

## **The DAPL decision and Keystone XL**

Pat Handlin, WPLC attorney     April 2, 2020

On March 25, 2020, the D.C. District Court Judge in *Standing Rock Sioux Tribe vs. US Army Corp of Engineers*, vacated the easement granted to Energy Transfer Partners (ETP) by the United States Army Corp of Engineers which allowed the Dakota Access Pipeline to cross under the Missouri River and Lake Oahe in North Dakota. This pipeline, which carries oil at pressure of up to 1440 pounds per square inch, endangers the drinking water of the Standing Rock Sioux Tribe, the Cheyenne River Sioux Tribe and others who rely upon the Missouri River for drinking water and other important purposes. While the Judge did not enter an injunction ordering that the flow of oil through the Dakota Access Pipeline stop, he did order all sides to file briefs on the question of stopping the flow, and recognized that the standard remedy for violation of the National Environmental Policy Act is vacating the rule or action.

Initially, before the Dakota Access pipeline was built, the U.S. Army Corp of Engineers (the Corps) concluded that granting an easement for the pipeline would yield no significant environmental impact, thus exempting the Corps from having to prepare an Environmental Impact Statement (EIS) under the requirements of the National Environmental Policy Act (NEPA). In a prior 2017 decision in this

case, while finding that the Corps' decision largely complied with NEPA, the Judge ordered the Corps

to consider the expert comments which noted that the pipeline suffered from serious flaws that could result in extensive environmental harm in the event of a spill. In the current decision, the same Judge has now held that the Corps' consideration of the expert opinions was inadequate in very significant ways. He also revisited the Corps' original decision before issuing the easement to ETP, which was that no EIS was required because no "significant environmental impact" might occur from the project. He has now found that decision flawed based on a new case from the D.C. Circuit Court, *National Parks Conservation Association v. Semonite*, 916 F.3d 1075 (D.C. Cir. 2019).

In this current decision, the Judge recognized that:

...[In] creating Lake Oahe, Congress effected a taking of 56,000 acres from Standing Rock's Reservation and 104,420 acres from the trust lands of the Cheyenne River Sioux Tribe. ... The Tribes now rely on the waters of Lake Oahe in myriad ways, including for drinking, agriculture, industry, and sacred religious and medicinal practices.

In this decision, the Judge specifically found that the Corps failed to adequately consider:

...(1) whether the project's effects were likely to be "highly controversial" ...; (2) the impact of a hypothetical oil spill on the Tribe's fishing and hunting rights...; and (3) the environmental-justice effects of the project.

A project is "highly controversial" under NEPA when critics or opponents of the project include scientific and governmental agencies who express criticism of the project and the degree to which the project effects the quality of the human environment. Evidence on this point includes "scientific or other evidence that reveals flaws in the methods or data relied upon by the agency in reaching its conclusions", or where "substantial dispute exists as to the size, nature, or effect of the major federal action rather than to the existence of opposition to a use." The Judge held specifically that criticism of the Dakota Access Pipeline including "unrebutted expert critiques regarding leak-detection systems, operator safety records, adverse conditions, and worst-case discharge mean that the easement approval remains highly controversial." The Judge noted that seven methodological critiques of the Corps' analysis were made in the Tribes' expert reports. The Judge also noted that both the Department of the Interior and the Environmental Protection Agency, under the Obama administration, expressed concerns with the Corps' analysis.<sup>1</sup>

---

<sup>1</sup> For example, the Judge noted that the Interior Department found that the Corps' Draft Environmental Assessment "did not adequately justify or otherwise support its conclusion that there would be no significant impacts upon the surrounding environment and community," and the EPA recommended,

In discussing the specific criticisms presented by the Tribe's experts, the Judge noted that the leak detection system employed by Energy Transfer Partners in the Dakota Access Pipeline was found in a federal regulatory study by the Pipeline and Hazardous Materials Safety Administration to have failed 80% of the time and that the Corps had failed to respond to this finding. The Judge stated:

...a 2012 PHMSA comprehensive leak detection study found one type of leak detection system [, called SCADA,] . . . detected hazardous liquid leaks 28 percent of the time," and another, called CPM, "had a detection rate of 20 percent." ... Another expert for Standing Rock had also presented this data in October 2016, adding that "[t]his low success rate" was "consistent with Accufacts' many liquid pipeline failure investigations spanning more than 40 years, especially more recent investigations." ... (Accufacts Report of October 2016). DAPL, it should be noted, uses a CPM leak-detection system.

In addition, the Judge noted that the design of the leak detection system was flawed in that "...the system was not even designed to detect leaks that constituted 1% or less of the pipe's flow rate, and held:

At the current pipeline flow rate of about 600,000 barrels per day, this means that "6,000 bbs/day" — that is, about 25,200 gallons — "could be released continuously, over a long period of time, without detection. Indeed, one of the experts noted that Sunoco had experienced a spill of 8,600 barrels on one of its pipelines when it had not recognized a leak even

---

among other things, that the Corps analyze more closely the leak-detection system Energy Transfer Partners had selected, including its "ability . . . to identify small volume leaks" and that EPA's own estimate for a spill from a pipeline of DAPL's size in that region was many times the size of the Corps'. "

when there was an “imbalance indication[.]” because that imbalance did not exceed “established normal operating tolerances.”

The Judge further noted that the “operator,” ETP, which merged with Sunoco while this case was pending, has an abysmal record of spills and leaks, and that “PHMSA data shows Sunoco has experienced 276 incidents resulting in over \$53 million in property damage from 2006–2016.” One expert described this as “one of the lower performing safety records of any operator in the industry for spills and releases.” The Judge went on to address the argument that 70% of the 276 incidents were confined to operators’ property, and would not reach Lake Oahe or any other land or water used by the Tribe by pointing out that “Indeed, the 70% of spills that occurred on operator property may still be relevant to the latter point — for example, by showing how an operator’s practices might affect the risk of a spill, length of detection time, and speed of response. “

The Judge also discussed the “worst case discharge” analysis which underscored the Corps’ failure to consider the impact of harsh North Dakota winters on response efforts in the event of a spill. The Judge stated that:

Ice makes it “difficult to determine where the largest pockets of oil may occur.” Beyond that, “[t]he trapped oil may move,” and “[i]ce will naturally break both on the river and on the reservoir, shifting recovery locations and increasing safety hazards. Because of the above-described complications of emergency response during the winter, moreover, “the time required to recover the oil will be increased,” in turn “increas[ing] the extent to which the oil dissolves into the water.” “Worst case discharge”

figure experts also voiced strong criticisms of how quickly the Corps claimed the system would catch a spill in its WCD analysis.

The difference between one and three minutes is not insignificant when speaking of a full-bore rupture: the current maximum flow rate of the pipeline (only half of its full capacity) is 600,000 barrels a day, which translates to over 416 barrels per minute.

The Judge concluded that, “many commenters in this case pointed to serious gaps in crucial parts of the Corps’ analysis — to name a few, that the pipeline’s leak-detection system was unlikely to work, that it was not designed to catch slow spills, that the operator’s serious history of incidents had not been taken into account, and that the worst-case scenario used by the Corps was potentially only a fraction of what a realistic figure would be — and the Corps was not able to fill any of them.”

Of great significance, the Corps took the position that the Tribes and their experts are more akin to the “non-governmental organizations.” The Judge specifically rejected this argument, stating that these sovereign nations prepared expert comments with the help of not only third-party consultants but also with their own relevant governmental departments.

The Judge also held that NEPA requires the Corps, and any other involved federal agency, to determine how a project will affect a tribe’s treaty rights. In this case, the Judge held that it is those rights arising from the Fort Laramie Treaty

of 1851. Specifically, the Judge held that the Corps is required to consider how the pipeline would affect the Tribes' hunting and fishing resources. The Judge also held that NEPA requires federal agencies to make achieving environmental justice part of their mission "...by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of [their] programs, policies, and activities on minority populations and low-income populations." "Indian tribes are one of the populations that must be considered." The Judge ordered the Corps to determine whether "Standing Rock would be disproportionately harmed by a spill."

TransCanada, now known as TC Energy, Inc., is presently seeking permits to build the Keystone XL pipeline from Canada through Montana, South Dakota, Nebraska and into northern Kansas, to connect with TransCanada's existing Keystone pipeline in Oklahoma, extending to Texas. The proposed Keystone XL Pipeline has a total transport capacity of 830,000 barrels per day. The Corps has issued a blanket authorization to TransCanada to cross hundreds of rivers, streams, wetlands, and other waterways along the route in Montana, South Dakota, and Nebraska without having prepared an environmental impact statement. As an example, TransCanada seeks to cross the Cheyenne River in South Dakota which forms the Southern Boundary of the Cheyenne River Sioux

reservation, and the White River in South Dakota whose tributaries drain onto the Rosebud Sioux reservation, also in South Dakota. Both of these rivers flow through unceded territory, which is land preserved by the Ft. Laramie Treaty of 1851 for use by the Tribes who have an absolute right to roam and occupy that land, and to hunt and fish, rights which have never been abrogated by the Tribes nor by Congress.

In the recent hearings in South Dakota conducted by the water management board of the South Dakota Department of Environment and Natural Resources, a number of witnesses testified that the Keystone XL pipeline falls within the area of landforms of significant spiritual value to the Dakota and Lakota people, such as Slim Buttes, North Cave Hills, South Cave Hills, Woman Who Lived with the Wolves, Touch the Cloud Camp, and Spotted Elk Camp, among many other sites. The spiritual impact to the Dakota and Lakota people were not considered, as neither the U.S. Government nor the State of South Dakota engaged in government-to-government consultation with the Tribes, nor were the current uses by the Tribes of the rivers for hunting and fishing, irrigation, ranching and for gardens. There was specific testimony presented about the restoration of plants of important medicinal and spiritual use along the Cheyenne River, which would be jeopardized by a spill.



In addition, TransCanada plans to cross the Ogallala Aquifer which is a source of drinking water for the Rosebud Sioux Tribe, and which extends through Nebraska, Oklahoma and Texas where it is used by millions of people for drinking water and irrigation. The Director of the Rosebud Department of Water Resources testified to the extraordinary impact of a spill of diluted bitumen (dilbit) in Tripp County South Dakota which has very porous soil and under which lies the Ogallala Aquifer which is a source of drinking water for much of the Rosebud Sioux reservation and the Tripp County Water User District. Where the KXL will cross the Ogallala aquifer in South Dakota, the aquifer is very close to the surface of the land and is covered by porous soil which would allow any spill to flow quickly down into the aquifer.

An expert witness presented by the Yankton Sioux Tribe, a scientist with over 30 years of experience working with pipeline spills, testified that dilbit, the hazardous material to be transported through the Keystone XL pipeline across South Dakota's lands and waters, has a higher ignition risk than conventional crude, is highly toxic, poses a high inhalation risk for responders and for wildlife, is stickier than conventional crude, and tends to sink in water, making cleanup and even locating the oil extraordinarily difficult. This expert testified that oil pipeline spills have negative effects that can be catastrophic not only to the environment, but to

economies and for people who depend on the resources that are affected. TransCanada uses the SCADA leak detection system, criticized by experts in the Standing Rock case, which fails 72% of the time.

The specific concerns expressed in this federal decision mirror the objections, criticisms and dire warnings conveyed by the experts presented by the Tribes, their governmental witnesses and third-party experts in the recent water board hearings in South Dakota against the KXL. The evidence and testimony of the expert witnesses were presented by the Yankton Sioux Tribe, the Cheyenne River Sioux Tribe, the Rosebud Sioux Tribe and the Standing Rock Sioux Tribe the Great Plains Tribal Water Alliance, Dakota Rural Action and many individual pro se intervenors, who testified to the grave danger to the Tribes and others presented by the KXL.

The failure of the “operator”, TransCanada, like the failure of ETP, is demonstrated by the spills and leaks which have occurred in the Keystone pipeline during the past 10 years since diluted bitumen oil has been flowing through that pipeline, which was also built and operated by TransCanada. PHMSA records show 34 incidents with the Keystone pipeline in less than the last 10 years, which were caused by failures of both pipe and pump seals, due to both inadequate design and construction. Both the Keystone and DAPL pipelines have a flawed leak detections

system, which fails to detect leaks which are less than 1% of flow, which in this case have allowed substantial leaks which went undetected. The appendix attached to this article lists the spills and the failures of the Keystone pipeline through December 2019.

One can only hope that the Judge presiding over the two pending cases in Federal District Court in Montana filed against construction of the Keystone XL pipeline will issue a similar order after review of the serious risk of environmental harm which would undoubtedly be caused by the KXL pipeline. We hope that the Judge's order will direct the Army Corp of Engineers to prepare an environmental impact statement and that he will follow the standard practice of vacating the permit which now allows TransCanada to cross the hundreds of rivers and other bodies of water in the path of the KXL construction project.

---

#### Appendix of PHMSA record of Keystone spills through December 2019

- **May 21, 2010** – 4.62 gallon (.11 barrel<sup>2</sup>) spill at Carpenter, South Dakota, threaded fitting pump meter station valve, improper installation.

---

<sup>2</sup> One barrel of oil or dilbit equals 42 gallons US.

- **June 23, 2010** – 99.96 gallon (2.38 barrel) spill at Howard, South Dakota Rosewell Pump Station threaded connection failure, equipment failure.
- **August 19, 2010** – 10.08 gallon (.24 barrel) spill Harrington, Nebraska pump seal failure.
- **January 30, 2011** -- 10.08 gallon (.24 barrel) spill in Turney, Missouri, failure of pump seal failure.
- **February 3, 2011** – 15.12 gallon (.36) barrel leak in Cushing, Oklahoma due to a sump/separator inadequate procedure.
- **February 17, 2011** -- 10.08 gallon (.24 barrel) spill in Udall, Kansas due to a valve leak at a meter station, connection failure.
- **March 16, 2011** – 630 gallon (15 barrel) spill in Seneca, Kansas due to a pump defective seal.
- **March 21, 2011** --warning letter regarding TransCanada Bison Project near Dickinson, North Dakota that there was poor quality assurance in all aspects of construction, inspection and record keeping.
- **May 7, 2011** -- 16,800 gallon (400 barrel) spill at Ludden Pump Station, Sargent County, North Dakota reported by local citizen caused by thread connection cracks, the result of over torqueing during installation and aggravated by vibration due to normal operation.

**May 29, 2011** – 357 gallon (8.5 barrel) spill at Severance Pump Station, Doniphan County, Kansas, leak at pressure transmitter manifold due to cyclical fatigue.

- **July 20, 2011** -- Rupture in a natural gas pipeline operated by a TransCanada subsidiary in Gillette, Campbell, Wyoming due to mechanical damage to the pipe as the result of a dent and crack caused during construction. Hydrostatic testing caused the dent to open a crack in the gouge and drove the defect to failure.

- **January 13, 2012** -- Warning letter from PHMSA regarding North and South Dakota Keystone; TransCanada failed to properly test AC interference currents from direct current powerlines which could affect integrity of the pipe (cause pipe deterioration), did not have line markers at all road crossings, failed to inspect crossing under navigable water (subject to civil penalty per violation per day).
  - **March 7, 2013** – 19.47 gallon (.47 barrel) spill El Dorado, Butler County, Kansas, valve seal or packing
  - **September 10, 2013** -- Warning letter from PHMSA for two violations, dents in a pipe being installed caused by failure to follow construction specifications and dents caused by placing the pipe in rocky terrain at the dig site with foam pillow supports but without properly first surrounding the pipe with stone free soil.
  - **September 26, 2013** -- Warning letter from PHMSA regarding defective welds; TransCanada experienced a high weld rejection rate with the first week 26.8%, second week 32.0%, third week 72.2%, and fourth week 45.0%. On September 12, 2012, 205 of 425 welds or 48.2% required repairs due to fusion defects. TransCanada had failed to use properly qualified welders (subject to civil penalty per violation per day).
- July 24, 2014** – 42 gallon (1 barrel) spill at valve seal due to seepage from torrential rains entering through the actuator and pushing out residual oil.
- **December 3, 2014** -- Warning letter from PHMSA for failure to demonstrate that repairs were made to welds on breakout tanks, including grinding down weld, additional weld, arc burns (subject to civil penalty per day per violation).
  - **November 20, 2015** -- Notice of Probable Violation with fine for failure to correct defective cathodic protection<sup>3</sup>; TransCanada was notified by the January 12, 2012 warning letter (above) which had by October 12, 2012 caused metal losses in pipe to the point of 97% loss of the wall of one pipe

---

<sup>3</sup> Cathodic protection is required to eliminate currents which occur wherever metal pipes cross or come near to other metal pipes which results in rapid deterioration of the metal pipe. The Keystone XL is mapped to cross the Mni Wiconi metal pipeline which carries water in Tripp County, South Dakota.

(leaving thickness of 1/64<sup>th</sup> of an inch), 69% loss of another pipe, 74% loss of a third pipe, and 61% loss of a fourth pipe. PHMSA found failure in TransCanada's original design including grounding grids at pump stations; that TransCanada knew in December 2011 that there was inadequate cathodic protection and interference from another pipeline in the vicinity when they laid the pipe, but did not correct the problems. TransCanada failed in corrective action in 62 locations for multiple years between 2010 and 2013, failed to conduct tests to monitor the pipeline every year with 51 annual readings not taken between 2010 and 2012. TransCanada was fined by PHMSA \$187,200 for these violations.

- **April 2, 2016** -- 16,800 gallon spill near Freeman, Hutchinson County, South Dakota first spotted by landowner who saw crude oil along rural road due to leak in a weld. Unknown how long was leaking; had not been detected by TransCanada equipment or inspection. High Consequence Area 1400 feet away.
- **April 9, 2016** -- Corrective Action Order ordered shut down of pipeline between Freeman and Harrington Pump Stations because continued operation would be hazardous to life, property and environment without immediate corrective action. Pipeline traverses High Consequence Areas and navigable streams. Test failed pipe to determine root cause of failure, improve leak detection plan.
- **April 27, 2016** -- Warning letter that TransCanada failed to adequately design cathodic protection system for newly designed breakout tanks in Keystone Gulf Coast Pipeline North system. Ordered to evaluate bottoms of tanks for corrosion, possible stray current near tank facility, determine if grounding for electrical equipment was installed correctly at the site, re-evaluate design; failed to provide post-accident review of employee activities to determine if procedures were effective in each emergency and take corrective action; failed to lock seven valve controls for purpose of securing valve from unauthorized operation and vandalism; control room failed to document review of change that could affect operations. (Subject to civil fine per violation per day).
- **July 28, 2016** -- Notice after inspection of pump station in Liberty County, Texas and valve stations between Liberty County, TX and Houston. Failed to have special signs where pipe less than 48 inches below ground for excavators and public; failed to maintain line markers of buried pipeline on public roads

and railroad crossings; failed to maintain signs for public with name of company and phone number.

- **August 3, 2016** -- Warning letter between Liberty County, TX and Houston flange bolts showed extensive corrosion due to failure to apply appropriate corrosion inhibitor to flange bolts, inadequate signage around Liberty Pump station (subject to civil penalty per day).
- **December 27, 2016** – 10.5 gallon (.25 barrel) spill in Carroll, Missouri due to valve seal leak.
- **November 16, 2017** -- 407,400 gallon spill in Amherst, Marshall County, South Dakota due to rupture of a pipe at the 12 o'clock position caused by mechanical damage from the original construction because weight was placed on the pipe due to the potential for buoyancy. 6.5 miles from nearest High Consequence Area.
- **November 28, 2017** -- Corrective Action Order shut down of 46.8 mile segment between Ludden Pump Station and Ferney Pump Station in Amherst, South Dakota because continued operation would be hazardous to life, property and environment without immediate corrective action.
- **January 5, 2018** -- Notice of probable violation, between 2015-2016, failed to verify that operators trained and maintained knowledge of emergency response procedures for which they are responsible; between 2014 and 2017 TransCanada provided abnormal operating conditions plan but failed to document corrective actions taken and effectiveness review.
- **February 20, 2018** – 15.12 gallon (.36 barrel) spill at Steele City, Nebraska, valve leak.
- **July 9, 2018** -- Explosion and fire of subsidiary of TransCanada in West Virginia caused by release of 165 million cubic feet of gas, which ejected 83 feet of 36 inch pipe. Six other sections of pipe were found to be on steep slopes, had indications of slippage.
- **October 22, 2018** -- 13.30 gallon spill at Cushing, Oklahoma leak of breakout tank.

- **February 4, 2019** -- Order amendment of procedures which were inadequate to insure safe operation of its pipeline system; inadequacies in plans, procedures and operations; inadequate maintenance schedule on firefighting equipment at each pump station (after being notified in 2016 of this inadequacy); excavation procedure checklist failed to state pressure restrictions to be implemented and documented prior to any excavation activities; inadequate inspection procedure for steel above ground breakout tanks; inadequate procedure specified for protection against ignitions in above ground breakout tanks arising from static electricity, lightning and stray currents during operation and maintenance for above ground breakout tanks; failure to require accident reports; procedure for reporting of all pipeline incidents within 24 hours; maintenance of cathodic protection test lead wires and notification if are inoperative or need repair.

**February 6, 2019** -- 740 gallon spill in St. Charles County, Missouri crack, acceleration of corrosion due to stray current. Leak was too small for the SCADA system and/or the CPM leak detection system to detect or confirm that a leak had occurred

- **June 12, 2019** – 84 gallon (2 barrel) spill in Cushing, Oklahoma at breakout tank.
- **June 13, 2019** -- Notice of probable violations pipeline from Canadian border to Patoka, Illinois and compliance order for failure to provide coating material suitable for prevention of atmospheric corrosion on the air-soil interface in numerous locations. (subject to civil penalty per violation per day).

**August 16, 2019** -- 5 barrel spill in Dickinson, Kansas due to leak of pump/meter station equipment and piping metal-on-metal abrasion from hose contact with an adjacent support bolt.

- **September 27, 2019** – 9.66 gallon (.23 barrel) spill at Chariton, Missouri due to connection failure at pump station, a failed weld connection.
- **October 29, 2019** – 383,040 gallon (9,120 barrel) spill in Edinburg, North Dakota due to pipe rupture. Only 8,037 barrels have been recovered as of December 10, 2019.