1.0 INTRODUCTION

TransCanada Keystone Pipeline, LP (Keystone) has applied to the U.S. Department of State (DOS) for a Presidential Permit for the proposed construction, connection, operation, and maintenance of a pipeline and associated facilities at the United States border for importation of crude oil from Canada. DOS receives and considers applications for Presidential Permits for such oil pipeline border crossings and associated facilities pursuant to the President's constitutional authority over foreign relations, and as Commander-in-Chief, which authority the President delegated to DOS in Executive Order (EO) 13337, as amended (69 Federal Register [FR] 25299). DOS's jurisdiction to issue a Presidential Permit includes only the border crossing and the associated facilities at the border.

It is the policy of DOS to prepare an environmental impact statement (EIS) in conjunction with the issuance of Presidential Permits when DOS has determined that issuance of a Presidential Permit would qualify as a "major federal action" that may have a "significant impact upon the environment" as those terms are defined in the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [U.S.C] § 4321 et seq.). The principal objectives of this EIS are to:

- Identify and assess potential impacts on the natural and human environment that would result from implementation of the proposed Keystone XL Pipeline Project (Project) in the United States;
- Describe and evaluate reasonable alternatives, including no action, to the Project in the United States that would avoid or minimize adverse effects to the environment;
- Identify the DOS preferred alternative in the final EIS;
- Identify and recommend specific mitigation measures, as necessary, to minimize environmental impacts; and
- Facilitate public, tribal, and agency involvement in identifying significant environmental impacts.

1.1 KEYSTONE XL PROJECT OVERVIEW

Keystone proposes to construct and operate a crude oil pipeline and related facilities to transport Western Canadian Sedimentary Basin (WCSB) crude oil from an oil supply hub near Hardisty, Alberta, Canada to destinations in the south central United States, including an existing oil terminal in Cushing, Oklahoma and existing delivery points in the Port Arthur and east Houston areas of Texas. In total, the Project would consist of approximately 1,707 miles of new, 36-inch-diameter pipeline, with approximately 327 miles of pipeline in Canada and 1,380 miles in the U.S. The proposed pipeline would cross the international border between Saskatchewan, Canada and the United States near Morgan, Montana. The Project initially would have the nominal transport capacity of 700,000 barrels per day (bpd) of crude oil from the oil supply hub near Hardisty, Alberta to an existing terminal in Cushing, Oklahoma (up to 200,000 bpd) and to existing delivery points in Nederland (near Port Arthur), Texas, and Moore Junction (in Harris County), Texas. By increasing the pumping capacity in the future, the Project could ultimately transport up to 900,000 bpd of crude oil. At that throughput, up to 200,000 bpd would be delivered to the Cushing Oil Terminal and the remainder would be delivered to the existing delivery points in Texas.

For purposes of this EIS, the Project consists of three new pipeline segments plus additional pumping capacity on the previously permitted Cushing Extension Segment of the Keystone Pipeline Project (Keystone Cushing Extension), as shown on Figure 1.1-1.

The three new pipeline segments are:

- Steele City Segment (from Morgan, Montana to Steele City, Nebraska) that connects to the northern end of the previously approved, and currently under construction, Keystone Cushing Extension;
- Gulf Coast Segment (from Cushing, Oklahoma to Nederland, Texas) that connects to the southern end of the Keystone Cushing Extension; and
- Houston Lateral (from the Gulf Coast Segment, in Liberty County, Texas to Moore Junction, in Harris County, Texas).

Approximately 1,380 linear miles of pipeline would be located in five states as listed in Table 1.1-1.

TABLE 1.1-1
Miles of New Pipe for the Proposed Project

Segment / State	New Construction Pipeline Miles	Mileposts (From – To)
Steele City Segment		
Montana	282.5	0 – 282.5
South Dakota	314.1	282.5 – 596.6
Nebraska	254.1	596.6 – 850.7
Keystone Cushing Extension		
Kansas	0	N/A
Gulf Coast Segment		
Oklahoma	155.4	0 -155.4
Texas	324.8	155.4 – 480.2
Houston Lateral		
Texas – Houston Lateral	48.6	0 – 48.6
Project Total	**1,379.5**	

Source: Keystone 2008.

The Project components would include 30 new pump stations, 74 mainline valves (MLVs), approximately 50 permanent access roads, one tank farm, and two crude oil delivery sites. Additional access roads, stockpile sites, railroad sidings and construction camps would be required during Project construction. Electric power lines and associated facility upgrades would be constructed, as required, by local power providers to provide power for the new pump stations and to power remotely operated valves and densitometers[1] located along the pipeline route. Local power providers would be responsible for obtaining the necessary approvals or authorizations from federal, state, and local governments for such facilities. Although the permitting process for the electrical facilities is an independent process, construction and operation of these facilities are considered connected actions under NEPA and are

[1] A densitometer is an on-line and continuous device used to measure the density of a flowing stream. In the oil and gas industry, a densitometer is normally used to measure the density of liquid hydrocarbon. The measurement of density is used to determine the quantity of crude oil passing through a meter.

evaluated in this EIS. Additionally, the Western Area Power Administration (Western) has determined that due to load forecasts associated with proposed pump stations in South Dakota, a new 230-kV transmission line approximately 70-mile-long would need to be added to the existing electrical grid system (proposed Lower Brule to Witten transmission line).

The Project would deliver crude oil to the existing terminal in Cushing, Oklahoma and to existing delivery points Nederland (near Port Arthur) and Moore Junction (east Houston area), Texas; those delivery points provide access to a number of other pipeline systems, terminals, and docks. The ultimate delivery location (terminals, pipelines, or docks) would not be contracted by Keystone. While the exact destinations of the oil would be determined based on shipper contracts with the refiners, there are 15 refineries within the proposed delivery area in Texas which would have access to Canadian crude oil delivered by the Project (Purvin & Gertz 2009). These refineries currently handle an estimated 1.4 million bpd of heavy crude oil that is similar to the oil that would be delivered by the Project (Purvin & Gertz 2009).

Any potential expansion of existing refinery capacity would be dependant upon market demand. Based on current market forecasts, PADD (Petroleum Administration for Defense Districts) III[2] has sufficient refining capacity to absorb an additional 500,000 bpd of Canadian crude oil by 2020 without expanding refining capacity (Purvin & Gertz 2009). This assessment is consistent with a report by the Canadian Association of Petroleum Producers (CAPP) 2009 which states that the processing of heavy crude in PADD III is not constrained by refinery capacity. Given these considerations, the EIS provides information on the impacts of refining additional heavy crude oil carried by the pipeline, but does not consider any potential refinery expansions in PADD III as connected actions.

The Project is planned to be placed into service in phases. The Gulf Coast Segment and the Houston Lateral are planned to be in service in 2011, and the Steele City Segment is planned to be in service in 2012.

1.2 PROJECT PURPOSE AND NEED

1.2.1 Purpose of the Proposed Project

The primary purpose of the proposed Project is to transport WCSB crude oil from the border with Canada to existing delivery points in PADD III that provide connections to existing refineries in PADD III. An additional purpose of the Project is to supplement WCSB deliveries to the Cushing Oil Terminal in Cushing, Oklahoma, which is in PADD II. Keystone's goal is to initially transport up to 700,000 bpd of crude oil by pipeline from the WCSB to the United States. Up to 500,000 bpd of this volume of crude oil would be transported to delivery points in PADD III and up to 200,000 bpd would be transported to the existing Cushing Oil Terminal. At maximum capacity (achieved with the addition of supplementary pumping power) the Project would have the potential to transport a total of 900,000 bpd of WCSB crude oil to the U.S., with the additional 200,000 bpd transported to delivery points in PADD III. Due to market projections of future fuel demand in PADD III, the applicant does not currently anticipate the need to expand capacity to 900,000 bpd in the near future.

[2] PADD III (Gulf Coast) consists of the states of Alabama, Mississippi, Louisiana, Arkansas, Texas, and New Mexico.

1.2.2 Need for the Proposed Project

The following sections address the need for the proposed Project:

- Overview of the Crude Oil Market (Section 1.2.2.1);
- Supply of Heavy Crude Oil from the WCSB (Section 1.2.2.2);
- Demand for Heavy Crude Oil in PADD III (Section 1.2.2.3);
- Transport of Crude Oil from the WCSB to PADD III (Section 1.2.2.4); and
- Future Scenarios (Section 1.2.2.5).

The information provided in the following sections regarding the current and projected supply and demand of crude oil takes into account the economic conditions at the time the EIS was issued. The supply and demand projections are based on the most current projections available in reports prepared by government agencies and other analysts at the time the EIS was issued.

1.2.2.1 Overview of the Crude Oil Market

Owing largely to its availability, energy density, and ease of transport, crude oil is currently the world's most important energy resource. It is traded in a global market that includes crude oils that vary in their points of delivery, densities, sulfur contents, and prices. For example on October 16, 2009 the price of crude oil ranged from $65 per barrel for heavy, sour WCSB crude to over $75 per barrel for light, sweet Colombian crude.

Those prices represent a balance between supply and demand in the global crude oil market. In that market, each oil field can be thought of as a potential supply source. In the past, most crude oil came from fields that produced relatively light crude oil, and while those fields are distributed throughout the world, the leading producers were in Saudi Arabia, the United States, Russia (the former USSR), and Iran. More recently, the world oil market has experienced an increase in the supply of crude oil from unconventional sources. These unconventional oil fields, primarily in Canada and Venezuela, produce a very heavy crude oil which is often referred to as bitumen.[3]

On the demand side of the market, each refinery can be thought of as a crude oil consumer. Each refinery makes decisions as to which crude oil to buy based on the characteristics of the crude (point of delivery, density, sweetness, and price) and the refinery's unique ability to transform the crude oil into a refined petroleum product that can be profitably sold.[4]

Much effort has gone into predicting future conditions in the crude oil market. Individuals, organizations, and countries attempt to forecast supply, demand, and price based on economic trends, governmental regulations, the cost and availability of substitute forms of energy, and many other factors. While those predictions are uncertain, there is a general consensus that the volume of crude oil consumed world wide, as well as the volume consumed domestically, is unlikely to decrease substantially over the next 30 years (EIA 2009b, EIA 2009c), and that the mix of crude oil consumed in the future will include an increased proportion of heavy crude.

[3] For the purposes of this EIS, oil from the WCSB is referred to as heavy crude or bitumen.

[4] The Energy Information Administration (EIA 2009a) reported that crude oil is generally fungible, i.e., one crude oil can be substituted for another. However, many refineries are optimized to refine crude oil with specific qualities, and switching from one crude oil to another can be costly.

1.2.2.2 Supply of Heavy Crude Oil from the WCSB

The WCSB is now widely accepted as having one of the largest crude oil reserves in the world. The Energy Resources Conservation Board (ERCB 2009) and CAPP (2009) estimated that Canada's oil sands contain 170 to 173 billion barrels of proven oil reserves.[5] However, the mere presence of oil in a field does not mean that oil will be produced. For oil to be produced, field operators must be convinced that they can extract and deliver the oil to the marketplace in a profitable manner; i.e., the price per barrel that consumers are willing to pay is high enough for producers to make a profit. Therefore, decisions regarding unconventional crude oil (bitumen) production in the WCSB are affected by the future price of conventional crude oil.

Given this market dynamic, CAPP (2009) reported that "Over the past 12 months [June 2008 to June 2009] the industry has witnessed a dramatic change in oil prices. The benchmark WTI crude oil price dropped from a peak in July 2008 of over $140 per barrel to less than $40 per barrel by years end . . . APP's estimate of industry capital spending for oil sands development was reduced to $10 billion dollars for 2009 compared to $20 billion in 2008. The forecast for market demand growth is also lower than in the previous report, which is in line with the slower forecasted growth in supply."[6] Most industry analysts predict that there will be growth in market demand as the global economy recovers from the recent financial crisis. Consequently, many oil sands projects that were shelved in 2009 have been revived and are set to commence in 2010.

CAPP (2009) projected that heavy crude production in the WCSB will increase from its 2008 level of 0.9 million bpd to between 1.4 and 1.6 million bpd by 2015 and then remain at relatively elevated levels until the end of the projection periods. These projections are largely consistent with (1) the most recent EIA forecast, which also projects that the unconventional oil supply from Canada will become an increasingly important source of global crude supply over time (EIA 2009), and (2) projections made by ERCB (2009), the National Energy Board of Canada (NEB 2009), and Strategy West (2009). At the current and projected rates of annual production, production from the estimated proven reserves in the WCSB could continue into the later part of the 21st century.

Historically, the majority of the WCSB crude oil has been exported to the U.S. In 2008, Canada was the largest exporter of crude oil to the U.S., shipping approximately 1.7 million bpd (70 percent of total production) from western Canada to the U.S. CAPP (2009) predicted that demand from Canadian refineries would increase by only about 0.076 million bpd by 2015; therefore, it is expected that Canada will continue to export the bulk of its crude oil production to the U.S. market.

1.2.2.3 Demand for Heavy Crude Oil in PADD III

The U.S. petroleum industry is divided into five PADDs. Refineries within a PADD tend to have more in common with each other (e.g., pipeline infrastructure and supply streams) than they do with refineries in other PADDs.

The majority of the crude oil transported by the proposed Project would have delivery points at terminals in PADD III, which has 58 refineries in it.[7] Those refineries represent a total refining capacity of approximately 8.4 million bpd and for the past 20 years have run at between 80 and 100 percent of

[5] Proven oil reserves are those that can be economically extracted given current and projected market conditions.
[6] Crude oil benchmarks are reference points for the various types of oil that are available in the market. The WTI benchmark is West Texas Intermediate crude oil and is the most commonly used benchmark in the U.S.
[7] Only a subset of PADD III refineries (approximately 15) would have direct pipeline access to oil delivered via the proposed Project.

maximum throughput (EIA 2009d). PADD III refineries provide significant volumes of refined petroleum product to both the U.S. East Coast and Midwest via pipeline. For example in 2008, approximately 50 percent of the gasoline consumed on the East Coast and 18 percent of the gasoline consumed in the Midwest was supplied by PADD III refineries.

In 2008, PADD III refineries imported 2.2 million bpd of heavy crude oil from 43 different countries. The top 4 suppliers were Mexico (22 percent), Saudi Arabia (17 percent), Venezuela (17 percent), and Nigeria (11 percent) (CAPP 2009). While the supply of crude oil from Saudi Arabia to the U.S. appears to be fairly stable, the remaining major suppliers each face declining or uncertain production horizons as summarized below.

- Capital expenditures by Mexico's national oil company have been insufficient to offset natural declines in oil field output. As a result, the production of heavy crude from Mexico has been falling; there has been a 250,000-bpd decrease in production of Mexican heavy crude since 2006. In particular, production from the offshore Cantarell field (which produces most of the Maya heavy crude supplied to the U.S.) is falling rapidly (Hook et al 2009, IEA 2008)
- Most of Venezuela's oil production is heavy crude, and over half of the production has been exported to the U.S. (Purvin & Gertz 2009). However, Venezuela is increasingly diversifying its oil customers to lessen its dependence on the United States. As such, exports to the U.S. as a portion of Venezuela's total output have decreased (Alvarez and Hanson 2009).
- Nigeria is Africa's largest oil producer. However, "since December 2005, Nigeria has experienced increased pipeline vandalism, kidnappings and militant takeovers of oil facilities in the Niger Delta…The instability in the Niger Delta has caused significant amounts of shut-in production and several companies declaring *force majeure* on oil shipments. EIA estimates Nigeria's effective oil production capacity to be around 2.7 million barrels per day (bbl/d) but as a result of attacks on oil infrastructure, 2008 monthly oil production ranged between 1.8 million bbl/d and 2.1 million bbl/d. Additional supply disruptions for the year were the result of worker strikes carried out by the Petroleum and Natural Gas Senior Staff Association of Nigeria (PENGASSAN) that shut-in 800,000 bbl/d of ExxonMobil's production for about 10 days in late April/early May" (EIA 2009e).
- Angola, Algeria, and Iraq, which were among the top 15 suppliers of crude oil to the U.S. in 2008 (EIA 2009f), have each experienced armed conflict or significant political unrest within the last 5 years.

These declining and uncertain supply horizons have prompted some PADD III refineries to modify their existing facilities to allow the refinement of heavy crude oil (Gunaseelan and Buehler 2009, Sword 2008). This diversification strategy could increase the reliability of the supply to PADD III and put downward pressure on PADD III crude oil prices provided that sufficient transportation capacity is available for heavy crude oil. Specifically, CAPP (2009) reported that (1) major refinery upgrades representing a total of 365,000 bpd of new capacity are planned at Port Arthur, Texas refineries that would have direct pipeline access to oil transported through the proposed Project, and (2) several PADD III refineries without direct pipeline access (Borger, Texas; Artesia New Mexico; and Garyville, Louisiana) are also planning upgrades to increase bitumen and heavy oil refining capacity. Purvin & Gertz (2009) identified many additional, smaller-scale upgrades designed to increase heavy crude oil refining capacity in PADD III. In addition, there are several PADD III refinery upgrades that have been postponed until the current economic situation is resolved; Shore and Hackworth (2009) reported that there are indications that reduced heavy/light crude oil price differentials and profit margins may be causing some PADD III refinery upgrades to be delayed, including upgrades in St. Charles and Norco, Louisiana.

1.2.2.4 Transport of Crude Oil from the WCSB to PADD III

Two major crude oil pipelines currently transport crude oil from the WCSB directly to U.S. markets: the Enbridge Pipeline System and the Kinder Morgan Express Project. Combined, those pipeline systems have a total capacity of about 2.1 million bpd. Of that total capacity, approximately 63 percent is heavy crude, and in 2008 both pipelines operated at or around 100 percent capacity (CAPP 2009). Two new pipeline systems were recently approved to transport crude oil from the WCSB to areas in the U.S. outside of PADD III: the TransCanada Keystone Oil Pipeline Project (including the Cushing Extension) and the Enbridge Alberta Clipper Pipeline Project. CAPP (2009) and Smith (2009) report that with those pipelines, the transport capacity of crude oil from Canada to the U.S. is sufficient to provide the needs of all areas exclusive of PADD III through 2019. It is not sufficient to supply PADD III through 2019 due to the lack of sufficient transport capacity into this area. CAPP (2009) noted that there is only one pipeline that provides PADD III refineries access to WCSB crude, the ExxonMobil Pegasus Pipeline; that pipeline has a small capacity of only 96,000 bpd (CAPP 2009). Thus, limited pipeline capacity continues to constrain the supply of WCSB crude oil to PADD III (CAPP 2009, Purvin & Gertz 2009), which represents the largest refining capacity in the U.S.

The conclusions of CAPP (2009) and Purvin & Gertz (2009) are consistent with observed marketplace behavior. In September 2008, when shippers were given an opportunity to enter into contractual commitments for Project capacity, several firms executed binding contracts with Keystone for a total of 380,000 bpd of WCSB crude to be transported to PADD III for an average of 18 years. In addition, Valero, a major refinery operator in the Houston area, stated that they expect to be one of the largest recipients of heavy crude from the Project pending regulatory approval (Valero 2008), and Canadian Natural Resources Limited (CNRL) has agreed to supply 100,000 bpd of heavy crude to an unnamed U.S. Gulf Coast refiner (CNRL 2008).

1.2.2.5 Future Scenarios

Outlook without the Proposed Project

The 'production strike price' for WCSB crude is the market price needed to make WCSB crude profitable; i.e., the price needed to make it worth the financial investment to produce that crude. The October 2009 price of benchmark crude oil exceeded the production strike price of $60 to $70 per barrel, and it is expected that benchmark crude oil prices will continue to increase in the long term; the price of crude in the EIA (2009) reference case increases to approximately $130 per barrel by 2030. These benchmark crude oil prices are consistent with the expected increase in WCSB output projected by CAPP (2009), EIA (2009), ERCB (2009), NEB (2009), and Strategy West (2009), and are consistent with the expected high-volume export of WCSB crude oil to the U.S. through the end of the century based on the estimated reserves and the current and projected production levels.

The unusually small price differential between heavy and light crude oil that prevailed in 2009 put pressure on refineries that were heavily dependent upon heavy oils and appears to have resulted in the delay of some heavy oil refinery expansions and upgrades since heavy oils are generally more expensive to refine. However, as of October 2009, the price differentials appeared to be returning to levels that would again support heavy crude oil use, and it is expected that long term market conditions will continue to result in the increased reliance on heavy crude.

If the proposed Project or a similar alternative is not implemented, Canadian crude oil producers would continue to have a limited ability to sell crude to refineries in PADD III; most of the crude would continue to be transported to PADD II. In the proposed Project, only 200,000 additional barrels would be

transported to PADD II, and the remaining 500,000 barrels would be used to address demand in PADD III. Without the proposed Project, the limited availability of Canadian crude oil in PADD III would tend to put upward pressure on (1) the price of crude oil shipped from Canada and other sources into PADD III, and (2) the prices of refined products shipped out of PADD III. In addition, constrained access to this large source of oil would tend to increase price volatility and reliance on oil from countries with declining or uncertain production horizons as well as from countries with potential political instabilities or concerns relative to trade relations with the U.S.

Outlook with the Proposed Project

If the proposed Project or a similar alternative is implemented, Canadian crude oil producers would have an increased opportunity to sell crude to the PADD III market. This supply diversification would put downward pressure on the price of crude oil shipped into PADD III and refined products shipped out of PADD III. Increasing development of and access to this large source of oil located in a stable country, with which the U.S. has free trade agreements, would tend to decrease price volatility and reduce the U.S. dependence on oil from countries with uncertain or declining production horizons as well as from countries where political considerations reduce the reliability of beneficial trade relationships with the U.S. In addition, there would be several other advantages to obtaining oil from this source via pipeline to PADD III:

- Reductions in the price of crude oil increase the level of output of the U.S. economy (Leiby 2007). Assuming that environmental externalities associated with crude oil consumption are appropriately addressed through regulation, projects such as the proposed Keystone XL Project, put downward pressure on the price of crude oil and benefit the U.S. economy.
- Oil shocks (unanticipated supply reductions that result in price spikes) reduce the amount of goods and services the U.S. can produce given a fixed amount of other inputs and cause some inputs (e.g., land, labor, and capital) to be under-utilized. In updating studies previously conducted by the Oak Ridge National Laboratory, Leiby (2007) estimated that the likely cost of future oil shocks to the U.S. economy was between $2 and $8 per barrel. Thus, projects which stabilize crude oil supply through diversification and increased access to politically stable regions, such as the proposed Project, benefit the U.S. economy.
- Much of the crude oil imports to PADD III would be supplied along a transportation pathway that would be shorter than that of most other sources. Crude oil supplies in Western Canada represent the closest foreign supply source for PADD III refineries, other than Mexico and Venezuela, and do not require many days or weeks of marine transportation, in contrast to most other suppliers.
- Increasing the PADD III supply of crude oil from Canada would increase supplies from a stable and reliable ally and trading partner of the United States with which we have free trade agreements. It would also increase the supply of crude oil from a major source outside of the Organization of Petroleum Exporting Countries and augment the security of the energy supply.
- Increasing the supply of crude oil to PADD III with Canadian crude would help make up for declining or uncertain supply from several foreign suppliers of crude oil to PADD III.

1.3 AGENCY PARTICIPATION

1.3.1 Federal Lead Agency – U.S. Department of State

For cross-border oil pipelines, DOS is responsible for issuance of Presidential Permits and as such DOS is the lead agency for the Project NEPA environmental review and for the Section 106 of the National Historic Preservation Act (NHPA) process. As the lead agency, DOS is supervising the preparation of the EIS for this Project in accordance with NEPA and the Section 106 process in accordance with the NHPA (16 U.S.C § 470 et seq.). As the lead federal agency, DOS has initiated both informal and formal consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act (ESA) [16 U.S.C § 1536], and to determine the likelihood of effects on listed species.

In addition, as lead agency DOS coordinates compliance with the Coastal Zone Management Act (CZMA) of 1972. Components of the Project are within the coastal zone of Texas. The Texas General Land Office administers the federally approved Texas Coastal Management Program, and will determine if the proposed Project is consistent with the program. This determination will only apply to a portion of both the Gulf Coast Segment and Houston Lateral.

DOS coordinated with the cooperating and assisting agencies to ensure compliance with laws and regulations within their authority as well as to ensure compliance with the following executive orders:

- Executive Order (EO) 11988 – Floodplain Management;
- EO 11990 – Protection of Wetlands;
- EO 12114 – Environmental Effects Abroad of Major Federal Actions;
- EO 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations;
- EO 13007 – Indian Sacred Sites;
- EO 13112 – Invasive Species;
- EO 13175 – Consultation and Coordination with Indian Tribal Governments;
- EO 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds;
- EO 13212 – Actions to Expedite Energy-Related Projects; and
- EO 13337, as amended (69 FR 25299) – governs the DOS issuance of Presidential Permits that authorize construction of pipelines carrying petroleum, petroleum products, and other liquids across U.S. international borders. Within DOS, the Bureau of Economic and Business Affairs, Office of International Energy and Commodity Policy, receives and processes Presidential Permit applications. Upon receipt of a Presidential Permit application for a cross-border pipeline, DOS is required to request the views of the Secretary of Defense, the Attorney General, the Secretary of the Interior, the Secretary of Commerce, the Secretary of Transportation, the Secretary of Energy, the Secretary of Homeland Security, the Administrator of the U.S. Environmental Protection Agency (EPA), and such other government department and agency heads as the Secretary of State deems appropriate. DOS must consider the Project to be in the national interest to issue a Presidential Permit.

1.3.2 Cooperating Agencies

The following agencies have agreed to cooperate in the NEPA process.

1.3.2.1 U.S. Environmental Protection Agency (EPA)

Under Section 402 of the Clean Water Act (CWA) (33 U.S.C §1251 et seq.), EPA has jurisdiction over the discharge of pollutants from a point source into waters of the United States. Administration of permit programs for point-source discharges that require a National Pollutant Discharge Elimination System (NPDES) permit has been delegated to the states affected by the Project. EPA maintains oversight of the delegated authority. Regulated discharges include, but are not limited to, sanitary and domestic wastewater, gravel pit and construction dewatering, hydrostatic test water, and storm water (40 CFR 122).

Under Section 404 of the CWA (33 U.S.C § 1251 et seq.), EPA reviews and comments on U.S. Army Corps of Engineers (USACE) Section 404 permit applications for compliance with the Section 404(b)(1) guidelines and other statutes and authorities within its jurisdiction (40 CFR 230).

Under Section 309 of the CAA (42 U.S.C § 7401 et seq.), EPA has the responsibility to review and comment in writing on the EIS for compliance with Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500–1508).

Under Sections 3001 through 3019 of the Resource Conservation and Recovery Act (RCRA) (42 U.S.C § 3251 et seq.), EPA establishes criteria governing the management of hazardous waste. In accordance with 40 CFR 261.4(b)(5), any hazardous waste generated in conjunction with construction or operation of the Project is subject to the hazardous waste regulations.

The proposed Project is located within EPA Regions 6, 7, and 8. Region 8 is the lead for EPA's involvement as a cooperating agency.

1.3.2.2 U.S. Department of the Interior, Bureau of Land Management (BLM)

BLM has authority to issue right-of-way (ROW) grants for all affected federal lands under the Mineral Leasing Act (MLA) of 1920, as amended (30 U.S.C 181 et seq.) excluding National Park Service (NPS) lands, and the public lands BLM administers under the Federal Land Policy and Management Act (FLPMA) of 1976. BLM will consider the issuance of a new ROW grant and issuance of associated temporary use permits that would apply to BLM-managed lands crossed by the Project, as well as all other federal lands affected. Conformance with land use plans and impacts on resources and programs will be considered in determining whether to issue a ROW grant. BLM staff is participating in agency meetings and assisting Keystone with routing across BLM lands.

BLM's purpose and need in preparing an EIS under NEPA for the proposed Project is to approve, approve with modification, or deny Keystone's application under section 28 of the Mineral Leasing Act of 1920, as amended for a ROW grant to construct, operate and decommission a crude oil pipeline and related facilities on public federal lands in the United States. The proposed ROW action appears consistent with approved BLM land use planning. For the decision to be made, BLM will decide whether or not to grant a ROW across federal lands, and if so, under what terms and conditions.

1.3.2.3 U.S. Department of the Interior, National Park Service (NPS)

NPS provides technical review of the proposal in the vicinity of NPS-administered lands affected by the Project. NPS retains this role despite the BLM authority on U.S. public federal lands since the MLA authorization administered by BLM is not applicable to NPS lands. The applicant proposed route for the Project would cross several National Historic Trails that are managed with the assistance of the NPS. As a result, NPS has become a cooperating agency for the Project.

1.3.2.4 U.S. Department of the Interior, U.S. Fish and Wildlife Service (USFWS)

USFWS is responsible for ensuring compliance with the ESA. Section 7 of the ESA, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "…jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined…to be critical…" (16 U.S.C § 1536[a][2] [1988]). USFWS also reviews project plans and provides comments regarding protection of fish and wildlife resources under the provisions of the Fish and Wildlife Coordination Act (FWCA) (16 U.S.C § 661 et seq.). USFWS is responsible for the implementation of the provisions of the Migratory Bird Treaty Act (16 U.S.C § 703) and the Bald and Golden Eagle Protection Act (16 U.S.C § 688). Easements are protected under the National Wildlife Refuge Systems Administration Act (16 U.S.C § 668dd[c]).

1.3.2.5 U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS)

NRCS administers the Wetlands Reserve Program (WRP) (16 U.S.C § 3837 et seq.), under which it purchases conservation easements and provides cost share to landowners for the purposes of restoring and protecting wetlands. Under the WRP, the United States may purchase 30-year or permanent easements. Land eligibility for the WRP is based on NRCS's determination that the land is farmed or converted wetland, that enrollment maximizes wildlife benefits and wetland values, and that the likelihood of successful restoration merits inclusion into the program. Lands under WRP easement are subject to development and other use restrictions in order to ensure protection of wetland and wildlife conservation values. The proposed Project route would cross land restricted by at least one WRP easement. NRCS also administers the Emergency Watershed Protection Program (Floodplain Easements) and the Healthy Forests Reserve Program, and shares management of the Grasslands Reserve Program with the Farm Service Agency (FSA). The Project may involve lands included in these other NRCS land conservation programs. NRCS is also responsible for the Farmland Protection Policy Act (7 CFR Part 658), including protection of prime and unique agricultural lands. The Project would traverse prime farmland and potentially prime farmland.

1.3.2.6 U.S. Department of Agriculture, Farm Service Agency (FSA)

The Farm Service Agency (FSA) is a unit of the U.S. Department of Agriculture (USDA) and administers several land conservation programs, including the Conservation Reserve Program (CRP), the Conservation Reserve Enhancement Program (CREP), the Farmable Wetlands Program, and the Grasslands Reserve Program. These programs provide annual rental payments and cost-share assistance to establish long-term resource conservation measures on eligible farmland. The terms of rental agreements are from 10 to 30 years, during which most agricultural uses of the affected lands are prohibited. The Grasslands Reserve Program is managed jointly with NRCS and includes provisions for

rental agreements up to 30 years, 30-year-easements, and permanent easements. The Project involves lands included in FSA land conservation programs.

1.3.2.7 U.S. Department of Agriculture, Rural Utilities Service (RUS)

RUS is an agency that administers the U.S. Department of Agriculture's Rural Development Utilities Programs. These programs include the provision of loans and loan guarantees to electric utilities and other entities to serve customers in rural areas, through the construction or expansion of generation, transmission and distribution facilities. Applications for financing have been or may be submitted to RUS by several rural electric cooperatives to enable the cooperatives' provision of electricity to pump stations that would serve the Project. RUS is responsible for NEPA compliance for facilities proposed by the cooperatives to provide these services including, but not limited to, transmission lines.

1.3.2.8 U.S. Army Corps of Engineers (USACE)

Under Section 404 of the CWA, USACE has the authority to issue or deny permits for placement of dredge or fill material in the waters of the United States, including adjacent wetlands. Under Section 10 of the Rivers and Harbors Act (33 U.S.C § 403), USACE regulates work and placement of structures in, on, over, or under navigable waters of the United States.

1.3.2.9 Western Area Power Administration (Western)

Western is a federal power-marketing agency within the U.S. Department of Energy (DOE) that sells and delivers federal electric power to municipalities, public utilities, federal and state agencies, and Native American tribes in 15 western and central states. A portion of the proposed Project is located within Western's Upper Great Plains Region, which operates and maintains nearly 90 substations and more than 8,000 miles of federal transmission lines in Minnesota, South Dakota, North Dakota, Montana, Nebraska, and Iowa.

Western has received requests from customers on its network for unplanned network load delivery points to serve unplanned load growth associated with the Project in Montana and South Dakota. Western is the network balancing authority. To accommodate these requests, the transmission system grid would require modification of existing electrical grid facilities, including installation of a new electric substation and construction of new transmission lines. According to DOE's NEPA Implementing Procedures (10 CFR Part 1021), these actions require environmental review.

The joint system engineering studies determined that power demands for pump stations in South Dakota at full Project flow capacity (900,000 bpd) would require that the existing area power grid be expanded to include a new 230-kV transmission line (the Lower Brule to Witten transmission line), modification of an existing substation (Witten), construction of a new switchyard/substation (Lower Brule), and construction of new double-circuit transmission line (from Big Bend to Lower Brule). These actions are considered connected actions to the Project since they would be needed as a direct result of the Project.

In responding to the need for agency action, Western must abide by the following:

- Address Interconnection Requests: Western's *General Guidelines for Interconnection* establishes a process for addressing applications for interconnection. The process dictates that Western respond to the applications as presented by the network customers.

- Protect Transmission System Reliability and Service to Existing Customers. Western's purpose and need is to ensure that existing reliability and service is not degraded. Western's *General Guidelines for Interconnection* provides for transmission and system studies to ensure that system reliability and service to existing customers is not adversely affected. If the existing power system cannot accommodate an applicant's request without modifications or upgrades, the applicant may be responsible for funding the necessary work unless the changes would provide overall system benefits.

Western is consulting with DOS to ensure cultural resources potentially affected by any Western transmission lines are taken into account. Western will also be a signator to the Programmatic Agreement consistent with Section 106 of the NHPA.

1.3.2.10 U.S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS)

OPS administers DOT's national regulatory program to assure the safe transportation of natural gas, petroleum, and other hazardous liquids by pipeline. The regulations for Transportation of Hazardous Liquids by Pipeline are presented in 49 CFR Part 195. Keystone has requested a Special Permit to construct the Project with the following modification of the design requirements in 49 CFR 195:

- Keystone requested a Special Permit from OPS on October 10, 2008, to design, construct, and operate the Keystone XL Pipeline Project using a 0.80-design factor in certain areas. Crude oil and other similar pipelines traditionally operate under a 0.72 design factor.
- The OPS special permit would be a federal agency action subject to the requirements of NEPA. OPS is conducting an environmental assessment to determine whether issuing the Special Permit would significantly impact the environmental and the likelihood of a pipeline spill or failure compared to not issuing the permit. OPS is also acting as a cooperating agency to accomplish their NEPA requirements through this EIS and is providing technical expertise to DOS in the assessment of the Project and in determination of appropriate mitigating measures.
- If the Special Permit is approved, OPS would impose conditions to ensure that there would be at least the equivalent level of safety in the Special Permit areas as would occur with meeting the design requirement of 49 CFR 195.

1.3.2.11 Montana Department of Environmental Quality (MDEQ)

MDEQ is the lead agency for compliance with the State of Montana Environmental Policy Act (MEPA). This EIS will not only address the requirements for NEPA environmental analysis, but also the requirements for MEPA environmental analysis. Additionally, Keystone is required to obtain a Certificate of Compliance (Certificate) from MDEQ under the Montana Major Facility Siting Act (MFSA) before the Project may begin construction or acquire easements through the eminent domain process. MDEQ must also consider issuance of permits under the Montana Water Quality Act, including turbidity authorizations for in-stream construction activities and Section 401 certification under the CWA. MDEQ's issuance of a Certificate must be based on substantive findings pursuant to Section 75-20-301(1), Montana Code Annotated (MCA) and Administrative Rules of Montana (ARM), Sections 17.20.1604 and 17.20.1607. Issuance of the Certificate would be a state action for which MDEQ is required to prepare an EIS under MEPA.

1.3.3 Assisting Agencies and Other State Agencies

The U.S. Department of Interior, Bureau of Reclamation (Reclamation) has agreed to provide technical assistance to DOS in the environmental review process. Reclamation has responsibilities for federal water supplies in the West. The proposed pipeline would go beneath one of Reclamation's canals in South Dakota.

The following county governments in Nebraska will assist DOS to address their concerns regarding local planning processes and/or laws: Fillmore, Greely, Holt, Merrick, Nance, Saline, and Wheeler. The Lower Big Blue Natural Resources and Upper Elkhorn Natural Resources districts, Nebraska have also agreed to be assisting agencies.

In addition to these assisting agencies, various other state and local resource agencies from each of the states crossed by the proposed Project have responsibilities for state and local permit issuance. The permits required by the various state and local jurisdictions crossed by the proposed corridor are discussed in Section 1.6.

1.4 INDIAN TRIBE CONSULTATION

In its Notice of Intent to prepare an EIS for the Project (NOI), DOS also presented its intent to conduct a parallel Section 106 consultation under the National Historic Preservation Act (NHPA). DOS and BLM initially contacted potentially affected Indian tribes to determine whether the tribes were interested in reviewing the proposed Project under NEPA and whether they were interested in participating in consultation under Section 106. As the lead federal agency for the Project, DOS is engaging in consultation with identified consulting parties, including federal agencies, state agencies, State Historic Preservation Officers (SHPOs), the Advisory Council on Historic Preservation (ACHP), and interested federally recognized Indian tribes (70 FR 71194) within the Project Area. Tribes potentially affected by the undertaking were invited to become consulting parties under Section 106 of the NHPA regulations. Consultation was initiated on May 12, 2009 and includes the ongoing development of a Programmatic Agreement (PA) between the consulting parties that would guide the continuing compliance with Section 106 should the Project receive all necessary permits and proceed to construction. Consultation to date has included two consultation meetings in Rapid City, South Dakota; one consultation meeting in Billings, Montana; two consultation meetings in Oklahoma City, Oklahoma, one consultation meeting in Dallas, Texas; and a webinar for all consulting parties to discuss comments on drafts of the proposed PA. DOS recognizes its responsibility for government-to-government consultation with federally recognized tribes, and is engaging in such consultation as requested by appropriate tribal officials.

1.5 SHPO CONSULTATION

Consultation with the SHPOs was initiated on April 21, 2009. Consultation to date has included consultation meetings in Lincoln, Nebraska, Helena, Montana, Pierre, South Dakota, and Austin, Texas.

1.6 ENVIRONMENTAL REVIEW OF CANADIAN PORTION OF THE KEYSTONE XL PROJECT

As a matter of policy, in addition to its environmental analysis of the Project in the United States, DOS monitors and obtains information from the ongoing environmental analysis of the Project in Canada. In so doing, DOS is guided by *EO 12114 – Environmental Effects Abroad of Major Federal Actions* which

stipulates the procedures and other actions to be taken by federal agencies with respect to the environment outside of the United States. The Canadian government is conducting its own environmental review of the portion of the Project in Canada. As a result, and consistent with EO 12114, DOS is not preparing any environmental analysis of the impacts of the pipeline in Canada.

The Canadian environmental analysis process began on July 18, 2008 when Keystone submitted a Preliminary Information Package (PIP) regarding the proposed Keystone XL Pipeline to Canada's National Energy Board (NEB). Upon receipt of the PIP, the NEB issued a Federal Coordination Notice that formally initiated an environmental assessment process pursuant to the Canadian Environmental Assessment Act (CEAA). In early 2009 Keystone submitted an application to NEB for a Certificate of Public Convenience and Necessity for the proposed Project pursuant to Section 52 of the National Energy Board Act (NEBA). Since that time the NEB has solicited comments from provincial governments and agencies and other potential intervening parties in the process. NEB held hearings on the Project application from September 15 through September 18, 2009 and information discussed in those hearings informs, where appropriate, various portions of this document. DOS continues to monitor the results of these hearings and the continuing environmental assessment of the Canadian portion of the proposed Project by the NEB.

1.7 SCOPING AND EIS COMMENT PROCESS

1.7.1 Scoping

On January 28, 2009, DOS issued an NOI to prepare an EIS to address reasonably foreseeable impacts from the proposed action and alternatives, and to conduct a parallel consultation process under Section 106 of NHPA.

The NOI informed the public about the proposed action, announced plans for scoping meetings, invited public participation in the scoping process, and solicited public comments for consideration in establishing the scope and content of the EIS. The NOI was published in the Federal Register and distributed to the following stakeholders:

- Landowners along the proposed route;
- Federal, state, and local agencies;
- Municipalities and counties;
- Native American Tribes;
- Elected officials;
- Non-governmental organizations;
- Media; and
- Interested individuals.

The scoping period was originally planned to extend from January 28 to March 16, 2009. Weather conditions in South Dakota precluded holding the scoping meetings on this schedule, and an amended NOI published on March 23, 2009 extended the scoping period until April 15, 2009 to provide time to allow rescheduling of two South Dakota scoping meetings.

DOS held 20 separate scoping meetings in the vicinity of the proposed route to give the public the opportunity to provide comments regarding the scope of the EIS. The dates and locations of the meetings are listed below, along with the attendance at each meeting (in parentheses).

February 9 – Beaumont, Texas (10)

February 10 – Liberty, Texas (15)

February 11 – Livingston, Texas (15)

February 12 – Tyler, Texas (60)

February 17 – Durant, Oklahoma (34)

February 18 – Ponca City, Oklahoma (12)

February 19 – El Dorado, Kansas (10)

February 19 – Clay Center, Kansas (20)

February 23 – York, Nebraska (62)

February 23 – Baker, Montana (39)

February 24 – Atkinson, Nebraska (65)

February 24 – Terry, Montana (30)

February 25 – Murdo, South Dakota (46)

February 25 – Circle, Montana (100)

February 25 – Plentywood, Montana (7)

February 25 – Glendive, Montana (45)

February 26 – Glasgow, Montana (53)

February 26 – Malta, Montana (32)

April 8 – Faith, South Dakota (12)

April 8 – Buffalo, South Dakota (31)

DOS received verbal, written, and electronic comments during the scoping comment period. All verbal comments formally presented at the meetings were recorded and transcribed. Additional written comments were received on comment forms provided to the public at the meetings and in letters submitted to DOS. A summary of public comments related to the scope of the EIS scope is presented in Table 1.7.1-1 along with the section in this EIS that addresses the concern. Additional details on the scoping comments are provided in Appendix A (Scoping Summary Report).

TABLE 1.7.1-1
Comments Received on Environmental Issues during the Public Scoping Process for the Proposed Project

Issue	Comment	Section Where Comment/Issue Addressed in EIS:
Purpose and Need	Purpose and economics of this project needs to be explained, including forecasts for Canadian sand oil production and U.S. crude oil demand and evaluate the Project in the context of overall U.S. oil production, transportation, storage and refining. How much supply comes from which nations and what is the stability of those sources? Describe commercial terms for commitments to the Project. Indicate how long the oil supply for the pipeline is projected to last at the throughput volumes planned for the Project.	1.2
Project Description	Pipeline installation methods should minimize impacts to the surrounding environment. Effects of installation, maintenance, operation, life expectancy, and removal of the pipeline.	2.0
Alternatives	Process to select alternatives, evaluation of a no-action alternative, route adjustments, route selection, routes that avoid sensitive areas and risks to homes and farming operations, use of other methods of transportation, shipping refined products instead of a crude oil pipeline, renewable energy sources, collocation with other ROWs.	4.0
Geology	Seismicity in the Brockton-Froid fault zone. Lower portion of the Niobrara River is underlain by Pierre shale, which is a very week rock prone to fracturing and slumping.	3.1
Soils and Sediments	Methods to reduce erosion, repair of erosion channels, sediment control, topsoil segregation during construction and replacement of topsoil after construction and abandonment, restoring right-of-way land to previous state, pipeline effects on soil temperature, effects of frost/moisture on bring rocks to the soil surface, construction related erosion impacts on sand dunes.	3.2
Water Resources	Impacts on public and private water sources, water supply contingencies in the event of a spill, stream channel erosion, impacts to reservoirs, availability of hydrostatic testing water. The EIS should provide a clear description of aquatic resources that may be impacted.	3.3
Wetlands	Identification of potentially impacted wetlands, impact and mitigation measures, replacement or restoration of loss wetlands, and avoidance of wetland drainage as a result of trenching.	3.4
Vegetation	Impacts and mitigation to native vegetation along pipeline ROW, revegetation measures, impact to tree shelter belts, spread of invasive weeds, effects to rare plant communities.	3.5
Fish, wildlife, and threatened and endangered species	Impacts to fisheries, potential impacts and mitigation to threatened and endangered species, fragmentation of habitat, off-site mitigation to compensate for impacts, and effects of power lines on avian collision.	3.6, 3.7 and 3.8
Land Use	Restrictions of land use over pipeline and cost of reclamation to agriculture land. Protection measure to protect landowner's ability to graze cattle, run equipment, and to be free of noxious weeds.	3.9
Recreation and Special Interest Areas	Impacts to state parks, National Historic Trails, and National Scenic Rivers; impacts to boating, tubing and other	3.9

TABLE 1.7.1-1
Comments Received on Environmental Issues during the Public Scoping Process for the Proposed Project

Issue	Comment	Section Where Comment/Issue Addressed in EIS:
	activities; and degradation of recreational opportunities.	
Visual Resources	Visual impacts of above-ground facilities, use of "Standard Environmental colors", impacts of fuel spills and visible sediment plumes in rivers and lakes, impacts on historic landscapes and National wild and scenic rivers.	3.9
Socioeconomics	Impacts to property values, impacts on property taxes, and Project-related tax revenues to municipalities and counties associated with the pipeline.	3.10
Transportation and Traffic	Impacts to county and private roads, methods used to cross roadways, and restoration of damaged roads.	3.10
Cultural Resources	Impacts to archaeological sites, paleontological resources, prehistoric and historic sites, and historic landscapes; route should visually inspect for historic properties; route should avoid any significant cultural resource on public land as well as hunting and subsistence areas. Potential major adverse impacts to cultural resources associated with El Camino Real de los Tejas in Nacogdoches County, Texas.	3.11
Air Resources	Air emissions and air pollution abatement from pump stations, and air quality impacts of refining tar sands.	3.12
Noise	Effects of pump station operational noise on humans and cattle, impacts due to construction noise, and effects of pipeline vibrations on nearby structures and cattle.	3.12
Reliability and Safety	Local county input to Emergency Response Plan; training for local responders; protection from vandalism, terrorist activities and fire risk; ROW security; safety of pipeline crossings; spill contamination and cleanup procedures; maximum potential spill volumes; state-of-the art leak detection, and detection of small leaks in particular; monitoring of pressure; automatic shut-down procedures; corrosive nature of Canadian tar sands; pipeline integrity; compensation to landowners affected by spills; spill clean up and restoration plans; TransCanada's operational experience and safety record; water supply contamination due to oil spills; and impacts of spills on animals and humans.	3.13
Cumulative Impacts	Impacts from building another pipeline on properties that may already have up to four other pipelines running through them; impact of mining, making, refining and using tar sands oil; impacts from activities such as new roads, gas or oil wells, power lines, wind farms, coal mines, etc.; and the impacts of adding additional volumes of crude oil to Wood River and Cushing terminals.	3.14

1.8 PERMITS, APPROVALS, AND REGULATORY REQUIREMENTS

The assisting federal, tribal, state, and local agencies with jurisdiction over various aspects of the Project participated in the EIS process by providing direct input to DOS or through the EIS review and comment process (see Sections 1.3.3 and 1.3.4).

Table 1.8-1 lists the permits, licenses, approvals, and consultation requirements for federal, state and local agencies.

TABLE 1.8-1
Permits, Licenses, Approvals, and Consultation Requirements for the Proposed Project

Agency	Permit or Consultation/Authority	Agency Action
Federal		
U.S. Department of State (DOS)	Presidential Permit, Executive Order 13337 of April 30, 2004 (69 Fed. Reg. 25299, et seq.)	Considers approval of cross-border facilities; lead federal agency under NEPA
	Section 106 (NHPA)	Supervises and coordinates compliance with Section 106 of NHPA and consultation with interested Tribal agencies
Bureau of Land Management (BLM)	ROW Grant(s) under the Federal Land Policy and Management Act of 1976 as amended (FLPMA) and Temporary Use Permit under Section 28 (MLA)	Considers approval of ROW grant and temporary use permits for the portions of the Project that would encroach on public lands
	Archeological Resources Protection Act (ARPA) Permit	Considers issuance of cultural resource use permit to survey, excavate or remove cultural resources on federal lands
	Notice to Proceed	Following issuance of a ROW grant and approval of the Project's POD, considers the issuance of a Notice to Proceed with Project development and mitigation activities for federal lands
	Section 106 (NHPA)	Responsible for compliance with Section 106 of NHPA and consultation with interested Tribal agencies
U.S. Corps of Engineers (USACE) – Omaha, Tulsa, Fort Worth, and Galveston Districts	Section 404, CWA	Considers issuance of Section 404 permits for the placement of dredge or fill material in Waters of the U.S., including wetlands
	Section 10 Permit (Rivers and Harbors Act of 1899)	Considers issuance of Section 10 permits for pipeline crossings of navigable waters
	Section 106 (NHPA)	Responsible for compliance with Section 106 of NHPA and consultation with interested Tribal agencies
U.S. Fish and Wildlife Service (USFWS)	ESA Section 7 Consultation, Biological Opinion	Considers lead agency findings of an impact of federally-listed or proposed species; provide Biological Opinion if the Project is likely to adversely affect federally-listed or proposed species or their habitats
U.S. Bureau of Reclamation (Reclamation)	ROW Grant and Temporary Use Permit under Section 28 of the MLA	Determines if ROW grant issued under MLA by BLM is in compliance with Reclamation standards

TABLE 1.8-1
Permits, Licenses, Approvals, and Consultation Requirements for the Proposed Project

Agency	Permit or Consultation/Authority	Agency Action
	Section 106 (NHPA)	Responsible for compliance with Section 106 of NHPA and consultation with interested Tribal agencies
Federal Highway Administration (FHA)	Crossing Permit	Considers issuance of permits for the crossing of federally funded highways
Office of Pipeline Safety (OPS)	49 CFR Part 195 (typically submitted closer to the construction phase after all other permits approved)	Reviews and approves IMP for HCAs prior to installation
	49 CFR Part 194 (typically submitted closer to the construction phase after all other permits approved)	Reviews and approves ERP prior to installation
	Special Permit (currently under review)	Authorizes the design, construction and operation of the Project using a 0.80 design factor in non-HCAs; imposes conditions to ensure at a minimum an equivalent level of safety
U.S. Environmental Protection Agency (EPA), Regions VI, VII, VIII	Section 401, CWA, Water Quality Certification	Considers approval of water use and crossing permits for non-jurisdictional waters (implemented through each state's Water Quality Certification Program)
	Section 402, CWA, National Pollutant Discharge Elimination System (NPDES)	Reviews and issues NPDES permit for the discharge of hydrostatic test water (implemented through each state's Water Quality Certification Program, where required)
U.S. Department of Agriculture – Natural Resources Conservation Service (NRCS)	Section 106 (NHPA)	Responsible for compliance with Section 106 of NHPA and consultation with interested Tribal agencies
U.S. Department of Agriculture – Farm Service Agency (FSA)	Section 106 (NHPA)	Responsible for compliance with Section 106 of NHPA and consultation with interested Tribal agencies
U.S. Department of Agriculture – Rural Utilities Services (RUS)	Section 106 (NHPA)	Responsible for compliance with Section 106 of NHPA and consultation with interested Tribal agencies
Western Area Power Administration (Western)	Section 106 (NHPA)	Responsible for compliance with Section 106 of NHPA and consultation with interested Tribal agencies
Advisory Council on Historic Preservation (ACHP)	Consultation	Advises federal agencies during the Section 106 consultation process; signator to the Programmatic Agreement
U.S. Department of Treasury – Bureau of Alcohol, Tobacco, and Firearms	Treasury Department Order No. 120-1 (former No. 221), effective 1 July 1972	Considers issuance of permit to purchase, store, and use explosives should blasting be required
Montana*		
Montana State Historic Preservation Office (SHPO)– Montana Historical Society**	Section 106 consultation regarding NRHP eligibility of cultural resources and potential Project effects on historic properties, Compliance with Montana State Antiquities Act	Reviews and comments on activities potentially affecting cultural resources
Montana Department of Environmental Quality (MDEQ)	Certificate of Compliance under MFSA	Considers issuance of a certificate of compliance under MFSA for construction and operation of the proposed facility.

TABLE 1.8-1
Permits, Licenses, Approvals, and Consultation Requirements for the Proposed Project

Agency	Permit or Consultation/Authority	Agency Action
MDEQ – Permitting and Compliance Division – Water Protection Bureau	Montana Ground Water Pollution Control System (MGWPCS) and Nondegredation Review (three levels of water protection based on water classification, i.e., outstanding resource waters etc.), Standard 318 (Permitting conditions for Pipeline Crossings at Watercourses – short term turbidity)	Considers issuance of permit for stream and wetland crossings; provides Section 401 certification consults for Section 404 process
	Montana Pollutant Discharge Elimination System (MPDES)	Considers issuance of permit for hydrostatic test water discharge into surface water, trench dewatering, and stormwater discharge
MDEQ – Permitting and Compliance Division – Waste and Underground Tank Management Bureau	Septic Tank, Cesspool, and Privy Cleaner New License Application Form (for work camps)	Reviews and licenses Cesspool, Septic Tank and Privy Cleaners, inspects disposal sites for septic tank, grease trap and sump wastes
MDEQ – Permitting and Compliance Division – Air Resources Bureau	Air Quality Permit Application for Portable Sources; Air Quality Permit Application for Stationary Sources	Considers issuance of air quality permit(s) for work camps dependant on source of power such as portable diesel generator or use of non-electrical equipment is used during construction or operation of the pipeline (i.e., diesel powered pumps during hydrostatic testing)
MDEQ – Permitting and Compliance Division – Public Water Supply Bureau	Water and Wastewater Operator Certification (for work camps)	Reviews and licenses operators of certain public drinking water and wastewater treatment facilities; issues approval to construct, alter or extend public water or sewer systems (including hauling, storage and distribution of water)
Montana Department of Natural Resources and Conservation (DNRC) – Water Resources Division (General)	Water Appropriation Permit (Beneficial Water use Permit) and/or Water Wells Drilling/ Alteration	Considers issuance of permit for water use for hydrostatic testing or waters for dust control
Montana DNRC Trust Land Management Division	Navigable Rivers/Land use License/Easement	Consults on and considers issuance of permit for projects in, on, over, and under navigable waters
Department of Transportation – Glendive District	State and Highway Crossing Permit for pipeline and access roads that encroach state highway ROW, with traffic control based on the Manual on Uniform Traffic Control Devices	Considers issuance of permits for crossings of state highways
Department of Transportation – Helena Motor Carrier Services (MCS) Division Office	Oversize/Overweight Load Permits, where required	Considers issuance of permit for oversize/overweight loads on state maintained roadways
Montana Public Service Commission	Grant Common Carrier Status	Considers whether or not an applicant qualifies as a common carrier under Montana Annotated Code (MAC) 69-13-101; if a common carrier, the commission would supervise and regulate operations under MCA Title 69 allowing Keystone to cross state highways and state streams.

TABLE 1.8-1
Permits, Licenses, Approvals, and Consultation Requirements for the Proposed Project

Agency	Permit or Consultation/Authority	Agency Action
County Road Departments	Crossing Permits	Considers issuance of permits for crossing of state highways
County Floodplain Departments	County Floodplain permitting	Considers issuance of permits and review of work in floodplains
County and Local Authorities	Pump Station Zoning Approvals, where required	Reviews under county approval process
	Special or Conditional Use Permits, where required	Reviews under county approval process (Note: These permits are not required after a Certificate of Compliance under MFSA is issued)
County Weed Control Boards	Approval of reclamation plan	Considers approval of a reclamation/weed control plan (Note: These approvals still required after Certificate of Compliance under MFSA is issued)
South Dakota*		
South Dakota Historical Society**	Consultation under Section 106, NHPA	Reviews and comments on activities potentially affecting cultural resources
South Dakota Public Utilities Commission (SDPUC)	Energy Conversion and Transmission Facilities Act	Considers issuance of permit for a pipeline and appurtenant facilities
Department of Environment and Natural Resources, Surface Water Quality Program	Section 401, CWA, Water Quality Certification	Considers issuance of permit for stream and wetland crossings; consult for Section 404 process
	Hydrostatic Testing/Dewatering & Temporary Water Use Permit (SDG070000)	Considers issuance of General Permit regulating hydrostatic test water discharge, construction dewatering to waters of the state, and Temporary Water use Permit
Department of Game, Fish, and Parks	Consultation	Consults regarding natural resources
Department of Transportation	Crossing Permits	Considers issuance of permits for crossing of state highways
County Road Departments	Crossing Permits	Considers issuance of permits for crossing of county roads
County and Local Authorities	Pump Station Zoning Approvals, where required	Reviews under county approval process
	Special or Conditional Use Permits, where required	Reviews under county approval process
Nebraska		
Nebraska State Historic Preservation Office (SHPO) **	Consultation under Section 106, NHPA	Reviews and comments on activities potentially affecting cultural resources
DEQ, Division of Water Resources	Section 401, CWA, Water Quality Certification	Considers issuance of permit for stream and wetland crossings; consult for Section 404 process
	Excavation Dewatering and Hydrostatic Testing Permit Form NEG6720000 Dewatering Form NEG6721000 Relocation	Considers issuance of permit regulating hydrostatic test water discharge and construction dewatering to waters of the state
Department of Environmental Quality (DEQ), Division of Air Quality	Nebraska Administrative Code Title 129, Construction Permit.	Considers issuance of permit for construction of proposed tank farm at Steele City

TABLE 1.8-1
Permits, Licenses, Approvals, and Consultation Requirements for the Proposed Project

Agency	Permit or Consultation/Authority	Agency Action
Department of Natural Resources	Water Appropriations – Groundwater and Surface Water	Considers issuance of permit to use Public Waters (for hydrostatic test water or dust control)
Game and Parks Commission	Consultation	Consults regarding natural resources
Department of Transportation	Crossing Permits	Considers issuance of permits for crossing of state highways
County Road Departments	Crossing Permits	Considers issuance of permits for crossing of county roads
County and Local Authorities	Pump Station Zoning Approvals, where required	Reviews under county approval process
	Special or Conditional Use Permits, where required	Reviews under county approval process
Kansas		
Department of Health and Environment, Bureau of Water	Hydrostatic Testing Permit (if applicable)	For pump station piping, may be below permitting thresholds
	Water Withdrawal Permit (if applicable)	For pump station piping, may be below permitting thresholds
Department of Wildlife and Parks	Non-game and Endangered Species Action Permit (if applicable)	Reviews of new pump station locations
SHPO**	Historical Resources Review (if applicable)	Reviews of new pump station locations
County and Local Authorities	Pump Station Zoning Approvals, where required	Reviews under county approval process
Oklahoma		
Oklahoma State Historical Society**	Consultation under Section 106, NHPA	Reviews and comments on activities potentially affecting cultural resources
Oklahoma Archaeological Survey (OAS)	Consultation	Reviews and comments on activities potentially affecting archaeological sites
DEQ, Division of Water Resources	Section 401, CWA, Water Quality Certification.	Considers issuance of permit for stream and wetland crossings; consults for Section 404 process; Critical Water Resources.
	Excavation Dewatering and Hydrostatic Testing Permit (OKG270000)	Considers issuance of permit regulating hydrostatic test water discharge and construction dewatering to waters of the state
Department of Wildlife Conservation	Consultation	Consults regarding natural resources
Department of Transportation	Crossing Permits	Considers issuance of permits for crossing of state highways
County Road Departments	Crossing Permits	Considers issuance of permits for crossing of county roads
County and Local Authorities	Pump Station Zoning Approvals, where required	Reviews under county approval process
	Special or Conditional Use Permits, where required	Reviews under county approval process
Texas		
SHPO**	Consultation under Section 106, NHPA	Reviews and comments on activities potentially affecting cultural resources

TABLE 1.8-1
Permits, Licenses, Approvals, and Consultation Requirements for the Proposed Project

Agency	Permit or Consultation/Authority	Agency Action
Texas Commission on Environmental Quality (TCEQ)	Section 401, CWA, Water Quality Certification.	Consults for Section 404 process; permit regulating hydrostatic test water discharge, and construction dewatering to waters of the state
	General Conformity Determination	Determines conformity of the federal action to the State Implementation Plan (SIP)
Parks and Wildlife Department	Consultation 31 TAC 69 - Marl, Sand, and Gravel Permits	Consults regarding natural resources, considers issuance of stream crossing permits
Texas General Land Office	Coastal Zone Management Program	Considers issuance of Coastal Zone Consistency Determination
	State owned lands	Considers approval of easement grants for ROW cover state-owned lands
Railroad Commission of Texas	State lead on oil and gas projects; Excavation Dewatering and Hydrostatic Testing Permit	Considers issuance of permit to operate the pipeline; considers issuance of permit regulating hydrostatic test water discharge and construction dewatering to waters of the state
Department of Transportation	Crossing Permits	Considers issuance of permits for crossing of state highways
County Road Departments	Crossing Permits	Considers issuance of permits for crossing of county roads
County and Local Authorities	Pump Station Zoning Approvals, where required	Reviews under county approval process
	Special or Conditional Use Permits, where required	Reviews under county approval process
Jefferson County Drainage District	Crossing Permits	Considers issuance of permits for crossing of drainage canals
Lower Neches Valley Authority	Crossing Permits	Considers issuance of permits for crossing of drainage canals

Note: All permits are considered attainable and consistent with existing land use plans based on consultation with the above agencies.

*Permits associated with construction camps are discussed in Section 2.2.7.4.

**The SHPO has the opportunity to review federal agency decisions under Section 106, but it is not a legal obligation.

Source: Keystone 2009c.

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