BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE PETITION OF DAKOTA ACCESS, LLC PIPELINE, LP FOR A PERMIT TO CONSTRUCT THE DAKOTA ACCESS PIPELINE	**HP14-002** **INDIGENOUS ENVIRONMENTAL NETWORK AND DAKOTA RURAL ACTION POST-HEARING BRIEF**

I. Introduction

DAPL failed to prove its case. "The applicant has the burden of proof to establish the proposed facility will comply with all applicable laws and rules… not pose a threat of serious injury to the environment nor to the social and economic conditions of its inhabitants… not substantially impair (public) health, safety or welfare; and not unduly interfere with the orderly development of the region." SDCL §49-41B-22.

In some areas, such as cultural resources, the evidence in the record shows that DAPL violates federal and perhaps state historic preservation laws. 16 U.S.C. §470f; SDCL §1-19A-11.1. In other areas, such as impacts on protected species, water quality, demand for the project and regional socioeconomics, DAPL simply failed to produce sufficient evidence to meet its burden of proof and comply with the statute. *Id*. The record of the evidentiary hearing in HP-14-002 does not support approval of the permit application for the Dakota Access Pipeline. SDCL §49-41B-22. The Commission must deny the application.

II. DAPL Does Not Comply with All Applicable Laws and Rules (SDCL §49-41B-22(1)) – National Historic Preservation Act

The evidence shows that DAPL violates section 106 of the National Historic Preservation Act (NHPA). 16 U.S.C. §470f and the implementing regulations. 36 CFR §§800.2(c)(2)(ii)(A) & (D); 800.4(b); 800.5(a). Three witnesses testified with respect to NHPA compliance: staff witness Paige Olson of the State Historic Preservation Office,

PUC Staff Exhibit 6, Tr. at 739-877; Energy Transfers Director of Environmental Science Monica Howard, DAPL Exhibits 33 & 38, Tr. at 393-522 & 2148-22; and Standing Rock Sioux Tribal Historic Preservation Officer Waste'Win Young, who testified for the Indigenous Environmental Network (IEN) and Dakota Rural Action (DRA), IEN & DRA Exhibit 2, Tr. at 1529-1827. The testimony of each witness demonstrates without question that in the conduct of cultural resources surveys for the Corps of Engineers and SHPO, there was a lack of required consultation and participation by Tribal experts in the identification and evaluation of historic properties in the immediate area of Corps of Engineers' permits and throughout the pipeline route.

A. The National Historic Preservation Act and the Section 106 Regulations Require Tribal Consultation and Participation in Surveys

Under NHPA section 106, no federally-permitted project may proceed unless, "prior to the issuance of any license… (the agency) take(s) into account the effect of the undertaking on any district, site, building, structure or object that is included in or eligible for inclusion in the National Register (of Historic Places)." 16 U.S.C. §470f. This section imposes a duty on the federal permitting agency, in this case the Corps of Engineers, to evaluate a permitted-project's impacts on historic properties and cultural resources. *Id.*

Under NHPA section 110, this duty is carried out in partnership with State and Tribal Historic Preservation Offices. 16 U.S.C. §470h-2(a)(2)(e)(ii). This section states:

> the agency's procedures for compliance with section 106… provide a process for the identification and evaluation of historic properties for listing in the National Register and the development and implementation of agreements, in consultation with the with State Historic Preservation Officers, local governments, Indian Tribes, Native Hawaiian organizations, and the interested public, as appropriate, regarding the means by which adverse effects on such properties will be considered.

Id.

In implementing the NHPA, each agency must proceed in a manner "consistent with the regulations by the Council." *Id.* at (a)(2)(e)(i). The Advisory Council

regulations are codified at 36 CFR Part 800. "The procedures in this part define how Federal agencies meet these statutory requirements." 36 CFR §800.1(a).

DAPL does not "comply with all applicable laws and rules" within the meaning of SDCL §49-41B-22(1), unless it can show that it provided cultural resources surveys to the SHPO, the THPOs of Tribes in the region, the Corps of Engineers and the Advisory Council on Historic Preservation, in compliance with the requirements of NHPA section 106 and the 36 CFR Part 800 regulations. DAPL has done virtually none of this for any portion of the pipeline route.

The regulations detail the requirements for the cultural resources surveys. There is a **requirement** that:

> (t)he section 106 process provide[s] the Indian tribe or Native Hawaiian organization a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects.

36 CFR §800.2(c)(2)(ii)(A).

This regulation requires cultural resources surveys such as that prepared by DAPL and purportedly submitted to the SHPO and Corps of Engineers to include Tribal participation in the "identification and evaluation" of cultural resources, and to include "properties of religious and cultural importance" (traditional cultural properties) in the surveys. *Id.* As testified to by Paige Olson on behalf of PUC Staff, "Section 106 of the National Historic Preservation Act outlines who the consulting parties are and specifically speaks to the participation of American Indian tribes." PUC Staff Exhibit 6, p. 8. The requirement of Tribal consultation and participation in the survey, identifications and evaluations stem both from the act itself, 16 U.S.C. §470h-2(a)(2)(e)(ii), and the section 106 regulations, 36 CFR §800.2(c)(2)(ii)(A).

DAPL has told the Commission: "Cultural surveys were conducted for the Project in accordance with Section 106 of the National Historic Preservation Act and the guidelines set forth by the South Dakota State Historical Society to identify and record the extent and temporal affiliation of archaeological resources and assess the potential eligibility for inclusion in the National Register of Historic Places." DAPL Exhibit 33, p.

24 (Testimony of Monica Howard). This testimony is an admission that NHPA section 106 applies to the pipeline route in South Dakota.

Nevertheless, it is a lawyerly statement written in the passive voice, in testimony submitted by an Environmental Scientist. *Id*. at p. 1. As an Environmental Scientist, Ms. Howard is ineligible to give opinion testimony on historic properties, under Rule 701 of the South Dakota Rules of Evidence, SDCL §19-19-701, and so her statement is inadmissible in any event. Ms. Howard acknowledged in her testimony that she is not a cultural specialist:

> Q. What about cultural resources? Do you consider yourself a cultural resources specialist?
> A. Not a specialist, no.

Tr. at 464, lines 15-17.

So none of the DAPL testimony with respect to compliance with the cultural resources' protection laws is actually admissible, because it violates the general prohibition against opinion testimony by lay witnesses in SDCL §19-19-701. In any event, the point Ms. Howard tried to make on page 1 of pre-filed testimony, DAPL Exhibit 33, is that DAPL recognizes the need to comply with NHPA section 106. That is a very important admission.

However, under cross-examination Ms. Howard's own testimony made clear that the DAPL cultural surveys failed to comply with the NHPA section 106 requirements for Tribal participation in the identification and evaluation of historic properties in the DAPL cultural surveys. She testified: "I didn't say they (the Tribes) were left out of surveys. I said **they weren't consulted for surveys**." Tr. at 470, line 23 (emphasis added). Actually, the consultation requirement for surveys is explicit, in both the statute, 16 U.S.C. §470a(d)(6)(B), and the regulations, 36 CFR §800.2(c)(2)(B)(ii).

Ms. Howard's testimony in the following exchange further demonstrates that DAPL violated the requirement of Tribal consultation and participation in surveys:

> **Q. Were there any Native American Tribes invited to participate in these surveys?**
> **A. No**.
> Q. Why not?
> A. As a matter of practice and regulation, that's – it's not a requirement. We typically don't do that.

Tr. at 415, lines 2-7 (emphasis added).

That testimony is DAPL's proverbial smoking gun. It is an admission that DAPL violates sections 106 and 110 of the National Historic Preservation Act, 16 U.S.C. §§470f, 470h-2(a)(2)(e)(ii), and its implementing regulations, 36 CFR §800.2(c)(2)(ii)(A). This is a very serious matter to many South Dakotans, especially the Tribes. The PUC cannot lawfully ignore this. SDCL §49-41B-22(1). DAPL's violations of the National Historic Preservation Act in the cultural resources surveys mandates denial of the DAPL application. *Id*.

There is case law directly on point. In *Montana Wilderness Ass'n v. Fry*, 310 F.Supp.2d 1127, 1153 (D. Mont. 2004), the federal court granted summary judgment to a Fort Peck Tribal historian for NHPA violations in the approval of an oil and gas pipeline lease and right-of-way to Macum Energy, Inc. Both Macon Energy and BLM officials were defendants subject to the injunction. *Id.* Consequently, the Macon Energy Pipeline, which was already on line, was shut down by the court, because surveys conducted by the oil company and submitted to the SHPO and federal agency were not conducted in consultation with the local Tribes. *Id.*

The court explained, "Here, plaintiff claims BLM failed to make a reasonable effort identify historic sites that may be affected by the oil and gas leases and failed to consult with the Rocky Boys and Fort Belknap Indian Reservations… Because BLM failed to consult after identifying a historic site in the area of the pipeline route, it violates NHPA." *Id*. at 1151, 1153.

The PUC regulations require the DAPL application to include a thorough analysis of "the impacts on landmarks and cultural resources of historic, religious, archaeological… or other cultural significance." ARSD §20:10:22:23(6). This requires the participation of Tribal experts in the identification of cultural resources and assessment of impacts. DAPL complied with neither the federal historic preservation laws nor the PUC regulations in this regard.

B. The Consultation Requirement Applies to Cultural Surveys Conducted by an Applicant

As Paige Olson testified, "Consultation with Indian tribes is the responsibility of the Federal agency." PUC Staff Exhibit 6, p. 9. The Army Corps of Engineers is that agency, with the authority to issue permits for river crossings and wetland fill. 33 U.S.C. §1344. The issuance of this permit by the Corps is the "undertaking" that triggers the requirements of NHPA section 106. *E.g. Business and Residence Alliance of East Harlem v. Jackson*, 439 F.3d 584 (2nd Cir. 2005).

The NHPA section 106 regulations authorize agencies such as the Corps to "use the services of applicants" to conduct the cultural resources surveys required under the statute and regulations. 36 CFR §800.2(a)(3). Per this regulation, the Corps and other federal agencies routinely rely on applicants such as DAPL to finance and prepare the requisite surveys, in order to facilitate their projects. *See* Tr. at 1555 (Testimony of Waste'Win Young).

Per Paige Olson's testimony, the Corps of Engineers is responsible for the DAPL consultation, PUC Staff Exhibit 6, p. 9. Consequently, the Corps faces potential legal jeopardy if it approves the 404 permit, in light of the failure to consult with the Tribes in the identification and evaluation of cultural sites. *Montana Wilderness Ass'n v. Fry*, 310 F.Supp.2d at 1151. And DAPL would be in violation of law as well, subject to the same legal jeopardy. *Id., see also South Fork Band Council of Western Shoshone of Nevada v. United States Department of the Interior*, 588 F.3d 718, 727 (9th Cir. 2009) (enjoining mining project for failure by the agency preparing the EIS to properly evaluate proposed mitigation measures for impacts to a Native American sacred site. The mining company, Barrick-Cortez, Inc., was a defendant in the case and subject to the injunction.). DAPL's failure to conduct proper cultural resources surveys in compliance with NHPA section 106 and its implementing regulations, puts both DAPL and the Corps in potential legal jeopardy for violating the statute and regulations. 36 CFR §800.2(a)(3) (applicants or contractors may conduct surveys but must comply with law); *Montana Wilderness Ass'n v. Fry*, 310 F.Supp.2d at 1151 (pipeline right of way suspended and pipeline shut down for violation of NHPA).

C. NHPA Applies to the Entire DAPL Route in South Dakota but the Requisite Tribal Role was Not Applied to Any Portion of the Pipeline Route

NHPA section 106 generally applies to the entirety of any project crossing Tribal aboriginal land – that is where very many Native American cultural resources are located. 36 CFR §800.2(c)(2)(D). In order for DAPL to comply with NHPA section 106, cultural surveys must be conducted with proper Tribal input for the length of the pipeline crossing Tribal aboriginal land – the entire length of the DAPL crossing in South Dakota. *See Colorado River Indian Tribes v. Marsh*, 605 F. Supp. 1425, 1437 (D. Cal.1985) (enjoining Corps of Engineers' rip-rapping project for marina development due to failure to study indirect effects on land across river; the "area of effects" under NHPA is far larger than the Corps' definition of the "permit area.").

The IEN/DRA testimony of Waste'Win Young established this.

> Q. Would the National Historic Preservation Act apply to nonfederal lands if there is a federal undertaking that may affect the historic properties on those nonfederal lands?
> A. Yes.
> Q. And you testified that the National Historic Preservation Act amendments provide a role for your office even off reservation; is that correct?
> Q. Would you describe the significance of an off reservation project that may been aboriginal lands of the Tribe?
> A. Like an example?
> Q. Say – like Keystone XL Pipeline.
> A. Our Tribe was involved in it because it crossed our aboriginal treaty territory.
> Q. Does DAPL cross Standing Rock aboriginal lands?
> A. Yes.
> Q. … Does your office routinely cooperate with project sponsors in the identification of sites?
> A. Yes.

Tr. at 1554-1555.

Ms. Young's testimony – that NHPA applies to historic properties on Tribal aboriginal lands and DAPL crosses Lakota and Dakota aboriginal land, and thus NHPA applies to the entire pipeline route in South Dakota – is uncontroverted in the record. DAPLs Monica Howard admitted this, DAPL Exhibit 33, p. 24, lines 464-465, and the Revised Application acknowledges it as well. *Dakota Access Pipeline Revised*

Application to the South Dakota Public Utilities Commission, p. 44. Indeed, the NHPA section 106 regulations state "Federal agencies should be aware that frequently historic properties of religious and cultural significance are located on ancestral, aboriginal, or ceded lands of Indian tribes and Native Hawaiian organizations and should consider that when complying with the procedures on this part." 36 CFR §800.2(c)(2)(D).

The regulations prohibit limiting the study area to the single location of any project segment, by defining the "area of potential effects" as "[T]he geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties… The area of potential effects is influenced by the scale and nature of an undertaking." 36 CFR §800.16(d). The courts require that the study area for identification of sites under NHPA section 106 extend to indirect effects on land outside of the project area, if there may be potential impacts on those lands. *Colorado River Indian Tribes v. Marsh*, 605 F. Supp. at 1437; *Hough v. Marsh*, 557 F. Supp. 74 (D. Mass. 1982). The "area of potential effects" is defined liberally in the regulations, and the courts enforce this. *Id.*

The record in this docket is clear that the entire DAPL pipeline route in South Dakota is Lakota and Dakota aboriginal land, whose cultural resources are potentially impacted by DAPL. DAPL has admitted this and filed cultural resources surveys for "98.6 percent" of the pipeline route, Tr. at 468 (testimony of Monic Howard), contending the reports comply with section 106. DAPL Exhibit 33, p. 24, lines 463-464. However, DAPL also admits Tribes were uninvolved in the surveys, as required in NHPA section 106 and the regulations. It is uncontroverted that there has been no proper survey conducted by DAPL in compliance with section 06 for any portion of the DAPL pipeline.

For these reasons, Paige Olson testified, "the identification of historic properties is not complete." PUC Staff Exhibit 6, p. 9. Likewise, Waste'Win young testified "The Section 106 process is currently incomplete." Tr. at 1532, lines 20-21. Ms. Olson of the SHPO and Ms. Young of the Standing Rock THPO provided corroborating testimony that DAPL does not comply with the National Historic Preservation Act and the section 106 regulations. The record establishes that the DAPL application does not meet the requirement in SDCL §49-41B-22(1) that it "comply with all applicable laws and rules," and consequently it must be denied.

III. The Record Lacks Sufficient Evidence of Protection of Socioeconomic Conditions of South Dakota and the Tribes - SDCL §49-41B-22(2)

DAPL must demonstrate that it does "not pose a threat of serious injury to the environment nor to the social and economic conditions of its inhabitants… (and) not substantially impair (public) health, safety or welfare." SDCL §§49-41B-22(2) & (3). DAPL has failed to meet its evidentiary burden.

This is particularly the case with respect to the socioeconomic impacts of DAPL. The statute requires DAPL to prove that the project will not significantly impact socioeconomic conditions of the affected South Dakotans and Tribes. SDCL §§49-41B-22(2). The PUC regulations require DAPL to establish there will be no adverse impact on "commercial and industrial sectors, housing, land values… law enforcement (and) other community and other governmental facilities and services." ARSD §20:10:22:23. DAPL must also provide "employment estimates, and an assessment of the adequacy of local manpower to meet the labor requirements." ARSD §20:10:22:24.

PUC Staff witness Dr. Michael Shelly demonstrated that DAPL failed to meet its burden of proof in this area. Dr. Shelly's testimony highlights important requirements that have not been met, including accurate information on employment, income and housing. Thus, the record shows that DAPL's evidence is incomplete and contains inaccuracies.

> Q. You detail a flaw with regard to the Economic Impact Analysis, is that correct?
>
> A. It's an inconsistency between two sets of statements about the results.
>
> Q. To your knowledge, has the inconsistency you identified been resolved?
>
> A. No. Not to my knowledge.
>
> Q. And would you describe the inconsistency?
>
> A. Yes. Let me just – in two places the numbers – numbers are presented related to the number of full-time jobs created by the project during the operational period of the project's constructed and the pipeline's in operation,
>
> In the assessment report that we were just talking about, it gives a number of 31,000 jobs, and it says that it will generate $1.9 million in income; however, in the submission to the Public Service Commission, the number is given at 12 permanent jobs also

> generating $2 million in annual labor income. So there's an inconsistency in the number of reported related jobs.
>
> Q. And in the assessment are there any other numbers or figures that are dependent on the number of permanent jobs that would –
>
> A. Yes there are.
>
> Q. Okay. Please describe those.
>
> A. … Well, what it does is – the number of employees determines how much labor income goes into the local economy, and how much economic output and employment is generated by that labor.
>
> Q. Did you say economic output is generated by –
>
> A. By the additional labor income. And that is due to the project's operation.
>
> Q. So here the labor income is close, even though the number if permanent jobs is almost double.
>
> A. Correct. That's the inconsistency. It's the inconsistency in two senses. There's an inconsistency in the number of reported jobs is different, but you also can't have – it's illogical to assume that 12 jobs will generate approximately the same annual income as 31 jobs.

Tr. at 973-975.

With the record before the Commission, it is not possible to accurately estimate direct employment for South Dakotans. DAPL testimony describes its commitment to hiring locally for "up to 50 percent" of the workforce, DAPL Exhibit 30, line 272 (Mahmoud testimony), while its Economic Impact Analysis estimates that "at least 50 percent" of workers will be hired locally. Tr. at 976-977.

Mr. Mahmoud's testimony states that DAPL will hire between 1-50 percent of the workers locally, and the written report (which was never entered into evidence and therefore is hearsay in any event) states that between 51-99 percent of the workforce will be hired locally. The contradictory testimony results in an evidentiary record that between 1-99 percent of the workforce will be South Dakotans.

This fails to comply with the requirement in the regulations that DAPL establish reasonable "employment estimates." ARSD §20:10:22:24. The regulation also requires an assessment of the ability of the local workforce to do the project, *id*, and DAPL violated this requirement as well.

This affects the level of any economic benefits that South Dakota may receive from the construction of the project. As Dr. Shelly testified;

> [T]he induced effects would be more – if the people come from the local area, then they will spend their money in the local area, and that it will have an induced effect in the local area.
>
> However, if they come from out of state, they will send that money back home, so the induced effects will occur somewhere else.

Tr. at 978.

Thus, the expert witness in economics Dr. Michael Shelly testifying on behalf of the PUC Staff demonstrates that DAPL failed to produce clear, competent economic information clarifying employment and induced economic benefit to South Dakota. Consequently, the DAPL application violates SDCL §§49-41B-22(2) and ARSD §20:10:22:24. It must be denied.

IV. The Record Lacks Sufficient Evidence of Protection Environment of South Dakota and the Tribes – SDCL §§49-41B-22(2) & (3)

The Revised Application and evidentiary hearing contain no information on the upstream crossing of the Missouri River, notwithstanding the admission by TransCanada that an oil spill could migrate downstream. DAPL's evidence on the need for the project is flimsy and fails to meet its evidentiary burden. The inadequate demonstration of need is far outweighed by the evidence of harm to Native and agricultural communities in South Dakota from a changing climate. Or these reasons, the DAPL application violates SDCL §§49-41B-22(2) & (3) and it must be denied.

A. The Record Lacks Protection of South Dakota Waters in the Event of a Release of Oil into the Missouri River

It is unclear if a release of oil at the Missouri River crossing, about 20 river miles upstream from the South Dakota state line, could impact the waters of South Dakota. As testified by IEN/DRA expert witness Peter Capossela, there is a strong possibility that it could, during periods of low water. IEN/DRA Exhibit 7. This testimony highlights the substantial fluctuations in Missouri River water flows, due to the manner in which the Corps of Engineers operates the Oahe Dam. IEN/DRA Exhibits 10 and 11.

Consequently, in order to ensure that South Dakota's waters are protected from DAPL, it is necessary to consider the potential for an oil spill in the Missouri River at the DAPL crossing in South Dakota.

The Clean Water Act enables a state to prohibit the discharge of pollutants in an upstream state, if the discharge would violate a downstream water quality standard. See 33 U.S.C §1370. In *Arkansas v. Oklahoma*, 503 U.S. 91, 96-97 (1992), the U.S. Supreme Court recognized the authority of Oklahoma to impose its more stringent standards on an upstream source of discharge in Arkansas, although the Court upheld the discharge in that case. The point is that the downstream jurisdiction may impose its rules on upstream polluters, if the pollution impacts the water quality downstream. *See City of Albuquerque v. Browner*, 97 F.3d 415, 429 (10th Cir. 1996) (upholding EPA authority to approve and impose the downstream water quality standards of the Isleta Pueblo on Albuquerque's water treatment plant).

Moreover, as described by University of South Dakota Law Professor Emeritus John Davidson, as well as IEN/DRA witness Peter Capossela, the Missouri River is subject to the water rights claims of the South Dakota Tribes. John H. Davidson, *Indian Water Rights, the Missouri River, and the Administrative Process: What are the Questions*, 24 American Indian L. Rev. 1 (2000); IEN/DRA Exhibit 7. The water potentially impacted by a release in the Missouri River may be Indian-owned water under the doctrines described by Professor Davidson and Mr. Capossela. *Id.*

The water rights of the Tribes, when adjudicated, include the right to water of pristine quality. Sources of pollution upstream from Indian Reservations have been the subject of federal injunctions when shown to affect the quality of Tribal waters. *United States v. Gila Valley Irrigation District*, 920 F. Supp. 1444, 1456 (D. Ariz 1996). This is particularly the case where, as here, Tribal drinking water intakes are immediately downstream from the source of the potential water degradation.

Moreover, DAPL failed to properly identify the Missouri River as a high consequence area (HCA). 49 U.S.C. §60109(a); 49 CFR §195.452. PUC Staff Witness Robert McFadden explained that several HCA's in South Dakota will be impacted by DAPL. Tr. at 1559.

Q. On page 6 of your testimony you list four different definitions of HCAs?
A. That's correct.
Q. The first one is a commercially navigable waterway?
A. Correct.
Q. Do you think the Missouri River is an HCA?
A. Yes.
Q. And are you aware that there's large communities, including native communities, that use the Missouri River as their prime source of drinking water?
A. I'm not specifically aware, but I'm not surprised.
Q. So your testimony is that the Missouri River should be considered an HCA then?
A. It's not up to me to determine it, but it appears to qualify.
Q. Okay. And I was going to ask about endangered species. There are several other endangered species habitats. Should those be considered USAs?
A. If they are identified habitats of an endangered species, under the definition they would be USAs.
Q. So while DAPL has told us that there are no HCAs in the State of South Dakota, would you agree with that?
A. No.

Id.

Dr. McFadden testified that properly-identified HCA's include waters that are the habitat for protected species. Tr. at 1559. His testimony confirms that the Missouri River and many waters crossed by DAPL in South Dakota have been misidentified and will not have proper integrity management as HCA's under federal law.). 49 U.S.C. §60109(a); 49 CFR §195.452.

Ultimately, a release of oil in North Dakota that may affect water quality in South Dakota must be evaluated by the Commission, in order to determine if DAPL may cause "serious injury" to the South Dakota environment under §49-41B-22(2). The PUC regulations require that "The applicant shall provide evidence that the propose facility will comply with **all** water quality standards." ARSD §20:10:22:20 (emphasis added). As DAPL could affect South Dakota's water quality standards to the Missouri River, ARSD §74:51:03:05, it is required to provide information relating to potential impacts to Missouri River water quality, and the Commission has a duty to consider it. ARSD §20:10:22:20. The record is devoid of evidence enabling the Commission to fulfill this duty. Consequently, the DAPL permit must be denied.

B. DAPL's Environmental Harm Far Outweighs Any Benefit to South Dakota and the Tribes

DAPL relies on the testimony of Joey Mahmoud to establish the demand for the DAPL pipeline. DAPL Exhibit 30, lines 122-124. Mr. Mahmoud stated, "DAPL secured binding long-term deficiency contracts from multiple committed shippers." *Id.* The *Revised Application* indicates that the sole purpose of the pipeline is to transport Bakken crude to Midwest refineries. DAPL Exhibit 1. The need for the project is determined by the supply of Bakken crude, not contracts whose terms are not included in the record.

As testified to by Dallas Goldtooth of IEN,

> Updated market analysis shows that Bakken oil production will be far below the U.S. Energy Information Agency's (EIA) projected forecast. The longevity of U.S. oil shale production at meaningful rates is highly questionable.

IEN/DRA Exhibit 12, p. 3.

As indicated by Mr. Goldtooth, the information properly relied upon for the determination of demand is suspect. Authoritative analyses support his testimony. David Hughes, a retired official of the Geologic Survey of Canada and recognized expert in tight shale oil production, wrote that the EIA estimates of the combined production of the Bakken and Eagle Ford shale deposits have been over-estimated by nearly 33 percent. J. David Hughes, *Drilling Deeper: A Reality Check on U.S. Government Forecasts for a Lasting Tight Oil and Shale Gas Boom,* Post Institute, (2014), p. 148. According to Wall Street Journal reporter Russell Gold, "Much could derail the Bakken's growth, such as falling oil prices, rising costs, and inferior rock quality as drilling expands farther out toward the edges." Russell Gold, *The Boom: How Fracking Ignitied the American Energy Revolution and Changed the World* (2014), p. 57. Mr. Goldtooth's testimony is consistent with broad expert analysis that oil production from the Bakken shale deposits is unsustainable and will diminish substantially, bringing into question the long-term need for DAPL.

Mr. Goldtooth's testimony suggests that, in light of the Bakken's declining output, any benefit to South Dakota from infrastructure such as DAPL is far outweighed by the environmental harm caused by greenhouse gas emissions from the extraction of fossil fuels. He explained, "hundreds of scientists have all come together to state that in

order to… avoid climate disaster… 80 percent of the world's fossil fuel reserves have to stay in the ground." Tr. at 1835. As one such scientist, Tim Flannery, former Chairperson of the Australia Climate Commission, recently wrote,

> Before 2020 we must achieve an absolute decrease in annual global carbon emissions – and that means reducing the amount of fossil fuels burned…. It's clear that we will need to achieve massive cuts in emissions between 2020 and 2030, and to eliminate greenhouse gas emissions from the burning of fossil fuels by 2050.

Tim Flannery, *Atmosphere of Hope, Searching for Solutions to the Climate Crisis* (2015), p. xiv.

The extraction of crude oil from the Bakken is particularly harmful to air quality because of the failure to capture methane and other gases escaping from the wells. As noted by doctors Michelle Bamberger and Robert Oswald:

> … highly toxic hydrogen sulfide (is) released during incomplete combustion of flared gas… It is important to note that gas being omitted from oil wells being hydraulically fractured in North Dakota's Bakken Formation are left to vent or flare for long periods, sometimes years… The effects of drilling and flaring have been reported in environmental health studies… Hydrogen sulfide is a poisonous, colorless gas that often accompanies methane gas as it returns to the surface, and could also be produced by the bacteria in wastewater impoundments; it has a tendency to cause health problems in people living near gas drilling operations.

Michelle Bamberger and Robert Oswald, *The Real Cost of Fracking, How America's Shale Gas Boom is threatening our Families, Pets, and Food* (2014), p. 5.

Tribal communities are disproportionately impacted by the Bakken shale production. Mr. Goldtooth testified, "there are significant concerns about the negative impacts that oil development has had on those communities. The health disparage, the health risk, the increased risk of violence in those communities which have all quantified in a number of reports." Tr. at 1836-1837. And so it is with DAPL, which is located immediately upstream from the drinking water intake of the Standing Rock Sioux Tribe, which serves Tribal communities on the Reservation in South Dakota.

Mr. Goldtooth's testimony was challenged at one point in the proceeding:

> CHAIRMAN NELSON: Do you understand the importance of petroleum products to agriculture in South Dakota?

THE WITNESS: I do.
CHAIRMAN NELSON: Do you understand the importance of petroleum products to the tourist industry in South Dakota?
THE WITNESS: I do.
CHAIRMAN NELSON: Do you understand the importance of petroleum products to the economy of the United States of America?
THE WITNESS: I do.

Tr. at 1856.

The agricultural and tourism industries in South Dakota are jeopardized by climate change. The IEN/DRA testimony of Peter Capossela indicates that in 2003 the severe drought resulted in the malfunctioning of the Standing Rock Sioux Tribe's drinking water and irrigation intakes on the Missouri River. IEN/DRA Exhibit 7. The Tribal farm could not irrigate – a problem for many South Dakota farmers. *See In re Operation of the Missouri R. Sys. Litig.*, 305 F. Supp.2d 1096 (D. Minn. 2004). "Sophisticated computer models indicate[s] that California, along with much of the Great Plains and American Southwest, is at high risk of 'mega droughts' in coming decades… we're talking about levels of risk of 80 percent of a 35-year drought." Flannery, *supra* at 26-27.

With respect to tourism, "the mountain pine bark beetle is a well-known villain, having devastated forests from New Mexico to British Columbia (and including South Dakota's Black Hills). With 88 million hectares of forest infested, and 70-90 percent mortality rates for infested trees, these creatures… are rapidly altering entire ecosystems." *Id.* at 53. The Black Hills are threatened by the pine bark beetle, because "warmer winters… allow the beetles to extend their breeding season." *Id*.

The evidence in this docket is insufficient to approve the DAPL permit. And, indeed, if the Public Utilities Commission is concerned with South Dakota's agricultural and tourism industries, it must deny the permit application for the Dakota Access Pipeline.

RESPECTFULLY SUBMITTED this 6th day of November, 2015

/s/Kimberly Craven

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