

NORTH DAKOTA PUBLIC SERVICE COMMISSION

In the Matter of

Dakota Access, LLC Consolidated Application
for an Amended Certificate of Corridor
Compatibility and Amended Route Permit;
Dakota Access Pipeline Pump Station -
Emmons County Siting Application

Case. No. PU-19-204
OAH File. No. 20190280

**Pre-Hearing Brief by
Intervenor Standing Rock Sioux Tribe**

Energy Transfer LP, through its subsidiary Dakota Access, LLC (“Dakota Access”), is presently asking the North Dakota Public Service Commission (the “Commission”) to allow it to nearly double the capacity of the Dakota Access Pipeline (“DAPL”) from 570,000 barrels per day (bpd) to 1,100,000 bpd by adding five new, 6,000-horsepower pumps to the Emmons County Pump Station. *See* Dakota Access Pipeline Optimization, Dkt. 1.2 at 2 (the “Application” or “DAPL Capacity Expansion”).

Intervenor Standing Rock Sioux Tribe (the “Tribe”) opposed the original construction of DAPL, and the Tribe continues to pursue that case in ongoing litigation against the U.S. Army Corps of Engineers and Dakota Access in Washington, D.C. *See Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers*, Case No. 16-1534 (D.D.C. 2017). The Tribe’s case against the Corps and Dakota Access is based on many factors, which are fully described in two extensive reports that are available on the Tribe’s website and incorporated herein by reference.¹ However, the Tribe recognizes that the present proceeding solely concerns the DAPL Capacity Expansion.

The Commission may only grant the Application if it is satisfied that the DAPL Capacity Expansion “will produce minimal adverse effects on the environment and the welfare of the citizens” of North Dakota. N.D.C.C. Sec. 49-22.1-02. Further, the Commission must find that any significant adverse effects imposed on, *inter alia*, human health and safety, animal health and safety, plant life, wetlands, woodlands, and wooded areas, and agriculture “will be at an acceptable minimum, or that those effects will be managed and maintained at an acceptable minimum.” N.D. Admin. Code Sec. 69-06-08-02. Based on the present record, there are

¹ Standing Rock Sioux Tribe, *Impacts of an Oil Spill from DAPL on Standing Rock*, Feb. 21, 2018 available at <https://www.standingrock.org/content/impacts-oil-spill-dapl-standing-rock>; Standing Rock Sioux Tribe, *Report Addressing Deficiencies in the Corps of Engineers’ Analysis of the Issues Remanded by the U.S. District Court for the District of Columbia Related to the Dakota Access Pipeline Crossing at Lake Oahe*, Feb. 5, 2019, available at <https://www.standingrock.org/content/srst-nodapl-remand-report-final>.

insufficient grounds to reach that conclusion. The DAPL Capacity Expansion will increase both the likelihood and the severity of spill incidents, and Dakota Access has failed to provide the Commission with critical information necessary to properly evaluate the magnitude of those increased risks and what, if any, measures might be necessary to mitigate them. As a result, neither the Commission nor the Tribe as Intervenor have had an opportunity to independently examine and comment on this information if it exists. Accordingly, the DAPL Capacity Expansion should be denied.

I. The DAPL Capacity Expansion Increases the Risk of Spill Incidents

DAPL's current capacity is 570,000 bpd.² Dakota Access now seeks to nearly double the pipeline's capacity by adding 30,000 horsepower to its Emmons County pump station that will force an additional 530,000 bpd through the pipeline. *See* Application at 2. This will result in oil being transported through DAPL at velocities in excess of 15 feet per second – an extreme velocity, according to engineering experts. *See* Prefiled Testimony of Richard Kuprewicz, Dkt. 42 (“Kuprewicz Testimony”). Granting the Application and allowing Dakota Access to transport 1.1 million barrels per day through DAPL at these extreme velocities will increase both the likelihood and the severity of spill incidents from DAPL.

The Tribe's experts will testify that the DAPL Capacity Expansion poses significant risks to the environment and to the welfare of North Dakota citizens. They will explain how even under current operations, DAPL poses a significant, unexamined risk of a major spill event that

² In its application, Dakota Access states that the existing capacity of DAPL is 600,000 bpd, but in both its original PSC application and numerous subsequent public statements, Dakota Access has consistently stated that the operational capacity of DAPL is 570,000 bpd. *See, e.g.*, Press Release, “Energy Transfer Announces The Bakken Pipeline Is In Service Transporting Domestic Crude Oil From The Bakken/Three Forks Production Areas” (June 1, 2017) (“The combined system is expandable to a capacity of approximately 570,000 barrels per day.”), available at <https://ir.energytransfer.com/news-releases/news-release-details/energy-transfer-announces-bakken-pipeline-service-transporting>.

would have catastrophic impacts on the Tribe and all North Dakotans, and how the DAPL Capacity Expansion compounds those risks. Doubling DAPL's throughput significantly increases the risk that pipeline-rupturing surge overpressure events will occur. By increasing the operating pressure of the pipeline, the DAPL Capacity Expansion will also put greater pressure on anomalies and imperfections in the pipeline, which increases the risk that such anomalies will become points of failure. Moreover, by doubling capacity, the potential "worst case" spill event is far more serious than today—another risk that has never been examined or prepared for. Finally, the Tribe's experts will explain why it is important to assess the Application in light of the track record of Dakota Access's corporate parent, Energy Transfer, which has the worst safety record in the industry over the past 13 years. The Tribe is concerned that, if approved, the DAPL Capacity Expansion will set the stage for yet another Energy Transfer pipeline spill, with devastating consequences for the Tribe, the environment, and the citizens of North Dakota.

A. The DAPL Capacity Expansion Will Increase Surge Risk

As the Tribe's engineering experts will testify, the DAPL Capacity Expansion increases the risk of "surge." "Surge" refers to the change in pressure in liquid pipelines caused by a major change in flow, such as a pump shutdown/startup or inadvertent remotely operated mainline valve closure. (Kuprewicz Testimony at 170-242). These are common occurrences on hazardous liquid transmission pipelines. For example, a mainline valve inadvertently closes, and the oil being transported rapidly "surges" back upstream due to this flow disruption, placing extremely high pressures on the pipeline. *Id.* Surge pressure increases occur within large diameter liquid hydrocarbon pipelines in microseconds and can move up and down many miles along a pipeline system at slightly under one mile per second, causing pipelines to burst. *Id.*

Federal regulations provide that “[n]o operator may permit the pressure in a pipeline during surges or other variations from normal operations to exceed 110 percent of [maximum operating pressure, or “MOP”]. Each operator must provide adequate controls and protective equipment to control the pressure within this limit.” 49 CFR §195.406(b). At 1,100,000 bpd, the DAPL Capacity Expansion will result in actual flow velocities within the 30-inch mainline pipeline in excess of 15 feet per second. This is an extremely high velocity for crude oil, especially for a large diameter pipeline such as DAPL. *See* Kuprewicz Testimony, 170-242. Such high velocities can rapidly cause surge overpressures over 110% MOP within microseconds. *Id.*

Remarkably, while its Application states that the DAPL Capacity Expansion “will not alter the existing maximum operating pressure of the DAPL,” Dakota Access’s Application and pre-filed testimony fail to say *anything* about surge risk and how they plan to attempt to mitigate this risk. This is a critical omission. The issue is not that the DAPL Capacity Expansion will alter DAPL’s maximum operating pressure; the issue is that the DAPL Capacity Expansion will increase the risk that surge overpressures greater than 110% of DAPL’s (unaltered) MOP will occur.

In proceedings before regulatory bodies in other states related to the DAPL Capacity Expansion, Dakota Access has produced analyses that attempt to address this surge risk. In a parallel proceeding before the Illinois Commerce Commission, Dakota Access produced a transient surge analysis which identified numerous equipment installations and safety measures that would be necessary to mitigate surge overpressure risks in light of the higher flow rates resulting from the DAPL Capacity Expansion. While the transient surge analysis itself was not

filed publicly,³ pre-filed testimony by DAPL's expert describe it as "a surge analysis for the Dakota Access and ETCO pipelines at the higher crude oil flow rates" that contains an "analysis of the potential for surge pressures greater than 105% of MOP" and "recommendations for preventing any pressures greater than 105% MOP on the pipelines."⁴

By contrast, in this proceeding Dakota Access has not even acknowledged the increased surge risks associated with the DAPL Capacity Expansion, much the less analyzed or explained to the Commission how it will mitigate those risks. If numerous controls and protective equipment are necessary to prevent surge overpressures in Illinois, what controls and protective equipment are required to prevent surge overpressures in North Dakota? The Tribe respectfully submits that the Commission should demand an answer to that question from Dakota Access and require Dakota Access to produce to the Commission and to the Tribe as Intervenor a transient surge analysis and recommended overpressure mitigation measures for independent review, analysis, and comment.

B. By Increasing Flow Rates and Operating Pressure, the DAPL Capacity Expansion Increases the Risks of Pipeline Failure

As the Tribe's engineering experts will attest, all steel pipelines contain anomalies, imperfections in pipe steel or welds, or weld heat affected zones (aka HAZs), for various reasons. *See* Kuprewicz Testimony at 244-369. Higher operating pressures increase the risk that such anomalies and imperfections will become points of failure. *Id.* That is why federal

³ Illinois Commerce Commission, Case No. 19-0673, (PART 1) Rebuttal Testimony on behalf of Dakota Access, LLC and Energy Transfer Crude Oil Company, LLC (Oct. 22, 2019), Dakota Access-ETCO Exhibit 7.3 PUBLIC VERSION Surge Analysis of Expansion Scenarios for the DAPL and ETCOP Oil Pipelines *available at* <https://icc.illinois.gov/docket/files.aspx?no=19-0673&docId=292547> (last accessed Nov. 6, 2019).

⁴ Illinois Commerce Commission, Case No. 19-0673, (PART 1) Rebuttal Testimony on behalf of Dakota Access, LLC and Energy Transfer Crude Oil Company, LLC (Oct. 22, 2019), Dakota Access-ETCO Exhibit 7.0 Rebuttal Testimony of Dr. Michael A. Hein at 35-56, *available at* <https://icc.illinois.gov/docket/files.aspx?no=19-0673&docId=292547> (last accessed Nov. 6, 2019).

minimum pipeline safety regulations require operators to reassess the integrity of hazardous liquid pipeline sections where an inadvertent release would affect populated areas, drinking water sources, or sensitive ecological resources – i.e., “High Consequence Areas,” or HCAs. *Id.*

In this case, Dakota Access is proposing to nearly double DAPL’s capacity and commensurately increase DAPL’s operating pressures. Yet Dakota Access has failed provide the Commission with specific data as to how the DAPL Capacity Expansion will increase operating pressures throughout the pipeline system, much the less explain what, if any, prudent periodic integrity reassessment measures it will take to protect against the increased operating pressures.

Dakota Access should have already prepared detailed hydraulic profiles for its pipeline system for both the current base case and the post-expansion case. *See* Kuprewicz Testimony at 286-293. The Commission should require DAPL to supplement the record with those hydraulic profiles, to the Commission and to the Tribe as Intervenor, for independent review, analysis, and comment so that the risks posed by DAPL’s increased operating pressures can be properly evaluated. The hydraulic profiles will show how the DAPL Capacity Expansion will increase operating pressures throughout the system, and the segments most at risk of failure due to substantial operating pressure increases. Dakota Access should then explain to the Commission and to the Tribe as Intervenor how it intends to reassess the integrity of those segments and identify which, if any, of them are near HCAs so that the Commission and the Tribe as Intervenor can independently review, analyze, and comment. Without this material, it impossible to conclude that the adverse effects posed by the DAPL Capacity Expansion are at an acceptable minimum.

C. Energy Transfer's Poor Safety Record Is Cause For Alarm

The Tribe has retained a pipeline safety expert who will testify that Dakota Access's corporate parent, Energy Transfer, has the worst hazardous liquid safety record in the industry over the past 13 years. *See* Prefiled Testimony of Donald Holmstrom, Dkt. 41 at 57-63 ("Holmstrom Testimony"). Energy Transfer's poor safety record indicates that spills from DAPL are a significant risk – particularly if the DAPL Capacity Expansion and its attendant operating pressure and surge overpressure increases are allowed to proceed. As the Tribe's federal litigation highlights, these risks have never been analyzed or disclosed by any federal agency.

As the Tribe's expert will explain, the history of Energy Transfer pipelines is replete with spill incidents. *Id.* at 263-307. In recent months and years, Energy Transfer and its pipelines have caused a number of high-profile release incidents, prompting unprecedented government enforcement actions, shutdowns and remedial actions. *Id.* As of December 3, 2018, DAPL itself had experienced 12 spills of over 6,100 gallons of Bakken crude oil in less than two years of operation. *Id.* But that is just a small fraction of the many hazardous liquid incidents across Energy Transfer's pipeline portfolio. According to a database maintained by the Pipeline and Hazardous Materials Safety Administration, from 2006 to 2018 Energy Transfer pipelines suffered 458 hazardous liquid incidents, resulting in \$109,737,246 in property damage from 2,557,716 gallons of hazardous liquid spilled, making Energy Transfer far and away the most hazardous pipeline operator across that 13-year period. *Id.* The second most hazardous pipeline operator over that period experienced 45% fewer liquid spills than Energy Transfer. *Id.*

Energy Transfer's poor safety record has continued into recent years. Just in the post-2017 period in which DAPL has been in operation, Energy Transfer company-wide hazardous liquid spills have resulted in \$20,540,487 in property damage, indicating significant harm from

the company's most recent hazardous liquid pipeline operations. *Id.* In fact, Energy Transfer's poor safety practices have prompted unprecedented regulatory enforcement action in recent years. In 2017-2018, Sunoco (an entity controlled by Dakota Access's corporate parent, *Id.* at 241-54) was forced to suspend pipeline operations because of environmental contamination on four separate occasions across three states, with one state regulator describing its practices as "egregious and willful" violations of law. *Id.*

The Tribe respectfully submits that the Commission should be alarmed that the industry's most hazardous operator is now seeking to double the already-substantial capacity of DAPL – and increase the risk of spill incidents – without providing critical documents and data necessary for the Commission to meaningfully evaluate and mitigate those risks.

II. The DAPL Capacity Expansion Will Increase the Severity of Spills

As the Tribe's experts will attest, doubling the amount of oil DAPL transports will increase the volume of oil discharged if and when spills occur. *See* Kuprewicz Testimony at 318-369; Holmstrom Testimony at 117-155. In particular, doubling throughput will exacerbate the Worst Case Discharge (WCD) scenario – a key metric for oil spill response planning efforts.

As the Tribe's pipeline safety expert will explain, a valid WCD is the starting point for the development of an oil spill response plan. *See* Holmstrom Testimony at 92-115. Developing a WCD is a simple and straightforward process governed by regulation:⁵ it consists of worst-case detection time, plus pipeline shut-down, times maximum flow rate, plus "drain down" volumes (i.e. how much oil would be in the pipeline segment between valves that can still be released once valves are shut off).

⁵ 40 C.F.R. § 194.105.

In the case of DAPL, however, Dakota Access failed to perform this simple but critical exercise. Instead, Dakota Access relies on a WCD analysis that significantly underestimates the true worst-case scenario. Moreover, there is no sign that Dakota Access has attempted to update or revisit its flawed WCD to account for the massive increase in throughput and velocity that would accompany the DAPL Capacity Expansion. *See* Holmstrom Testimony at 117-155.

As the Tribe's expert will attest, DAPL's existing 570,000 bpd WCD omits required calculations and assumes that all systems will function precisely as intended—i.e., the incident is discovered immediately, the correct decision and response is immediately initiated, and all equipment such as controls, sensors, pumps and valves function as intended. In the real world, however, this is not how major events happen. *Id.* People make mistakes. Equipment malfunctions. Systems are deficient. Modern major accident prevention focuses on rigorous analysis of all potential hazards (i.e., things that could go wrong) and implements continuous improvement to a variety of complex, interrelated safety systems such as operational controls, human factors, integrity management, incident investigation, safety culture, risk management, and safety assurance. Effective risk analysis must consider all these important elements to achieve incident prevention. Dakota Access's WCD ignores these realities. *Id.*

The assumptions baked into Dakota Access's 570,000 bpd WCD are not realistic and do not comply with minimum regulatory requirements. *Id.* at 140-148. Detection time is a critical factor in worst case discharge. In some cases, it takes hours or even days to detect the leak before shutdown is initiated. For example, in the 2016 Permian Express II pipeline crude oil spill of 361,000 gallons, it took ET 12 days to detect the spill and shut down the pipeline. *Id.* The spill from the central Texas pipeline, which had only been operational for one year, led to a reported \$4 million in property damage. *Id.* Yet, in the case of DAPL's WCD analysis, Dakota Access

assumes that it will instantaneously detect any spill and shut down the pipeline in a mere 9 minutes.

Dakota Access is now proposing to double DAPL's throughput – and to double or at least significantly increase the amount of oil that will be discharged if and when a spill occurs. Yet Dakota Access's oil spill response planning efforts are still premised on its flawed 570,000 bpd WCD. In other words, Dakota Access dramatically underestimated the worst-case discharge that may occur while operating DAPL at 570,000 bpd. Dakota Access now seeks to transport 1.1 million bpd through DAPL – yet there is no evidence that Dakota Access has revised its worst-case discharge estimate to account for the additional 530,000 bpd it seeks to transport. The Tribe respectfully submits that allowing Dakota Access to double DAPL's throughput despite these failures would impose unacceptable risks on the environment and on the welfare of the citizens of North Dakota.

III. The Commission Cannot Grant the Application On the Present Record

As the Tribe's retained experts attest, Dakota Access has failed to provide information that is critical to evaluating the risks of the DAPL Capacity Expansion, including:

1. The transient surge analyses and recommended mitigation measures that Dakota Access produced to the Illinois Commerce Commission in October 2019.
2. Hydraulic profiles of the 30-inch pipeline system within North Dakota both before and after the DAPL Capacity Expansion sufficient to show how the DAPL Capacity Expansion will increase operating pressures throughout the system.
3. An identification of all HCAs by milepost within North Dakota and Dakota Access's plans for periodically reassessing the integrity of its pipeline in areas where an inadvertent release would impact those HCAs.
4. Dakota Access's analysis of estimated oil release volumes and locations based on and as informed by its transient flow modeling and the pipeline's hydraulic profile.

5. An up-to date and DAPL-specific Integrity Management Plan (IMP) that complies with PHMSA regulations and industry standards.
6. Proof that the DAPL Capacity Expansion adheres to all applicable API best practices, including RP 1173 (Pipeline Safety Management Systems), RP 1175 (Leak Detection Program Management), RP 1160 (Managing System Integrity for Hazardous Liquid Pipelines), and RP 1130 (Computational Pipeline Monitoring for Liquids), as it falsely promised in its application to the federal government for permits.
7. An updated WCD for the DAPL Capacity Expansion that properly incorporates all factors required by PHMSA regulations.
8. A revised spill model based on the updated WCD and corresponding changes to the DAPL Facility Response Plan and Lake Oahe Geographic Response Plan.

The Tribe respectfully submits that the Commission should not even consider granting the Application until such information is produced to the Commission and to the Tribe as Intervenors for independent review, analysis, and comment. Without this information, there is simply no basis for the Commission to decide whether the DAPL Capacity Expansion will produce minimal adverse effects on the environment and welfare of North Dakota citizens.

IV. The DAPL Capacity Expansion Poses Grave Risks to the People of Emmons County and the Standing Rock Sioux Tribe

Finally, it is critical to consider the impact that the DAPL Capacity Expansion will have on those who live in the immediate vicinity of the expanded pump station. Dakota Access is proposing to transport nearly twice as much oil through DAPL at the extreme velocity of 15 feet per second. The 30,000 additional pumping horsepower required to make that a reality, and the pipeline segments immediately upstream and downstream that will experience extreme flow rate increases due to that increased pumping horsepower, are situated in Emmons County.

Accordingly, it is critical that the Commission consider the impact the DAPL Capacity Expansion will have on the welfare of the people of Emmons County and on the Tribe, whose Standing Rock Reservation sits just across the Missouri River from Emmons County.

A few miles upstream from the Emmons County pump station is the DAPL crossing at Lake Oahe. A few yards – not miles, but yards – south of the DAPL Oahe crossing sits the community of Cannonball and the northern border of the Standing Rock Reservation, which extends down the western bank of the Missouri River from the Cannonball River into South Dakota. The waters of Lake Oahe are critical to the welfare of Tribal members. The DAPL Oahe crossing imperils Tribal welfare, and the DAPL Capacity Expansion will dramatically exacerbate that peril. As the Tribe’s Historic Preservation Officer will explain, throughout history and into modern times, the Tribe has been forced to surrender its land and its way of life to the interests of others. *See* Prefiled Testimony of Jon Eagle, Dkt. 40. The siting of DAPL, and now, the DAPL Capacity Expansion, threatens to write another chapter in that sorrowful history.

The area within and around the DAPL Oahe crossing is considered sacred by the Tribe. *Id.* It is a place of prayer, a place where people indigenous of this continent continue to go for good direction, strength, and protection. *Id.* At this site, traditional enemy tribes camped peacefully within sight of each other because of the reverence they had for this sacred site. *Id.*

The waters of Lake Oahe are central to the Tribe’s culture. As the Tribe’s Historic Preservation Officer will explain, members of the Tribe descend from ancient people who have creation stories that give them cultural affiliation to the land, water and air going back to the beginning of time. *Id.* Tribal elders teach that Water is sacred. The Lakota word for water is Mni Wiconi, or Water of life: without water, there is no life. Tribal members still go to the water to pray and make offerings so that all life that is sustained by the river may live. *Id.* People, horses, buffalo, deer, fish, birds, all life is considered to be sacred and is dependent upon water. *Id.*

Because of DAPL, Tribal members live every day under the risk of an oil spill that will harm the waters that sustain the Tribe’s people, economy, and spiritual lives. So do the people of

Emmons County. An oil spill would foul the water that the Tribe drinks, that the Tribe relies upon for their Treaty-protected, subsistence hunting, fishing and traditional plant gathering, and that provides irrigation for the Tribe's farming and other economic ventures. The risks of leaks and spills are placed squarely on the Tribe and the people of Emmons County, as the Reservation and Emmons County are both immediately downstream from the crossing site at Lake Oahe.

The DAPL Capacity Expansion would significantly compound the threat already facing the Tribe. Doubling the throughput of a pipeline that already poses a grave threat to the water the Tribe drinks, the sacred sites where Tribal members pray, and the hunting, fishing, and plant gathering practices that are integral to the Tribe's way of life would have a profoundly adverse impact on Tribal members. The Tribe respectfully asks that the Commission take the welfare of Tribal members and the people of Emmons County into consideration and deny the Application.

Dated this 8th day of November, 2019.

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