via rail at an increasing rate.[4] The North Dakota Pipeline Authority estimates that rail export volumes from the U.S. Williston Basin have increased from approximately 40,000 bpd in 2010 to over 700,000 bpd in early 2014. Over 60% of crude oil transported from the Williston Basin is delivered by rail.[5] The industry has also been making significant investments in increasing rail transport capacity for crude oil out of the Western Canadian Sedimentary Basin (WCSB).[6] In recent years, rail transport of crude oil in Canada has grown from approximately 10,000 bpd in 2010 to approximately 270,000 bpd by the end of 2013.[7] The DOS Final SEIS indicates that transportation of crude oil by pipeline is safer and less greenhouse gas intensive than crude oil transportation by rail.[8] The Project will provide an opportunity for U.S. refiners in Petroleum Administration for Defense District III, the Gulf Coast region, to further diversify supply away from traditional offshore foreign crude supply and to obtain direct access to secure and growing domestic crude supplies.
28	Reliable and safe transportation of crude oil will help ensure that U.S. energy needs are not subject to unstable political events. Established crude oil reserves in the WCSB are estimated at 179 billion barrels (CAPP 2008). Over 97 percent of WCSB crude oil supply is sourced from Canada's vast oil sands reserves located in northern Alberta. The Alberta Energy and Utilities Board estimates there are 175 billion barrels of established reserves recoverable from Canada's oil sands. Alberta has the second largest crude oil reserves in the world, second only to Saudi Arabia. Ex TC-1, 3.1, p. 23.	Reliable and safe transportation of crude oil will help ensure that U.S. energy needs are not subject to unstable political events. Of Canada's 173 billion barrels of oil reserves, 97% or 167 billion, barrels are located in the oil sands. In terms of overall oil reserves, Canada's 173 billion barrels is third only to Venezuela and Saudi Arabia.[9] Canada is the largest foreign supplier of crude oil to the U.S. and is likely to remain as such for the foreseeable future.[10]
29	Shippers have already committed to long-term binding contracts, enabling Keystone to proceed with regulatory applications and construction of the pipeline once all regulatory, environmental, and other approvals are received. These long-term binding shipper commitments demonstrate a material endorsement of support for the Project, its economics, proposed route, and target market, as well as the need for additional pipeline capacity and access to Canadian crude supplies. Ex TC-1, 3.5, p. 24.	Shippers have committed to long-term binding contracts, enabling Keystone to proceed with regulatory applications and construction of the pipeline once all regulatory, environmental, and other approvals are received. These long-term binding shipper commitments demonstrate a material endorsement of support for the Project, its economics, proposed route, and target market, as well as the need for additional pipeline capacity to access domestic and Canadian crude supplies. The DOS Final SEIS independently confirms the continuing strong market demand.[11]
	Environmental	
32	Table 6 to the Application summarizes the environmental impacts that Keystone's analysis indicates could be expected to remain after its Construction Mitigation and Reclamation Plan (CMR Plan) are implemented. Ex TC-1, pp. 31-37.	Table 6 is still applicable. The latest version of the CMR Plan is Rev4, April 2012. Attachment A to this Tracking Table is a redline version showing changes to the CMR Plan from Rev1 to the current Rev4. Overall changes to the CMR Plan were made to clarify language, provide additional detail related to construction procedures and incorporate lessons learned from previous pipeline construction, current right-of-way conditions and project requirements

[4] Final Supplemental Environmental Impact Statement, Keystone XL Pipeline Project, January 2014 at 1.4.3.2 and 1.4.3.3.
[5] North Dakota Pipeline Authority 2014 https://ndpipelines.files.wordpress.com/2012/04/nd-rail-estimate-april-2014.jpg
[6] Final Supplemental Environmental Impact Statement Keystone XL Pipeline Project, January 2014 at 1.4.1.3
[7] Transportation Safety Board of Canada http://www.tsb.gc.ca/eng/recommandations-recommendations/rail/2014/rec-r1401-r1403.asp
[8] Final Supplemental Environmental Impact Statement, Keystone XL Pipeline Project, January 2014, Chapter 5 and Errata Sheet at http://keystonepipeline-xl.state.gov/documents/organization/227464.pdf.
[9] Canadian Association of Petroleum Producers (CAPP) Crude Oil Forecast, Markets & Transportation June 2014
[10] EIA Annual Energy Outlook 2014
[11] Final Supplemental Environmental Impact Statement, Keystone XL Pipeline Project, January 2014 at 1.3.1 and 1.4.2.6

Appendix C
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33	The pipeline will cross the Unglaciated Missouri Plateau. This physiographic province is characterized by a dissected plateau where river channels have incised into the landscape. Elevations range from just over 3,000 feet above mean sea level in the northwestern part of the state to around 1,800 feet above mean sea level in the White River valley. The major river valleys traversed include the Little Missouri River, Cheyenne River, and White River. Ex TC-1, 5.3.1, p. 30; Ex TC-4, ¶ 15. Exhibit A to the Application includes soil type maps and aerial photograph maps of the Keystone pipeline route in South Dakota that indicate topography, land uses, project mileposts and Section, Township, Range location descriptors. Ex TC-1, Exhibit A. Updated versions of these maps were received in evidence as Exhibit TC-14.	The soil type maps and aerial photograph maps of the Keystone pipeline route in South Dakota that indicate topography, land uses, project mileposts and Section, Township, Range location descriptors that were submitted in evidence as Exhibit TC-14 are still generally consistent in the description of the current Project route through South Dakota. Keystone will submit updated maps prior to the initiation of construction as required by Condition No. 6 of the Amended Final Decision and Order.
41	Fifteen perennial streams and rivers, 129 intermittent streams, 206 ephemeral streams and seven man-made ponds will be crossed during construction of the Project in South Dakota. Keystone will utilize horizontal directional drilling ("HDD") to cross the Little Missouri, Cheyenne and White River crossings. Keystone intends to use open-cut trenching at the other perennial streams and intermittent water bodies. The open cut wet method can cause the following impacts: loss of in-stream habitat through direct disturbance, loss of bank cover, disruption of fish movement, direct disturbance to spawning, water quality effects and sedimentation effects. Alternative techniques include open cut dry flume, open cut dam-and-pump and horizontal directional drilling. Exhibit C to the Application contains a listing of all water body crossings and preliminary site-specific crossing plans for the HDD sites. Ex TC-14. Permitting of water body crossings, which is currently underway, will ultimately determine the construction method to be utilized. Keystone committed to mitigate water crossing impacts through implementation of procedures outlined in the CMR Plan. Ex TC-1, 5.4.1, pp. 45-46.	Fifteen perennial streams and rivers, 129 intermittent streams, and 206 ephemeral streams will be crossed during construction of the Project in South Dakota. No man-made ponds are crossed. Keystone will utilize horizontal directional drilling ("HDD") to cross the Little Missouri, Cheyenne, Bad, and White rivers, as well as Bridger Creek. Keystone intends to use open-cut trenching at other perennial streams and intermittent water bodies. The open cut wet method can cause the following impacts: loss of in-stream habitat through direct disturbance, loss of bank cover, disruption of fish movement, direct disturbance to spawning, water quality effects and sedimentation effects. Alternative techniques include open cut dry flume, open cut dam-and-pump and horizontal directional drilling. To supplement Exhibit C to the Application, Attachment B to this Tracking Table contains the preliminary site-specific crossing plans for the two newly identified HDD crossings; Bad River and Bridger Creek.
50	The total length of Project pipe with the potential to affect a High Consequence Area ("HCA") is 34.3 miles. A spill that could affect an HCA would occur no more than once in 250 years. TC-12, ¶ 24.	The total length of Project pipe with the potential to affect a High Consequence Area ("HCA") is 19.9 miles. A spill that could affect an HCA would occur no more than once in 250 years.
54	Of the approximately 314-mile route in South Dakota, all but 21.5 miles is privately owned. 21.5 miles is state-owned and managed. The list is found in Table 14. No tribal or federal lands are crossed by the proposed route. Ex TC-1, 5.7.1, p. 75.	Of the approximately 315-mile route in South Dakota, all but 27.9 miles are privately owned. 1.7 miles are local government owned, and 26.3 miles are state-owned and managed. No tribal or federal lands are crossed by the route.
	Design and Construction	
60	Keystone has applied for a special permit ("Special Permit") from PHMSA authorizing Keystone to design, construct, and operate the Project at up to 80% of the steel pipe specified minimum yield strength at most locations. TC-1, 2.2, p. 8; TR 62. In Condition 2, the Commission requires Keystone to comply with all of the conditions of the Special Permit, if issued.	Keystone withdrew its request to PHMSA for a special permit ("Special Permit") on August 5, 2010. Keystone will implement 59 additional safety measures as set forth in the DOS Final SEIS, Appendix Z. These measures provide an enhanced level of safety equivalent to or greater than those that would have applied under the previously requested Special Permit.
61	TransCanada operates approximately 11,000 miles of pipelines in Canada with a 0.8 design factor and requested the Special Permit to ensure consistency across its system and to reduce costs. PHMSA has previously granted similar waivers adopting this modified design factor for natural gas pipelines and for the Keystone Pipeline. Ex TC-8, ¶¶ 13, 17.	[Finding 61 is no longer relevant as Keystone has withdrawn its request for a Special Permit].
62	The Special Permit is expected to exclude pipeline segments operating in (i) PHMSA defined HCAs described as high population areas and commercially navigable waterways in 49 CFR Section 195.450; (ii) pipeline segments operating at highway, railroad, and road crossings; (iii) piping located within pump stations, mainline valve assemblies, pigging facilities, and measurement facilities; and (iv) areas where the MOP is greater than 1,440 psig. Ex TC-8, ¶ 16.	[Finding 62 is no longer relevant as Keystone has withdrawn its request for a Special Permit.]
63	Application of the 0.8 design factor and API 5L PSL2 X70 high-strength steel pipe results in use of pipe with a 0.463 inch wall thickness, as compared with the 0.512 inch wall thickness under the otherwise applicable 0.72 design factor, a reduction in thickness of .050 inches. TR 61. PHMSA previously found that the issuance of a waiver is not inconsistent with pipeline safety and that the waiver will provide a level of safety equal to or greater than that which would be provided if the pipeline were operated under the otherwise applicable regulations. Ex TC-8, ¶ 15.	The pipeline will operate at a maximum operating pressure of 1,307 psig. Use of API 5L X70 high-strength steel results in a 0.465 inch nominal pipe wall thickness. For location specific low elevation segments close to the discharge of pump stations, the maximum operating pressure will be 1,600 psig. Pipe associated with these segments of 1,600 psig MOP will have a design factor of 0.72 and a nominal pipe wall thickness of 0.572 inch (X-70M).

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68	TransCanada has thousands of miles of this particular grade of pipeline steel installed and in operation. TransCanada pioneered the use of FBE, which has been in use on its system for over 29 years. There have been no leaks on this type of pipe installed by TransCanada with the FBE coating and cathodic protection system during that time. When TransCanada has excavated pipe to validate FBE coating performance, there has been no evidence of external corrosion. Ex TC-8, ¶ 27.	TransCanada has thousands of miles of this particular grade of pipeline steel installed and in operation. TransCanada pioneered the use of FBE, which has been in use on its system for over 33 years. There have been no leaks on this type of pipe installed by TransCanada with the FBE coating and cathodic protection system during that time. When TransCanada has excavated pipe to validate FBE coating performance, there has been no evidence of external corrosion except for one instance where an adjacent foreign utility interfered with the cathodic protection system. No similar situations exist on the Project in South Dakota.
73	The Applicant has prepared a detailed CMR Plan that describes procedures for crossing cultivated lands, grasslands, including native grasslands, wetlands, streams and the procedures for restoring or reclaiming and monitoring those features crossed by the Project. The CMR Plan is a summary of the commitments that Keystone has made for environmental mitigation, restoration and post-construction monitoring and compliance related to the construction phase of the Project. Among these, Keystone will utilize construction techniques that will retain the original characteristics of the lands crossed as detailed in the CMR Plan. Keystone's thorough implementation of these procedures will minimize the impacts associated with the Project. A copy of the CMR Plan was filed as Exhibit B to Keystone's permit application and introduced into evidence as TC-1, Exhibit B.	Keystone has updated its CMR Plan since the Amended Final Decision and Order. Overall changes to the CMR Plan were made to clarify language, provide additional detail related to construction procedures and incorporate lessons learned from previous pipeline construction, current right-of-way conditions and project requirements. A redlined version of the CMR Plan showing changes since the version considered in 2010 is attached as Attachment A to this Tracking Table.
80	Keystone is in the process of preparing, in consultation with the area National Resource Conservation Service, construction/reclamation unit ("Con/Rec Unit') mapping to address differing construction and reclamation techniques for different soils conditions, slopes, vegetation, and land use along the pipeline route. This analysis and mapping results in the identification of segments called Con/Rec Units. Ex. TC-5; TC-16, DR 3-25.	In consultation with the area National Resource Conservation Service, Keystone has completed construction/reclamation unit ("Con/Rec Unit') mapping to address differing construction and reclamation techniques for different soils conditions, slopes, vegetation, and land use along the pipeline route.
83	Keystone will utilize HDD for the Little Missouri, Cheyenne and White River crossings, which will aid in minimizing impacts to important game and commercial fish species and special status species. Open-cut trenching, which can affect fisheries, will be used at other perennial streams. Keystone will use best practices to reduce or eliminate the impact of crossings at the perennial streams other than the Cheyenne and White Rivers. Ex TC-1 , 5.4.1, p. 46; 5.6.2, p. 72; TC-16, DR 3-39.	Keystone will utilize HDD for the Little Missouri, Cheyenne, Bad and White River crossings, as well as Bridger Creek, which will aid in minimizing impacts to important game and commercial fish species and special status species. Open-cut trenching, which can affect fisheries, will be used at other perennial streams. Keystone will use best practices to reduce or eliminate the impact of crossings at the perennial streams that are open cut.
	Operation and Maintenance	
90	The Keystone pipeline will be designed constructed, tested and operated in accordance with all applicable requirements, including the PHMSA regulations set forth at 49 CFR Parts 194 and 195, as modified by the Special Permit. These federal regulations are intended to ensure adequate protection for the public and the environment and to prevent crude oil pipeline accidents and failures. Ex TC-8, ¶ 2.	The Keystone pipeline will be designed constructed, tested and operated in accordance with all applicable requirements, including the PHMSA regulations set forth at 49 CFR Parts 194 and 195, and the 59 PHMSA Special Conditions as set forth in DOS Final SEIS, Appendix Z. These federal regulations and additional conditions are intended to ensure adequate protection for the public and the environment and to prevent crude oil pipeline accidents and failures.
	Socio-Economic Factors	
107	Socio-economic evidence offered by both Keystone and Staff demonstrates that the welfare of the citizens of South Dakota will not be impaired by the Project. Staff expert Dr. Michael Madden conducted a socio-economic analysis of the Keystone Pipeline, and concluded that the positive economic benefits of the project were unambiguous, while most if not all of the social impacts were positive or neutral. S-2, Madden Assessment at 21. The Project, subject to compliance with the Special Permit and the Conditions herein, 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.	[Keystone has withdrawn its Special Permit application but will comply with the 59 additional conditions set forth in the DOS Final SEIS, Appendix Z, which provide an enhanced level of safety equivalent to or greater than those that would have applied under the requested Special Permit.] The increased cost of the Project reflected in updated Finding 23 is likely to result in increased tax revenue to the affected counties.

DEPARTMENT OF STATE
RECORD OF DECISION AND NATIONAL INTEREST DETERMINATION

TransCanada Keystone Pipeline, L.P. Application for Presidential Permit, Keystone XL Pipeline

Contents:

1.0 Summary

On May 4, 2012, TransCanada Keystone Pipeline, L.P. (Keystone) submitted an application to the U.S. Department of State (Department) for a Presidential permit that would authorize construction, connection, operation, and maintenance of pipeline facilities at the U.S.-Canada border in Phillips County, Montana, to import crude oil from Canada into the United States. The proposed project, called Keystone XL (the proposed Project), would consist of approximately 1,204 miles of new, 36-inch-diameter pipeline extending from Hardisty, Alberta, to Steele City, Nebraska. The proposed Project would have the capacity to deliver up to 830,000 barrels per day (bpd) of crude oil. It would predominantly transport crude oil from the Western Canadian Sedimentary Basin (WCSB), but, subject to commercial demand, would also transport quantities of crude oil from Montana and North Dakota via a proposed pipeline and associated facilities known as the Bakken Marketlink Project. If issued, the permit would authorize operations at the border segment, which is from the international border near Morgan, Montana, to the first mainline shut-off valve within the United States located approximately 1.2 miles from the international border.

On November 6, 2015, Secretary of State Kerry determined under Executive Order 13337 that issuing a Presidential permit to Keystone for the proposed Keystone XL pipeline's border facilities would not serve the national interest, and denied the permit application (2015 Decision). On January 24, 2017, President Trump issued a Presidential Memorandum Regarding Construction of the Keystone XL Pipeline (Presidential Memorandum) which, *inter alia*, invited Keystone "to re-submit its application to the Department of State for a Presidential permit for the construction and operation of the Keystone XL Pipeline..." On January 24, 2017, President Trump also issued an Executive Order on Expediting Environmental Reviews and Approvals for High Priority Infrastructure Projects in which he set forth the general policy of the Executive Branch "to streamline and expedite, in a manner consistent with law, environmental reviews and approvals for all infrastructure projects, especially projects that are a high priority for the Nation," and cited pipelines as an example of such high priority projects.

On January 26, 2017, the Department received a re-submitted application from Keystone for the proposed Project. The re-submitted application includes minor route alterations due to agreements with local property owners for specific right-of-ways and easement access, but remains entirely within the areas previously surveyed by the Department in the 2014 Supplemental Environmental Impact Statement (EIS).

Keystone is a limited partnership organized under Delaware law with a primary business address in Houston, Texas. Its affiliate, TC Oil Pipeline Operations Inc. would operate the proposed Project. TC Oil Pipeline Operations Inc. is a limited company organized under the laws of Canada with its headquarters located in Calgary, Alberta, Canada. Both Keystone and TC Oil Pipeline Operations Inc. are owned by affiliates of TransCanada Corporation, a Canadian company with stock publicly traded on the Toronto and New York stock exchanges.

Executive Order 13337 (April 30, 2004) delegates to the Secretary of State the President's authority to receive applications for permits for the construction, connection, operation, or maintenance of facilities for the exportation or importation of petroleum, petroleum products, coal, or other fuels (except for natural gas) at the borders of the United States and to issue or deny such Presidential permits upon a national interest determination. The determination is Presidential action, made through the exercise of Presidentially delegated authorities, and therefore the requirements of the National Environmental Policy Act of 1969 (NEPA), the National Historic Preservation Act of 1966 (NHPA), the Endangered Species Act of 1973 (ESA), the Administrative Procedure Act (APA), and other similar laws and regulations that do not apply to Presidential actions are also inapplicable here. Nevertheless, the Department's review of the Presidential permit application for the proposed Project has, as a matter of policy, been conducted in a manner consistent with NEPA. A Final Supplemental EIS was released on January 31, 2014 as noted above. In the Supplemental EIS, the Department evaluated the potential construction and operational impacts of the proposed Project and alternatives that may occur without the proposed Project on a wide range of environmental and cultural resources. Similarly, as a matter of policy, the Department conducted reviews of the proposed Project consistent with Section 106 of the NHPA, as amended, and with Section 7 of the ESA. The Department solicited public comment and conducted a broad range of consultations with state, local, tribal, and foreign governments and other federal agencies as it considered Keystone's application.

Acting on behalf of the President under delegated authorities in accordance with Executive Order 13337 and the Presidential Memorandum, the Under Secretary of State for Political Affairs has determined that issuing a Presidential permit to Keystone to construct, connect, operate, and maintain at the border of the United States pipeline facilities for the import of crude oil from Canada to the United States as described in the Presidential permit application for the proposed Project would serve the national interest. Accordingly, the request for a Presidential permit is approved.

2.0 Legal Authority

The President of the United States has authority to require permits for transboundary infrastructure projects based upon his Constitutional powers. In Executive Order 13337, acting pursuant to the Constitution and laws of the United States, including Section 301 of Title 3 of the United States Code, the President delegated to the Secretary of State the authority to receive applications and make determinations regarding approval or denial of a Presidential permit for certain types of border facilities, including those for cross-border petroleum pipelines, based on the Secretary's finding as to whether issuance of a permit would serve the national interest. Because the proposed Project seeks to build new petroleum facilities that cross the international border, the authority to make a determination for the issuance of a Presidential permit for the border facilities is within the scope of authority delegated to the Secretary of State by the President. The functions assigned to the Secretary have been further delegated within the Department including to the Deputy Secretary of State, the Under Secretary of State for Political Affairs, and the Under Secretary of State for Economic Growth, Energy, and the Environment.

(Department of State Delegations of Authority No. 245-1, 118-2).

As noted above, when reviewing an application for a Presidential permit, the Secretary or his delegate is required by the Executive Order to determine if issuance of the permit would serve the national interest. The determination is made pursuant to the President's Constitutional authority. No statute establishes criteria for this determination. The President or his delegate may take into account factors he or she deems germane to the national interest. With regard to the proposed Project, the Under Secretary of State for Political Affairs has considered a range of factors, including but not limited to foreign policy; energy security; environmental, cultural, and economic impacts; and compliance with applicable law and policy. The determination is Presidential action, made through the exercise of Presidentially delegated authorities, and therefore the requirements of NEPA, the ESA, the NHPA, the APA, and other similar laws and regulations that do not apply to Presidential actions are also inapplicable here. Nevertheless, as a matter of policy and in order to inform the Under Secretary's determination regarding the national interest, the Department has reviewed the potential impacts of the action on the environment and cultural resources in a manner consistent, where appropriate, with these statutes. The purpose of preparing an environmental impact statement and undertaking the other statutory processes noted above was to produce a comprehensive review to inform decisionmakers and the relevant Executive Branch agencies about the potential environmental impacts of the proposed Project.

In accordance with the Presidential Memorandum, the agency notification and fifteen-day delay requirements of sections 1(g), 1(h) and 1(i) of Executive Order 13337 have been waived with respect to this re-submitted application.

3.0 Agency and Tribal Involvement and Public Comment

The Department conducted extensive public outreach and consultation during several stages of its consideration of Keystone's Presidential permit application in order to solicit input on issues to be considered. The Department also conducted government-to-government consultation with Indian tribes regarding historic properties in a manner consistent with the NHPA, and consulted with relevant agencies consistent with the ESA and other statutes as appropriate. Finally, the Department sought views of other federal agencies as required by Executive Order 13337. The public notice, outreach, and consultation efforts during consideration of Keystone's application are further detailed below. The Department has taken all comments and relevant information into account in making the national interest determination.

3.1 Public Notice: Upon receipt of Keystone's application in 2012, the Department published in the Federal Register a Notice of Receipt of the Keystone XL Pipeline Application (77 FR 27533, May 10, 2012). At that time, the Department also established a website that it updated with information and significant documents throughout its review of the Presidential permit application (*see* https://keystonepipeline-xl.state.gov/). In February 2017, the Department also published in the Federal Register a Notice of Receipt of TransCanada Keystone Pipeline, L.P.'s Re-Application for a Presidential

Permit to Construct, Connect, Operate, and Maintain Pipeline Facilities on the Border of the United States and Canada (82 FR 10429, Feb. 10, 2017).

3.2 Public Comment Periods: There has been significant opportunity for public comment on this project. On June 15, 2012, the Department published a notice in the Federal Register informing the public that it intended to prepare a Supplemental EIS (77 FR 36032). The notice also announced plans for developing the scope of the environmental review and content of the Supplemental EIS, and invited public participation in that process, including soliciting public comments. The Department received over 400,000 comments during the scoping period (including letters, cards, emails, and telephone calls), which were considered and reflected as appropriate in developing the scope of the Supplemental EIS. The Department also published all comments received during this and all other public comment periods in the review, consistent with its commitment to conduct an objective, rigorous, and transparent review process.

In March 2013, the Department released a Draft Supplemental EIS, which was posted on the Department's website for the project. The Department distributed copies to public libraries along the pipeline route and to interested Indian tribes, federal and state agencies, elected and appointed officials, media organizations, non-governmental organizations (NGOs), private landowners, and other interested parties. On March 27, 2013, the Department published a notice in the Federal Register inviting the public to comment on the document (78 FR 18665). The Department then held a public meeting on April 18, 2013, in Grand Island, Nebraska, to receive further views from the public and other interested parties. In total, the Department received more than 1.5 million submissions during the public comment period for the Draft Supplemental EIS. These submissions came from members of the public, federal, state, and local representatives, government agencies, Indian tribes, NGOs, and other interested groups and stakeholders. All comments were considered as part of the Supplemental EIS; Volumes V and VI of the Supplemental EIS address the comments that were received.

On February 5, 2014, five days after releasing the Supplemental EIS, the Department published a notice in the Federal Register inviting members of the public to comment within 30 days on any factors they deemed relevant to the national interest determination (79 FR 6984). Executive Order 13337 allows for such a public comment process, but does not require the Department to solicit public input. The response during the 30-day public comment period was unprecedented. The Department received more than three million submissions.

All comments were reviewed by subject matter experts from several Department bureaus who were knowledgeable about the proposed Project and involved in drafting sections of this Record of Decision and National Interest Determination, as well as by the third-party contractor engaged to assist the Department with tasks relating to the review of the permit application. The contractor, with guidance from Department experts, sorted the comments into six overarching issue areas discussed in the comments—environmental impacts (including climate change), cultural resources impacts, socioeconomic impacts, energy security, foreign policy considerations, and compliance with relevant federal and

state laws and regulations. For each of these issue areas, the contractor identified a number of themes that captured the ideas or points raised by public comments. The Department's subject matter experts directly reviewed all of the issues and information raised in the public comments. The Department determined that the comments largely addressed issues that were also raised during preparation of the Supplemental EIS.

3.3 Tribal Consultation: The Department directly contacted 84 Indian tribes within the United States that could have an interest in the resources potentially affected by the proposed Project. Of the 84 Indian tribes, 67 notified the Department that they would like to consult on the proposed Project or were undecided. The Department conducted extensive government-to-government consultations with those 67 Indian tribes on the environmental, cultural, and other potential impacts of the proposed Project. In addition to communications by phone, email, and letter, Department officials held tribal meetings in October 2012 (three meetings), May 2013 (one meeting), and July 2013 (teleconference). The face-to-face meetings were held in four locations: Billings, Montana; Pierre, South Dakota; Rapid City, South Dakota; and Lincoln, Nebraska.

In addition to the government-to-government consultations, the Department engaged in discussions consistent with Section 106 of the NHPA with Indian tribes, Tribal Historic Preservation Officers, State Historical Preservation Officers, and the Advisory Council on Historic Preservation. The topics of these discussions included cultural resources, in general, as well as cultural resources surveys, Traditional Cultural Properties surveys, effects on cultural resources, and potential mitigation. Additionally, Indian tribes were provided cultural resources survey reports for the proposed Project and were invited both to conduct Traditional Cultural Property surveys funded by Keystone and to help develop and participate in the Tribal Monitoring Plan. New cultural resources survey information provided by Keystone in its re-submitted application will be shared as appropriate according to the terms and conditions of the 2013 Amended Programmatic Agreement.

3.4 Consultation with Federal and State Agencies: Ten federal entities agreed to assist the Department as Cooperating Agencies during preparation of the Supplemental EIS: the U.S. Army Corps of Engineers, the Farm Service Agency, the Natural Resource Conservation Service, the Rural Utilities Service, the Department of Energy, the Bureau of Land Management, the National Park Service, the U.S. Fish and Wildlife Service (FWS), the Pipeline and Hazardous Materials Safety Administration's Office of Pipeline Safety (PHMSA), and the U.S. Environmental Protection Agency (EPA). These agencies had significant input into the drafting of the Draft and Final Supplemental EIS.

Consistent with Section 7 of the ESA, the Department consulted with the FWS and submitted a Biological Assessment on the proposed Project. The FWS issued a Biological Opinion in 2013 that is available as an attachment to the Supplemental EIS. Prior to issuance of the 2015 Decision, consultations with the FWS were reinitiated regarding the rufa red knot (*Calidris canutus rufa*), designated a threatened species effective January 12, 2015, and the northern long-eared bat (*Myotis septentrionalis*), designated a threatened species effective May 4, 2015. Following publication of the Supplemental EIS, the Department and FWS have concluded Section 7 consultations with

regard to both the rufa red knot and the northern long-eared bat to supplement the existing Biological Opinion for the proposed Project. The Department also reviewed the 2013 Biological Opinion and received confirmation from FWS that Section 7 consultations need not be reinitiated for any other species and that, following implementation of the conservation measures contained within that Opinion, no other species included in the project area would be adversely affected.

Executive Order 13337 requires that the Secretary request the views of eight specified U.S. federal agencies with regard to the permit application. Accordingly, the Department requested the views of the Department of Defense, the Department of Justice, the Department of the Interior, the Department of Commerce, the Department of Transportation, the Department of Energy, the Department of Homeland Security, and the EPA. The Department of Justice and the Department of Commerce informed the Department that they did not plan to provide any views with regard to the permit application. The other six agencies provided their views in writing; those views were released in conjunction with the 2015 Decision.

The Department has also monitored other federal and state permitting and licensing processes, including, for example, litigation and the recent application to the Nebraska Public Service Commission concerning the proposed Project's route through that state.

3.5 Information Provided by Keystone: The Department had robust communication with Keystone throughout the review of the application for the proposed Project. Keystone responded to multiple requests for information and provided supplemental views and information on its own initiative, including through letters on February 24, 2015, June 29, 2015, February 3, 2017, and March 17, 2017. The Department has taken all information provided by Keystone into account in making the national interest determination.

4.0 Project Background

4.1 Keystone XL Project: The proposed Project would consist of approximately 1,204 miles of new, 36-inch-diameter pipeline extending from Hardisty, Alberta, to Steele City, Nebraska. Approximately 875 miles of the pipeline would be located in the United States. The pipeline would cross the international border between Saskatchewan, Canada and the United States near the town of Morgan, Montana, in Phillips County. The border segment is from the international border near Morgan, Montana, to the first mainline shut-off valve within the United States located approximately 1.2 miles from the international border. The pipeline would have the capacity to deliver up to 830,000 bpd of crude oil. Annual quantities would likely vary based on market conditions and other factors.

Subject to commercial demand, Bakken crude will enter the pipeline within the United States through the proposed Bakken Marketlink Project—a five-mile pipeline with pumps, meters, and storage tanks that would connect to the Keystone XL pipeline near Baker, Montana. The facilities would supply up to 100,000 bpd of Bakken crude oil to the proposed Keystone XL pipeline.

At its southern terminus, the proposed Project would connect to the existing Keystone Cushing Extension pipeline, which extends from Steele City, Nebraska, to Cushing, Oklahoma. The Keystone Cushing Extension in turn connects to Keystone's Gulf Coast pipeline, which extends south to Nederland, Texas, in order to serve Gulf Coast refineries.

In addition to the pipeline and potential Bakken Marketlink Project facilities, the proposed Project would include ancillary facilities. Eighteen pumping stations would be located along the Keystone XL pipeline, and two pumping stations would be added to the Keystone Cushing Extension. Keystone further anticipates new pumping capacity on the Keystone Cushing Extension in Kansas. The pipeline would be located in a 50-foot-wide permanent right of way (ROW). The temporary construction ROW would be wider—110 feet—and access roads, construction camps, and related facilities would be needed during construction.

According to the application submitted by Keystone, the primary purpose of the proposed Project would be to transport crude oil from the border with Canada to delivery points in the United States (primarily to the Gulf Coast area). The proposed Project is meant to supply U.S. refineries with crude oil of the kind found in the WCSB (often called heavy crude oil). Subject to commercial demand, the proposed Project may also provide transportation for the kind of crude oil found within the Bakken formation of North Dakota and Montana (often called light crude oil).

Most recent U.S. production growth has been from tight oil formations—unlocked through technical innovations like hydraulic fracturing and horizontal drilling—that typically yield light, sweet crude. As a result, U.S. crude production growth has tended to displace imports from other countries also producing light, sweet crude—predominately in Africa. Oil sands bitumen consists of heavy, sour, viscous crude oil that is produced and marketed differently than most domestic unconventional crudes. Many U.S. refineries, particularly in the Midwest and Gulf Coast, are optimized to process heavy crudes like those from the oil sands.

As the Supplemental EIS explains, North American production growth coupled with constraints on transporting landlocked crude oil to market have contributed to discounts on the price of landlocked crude and led to growing volumes of crude shipped by rail. This has heightened the attractiveness of the proposed Project to many in industry. Keystone has stated that the proposed Project is commercially viable and sees the demand to be substantially similar to that which existed when Keystone first applied.

The Department notes that the ultimate disposition of crude oil that would be transported by the proposed Project, as well as any refined products produced from that crude oil, would be determined by market demand and applicable law. In the absence of heavy crude oil from Canada, U.S. refineries, particularly in the Gulf Coast, will continue to rely on comparable foreign heavy crudes.

4.2 Prior Permit Application: Keystone's first application for the Keystone XL pipeline was submitted to the Department on September 19, 2008. A Final EIS was published on August 26, 2011 (2011 Final EIS). The route proposed in 2008 included the same U.S.-Canadian crossing as the border currently proposed Project, but a different pipeline route in the United States. That route traversed a substantial portion of the Sand Hills Region of Nebraska, as identified by the Nebraska Department of Environmental Quality (NDEQ). Moreover, the 2011 Final EIS route went from Montana to Steele City, Nebraska, and then from Cushing, Oklahoma, to the Gulf Coast area.

In November 2011, the Department determined that additional information was needed to fully evaluate the application—in particular, information about alternative routes within Nebraska that would avoid the NDEQ-identified Sand Hills Region. In late December 2011, Congress enacted a provision of the Temporary Payroll Tax Cut Continuation Act that sought to require the President to make a decision on the Presidential permit for the 2008 application within 60 days. At the time, the prior administration determined that the deadline did not allow sufficient time for the Department to prepare a rigorous, transparent, and objective review of an alternative route through Nebraska. Accordingly, the Presidential permit was denied.

In February 2012, Keystone informed the Department that it considered the Gulf Coast portion of the originally proposed pipeline project (from Cushing, Oklahoma, to the Gulf Coast area) to have independent economic utility, and indicated that Keystone intended to proceed with construction of the Gulf Coast pipeline as a separate project, called the Gulf Coast Project. The Gulf Coast Project did not require a Presidential permit because it does not cross an international border. Construction on the Gulf Coast Project is now complete.

On May 4, 2012, Keystone filed a new Presidential permit application for the Keystone XL Project. The proposed Project has a new route and a new stated purpose and need. The new proposed route differs from the 2011 Final EIS Route in two significant ways: 1) it would avoid the environmentally sensitive NDEQ-identified Sand Hills Region and 2) it would terminate at Steele City, Nebraska. From Steele City, existing pipelines would transport the crude oil to the Gulf Coast area. The proposed Project no longer includes a southern segment.

In addition to the NDEQ-identified Sand Hills Region, the proposed Project route would avoid other areas in Nebraska (including portions of Keya Paha County) that have been identified by the NDEQ as having soil and topographic characteristics similar to the Sand Hills Region. The proposed Project route would also avoid or move further away from water wellhead protection areas for the towns of Clarks and Western, Nebraska.

On November 6, 2015, Secretary of State Kerry determined under Executive Order 13337 that issuing a Presidential permit to Keystone for the proposed Keystone XL pipeline's border facilities would not serve the national interest, and denied the permit application in the 2015 Decision. On January 24, 2017, President Trump issued the Presidential Memorandum which, inter alia, invited Keystone "to re-submit its application to the

Department of State for a Presidential Permit for the construction and operation of the Keystone XL Pipeline. . . ." On January 26, 2017, the Department received a re-submitted application from Keystone for the proposed Project. The proposed route in the re-submitted application includes minor route alterations due to changes in right-of-way and easement agreements with local property owners, but remains entirely within the area previously examined by the Department in the Supplemental EIS.

5.0 Issues Considered in the Final Supplemental Environmental Impact Statement

This Record of Decision and National Interest Determination is informed by the Supplemental EIS prepared by the Department and published in January 2014, which identified and analyzed a broad range of potential impacts of the proposed Project. The Presidential Memorandum directed the Department to consider to the maximum extent permitted by law the Supplemental EIS "and the environmental analysis, consultation, and review described in that document (including appendices)" to satisfy any provision of law that requires executive department consultation or review, including any applicable requirements of NEPA. As described above, the Department's determination with respect to an application for a Presidential permit is Presidential action, made through the exercise of Presidentially delegated authorities, and therefore the requirements of NEPA, the ESA, the NHPA, the APA, and other similar laws and regulations that do not apply to Presidential actions are inapplicable. As a matter of policy, however, and in order to inform the Department's determination regarding the national interest, the Department has reviewed the potential impacts of the proposed Project on the environment and cultural resources in a manner consistent, where appropriate, with these statutes.

The Supplemental EIS presents information and analysis on a range of potential impacts of the proposed Project. It also describes the tribal consultations undertaken as part of the Supplemental EIS process. The Supplemental EIS also considers reasonable alternative pipeline routes and No Action Alternative scenarios.

Key topics in the Supplemental EIS, particularly those that received significant public interest, are described below. The Supplemental EIS reflects the expected environmental impacts of the proposed Project. Certain topics examined therein such as greenhouse gas (GHG) emissions analysis and market analysis are dynamic, although, for the reasons discussed below, the Supplemental EIS continues to inform the Department's national interest determination in respect of these topics. With respect to other topics such as threatened and endangered species, changes brought about either by the passage of time or differences in underlying law or regulations are noted. The Department has reviewed and considered these changes and concluded that they do not represent substantial changes, do not present significant new information, and do not affect the continued reliability of the Supplemental EIS.

5.1 Greenhouse Gas (GHG) Emissions: GHG emissions and the potential climate change impacts associated with the proposed Project were key areas of interest highlighted by the comments received by the Department. The Supplemental EIS evaluates the relationship between the proposed Project with respect to GHG emissions

and climate change from the following perspectives:

- The GHG emissions associated with the construction and operation of the proposed Project and its connected actions;

- The indirect lifecycle (wells-to-wheels) GHG emissions associated with the WCSB crude oil that would be transported by the proposed Project as compared to the GHG emissions of the crudes it may displace; and

- How the GHG emissions associated with the proposed Project cumulatively contribute to climate change.

GHG Emissions Associated with Construction and Operation

According to the Supplemental EIS, the proposed Project would emit approximately 0.24 million metric tons of carbon dioxide (CO2) equivalents (MMTCO2e) per year during the construction period. These emissions would be emitted directly through fuel use in construction vehicles and equipment as well as land clearing activities, including open burning, and indirectly from electricity usage. To operate and maintain the pipeline, approximately 1.44 MMTCO2e would be emitted per year, largely attributable to electricity use for pump station power, fuel for vehicles and aircraft for maintenance and inspections, and fugitive methane emissions at connections. The 1.44 MMTCO2e emissions would be equivalent to GHG emissions from approximately 300,000 passenger vehicles operating for one year, or 71,928 homes using electricity for one year.

GHG Emissions Associated with the Indirect Lifecycle of WCSB Crudes

To enable a more comprehensive understanding of the potential indirect GHG impact of the proposed Project, it is important to consider the wider GHG emissions associated with the crude oil that would be transported by the proposed Project. A lifecycle analysis is a technique used to evaluate the environmental aspects and impacts (in this case GHGs) that are associated with a product, process, or service from raw materials acquisition through production, use, and end-of-life (wells-to-wheels). This approach evaluates the GHG implications of the WCSB crudes that would be transported by the proposed Project compared to other crude oils that would likely be replaced or displaced by those WCSB crudes in U.S. refineries (hereinafter, reference crudes). The actual increase in GHG lifecycle emissions attributable to the proposed Project depends on whether or how much approval and use of the pipeline would cause an increase in oil sands production. Conclusions drawn from the Department's market review, detailed further below, indicate that the proposed Project would be unlikely to significantly impact the rate of extraction in the oil sands and is therefore not likely to lead to a significant net increase in GHG emissions.

The Supplemental EIS analysis considers wells-to-wheels GHG emissions, including extraction, processing, transportation, refining, and refined product use (such as combustion of gasoline in cars) of WCSB crudes compared to other reference crudes, including heavy slates. The lifecycle analysis also considers the implications associated with other generated products during the lifecycle stages (so-called co-products) such as

petroleum coke. The largest single source of GHG emissions in the lifecycle analysis is the finished-fuel combustion of refined petroleum fuel products, which is consistent for different crude oils.

WCSB crudes are generally more GHG intensive than other crudes they would replace or displace in U.S. refineries, and emit an estimated 17 percent more GHGs on a lifecycle basis than the average barrel of crude oil refined in the United States. As the EPA notes in its letter of February 2, 2015 to the Secretary, "oil sands crude is substantially more carbon intensive than reference crudes and its use will significantly contribute to carbon pollution."

According to the Supplemental EIS, the total lifecycle emissions associated with production, refining, and combustion of 830,000 bpd of oil sands crude oil transported through the proposed Project is approximately 147 to 168 MMTCO2e per year. The annual lifecycle GHG emissions from 830,000 bpd of the four reference crudes examined in the Supplemental EIS are estimated to be 124 to 159 MMTCO2e. The range of incremental GHG emissions for crude oil that would be transported by the proposed Project is estimated to be 1.3 to 27.4 MMTCO2e annually. The estimated range of potential emissions is large because there are many variables, such as which reference crude is used for the comparison and which study is used for the comparison. Nevertheless, at the high end, the Supplemental EIS states that 27.4 MMTCO2e per year is equivalent to the annual GHG emissions from 5.7 million passenger vehicles or 7.8 coal-fired power plants.

GHG lifecycle emissions analysis performed by the Department after publication of the Supplemental EIS in the context of the environmental review for a Presidential permit for another pipeline, Enbridge's Line 67 Expansion, estimates that GHG emissions from WCSB crude may be five to 20 percent higher than previously indicated. Using the Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) model, an alternative "well-to-wheels" fuel-cycle model developed by the Argonne National Laboratory (Argonne National Laboratory 2016, 2015), the Line 67 Expansion Draft Supplemental EIS places emissions per barrel of WCSB at 584 kg CO2-eq per barrel, compared to approximately 485-555 kg CO2-eq per barrel to in the Supplemental EIS for the proposed Project.[1]

The estimates provided in the Supplemental EIS characterize the potential increase in emissions attributable to the proposed Project if one assumes that approval or denial of the proposed Project would directly result in a change in production of 830,000 bpd of oil sands crudes in Canada. That is because the estimates represent the total incremental emissions associated with production and consumption of 830,000 bpd of oil sands crude

[1] The primary driver for the Department's determination for Line 67 is the assumption that coke produced in the process of extraction of WCSB would not offset the use of coal as a source of energy to fuel WCSB extraction. If coke displaces coal, WCSB emissions would be 528 kg CO2-eq per barrel according to the Line 67 Expansion Supplemental EIS. We note that comparing lifecycle greenhouse gas emissions to the U.S. average mix in GREET could potentially lead to over-estimating the change in emissions from using heavy WCSB crude oil, and under-estimating the change from using lighter WCSB crude oil.

above and beyond the current baseline compared to the reference crudes. However, as discussed further below, the Department's analysis continues to show that the approval of this proposed Project is unlikely to have a substantial effect on the rate of extraction of the oil sands and is also therefore unlikely to directly result in significant change in production in oil sands crudes in Canada.

5.2 Market Analysis

Proposed Project's Impact on Oil Sands Production

The Supplemental EIS utilizes analysis of evolving market conditions, transportation costs, oil-sands supply costs, and varying supply-demand scenarios to inform conclusions about the proposed Project's potential impact on oil sands production. The analysis concluded at the time it was published in January 2014 that approval or denial of any one crude oil transport project, including the proposed Project, would be unlikely to significantly impact the rate of extraction in the oil sands, or the continued demand for heavy crude oil at refineries in the United States. The Supplemental EIS balances this position by emphasizing that uncertainty underlies a number of key variables critical to projecting Canadian production growth.

Generally, the dominant drivers of oil sands development remain more global than any single infrastructure project. Oil sands production and investment could slow or accelerate depending on oil price trends, regulations, and technological developments, but the potential effects of those factors on the industry's rate of expansion need not be conflated with the more limited effects of individual pipelines. Under most market conditions, alternative transportation infrastructure would allow growing oil sands production to reach markets irrespective of the proposed Project. Most recently, this has been demonstrated by the growth in rail loading capacity in Western Canada, which as of February 25, 2017, the National Energy Board (NEB) of Canada now estimates at over 1,075,000 bpd. This significant rail capacity has been utilized to export over 160 million barrels of Canadian crude oil to the United States since 2011. The Supplemental EIS also determined that construction of the proposed Project would have some effect on discrete decisions about whether to develop specific oil sands projects if (1) no new pipeline capacity to Canadian ports or to the United States becomes operational and (2) the price of oil in the long run persists at a level where other transport options are no longer economical.

Coupled with supply growth in the WCSB, major crude oil export pipelines from the region have largely operated at, or near, capacity for several years; an observation highlighted by Prime Minister Trudeau on November 29, 2016 when he announced the conditional approval of Kinder Morgan's expansion of the Trans Mountain pipeline from Alberta to the port at Vancouver, British Columbia, which would increase the pipeline's capacity from 300,000 bpd to 890,000 bpd of crude oil. Kinder Morgan expects to begin construction of the Trans Mountain pipeline in September 2017. Current market projections from the Energy Information Administration (EIA) and the International Energy Agency (IEA) anticipate production growth in Canadian WCSB to continue, even when factoring in delays and cancellations of certain planned large-scale greenfield

projects resulting from the current crude oil price environment, further stressing the capability of existing pipeline infrastructure to keep pace with supply growth, and suggesting that there continues to be sustained demand for additional pipeline capacity. This near-term production growth in the WCSB is due largely to the start of other projects with long lead-times and continued incremental investment by certain market players to expand production from existing brownfield projects.

The impact on oil sands development is difficult to gauge with precision, in part because the cost differential between other modes of transport and pipelines may change over time, and production costs vary from one oil sands development to another. While the Department does not know all of the production costs or other investment factors for specific Canadian projects, the Supplemental EIS concluded that many projects are expected to break even when sustained oil prices are in the range of $65-$75 per barrel. On this basis, the Department's analysis found that oil sands production is expected to be most sensitive to transport costs with oil prices in or below that range.

Since the publication of the Supplemental EIS, the price of benchmark West Texas Intermediate (WTI) crude oil has declined by over 50 percent from $98.23 per barrel in January 2014 to approximately $48 per barrel at present. This represents a sizeable near-term price decline; however, the Department notes that the 30-year real price average (i.e., the nominal price adjusted for inflation using March 2017 $) of WTI crude is $55 per barrel. Although prices have rebounded from 2016 lows, global liquids production for the time being continues to outpace consumption. Organization for Economic Cooperation and Development commercial stocks of crude oil remain approximately 300 million barrels above the five-year average. This includes U.S. commercial oil stocks, which are at an all-time high of 528 million barrels or approximately 35 days of domestic supply needs. The EIA expects a relatively balanced oil market in the next two years, with inventory builds averaging 100,000 bpd in 2017 and 200,000 bpd in 2018. However, the Department underscores that short-term fluctuations in price driven by current market supply and demand dynamics are less indicative of the industry's general outlook than the broader macroeconomic forces that drive investment in the oil and gas sector.

In making long-term investment decisions, companies often distinguish between new development and production from existing projects with previously sunk capital costs. While oil prices consistently below supply costs over the long-term may lead some investors to delay or even cancel some future projects, decisions about proceeding with or expanding existing projects and those already under construction or with financing in place are largely based on marginal operating costs. In general, existing projects and those under development are unlikely to slow or stop unless revenues persistently fall below current operating costs, which are much lower than total supply costs ($20 to $40 per barrel according to most estimates reviewed). Most reports further indicate that oil sands supply costs have fallen in the lower-price environment. Collectively, these factors help to explain why Canadian crude oil production, including from the oil sands, has proven resilient despite lower oil prices, including a period during the first quarter of 2016 when price remained at or below $40 per barrel. These market observations also

explain the growth trends expected by the Department and other market energy information organizations, such as the EIA, which predicts 340,000 bpd in crude production growth in Canada through 2018.

The Department recognizes that oil prices are volatile, particularly over the short term. However, the long-term trends that drive WCSB crude oil production and the amount of new transportation capacity needed to meet them, coupled with the documented ability of Canadian upstream producers to sustain production during a period of lower oil prices, lead the Department to have confidence in the forecasts presented by market experts at the EIA and IEA, and affirm the Department's conclusion that such infrastructure is supported by mid- and long-term market outlooks.

Crude-by-Rail

In recent years, industry has looked toward existing Canadian crude oil production forecasts and commercial realities tied to prevailing midstream bottlenecks as justification for further investment in alternative crude oil transportation. Although there are a number of possible alternative transportation avenues for crude from the oil sands to reach U.S. or other markets, significant investment has been made in the development of crude-by-rail loading and off-loading facilities throughout North America. Current WCSB rail loading capacity has been estimated to exceed 1,075,000 bpd, with potential to expand further. Under current market conditions, existing pipelines coupled with crude-by-rail facilities will likely have the capacity to accommodate new supply from upstream projects under construction and in various stages of completion in western Canada. Although existing rail capacity moderates the impact of pipeline constraints, according to NEB of Canada, it remains a more expensive form of transportation than pipelines, an observation that supports the economic utility and commercial viability of new pipeline infrastructure. Additionally, as stated in the Supplemental EIS, per unit rail transport of WCSB oil would be more GHG-intensive than transport by pipeline when accounting for the total aggregate lifecycle GHG emissions (including direct and indirect emissions).

The extent to which rail transport will actually occur, however, or would prove to be a major form of transport for WCSB crude to the United States in the long term, remains uncertain. Utilization of rail facilities will depend upon many factors, including the availability of cheaper pipeline transport options from the respective production areas, the rate of growth in emerging areas of crude production, demand from refineries that may be better served by rail from these sources, differences in the price of oil paid in the production areas and the price of oil paid at the refinery markets (particularly on the coasts), and arbitrage opportunities that may be available through faster rail-based transport.

Producers seeking to preserve margins in the face of narrowing price gaps between Western Canada Select crude, WTI, and other crudes such as the Mexican Maya, may seek to maximize the efficiency of existing pipeline infrastructure in lieu of rail. Moreover, implementation of new Department of Transportation rules intended to improve the safe transportation of large quantities of crude-by-rail may lead to a marginal

increase in crude-by-rail costs.

5.3 Potential Spill Risk and Safety Impacts: Many concerns were raised in comments received by the Department regarding the potential environmental effects of a pipeline release, leak, and/or spill. The Supplemental EIS analyzes impacts from potential releases from the proposed Project by analyzing historical spill data. The analysis identifies the types of pipeline system components that historically have been the source of spills, the sizes of those spills, and the distances those spills would likely travel. The resulting potential impacts to natural resources, such as surface waters and groundwater, are also evaluated and mitigation measures are included that are designed to prevent, detect, minimize, and respond to oil spills.

The Supplemental EIS analyzes historical crude oil pipeline incident data within the PHMSA and National Response Center incident databases. Over a period of ten years, from January 2002 through July 2012, a total of 1,692 incidents were reported in the United States, of which 321 were reported to be pipe incidents and 1,027 incidents were reported to involve different equipment components such as tanks, valves, or pumps.

Most spills over this period were small. Of the 1,692 incidents between 2002 and 2012, 79 percent of the incidents were in the small (zero to 50 barrel) range—roughly equivalent to a spill of up to 2,100 gallons. Four percent of the incidents were in the large (greater than 1,000 barrel) range. If a pipeline spill were to occur, the severity of its impact would depend on the volume and aerial extent of oil released; the distance of the impacted entity from the spill source; site-specific environmental circumstances, including climate and species present; and the timing and nature of response efforts.

An oil spill that reaches a surface waterbody or wetland could cause effects such as reduced dissolved oxygen levels or high benzene contaminant levels. The Supplemental EIS states that acute toxicity could occur if substantial amounts of crude oil were to enter rivers and streams. If diluted bitumen is accidentally released and it flowed into surface water, the diluent fraction would tend to volatilize or dissolve into the water, leaving bitumen behind to sink or become suspended. Upwards of 25 percent of residual hydrocarbons could be reasonably removed by natural attenuation, while active recovery methods would be required for remediation of the remaining spill volume. Aggressive cleanup methods could mix oil and water, which might result in longer-lasting impacts to sensitive waterbody habitat. Passive cleanup methods are less likely to impact resources, but require a timeframe on the order of tens of years.

There are 39 stream crossings within 40 miles upstream of protected or specially designated segments of the Niobrara and Missouri rivers, which are in proximity to the proposed Project route. The shortest distance an oil spill would have to travel to impact a protected waterbody is approximately 28.5 miles. Based on an analysis of PHMSA historical incident data of large-diameter pipeline releases, the probability of a spill occurring that would convey oil to a protected waterbody is once every 542 years.

Spilled crude oil could affect wildlife directly and indirectly. Direct effects include

physical processes such as oiling and toxicological effects, which could cause sickness or mortality. Indirect effects include habitat impacts, nutrient cycling disruptions, and alterations to the ecosystem.

A surface release could produce localized effects on plant populations by direct oiling or by oil permeating through the soil, affecting root systems and indirectly affecting plant respiration and nutrient uptake. Generally, most past spills on terrestrial habitats have caused minor ecological damage, and ecosystems have shown a good potential for recovery.

At the time of the release of the Supplemental EIS, there were 1,232 identified wells within the potential range of a large spill from the proposed Project. In Nebraska, the potential spill range from the proposed Project overlaps with the Steele City Wellhead Protection Area. Keystone agreed to provide an alternative water supply if an accidental release from the proposed Project contaminates groundwater or surface water used as potable water or for irrigation or industrial purposes.

Normal operations would be expected to result in less than one human injury per year. In the event of a spill, human health exposure pathways could include direct contact with crude oil, inhalation of airborne emissions from crude oil, or consumption of food or water contaminated by either the crude oil or components of the crude oil. Mitigation measures, including spill response and containment and emergency response plans, would reduce and minimize human and environmental exposures.

Keystone has agreed to incorporate additional mitigation measures in the design, construction, and operation of the proposed Project, in some instances exceeding what is normally required, including 59 Special Conditions, 57 of which were recommended by PHMSA. These commitments by Keystone remain in effect. Many of these mitigation measures are intended to reduce the likelihood of a release occurring. Other measures provide mitigation intended to reduce the consequences and impact of a spill should such an event occur.

Since the publication of the Supplemental EIS, several new studies related to cleanup of diluted bitumen have been published. The National Academy of Science (NAS) 2016 study, Spills of Diluted Bitumen from Pipelines: A Comparative Study of Environmental Fate, Effects, and Response, found that diluted bitumen presents more challenges for cleanup response than other types of oil commonly moved by pipeline. The NAS 2016 study also found that various government agencies (PHMSA, EPA, and the U.S. Coast Guard) and first responders are in need of more training and better communication in order to adequately and effectively address spills of diluted bitumen.

But as described in the Supplemental EIS, Appendix Z, Compiled Mitigation Measures, Keystone has agreed to develop and carry out multiple mitigation measures including developing monitoring plans and response plans, among other spill and spill-prevention mitigation measures. For example, if a spill were to occur, Keystone would provide material safety data sheets to first responders within one hour of the occurrence, and

would provide potable water for any affected communities, businesses, or affected entities within the spill area. Additionally, during the development and construction phase of the project, Keystone has agreed to consult with local emergency responders during development of an Emergency Response Plan (ERP) and update its mitigation and spill response plans with new knowledge or information on the chemistry of diluted bitumen as it becomes available. Accordingly, the measures that Keystone has already committed to—including commitments relating to development of an ERP and other mitigation plans that account for new information –adequately address the new challenges, training needs, and communication needs identified in the NAS 2016 study.

The Supplemental EIS also discusses transportation by rail, in particular as part of the No Action Alternative scenarios (in other words, scenarios that may occur if the proposed Project were denied), and concludes that transport by rail likely results in a greater number of injuries and fatalities per ton-mile than transportation by pipeline, as well as a greater number of accidental releases of crude oil and a greater overall volume of crude oil released. However, the average size of an accidental release associated with crude-by-rail transportation is smaller than the average size of an accidental release associated with a pipeline.

5.4 Socioeconomic Impacts: Socioeconomic impacts associated with the proposed Project were also of particular concern in the comments received by the Department throughout its process. The Supplemental EIS analyzes these impacts and provides information regarding economic activity that may result from an approval of the proposed Project.

Employment and Economic Activity

The Department utilized subject matter experts and established methodologies to characterize the macroeconomic impacts of the proposed Project in the Supplemental EIS. Benchmarking against 2010 economic data, construction spending on the proposed Project was found to support a combined total of approximately 42,100 jobs throughout the United States for the up to two-year construction period. Of these jobs, approximately 16,100 would be direct jobs supported at firms that are awarded contracts for goods and services, including construction, by Keystone. The other approximately 26,000 jobs would result from indirect and induced spending; this would consist of goods and services purchased by the construction contractors and spending by employees working for either the construction contractor or for any supplier of goods and services required in the construction process. About 12,000 jobs, or 29 percent of the total 42,100 jobs, would be supported in Montana, South Dakota, Nebraska, and Kansas.

Of the 42,100 supported jobs described above, approximately 3,900 (or 1,950 per year if construction took two years) would comprise a direct, temporary, construction workforce in the proposed Project area. Employment supported by construction of the proposed Project would translate to approximately $2.05 billion in employee earnings. Of this, approximately 20 percent ($405 million in earnings) would be allocated to workers in the proposed Project area. The remaining 80 percent, or $1.6 billion, would occur in other locations around the country.

According to Keystone, once the proposed Project enters service, operations would require approximately 50 total employees in the United States: 35 permanent employees and 15 temporary contractors. This small number would result in negligible impacts on population, housing, and public services in the proposed Project area.

The total estimated property tax from the proposed Project in the first full year of operations would be approximately $55.6 million spread across 27 counties in three states. This impact to local property tax revenue receipts would be substantial for many counties, constituting a property tax revenue benefit of 10 percent or more in 17 of these 27 counties. Operation of the proposed Project is not expected to have an impact on residential or agricultural property values.

Construction contracts, materials, and support purchased in the United States would total approximately $3.1 billion. Another approximately $233 million would be spent on construction camps for workers in remote locations of Montana, South Dakota, and northern Nebraska. Construction of the proposed Project would contribute approximately $3.4 billion to the U.S. gross domestic product (GDP). This figure includes not only earnings by workers, but all other income earned by businesses and individuals engaged in the production of goods and services demanded by the proposed Project, such as profits, rent, interest, and dividends.

According to the U.S. Bureau of Economic Analysis, the U.S. oil and gas industry contributed 1.1% to total U.S. GDP in 2015. The proposed Project would make a meaningful contribution to this critically important sector of U.S. economy.

Since 2010, from which data the economic data was benchmarked, the U.S. economy has returned closer to full employment capacity but simultaneously has seen relative economic weakness in certain sectors and states due to the downturn in global energy prices in 2014. As a result, the economic benefits in terms of job creation from the proposed Project may be significantly different than the initial estimates.

Health Impacts

A number of commenters raised concerns about the potential for impacts on human health associated with the proposed Project. The Department took into account, with peer-reviewed research where appropriate, impacts to human health throughout the various resource areas in the Supplemental EIS.

For example, in the Potential Releases chapter, the Supplemental EIS examined potential health risks associated with exposure to crude oil and other relevant chemicals, were there to be a spill. In the Air Quality and Noise chapter, the Supplemental EIS addressed air pollution that would be associated with the construction and operation of the proposed Project. In the Cumulative Effects Assessment and Extraterritorial Concerns chapter, the Supplemental EIS described potential changes in pollution associated with refineries. Finally, the Supplemental EIS also examined potential human health impacts in Canada associated with oil sands development and pipeline construction and operation.

Environmental Justice

According to the Office of Environmental Justice in EPA, environmental justice refers to the "fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." A total of 17 separate census areas with minority and/or low income populations could potentially be affected by construction or operation of the proposed Project. Temporary environmental justice impacts during construction could include exposure to construction dust and noise, disruption to traffic patterns, and increased competition for medical or health services in underserved populations. Positive impacts could include increased employment and earnings.

Minority or low-income populations could be more vulnerable should an oil release occur along the segment of the pipeline that transits through their communities. Further, Indian tribes with significant dependence on natural resources could be disproportionately affected.

Mitigation of environmental justice concerns would include ensuring adequate communication with affected populations, such as through public awareness materials in appropriate languages so as to ensure an appropriate level of emergency preparedness. With respect to employment opportunities, Keystone has committed to employee and supplier diversity and has programs in place to mitigate impacts on vulnerable populations.

Some comments, particularly from Indian tribes, have expressed concern that temporary camps of construction workers along the proposed Project route may increase crime and otherwise disrupt local communities. In their letters to the Department of February 2, 2015, the Department of Homeland Security and the Department of the Interior also expressed concerns in this regard. Keystone committed to take several measures to ensure greater safety for those communities along the route, including security provisions and a code of conduct for the workers.

5.5 Physical Disturbance Impacts:

Water Resources

Construction and operation of the proposed Project could result in temporary and permanent surface water impacts, including stream sedimentation, changes in stream channels and stability, and temporary reduction in stream flow. The proposed Project's pipeline route would avoid surface water whenever possible, but would cross approximately 1,073 surface water bodies, including 56 perennial rivers and streams, as well as approximately 24 miles of mapped floodplains. Mitigation measures would include tunneling the pipeline underneath major rivers to mitigate construction impacts, erosion control during construction, and restoration of waterbodies as soon as practical after construction.

Wetlands

The proposed Project would affect approximately 383 acres of wetlands, two acres of which may be permanently lost. Remaining wetlands affected by the proposed Project would remain as functioning wetlands, provided that impact minimization and restoration efforts described in the mitigation plan are successful. The proposed route includes modifications to the route that Keystone originally proposed in 2012 to avoid wetland areas (such as the sensitive NDEQ-identified Sand Hills Region) and Keystone has committed to additional mitigation measures. Additionally, Keystone has identified mitigation measures for the protection of sensitive areas, including wetlands, such as industry-standard avoidance measures and best practices for working near sensitive areas as described in the Construction, Mitigation, and Reclamation Plan (CMRP), as well as a commitment to abide by all state, local, and tribal regulations and requirements. Finally, Keystone will work with state and local response agencies to develop and carry-out mitigation measures related to work near wetlands.

Threatened and Endangered Species

Thirteen federally listed threatened or endangered species occur in the proposed project area. The endangered American burying beetle (*Nicrophorus americanus*) is the only species that is likely to be adversely affected by the proposed Project, but other species could potentially be affected. These include the federally endangered black-footed ferret (*Mustela nigripes*), interior least tern (*Sternula antillarum*), whooping crane (*Grus americana*), and pallid sturgeon (*Scaphirhynchus albus*); and the threatened piping plover (*Charadrius melodus*), western prairie fringed orchid (*Platanthera praeclara*), northern long-eared bat (*Myotis septentrionalis*), and rufa red knot (*Calidris canutus rufa*).

The FWS issued a Biological Opinion in May 2013 to the Department regarding potential impacts of the proposed Project on seven federally protected species. The American burying beetle was the only species determined by the FWS to likely be adversely affected by the proposed Project. Since that time, two additional species have become federally listed as threatened—the northern long-eared bat and the rufa red knot. The consultations for both species were completed, with the FWS concurring in a "may affect, but is not likely to adversely affect" determination. The Department also reviewed the 2013 Biological Opinion and received confirmation from FWS that Section 7 consultations need not be reinitiated for any other species and that, following implementation of the conservation measures contained within that Opinion, no other species included in the project area would be adversely affected. The Department is committed to ensuring that all measures identified in the 2013 Biological Opinion, as supplemented, are implemented, including by Keystone.

Geology and Soils

The proposed Project's pipeline route extends through relatively flat and stable areas, and the potential for seismic hazards (earthquakes), landslides, or subsidence (sink holes) is low. The route would avoid the NDEQ-identified Sand Hills Region, where soils are particularly susceptible to damage from pipeline construction. Potential impacts to soil resources in other areas associated with construction or operation of the proposed Project and connected actions include soil erosion, loss of topsoil, soil compaction, an increase in

the proportion of large rocks in the topsoil, soil mixing, soil contamination, and related reductions in the productivity of desirable vegetation or crops. Mitigation measures would include construction of temporary erosion control systems, implementation of topsoil segregation methods, and restoration of the ROW after construction.

Terrestrial Vegetation

Potential construction and operations-related impacts to terrestrial vegetation resources associated with the proposed Project include impacts to cultivated crops, developed land, grassland/pasture, upland forest, open water, forested wetlands, emergent herbaceous wetlands, and shrub-scrub communities. The proposed Project route would impact biologically unique landscapes and vegetation communities of conservation concern. Keystone committed to restore areas to preconstruction conditions as practicable, and reseed disturbed areas, and to use specific best management practices and procedures to minimize and mitigate the potential impacts to native prairie areas.

Wildlife

The proposed Project would cause minor impacts to wildlife and wildlife habitat. Potential impacts to wildlife include habitat loss, alteration, and fragmentation; direct mortality during construction and operation (e.g., wildlife collisions with vehicles and power lines/power poles); and reduced survival or reproduction due to stress or avoidance of feeding caused by factors such as construction and operations noise and increased human activity. Mitigation measures to reduce potential construction and operations-related effects to wildlife where habitat is entered would include construction timing restrictions and buffer zones developed in consultation with regulatory agencies as well as measures to minimize adverse effects to wildlife habitats. Keystone committed to develop and implement a conservation plan for migratory birds and bald and golden eagles and their habitats in consultation with the FWS.

Fisheries

Impacts to fisheries within the rivers and perennial streams crossed by the proposed Project route would occur during construction and would be temporary. The CMRP contains measures for waterbody crossings to reduce potential effects on fish and aquatic/stream bank habitat and otherwise minimize potential impacts to fisheries resources. Mitigation measures would include best practices in open-cut stream crossings to reduce stream bed disturbance, sediment impacts, and interference with spawning periods; crossing under large rivers using horizontal directional drilling methods; minimization of vehicle contact with surface waters; and development of site-specific contingency plans to address unintended releases of drilling fluids that include preventative measures and a spill response plan.

Land Use, Recreation, and Visual Resources

Approximately 15,296 acres of land would be affected by construction of the proposed Project, though only approximately 5,569 acres would be retained for operation within permanent easements along the pipeline ROW and at the locations of ancillary facilities (e.g., access roads, pump stations). Approximately 89 percent of the total affected acreage (13,597 acres) is privately owned and the remainder government-owned.

Rangeland (approximately 63 percent) and agricultural land (approximately 33 percent) comprise the vast majority of land use types that would be affected by construction. Impacts to land use resources include lease or acquisition and development of the pipeline ROW and land for ancillary facilities (e.g., access roads, pump stations, and construction camps), damage to agricultural features and productivity, visual impacts, and increased dust and noise.

Construction activities would temporarily affect recreational traffic and use patterns in special management and recreational areas, such as historic or scenic trails and rivers with recreational designations. Impacts of operation of the proposed Project on recreation would be minimal.

Visual impacts associated with the proposed Project would primarily occur during construction, when pipeline and ancillary facility construction, trenching, and facilities such as pipe yards would be visible. Permanent visual impacts following operation would include the presence of new ancillary facilities as well as visual disturbances in the landscape, such as tree removal, along the pipeline route.

Keystone committed to compensate landowners for construction- and operation-related impacts. It would implement measures to reduce impacts to land uses, recreation, and visual resources such as topsoil protection, restoring disturbed areas, and developing traffic access and management plans.

Air Quality and Noise

Construction dust and emissions from construction equipment would typically be localized, intermittent, and temporary since pipeline construction would move through an area relatively quickly. During normal operation of the proposed Project, there would be only minor emissions from valves and pumping equipment at the pump stations. Keystone would implement mitigation measures to reduce air quality impacts, including dust control measures and compliance with state and local air quality restrictions.

Construction noise impacts would also be localized, intermittent, and temporary. Noise impacts from operation of the pipeline would be limited to the electrically driven pump stations. During construction, Keystone would limit the hours during which activities with high-decibel noise levels are conducted in residential areas, require noise mitigation procedures, and develop site-specific mitigation plans to comply with regulations. During operations, Keystone would implement a noise control plan to mitigate noise impacts at affected sites and, as necessary, install sound barriers.

5.6 Cultural Resources: Pipeline construction may present a risk to historic and cultural resources unless appropriately addressed through avoidance or mitigation. This risk was a key concern for Indian tribes and other commenters. The Department of Interior in its February 2, 2015 letter to the Secretary reiterated these concerns. The Department concluded a Programmatic Agreement (an agreement with several interested parties that contemplates mitigation of certain cultural resources impacts in the event of construction). The Programmatic Agreement is appended to the Supplemental EIS, and

was concluded in consultation with Indian tribes, federal and state agencies, and the permit applicant. The Department incorporated input from Indian tribes to amend the Programmatic Agreement on cultural resources that had been developed for Keystone's 2008 permit application. The Programmatic Agreement describes the processes that would be followed by Keystone and applicable state and federal agencies to identify cultural resources and to avoid or mitigate adverse impacts.

The proposed Project was designed to avoid disturbing cultural resources listed in the National Register of Historic Places (NRHP), those considered to be eligible for listing in the NRHP, and others of potential concern that have not been evaluated for NRHP listing, to the extent possible. With regard to cultural resources that cannot be avoided, Keystone has committed to minimize and mitigate impacts whenever feasible. Additionally, Keystone would implement Unanticipated Discovery Plans in order to ensure minimization of impacts to as-yet-unknown cultural resources that might be inadvertently encountered during construction or operation of the proposed Project.

5.7 Cumulative Effects: The cumulative effects analysis in the Supplemental EIS evaluates the way that the proposed Project's impacts interact with the effects of other past, present, or reasonably foreseeable future actions or projects. The goal of the cumulative impacts analysis is to identify situations where sets of comparatively small individual impacts, taken together, constitute a larger collective impact. Cumulative effects associated with the proposed Project and connected actions vary among individual environmental resources and locations. Generally, where long-term or permanent impacts from the proposed Project are absent, the potential for additive cumulative effects with other past, present, and reasonably foreseeable future projects is negligible.

5.8 Alternatives: The Supplemental EIS provides a detailed description of the categories of alternatives to the proposed Project that were analyzed, as well as the alternative screening process and the detailed alternatives identified for further evaluation.

Consistent with NEPA and Council on Environmental Quality (CEQ) regulations, the Department compared the proposed Project with four reasonable alternatives: a pipeline that partly follows an alternative route (the "I-90 Corridor Pipeline Alternative"), and three different "No Action Alternative" scenarios that could result if the Presidential permit is not granted and the crude oil from the WCSB and the Bakken formations is carried on a different form of transport.

Consistent with CEQ regulations and the Department's authority, the Supplemental EIS specifically identifies the alternatives that are before the decisionmaker in considering the application and making the national interest determination pursuant to Executive Order 13337: the No Action Alternative (Permit denial) and the proposed Project (Permit approval).

No Action Alternative

The Supplemental EIS separately analyzed three No Action Alternative scenarios, which are described briefly below. The No Action Alternative analysis considers what would

likely happen if the Presidential permit would be denied or the proposed Project would not otherwise implemented. It includes the Status Quo Baseline, which serves as a benchmark against which other alternatives are evaluated. Under the Status Quo Baseline, the proposed Project would not be constructed, its capacity to transport WCSB crude would not be replaced, and the resulting direct, indirect, and cumulative impacts that are described in this Supplemental EIS would not occur. The Status Quo Baseline is a snapshot of the crude oil production and delivery systems at January 2014 levels.

The No Action Alternative includes analysis of three alternative transport scenarios that, based on the findings of the market analysis, are believed to meet the proposed Project's purpose (i.e., providing WCSB and Bakken crude oil to meet refinery demand in the Gulf Coast area) if the Presidential permit for the proposed Project were denied, or if the pipeline were otherwise not constructed. Under the alternative transport scenarios, other environmental impacts would occur in lieu of the proposed Project. The Supplemental EIS includes analysis of various combinations of transportation modes for oil, including truck, barge, tanker, and rail. These scenarios are considered representative of the crude oil transport alternatives with which the market could respond in the absence of the proposed Project. These three alternative transport scenarios (the Rail and Pipeline Scenario, Rail and Tanker Scenario, and Rail Direct to the Gulf Coast Scenario) are described below.

Rail and Pipeline Scenario: Under this scenario, WCSB and Bakken crude oil (in the form of dilbit or synbit) would be shipped via rail from Lloydminster, Saskatchewan, and Epping, North Dakota respectively (the nearest rail terminal served by two Class I rail companies for both locations), to Stroud, Oklahoma, where it would be temporarily stored and then transported via existing and expanded pipelines approximately 17 miles to Cushing, Oklahoma to interconnect with the interstate oil pipeline system. This scenario would require the construction of two new or expanded rail loading terminals in Lloydminster, Saskatchewan (the possible loading point for WCSB crude oil), one new terminal in Epping, North Dakota (the representative loading point for Bakken crude oil), seven new terminals in Stroud, and up to 14 unit trains (consisting of approximately 100 cars carrying the same material and destined for the same delivery location) per day (12 from Lloydminster and two from Epping) to transport the equivalent volume of crude oil as would be transported by the proposed Project.

Rail and Tanker Scenario: The second transportation scenario assumes WCSB and Bakken crude oil would be transported by rail from Lloydminster to a western Canada port (assumed to be Prince Rupert, British Columbia), where it would be loaded onto Suezmax tankers (capable of carrying approximately 986,000 barrels of WCSB crude oil) for transport to the U.S. Gulf Coast (Houston and/or Port Arthur) via the Panama Canal. Bakken crude would be shipped from Epping to Stroud via BNSF Railway or Union Pacific rail lines, similar to the method described under the rail and pipeline scenario. The rail and tanker scenario would require up to 12 unit trains per day between Lloydminster and Prince Rupert, and up to two unit trains per day between Epping and Stroud. This scenario would require the construction of two new or expanded rail loading facilities in Lloydminster with other existing terminals in the area handling the

majority of the WCSB for shipping to Prince Rupert. Facilities in Prince Rupert would include a new rail unloading and storage facility and a new marine terminal encompassing approximately 4,200 acres and capable of accommodating two Suezmax tankers. For the Bakken crude portion of this Scenario, one new rail terminal would be necessary in both Epping, North Dakota, and Stroud, Nebraska.

Rail Direct to the Gulf Coast Scenario: The third transportation scenario assumes that WCSB and Bakken crude oil would be shipped by rail from Lloydminster, Saskatchewan, and Epping, North Dakota, directly to existing rail facilities in the Gulf Coast region capable of off-loading up to 14 unit trains per day. These existing facilities would then either ship the crude oil by pipeline or barge the short distance to nearby refineries. As with the rail and tanker scenario, this scenario would likely require construction of up to two new or expanded terminals to accommodate the additional WCSB shipments out of Canada. One new rail loading terminal would be needed in Epping to ship Bakken crude oil. Sufficient off-loading rail facilities currently exist or are proposed in the Gulf Coast area such that no new terminals would need to be built under this scenario.

Comparison of Alternatives Before the Decisionmaker

The Supplemental EIS provides detailed analysis of the differences between these alternatives. With regard to GHG emissions, during operation of the No Action Alternative transportation scenarios, including rail and combination modes, the increased number of trains along the rail routes would produce GHG emissions from diesel fuel combustion and electricity generation to support rail terminal operations. Annual GHG emissions (direct and indirect) attributed to the No Action transportation scenarios would be greater than for the proposed Project, but those emissions relate solely to the movement of equivalent amounts of oil from Alberta to the Gulf Coast. Construction of the rail terminals would also involve large numbers of truck trips to transport construction materials and equipment. This increased traffic could cause congestion on roads. Increased shipment of crude by rail could reduce rail capacity available for other goods.

Transportation by rail would likely lead to a greater number of injuries and fatalities per ton-mile than transportation by pipeline, as well as a greater number of accidental releases of crude oil and a greater overall volume of crude oil released. However, the average size of an accidental release associated with crude-by-rail transportation is smaller than the average accidental release associated with a pipeline. Physical disturbance impacts of the No Action Alternative would vary depending upon the modes of transportation chosen by shippers. All three scenarios would require new or expanded facilities, likely concentrated near loading and off-loading terminals. Nevertheless, expansion of infrastructure would affect fewer acres of land (1,500-6,427) during construction than a new pipeline. During operations, the No Action Alternative would permanently affect between 1,500 acres and 6,303 acres of land, compared to 5,309 acres for the proposed Project.

6.0 Basis for Decision

Acting on behalf of the President of the United States under authority delegated by the Secretary of State to him, the Under Secretary of State for Political Affairs has determined that it serves the national interest to issue a Presidential permit to TransCanada Keystone Pipeline, L.P. to construct, connect, operate, and maintain pipeline facilities at the U.S.-Canada border in Phillips County, Montana, as part of the proposed Project. In accordance with the Presidential Memorandum dated January 24, 2017, and Executive Order 13337, the Department has considered Keystone's Presidential permit application originally filed with the Department on May 4, 2012 and re-submitted to the Department on January 26, 2017, and all input received over the course of the Department's review. The determination to issue a Presidential permit for the proposed Project is based on consideration of a broad range of factors, including the following assessments:

- The Department finds that the proposed Project will meaningfully support U.S. energy security by providing additional infrastructure for the dependable supply of crude oil. Global energy security is a vital part of U.S. national security. Moreover, crude oil is vital to the U.S. economy and is used to produce transportation fuels, fuel oils for heating and electricity generation, asphalt for our roads, and petrochemical feedstocks used for the manufacturing of chemicals, synthetic rubber, and a variety of plastics. Accordingly, the Department works closely with our international partners to ensure that adequate supplies of energy reach the global economy and to help manage geopolitical changes arising from shifting patterns of energy production and consumption. Whether promoting national and regional markets that facilitate financing for transformational and clean energy or inspiring civil society and governments to embrace transparent and responsible development of natural resources, the Department works to ensure energy is employed as a tool for stability, security, and prosperity. For U.S. policymakers, this has often translated into an acute focus on oil markets. Historically, oil has been a major source of U.S. energy security concerns due to our relatively high volume of net imports, and oil's economic importance and military uses. Such concerns are well founded. Over the past year, crude oil supply disruptions internationally have trended noticeably higher when controlling for Iran's return to the international oil market. Largely attributable to political instability and manipulative market tactics on the part of OPEC, when compared to disruptions at the time of the 2015 Decision, today unplanned disruptions are over 500,000 bpd higher, having reached a peak high of nearly one million bpd in September 2016. Moreover, OPEC's total spare capacity remains at or below two million bpd, which provides very little cushion for fluctuations in supply in a context of rapidly rising demand or further geopolitical disruptions. While U.S. oil imports have abated sharply in recent years, the United States remains a net oil importer. Moreover, even if the United States were self-sufficient in terms of meeting its domestic energy needs, because oil is traded globally, the United States would stay integrated with global oil markets and subject to global price volatility. Accordingly, the U.S. national interest in ensuring access to stable, reliable, and affordable energy supplies will persist in the foreseeable future.

- Canada's role as the largest and fastest-growing source of U.S. crude imports cannot

be dismissed. According to the latest statistics from the EIA, the United States imported 3.17 million bpd of crude oil from Canada in 2016, which accounted for more than 43 percent of total U.S. crude oil imports. Although domestic production growth from tight oil formations, which is predominately light crude, continues to supplant the majority of international alternatives, U.S. imports of Canadian crude oil are increasing. The vast majority of these imports reach U.S. markets via existing pipeline infrastructure between Canada and the United States. A growing share, however, reaches markets by rail. Over 160 million barrels of Canadian crude oil has been imported by rail from Canada since 2011. Current estimates for WCSB rail loading capacity show crude oil transport by rail has potential to grow further.

- Canadian oil is a relatively stable and secure source of energy supply for many reasons, and few countries share all of the political or physical characteristics that enable Canada to remain in this position. Its producing areas are physically close to the U.S. market, and there are limited chokepoints to disrupt trade between Canada and the United States. Canada has a low likelihood of political unrest, resource nationalism, or conflict—above-ground factors that sometimes disrupt oil production in other regions. Additionally, it is not a member of OPEC, which acts to restrict oil production and influence market conditions. The Canadian oil sector is efficiently run, without undue political interference. Canadian oil sands projects have low production decline rates compared to conventional oil fields, providing greater geologic certainty of future supply levels. Moreover, as the Canadian Government's conditional approval of the Trans Mountain pipeline illustrates, failure to approve new transboundary pipeline infrastructure may redirect this source of reliable supply to Asian markets.

- Any impact on prices for refined petroleum products would be minimal if the proposed Project is approved. The Supplemental EIS recognized that the proposed Project is unlikely to have a meaningful effect on crude flows and domestic fuel prices. While crude oil prices matter to those involved in producing oil or refining oil into products, most Americans are mainly concerned with the price of gasoline and other refined products. The price of those refined products in the United States continues to be set largely by global crude prices, which are tied to global production and consumption, rather than the availability of pipelines. The findings in the Supplemental EIS have been reinforced by EIA studies that assert that U.S. gasoline prices move with the international benchmark Brent crude oil price rather than WTI. Accordingly, energy security concerns stemming from the proposed Project's impact on domestic fuel prices are largely unwarranted—cross-border pipeline capacity does not measurably translate into lower retail gasoline prices. Oil trade is driven by commercial considerations and occurs in the context of a globally traded market in which crude oil and products are relatively fungible. The market continually adjusts both logistically and in terms of price to balance global supply and demand. As a result, the level or origin of U.S. oil imports has a minimal impact on the prices U.S. consumers pay for refined products.

- By itself the proposed Project is unlikely to significantly impact the level of GHG-

intensive extraction of oil sands crude or the continued demand for heavy crude oil at refineries in the United States. As stated in the Supplemental EIS, the dominant drivers of oil sands development remain more global than any single infrastructure project. Moreover, under most market conditions, alternative transportation infrastructure would allow growing oil sands production to reach markets irrespective of the proposed Project. Still, uncertainties about the future growth of oil sands production remain. Oil prices are volatile, particularly over the short term. However, the long-term price and technological trends that drive WCSB crude oil production and subsequently the amount of new transportation capacity needed to meet them, coupled with the documented ability of Canadian upstream producers to sustain production during a brief period of lower oil prices, leads the Department to have confidence in the forecasts presented by market experts at the EIA and IEA, and affirms the Department's conclusion that such infrastructure is supported by mid- and long-term market outlooks.

- In the 2015 Decision, the Department determined that approval of the proposed Project at that time would have undercut the credibility and influence of the United States in urging other countries to address climate change. Since then, there have been numerous developments related to global action to address climate change, including announcements by many countries of their plans to do so. In this changed global context, a decision to approve this proposed Project at this time would not undermine U.S. objectives in this area. Moreover, a decision to approve this proposed Project would support U.S. priorities relating to energy security, economic development, and infrastructure.

- The Department recognizes the importance of the proposed Project to Canada and places great significance on maintaining strong bilateral relations. The United States and Canada are the closest of allies, economic partners, and friends. This unique bilateral relationship is based on shared history, common values, and a vast and intricate network of ties between our federal governments, states, cities, and people. In many economic sectors the United States and Canada enjoy deeper, more integrated structures than found even among European Union member states. The United States has over $2 billion in trade per day, U.S.-Canadian supply chains are interlinked, and U.S. and Canadian companies are heavily invested in each other's markets. The two countries coordinate closely on most foreign policy issues and have a robust partnership in critical areas around the world. Irrespective of the proposed Project, our relationship with Canada will endure. However, the United States recognizes Canada's interest in the completion of the proposed Project and finds that it is in the United States' interest to strengthen the role Canada plays as a secure conduit for crude oil to reach the U.S. market, and more broadly, to ensure our shared interests in energy, environmental, and economic issues continue to prosper.

- The Department considered the economic benefits of the proposed Project for the United States using an input-output model calibrated to 2010 data. During construction over a two-year period, the model estimates spending on the proposed Project would support approximately 42,100 jobs (direct, indirect, and induced jobs

combined), of which approximately 3,900 would be direct construction jobs. The majority of these jobs would be short-term in nature. According to the applicant, were the proposed Project to enter service, operations would require approximately 50 employees in the United States, consisting of 35 full-time employees and 15 temporary contractors. The proposed Project would also generate tax revenue for communities in the pipeline's path and it was estimated that pipeline activity would contribute $3.4 billion to U.S. GDP. Since 2010, the U. S. economy has returned closer to full employment capacity but simultaneously has seen relative economic weakness in certain sectors and states due to the downturn in global energy prices in 2014. As a result, the economic benefits in terms of job creation from the proposed Project may be more significant than the initial estimates. The economic benefits are likely to be meaningful and reflect the importance policymakers place on positive near- and long-term economic growth.

- There are a variety of potential environmental and cultural impacts associated with the proposed Project, just as there would be for alternative methods of transporting crude oil. TransCanada Keystone Pipeline, L.P. has agreed to abide by all the terms and conditions of the mitigation measures outlined in the Supplemental EIS, including all Appendices and supplements, follow all state, local, and tribal laws and regulations with respect to the construction and operation of the proposed Project, follow monitoring and reporting requirements, and carry out response activities of any spills if they occur. Additionally, the Department has considered the concerns of some Indian tribes raised in the context of the proposed Project regarding sacred cultural sites and avoidance of adverse impacts to the environment, including to surface and groundwater resources.

Having weighed multiple policy considerations, the Under Secretary of State for Political Affairs finds that, at this time, the proposed Project's potential to bolster U.S. energy security by providing additional infrastructure for the dependable supply of crude oil, its role in supporting, directly and indirectly, a significant number of U.S. jobs and provide increased revenues to local communities that will bolster the U.S. economy, its ability to reinforce our bilateral relationship with Canada, and its limited impact on other factors considered by the Department, all contribute to a determination that issuance of a Presidential permit for this proposed Project serves the national interest.

7.0 National Interest Determination

Pursuant to the authority vested in me under Executive Order 13337 of April 30, 2004, the Presidential Memorandum dated January 24, 2017, and Department of State Delegation of Authority No. 118-2 of January 26, 2006, I hereby determine that issuance of a permit to TransCanada Keystone Pipeline, L.P. (Keystone), a limited partnership organized under the laws of the State of Delaware, to construct, connect, operate, and maintain facilities at the border of the United States and Canada for the transport of crude oil from Canada to the United States across the international boundary in Phillips County, Montana, would serve the national interest.

The Presidential permit issued to TransCanada Keystone Pipeline, L.P. shall include authorizations to construct, connect, operate and maintain facilities at the border of the United States facilities for the transport of crude oil from Canada to the United States as described in the Presidential permit application dated January 26, 2017. No actions shall be taken by TransCanada Keystone Pipeline, L.P. pursuant to this authorization prior to Keystone's acquisition of all other necessary federal, state, and local permits and approvals from agencies of competent jurisdiction.

23 March 2017
Date

Thomas A. Shannon, Jr.
Under Secretary of State for Political Affairs

PRESIDENTIAL PERMIT

AUTHORIZING TRANSCANADA KEYSTONE PIPELINE, L.P. ("KEYSTONE") TO CONSTRUCT, CONNECT, OPERATE AND MAINTAIN PIPELINE FACILITIES AT THE INTERNATIONAL BOUNDARY BETWEEN THE UNITED STATES AND CANADA

By virtue of the authority vested in me as Under Secretary of State for Political Affairs, including those authorities under Executive Order 13337, 69 Fed. Reg. 25299 (2004), the January 24, 2017 Presidential Memorandum Regarding Construction of the Keystone XL Pipeline, and Department of State Delegation of Authority 118-2 of January 26, 2006; having considered the environmental effects of the proposed action consistent with the National Environmental Policy Act of 1969 (83 Stat. 852; 42 U.S.C. 4321 et seq.), Section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1536), and other statutes relating to environmental concerns; having considered the proposed action consistent with the National Historic Preservation Act of 1966 (80 Stat. 917, 16 U.S.C. 470f et seq.); and having requested and received the views of members of the public, various federal and state agencies, and various Indian tribes; I hereby grant permission, subject to the conditions herein set forth, to TransCanada Keystone Pipeline, L.P. (hereinafter referred to as the "permittee"), a limited partnership organized under the laws of the state of Delaware, owned by affiliates of TransCanada Corporation, a Canadian public company organized under the laws of Canada, to construct, connect, operate, and maintain pipeline facilities at the international border of the United States and Canada at Morgan, Montana, for the import of crude oil from Canada to the United States.

The term "facilities" as used in this permit means the relevant portion of the pipeline and any land, structures, installations or equipment appurtenant thereto.

The term "United States facilities" as used in this permit means those parts of the facilities located in the United States. The United States facilities consist of a 36-inch diameter pipeline extending from the international border between the United States and Canada at a point near Morgan in Phillips Country, Montana, to the first mainline shut-off valve in the United States located approximately 1.2 miles from the international border. The United States facilities also include certain appurtenant facilities.

This permit is subject to the following conditions:

Article 1. (1) The United States facilities herein described, and all aspects of their operation, shall be subject to all the conditions, provisions, and requirements of this permit and any amendment thereof. This permit may be terminated or amended at any time at the discretion of the Secretary of State or the Secretary's delegate or upon proper application therefor. The permittee shall make no substantial change in the United States facilities, the location of the United States facilities, or in the operation authorized by this permit until such changes have been approved by the Secretary of State or the Secretary's delegate.

(2) The construction, operation, and maintenance of the United States facilities shall be in all material respects as described in the permittee's application for a Presidential permit under Executive Order 13337, filed on May 4, 2012 and resubmitted on January 26, 2017, the Final Supplemental Environmental Impact Statement (SEIS) dated January 31, 2014 including all Appendices as supplemented, and any construction, mitigation, and reclamation measures included in the Construction, Mitigation, and Reclamation Plan (CMRP), Emergency Response Plan (ERP), Oil Spill Response Plan (SRP), and other mitigation and control plans that are already approved or that are approved in the future by the Department of State or other relevant federal agencies. In the event of any discrepancy among these documents, construction, connection, operation and maintenance of the United States facilities shall be in all material respects as described in the most recent approved document unless otherwise determined by the Department of State.

Article 2. The standards for, and the manner of, construction, connection, operation, and maintenance of the United States facilities shall be subject to inspection and approval by the representatives of appropriate federal, state and local agencies. The permittee shall allow duly authorized officers and employees of such agencies free and unrestricted access to said facilities in the performance of their official duties.

Article 3. The permittee shall comply with all applicable federal, state, local, and tribal laws and regulations regarding the construction, connection, operation, and maintenance of the United States facilities and with all applicable industrial codes. The permittee shall obtain requisite permits from relevant state and local governmental entities, and relevant federal agencies.

Article 4. All construction, connection, operation, and maintenance of the United

States facilities under this permit shall be subject to the limitations, terms, and conditions issued by any competent agency of the U. S. Government. The permittee shall continue the operations hereby authorized and conduct maintenance in accordance with such limitations, terms, and conditions. Such limitations, terms, and conditions could address, for example, environmental protection and mitigation measures, safety requirements, export or import and customs regulations, measurement capabilities and procedures, requirements pertaining to the pipeline's capacity, and other pipeline regulations. This permit shall continue in force and effect only so long as the permittee shall continue the operations hereby authorized in accordance with such limitations, terms, and conditions.

Article 5. Upon the termination, revocation, or surrender of this permit, and unless otherwise agreed by the Secretary of State or the Secretary's delegate, the United States facilities in the immediate vicinity of the international boundary shall be removed by and at the expense of the permittee within such time as the Secretary of State or the Secretary's delegate may specify, and upon failure of the permittee to remove, or to take such other appropriate action with respect to, this portion of the United States facilities as ordered, the Secretary of State or the Secretary's delegate may direct that possession of such facilities be taken and that they be removed or other action taken, at the expense of the permittee; and the permittee shall have no claim for damages by reason of such possession, removal, or other action.

Article 6. When, in the opinion of the President of the United States, the national security of the United States demands it, due notice being given by the Secretary of State or the Secretary's delegate, the United States shall have the right to enter upon and take possession of any of the United States facilities or parts thereof; to retain possession, management, or control thereof for such length of time as may appear to the President to be necessary; and thereafter to restore possession and control to the permittee. In the event that the United States shall exercise such right, it shall pay to the permittee just and fair compensation for the use of such United States facilities upon the basis of a reasonable profit in normal conditions, and the cost of restoring said facilities to as good condition as existed at the time of entering and taking over the same, less the reasonable value of any improvements that may have been made by the United States.

Article 7. Any transfer of ownership or control of the United States facilities or any part thereof shall be immediately notified in writing to the Department of State, including the submission of information identifying the transferee. This

permit shall remain in force subject to all the conditions, permissions and requirements of this permit and any amendments thereto unless subsequently terminated or amended by the Secretary of State or the Secretary's delegate.

Article 8. (1) The permittee is responsible for acquiring any right-of-way grants or easements, permits, and other authorizations as may become necessary and appropriate.

(2) The permittee shall hold harmless and indemnify the United States from any claimed or adjudged liability arising out of construction, connection, operation, or maintenance of the facilities, including but not limited to environmental contamination from the release or threatened release or discharge of hazardous substances and hazardous waste.

(3) The permittee shall maintain the United States facilities and every part thereof in a condition of good repair for their safe operation, and in compliance with prevailing environmental standards and regulations.

Article 9. The permittee shall take all necessary measures to prevent or mitigate adverse impacts on or disruption of the human environment in connection with the construction, connection, operation, and maintenance of the United States facilities. Such measures will include the actions and obligations agreed to by permittee in the CMRP and other mitigation, control plans, and special conditions found in the Final SEIS, including all Appendices as supplemented, all of which are appended to and made part of this permit, or that are approved in the future by the Department or other relevant federal or state agencies, and any other measures deemed prudent by the permittee.

Article 10. The permittee shall file with the appropriate agencies of the United States Government such statements or reports under oath with respect to the United States facilities, and/or permittee's activities and operations in connection therewith, as are now, or may hereafter, be required under any laws or regulations of the United States Government or its agencies. The permittee shall file electronic Export Information where required.

Article 11. The permittee shall provide information upon request to the Department of State with regard to the United States facilities. Such requests could include, for example, information concerning current conditions or anticipated changes in ownership or control, construction, connection, operation, or maintenance of the U.S. facilities.

Article 12. The permittee shall provide written notice to the Department of State at such time as the construction authorized by this permit is begun, at such time as construction is completed, interrupted, or discontinued, and at other times as may be designated by the Department of State.

Article 13. This permit shall expire five years from the date of issuance in the event that the permittee has not commenced construction of the United States facilities by that deadline.

IN WITNESS WHEREOF, I, Under Secretary of State for Political Affairs, have hereunto set my hand this 23rd day of March, 2017 in the City of Washington, District of Columbia.

Thomas A. Shannon, Jr.
Under Secretary of State for Political Affairs