

No. 21-

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IN THE  
*Supreme Court of the United States*

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DAKOTA ACCESS, LLC,

*Petitioner,*

v.

STANDING ROCK SIOUX TRIBE, ET AL.,

*Respondents.*

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**On Petition For A Writ Of Certiorari  
To The United States Court Of Appeals  
For The District Of Columbia Circuit**

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**APPENDIX TO PETITION  
FOR A WRIT OF CERTIORARI  
VOLUME II OF III**

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MIGUEL A. ESTRADA

*Counsel of Record*

WILLIAM S. SCHERMAN

DAVID DEBOLD

GIBSON, DUNN & CRUTCHER LLP

1050 Connecticut Avenue, N.W.

Washington, D.C. 20036

(202) 955-8500

mestrada@gibsondunn.com

*Counsel for Dakota Access, LLC*

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**APPENDIX D**

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**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA**

**STANDING ROCK SIOUX  
TRIBE,**  
**Plaintiff,**  
**and**  
**CHEYENNE RIVER SIOUX  
TRIBE,**  
**Plaintiff-Intervenor,**  
**v.**  
**U.S. ARMY CORPS OF  
ENGINEERS,**  
**Defendant,**  
**and**  
**DAKOTA ACCESS, LLC,**  
**Defendant-Intervenor  
and Cross-Claimant.**

**Civil Action No.  
16-1534 (JEB)  
(and Consoli-  
dated Case Nos.  
16-1769 and 16-  
267)**

**MEMORANDUM OPINION**

The dispute over the Dakota Access Pipeline has now taken nearly as many twists and turns as the 1,200-mile pipeline itself. On June 14, 2017, in its third Opinion on the case, this Court held that the U.S. Army Corps of Engineers had failed to fully follow the National Environmental Protection Act when

it determined that the pipeline would not have a significant environmental impact. Although the Court found that the agency had “substantially complied” with the statute, the Opinion identified three discrete deficiencies in the Corps’ analysis and remanded the matter to the agency for further evaluation. In doing so, the Court asked the parties to submit further briefing on the question such an action raised: what is the proper remedy during this remand period? Specifically, the Court must determine whether or not to vacate the Corps’ environmental assessment, as well as the easement granted to Dakota Access in reliance on that determination. Without such an easement, the oil cannot flow through the pipeline.

The propriety of vacatur during remand is determined by a two-prong test that requires the Court to consider (1) the seriousness of the deficiencies in the agency action and (2) the disruptive consequences of vacating that prior approval. As to the first, the Court ultimately concludes that the three errors identified in the prior Opinion are not fundamental or incurable flaws in the Corps’ original analysis; rather, the agency has a significant possibility of justifying its prior determinations on remand. Although the Court finds that the equities of disruption do not tip sharply in Defendants’ favor on the second factor, prevailing on the first is enough here for them to avoid vacatur.

### **I. Procedural History**

The lengthy factual history of this case is set forth in this Court’s prior Opinion, Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers (Standing Rock III), 255 F.Supp.3d 101, 2017 WL 2573994 (D.D.C. June 14, 2017), and need not be repeated here. Suffice

it to say that Plaintiffs, the Standing Rock and Cheyenne River Sioux Tribes (and other intervenors and consolidated Plaintiffs), strongly oppose the current route of the Dakota Access Pipeline (DAPL), a nearly 1,200-mile domestic pipeline running from North Dakota to Illinois. In particular, the Tribes protest DAPL's crossing at Lake Oahe, a federally regulated body of water that borders their reservations. Created by the Corps in 1958 via a dam constructed on the Missouri River, the Lake is a primary source of water for the Tribes, and it is considered sacred to their spiritual practices. *Id.* at \*3.

A. History of Litigation

For the past fourteen months, the Tribes have attempted to prevent oil from flowing under Lake Oahe. The instant case began on July 25, 2016, when Standing Rock filed its Complaint against the Corps for declaratory and injunctive relief pursuant to the National Historic Preservation Act, National Environmental Policy Act, Clean Water Act, and the River and Harbors Act. *See* ECF No. 1 (SRST Complaint), ¶¶ 128-212. The following month, Dakota Access LLC successfully moved to intervene in support of the Corps, *see* ECF No. 7, and the Cheyenne River Sioux Tribe intervened as a Plaintiff, subsequently filing its own Complaint. *See* ECF No. 11-12 (CRST Complaint). The Tribes' first pass at preventing the pipeline was a motion for a preliminary injunction based solely on the NHPA, asserting that the ongoing clearing and grading of the land along DAPL's route disrupted sacred Tribal sites. *See Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers (Standing Rock I)*, 205 F.Supp.3d 4, 8-9 (D.D.C. 2016). On September



9, 2016, the Court denied emergency relief, and construction proceeded. Id. at 37.

On February 8, 2017, the Corps finally granted Dakota Access an easement pursuant to the Mineral Leasing Act, authorizing it to cross federal lands at Lake Oahe and complete the pipeline. See ECF No. 172-11 (Easement). The next day, Cheyenne River filed a motion for preliminary injunction and an application for a temporary restraining order, this time alleging violations of RFRA. See ECF Nos. 98, 99; Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers (Standing Rock II), 239 F.Supp.3d 77, 81 (D.D.C. 2017), appeal dismissed, No. 17-5043, 2017 WL 4071136 (D.C. Cir. May 15, 2017). Believing these religious-freedom claims unlikely to succeed, the Court issued a second Opinion denying the preliminary injunction. See Standing Rock II, 239 F.Supp.3d at 80.

#### B. Motions for Summary Judgment

As these emergency motions were ongoing, the parties filed cross-motions for summary judgment. See ECF Nos. 117 (SRST MSJ); 131 (CRST MSJ); 172 (Corps MSJ); 185 (DA MSJ). Now focusing on their environmental claims, the Tribes challenged the Corps' decision to issue the easement on the basis of its July 25, 2016, Environmental Assessment (EA) and Mitigated Finding of No Significant Impact (FONSI), asserting that the agency had violated NEPA by failing to complete an Environmental Impact Statement (EIS). NEPA requires that federal agencies evaluate the environmental effects of major government actions, but it does not “mandate particular results.” Robertson v. Methow Valley Citizens

Council, 490 U.S. 332, 350 (1989). Instead, the statute “imposes only procedural requirements.” Dep’t of Transp. v. Public Citizen, 541 U.S. 752, 756 (2004). If a project will “significantly” affect the “quality of the human environment,” NEPA requires that the agency complete a detailed EIS. See 42 U.S.C. § 4332(C). To determine whether or not there will be such significant effects, however, the agency first prepares a shorter EA. This “concise public document” discusses the need for the proposal, the alternatives, the environmental impacts of the proposed action, and the agencies and persons consulted. See 40 C.F.R. § 1508.9(b). If the EA concludes that there will be no significant environmental impact, the agency may forgo completing a full EIS.

This was the route chosen by the Corps in this case. See ECF Nos. 172-1, 172-2 (EA and FONSI). The agency’s EA and FONSI explained that, given the proposed mitigation measures and Defendants’ assessment of DAPL’s “anticipated environmental, economic, cultural . . . social[, and] cumulative effects,” the pipeline’s crossing at Lake Oahe would not “significantly affect the quality of the human environment.” FONSI at 6. The Tribes argued in their briefing that “[t]he Corps’ conclusion that the Oahe crossing was not significant enough to warrant an EIS” was “arbitrary, capricious, and contrary to law.” SRST MSJ at 17.

### C. Prior Opinion and Remand

On June 14, 2017, two weeks after DAPL became fully operational, the Court granted in part and denied in part the parties’ motions and remanded certain issues to the Corps. See Standing Rock III, 2017

WL 2573994, at \*40. It rejected Plaintiffs' motion with respect to their claims under the Clean Water Act and the Mineral Leasing Act, and it also upheld the majority of the Corps' determinations under NEPA—including the agency's "top-line conclusion" that the risk of an oil spill was sufficiently low so as to not require an EIS. *Id.* at \*12, 16. It granted the Tribes' motion, however, with respect to three discrete flaws in the Corps' environmental analysis. The Court held that the Corps had insufficiently addressed: (1) the degree to which the project's effects are likely to be highly controversial; (2) the consequences of a spill for the Tribes' fishing and hunting rights; and (3) the environmental-justice impacts of the project. *Id.* at \*1. Although the Court remanded these issues to the Corps for further analysis, it did not decide whether the easement should be vacated pending such remand. Instead, it ordered the parties to submit briefing on "whether remand with or without vacatur is appropriate in light of the deficiencies herein identified and any disruptive consequences that would result given the current stage of the pipeline's operation." *Id.* at \*29.

This briefing is now complete, and the Court must determine whether or not oil may continue to flow under Lake Oahe. Although the parties dispute what, precisely, vacatur would entail, *see* ECF Nos. 277 (DA Reply) at 1 n.1; 276 (Corps Reply) at 9; 280 (Tribes Sur-reply) at 1, the prior Opinion clearly stated that vacatur would require that DAPL "cease operations" during remand. *Standing Rock III*, at \*28. The Court therefore assumes at this stage that such a remedy would vacate the Corps' prior EA and FONSI, as well

as the easement it granted to Dakota Access in reliance on these determinations. Without this authorization, DAPL cannot lawfully continue to operate the pipeline on federal land.

## II. Legal Standard

Under the caselaw of this Circuit, “vacating a rule or action promulgated in violation of NEPA is the standard remedy.” Humane Soc. of U.S. v. Johanns, 520 F.Supp.2d 8, 37 (D.D.C. 2007) (citing Am. Bioscience, Inc. v. Thompson, 269 F.3d 1077, 1084 (D.C. Cir. 2001)); see Reed v. Salazar, 744 F.Supp.2d 98, 118-20 (D.D.C. 2010) (finding NEPA violation and ordering vacatur); Sierra Club v. Van Antwerp, 719 F.Supp.2d 77, 78-80 (D.D.C. 2010) (finding NEPA violation and ordering remand with partial vacatur); Greater Yellowstone Coal. v. Kempthorne, 577 F.Supp.2d 183, 204-05, 210 (D.D.C. 2008) (finding NEPA violation and ordering vacatur). Yet, although vacatur is the “presumptively appropriate remedy,” it is not the only option. See Sierra Club, 719 F.Supp.2d at 78. Instead, as equity requires, the reviewing court has discretion leave the agency action in place. See, e.g., Advocates for Hwy. & Auto Safety v. Fed. Motor Carrier Safety Admin., 429 F.3d 1136, 1151 (D.C. Cir. 2005) (remanding without vacatur); Int’l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin., 920 F.2d 960, 966-67 (D.C. Cir. 1990) (same).

The test for whether or not a court should vacate a deficient agency action during remand comes from this Circuit’s decision in Allied-Signal v. U.S. Nuclear Regulatory Commission, 988 F.2d 146, 150-51 (D.C. Cir. 1993). As Allied-Signal explained, “[T]he decision whether to vacate depends on the seriousness of the

order's deficiencies (and thus the extent of doubt whether the agency chose correctly) and the disruptive consequences of an interim change that may itself be changed." Id. at 150-151 (internal citation omitted). Put otherwise, this Court must determine whether there is "at least a serious possibility that the [agency] will be able to substantiate its decision on remand," and whether vacatur will lead to impermissibly disruptive consequences in the interim. See Nat'l Parks Conservation Ass'n v. Jewell, 62 F.Supp.3d 7, 20 (D.D.C. 2014); Williston Basin Interstate Pipeline Co. v. FERC, 519 F.3d 497, 504 (D.C. Cir. 2008) (declining to vacate when "significant possibility that the [agency] may find an adequate explanation for its actions"). The question for the Court today is thus whether this is the "type of case that merits departure from the presumptive remedy of vacatur." Pub. Employees for Env'tl. Responsibility v. United States Fish & Wildlife Serv., 189 F.Supp.3d 1, 2-3 (D.D.C. 2016), appeal dismissed, No. 16-5224, 2016 WL 6915561 (D.C. Cir. Oct. 31, 2016). It therefore examines the two prongs of Allied-Signal separately below, bearing in mind that "[t]here is no rule requiring either the proponent or opponent of vacatur to prevail on both factors." Shands Jacksonville Med. Ctr. v. Burwell, 139 F.Supp.3d 240, 270 (D.D.C. 2015).

### **III. Analysis**

#### **A. Seriousness of Deficiencies**

The first prong of the Allied-Signal test requires the Court to determine the "seriousness" of the deficiencies in the underlying agency action. Here, Defendants argue that the three inadequacies identified

by the Court—namely, the Corps’ failure to adequately address the degree to which the project’s effects are likely to be highly controversial, the impacts of a spill on fish or game, and the environmental-justice impacts of a spill—are not significant deficiencies in the agency’s prior analysis. See ECF No. 258 (Corps Brief). Noting that the Court previously rejected the majority of Plaintiffs’ challenges, Defendants contend that there are “only a few remaining tasks for the Corps to complete on remand” in order to substantiate the prior EA. See ECF No. 260 (DA Brief) at 19. Plaintiffs, unsurprisingly, cast the Court’s Opinion in quite a different light. The Tribes assert that the Court granted their motion for summary judgment on “three grounds that go to the heart of this dispute, and that are fundamental to the Tribes and their treaty rights.” ECF No. 272 (Tribes Brief) at 1. These issues, the Tribes contend, cast “considerable doubt” upon the Corps’ decision to forgo a full EIS. See Tribes’ Sur-reply at 10.

Under Allied-Signal, the severity of an agency’s errors below turns on “the extent of doubt whether [it] chose correctly.” 988 F.2d at 150-51. The Court therefore must assess the likelihood that, on remand, the Corps will be able to justify its prior decision to issue an EA and FONSI, rather than preparing a full EIS. Such assessment looks at each issue in turn.

1. *Highly Controversial*

The prior Opinion found that the Corps had failed to fully consider “the degree to which [DAPL’s] effects on the quality of the human environment are likely to be highly controversial.” Standing Rock III, 2017 WL 2573994, at \*13 (citing 40 C.F.R. § 1508.27(b)(4)).

This factor must be addressed in “cases where a 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.” Town of Cave Creek, Arizona v. FAA, 325 F.3d 320, 331 (D.C. Cir. 2003). Here, the Court found that certain of the Tribes’ expert reports submitted after July 24, 2016, created such a controversy and thus directed the Corps to address those “scientific critiques.” Standing Rock III, 2017 WL 2573994, at \*14. Plaintiffs contend that doing so on remand will require Defendants to “explicitly . . . find[ ] meritless each of the many technical criticisms and supporting data” in the expert reports. See Tribes Brief at 19. They therefore assert that the Court’s holding reflects not an “easily explained oversight,” but a “substantial legal flaw.” Id. at 20. Defendants feel differently. The Corps argues that, as noted in the prior Opinion, the record after remand may demonstrate that Defendants “reasonably” determined that the Tribes’ reports had “material flaws.” Corps Brief at 10; Standing Rock III, 2017 WL 2573994, at \*14. The agency asserts, moreover, that there is a serious possibility that the 36 conditions on the existing easement already address any of the experts’ legitimate concerns. See Corps Brief at 10-11.

The Court recognizes that the “lack of a reasoned explanation is a serious failing in an agency’s decision, because it leaves the Court in doubt as to whether the agency chose correctly in making its decision.” AARP v. United States Equal Employment Opportunity Comm’n, 2017 WL 3614430, at \*16 (D.D.C. Aug. 22, 2017) (internal citation omitted). The question with respect to vacatur, however, is the extent of that doubt. See Allied-Signal, 988 F.2d at 150. In this

case, the Court did not find that the expert reports submitted after July 25, 2016, presented an insurmountable obstacle to justifying the Corps' prior EA. Rather, the Opinion stated that “[i]t may well be the case that the Corps reasonably concluded that these expert reports were flawed or unreliable and thus did not actually create any substantial evidence of controversial effects.” Standing Rock III, 2017 WL 2573994, at \*14. What was missing, the Court found, was that the Corps “never said as much.” Id.

Correcting this flaw does not require that Defendants begin anew, but only that they better articulate their reasoning below. Courts have declined to grant vacatur in similar circumstances, finding that agencies should instead be “afford[ed] a reasonable opportunity to . . . provide a reasoned explanation” of their choices. See Am. Radio Relay League, Inc. v. FCC, 524 F.3d 227, 242 (D.C. Cir. 2008); Heartland Reg'l Med. Ctr. v. Sebelius, 566 F.3d 193, 198 (D.C. Cir. 2009) (“When an agency may be able readily to cure a defect in its explanation of a decision, the first factor in Allied-Signal counsels remand without vacatur.”); Black Oak Energy, LLC v. F.E.R.C., 725 F.3d 230, 244 (D.C. Cir. 2013) (declining to vacate agency action when “plausible that [agency] can redress its failure of explanation on remand while reaching the same result”); Williston Basin, 519 F.3d at 504 (declining to vacate when “significant possibility that the [agency] may find an adequate explanation for its actions”). This Court agrees. Although the Corps must give careful consideration to the expert critiques, it is well positioned to provide such explanation on remand. Indeed, addressing the degree to which the project is likely to be highly controversial fits squarely within



the realm of those “factual disputes” committed to agency expertise. See Wis. Valley Improvement Co. v. FERC, 236 F.3d 738, 746 (D.C. Cir. 2001) (citation omitted); FBME Bank Ltd. v. Lew, 209 F.Supp.3d 299, 342 (D.D.C. 2016) (finding that the “fair likelihood that the agency will be able to make use of its expertise to justify its reliance on data and information” counsels in favor of remand without vacatur). On remand, the Corps must exercise its judgment in analyzing Plaintiffs’ expert critiques. The Court finds a serious possibility that, in doing so, it will be able to substantiate the prior EA.

## 2. *Fishing and Hunting*

The second deficiency identified in the prior Opinion was the Corps’ neglecting to properly assess the impact of an oil spill on fish and game—two resources protected by the Tribes’ treaty rights. Standing Rock III, 2017 WL 2573994, at \*16-17. As with the first issue, Plaintiffs assert that remedying this error will necessitate in-depth analysis through an EIS. See Tribes Brief at 21. Defendants counter that, given the minimal risk of an oil spill, there is a substantial possibility that DAPL will have “no significant impacts” on the Tribes’ hunting and fishing rights. See Corps Brief at 11. They therefore maintain that the Corps will likely substantiate that DAPL’s effects on fishing and hunting, if any, do not require an EIS.

On this issue, Defendants’ task on remand is a narrow one. As the Court previously noted, the agency did not “wholly ignore the consequences of a possible oil spill” on the Tribes’ treaty rights. Standing Rock III, 2017 WL 2573994, at \*16. The Corps’ analysis fell short, however, when it “stat[ed] simply

that “[t]he primary issue related to impacts on the aquatic environment from operation of [DAPL] would be related to a release from the pipeline,” without explaining “what those effects would be.” Id. at \*17. Likewise, although the agency addressed the effects of pipeline construction on wildlife, it failed to consider the consequences of a spill. Id. These two gaps in the Corps’ analysis were improper under NEPA, but they are far from incurable. Although the Tribes assert that the record on remand will support the need for an EIS because it “is replete with evidence of the significance of these rights to the Tribe[s],” Tribes Brief at 20, the Court already held that NEPA does not require any such “existential-scope analysis.” Standing Rock III, 2017 WL 2573994, at \*15. While the Tribes now reiterate that they place a “high importance . . . on hunting and fishing,” Tribes Brief at 21, the Corps on remand must take a “hard look” at the impact of DAPL on only the resources themselves.

Here, the record shows that the agency is well situated to conduct such an inquiry. It has already gathered information regarding Lake Oahe’s fish and wildlife, and it has conducted a lengthy analysis of the possible toxicity arising from various spill scenarios. See Standing Rock III, 2017 WL 2573994, at \*17; ECF No. 172-1 at 58-59 (discussing wildlife near Lake Oahe); 104 (same); 101 (discussing exposure of Lake Oahe fish to oil spill); 47-48 (same); 45-46 (discussing potential toxic effects of spill). On remand, the Corps must simply connect the dots. This, then, is not a case in which the agency “must redo its analysis from the ground up.” North Carolina v. EPA, 531 F.3d 896, 929 (D.C. Cir. 2008). The agency already has the data it needs to determine the impact of a spill on fish and

game—indeed, it has already concluded that “under no spill scenario would the acute toxicity threshold for aquatic organisms be exceeded.” Standing Rock III, 2017 WL 2573994, at \*17. The Corps, moreover, will assess the significance of any consequences on fish and game in light of its prior determination that the risk of rupture under Lake Oahe is low. See New York v. NRC, 681 F.3d 471, 478-79 (D.C. Cir. 2012) (holding that agency “may find no significant impact if . . . the combination of probability and harm is sufficiently minimal”). The record suggests, therefore, that the Corps “may be able readily to cure a defect in its explanation of [the prior] decision.” Heartland Reg’l Med. Ctr. v. Sebelius, 566 F.3d 193, 198 (D.C. Cir. 2009). Although the agency may ultimately conclude that this issue nonetheless requires a full EIS, the Court finds that there is a strong likelihood that it will instead substantiate its prior decision to issue an EA.

### 3. *Environmental Justice*

The last issue concerns the environmental-justice impacts of the Lake Oahe crossing. The Tribes challenged the selection of that site over an alternative location upstream of Bismarck, North Dakota, arguing that the Corps had failed to properly analyze whether the current placement of the pipeline could disproportionately affect low-income, minority communities. See ECF 117-19 (SRST MSJ). The Court agreed. It held that the Corps’ “cursory” analysis did not “reasonably support the conclusion that the [Standing Rock Sioux] Tribe will not be disproportionately affected by an oil spill in terms of adverse human health or environmental effects.” Standing Rock III, 2017 WL 2573994, at \*23. In particular, the Court cast doubt upon the Corps’ decision to use census tracts

upstream from the Lake Oahe site—when oil spills flow downstream—and to consider the communities within only a half-mile radius of the crossing, given that the Standing Rock Reservation is located .55 miles downstream. *Id.* at \*20-21. In light of these flaws and the “minimal” discussion of environmental justice in the EA, the Court concluded that the agency “did not properly consider the environmental-justice implications of the project.” *Id.* at \*23.

Characterizing the Corps’ environmental-justice assessment as “fatally flawed,” Tribes Brief at 22, Plaintiffs contend that a valid analysis would “inevitably conclude” that the pipeline disproportionately affects Native American and low-income populations, and thus would “yield a different outcome on the core question of whether an EIS is required.” *Id.* at 23. Defendants, of course, disagree, rejoining that “given the low risk of an oil spill, it is unlikely that . . . a different buffer and environmental justice analysis” will yield a new result on remand. *See* Corps Brief at 10.

Although it is a closer call than the first two issues, the Court concludes that the flaws in the Corps’ environmental-justice analysis do not support vacatur. The agency’s action was not, in this case, so lacking as to cast serious doubt on its decision to issue an EA. The prior Opinion explicitly stated that the Corps “need not necessarily have addressed” each concern raised by the Tribes, but only that it must “offer more than a bare-bones conclusion that Standing Rock would not be disproportionately harmed by a spill.” *Standing Rock III*, 2017 WL 2573994, at \*23; *see Sierra Club v. FERC*, 867 F.3d 1357, 1370 (D.C. Cir. 2017) (holding that the “goal of an environmental-justice analysis is satisfied if an agency recognizes and

discusses a project's impacts on predominantly-minority communities"); Latin Americans for Soc. & Econ. Dev. v. Adm'r of Fed. Highway Admin., 756 F.3d 447, 477 (6th Cir. 2014) (noting that "[e]nvironmental impacts and environmental justice issues are a consideration in agency decision making, but are not controlling"). Although the Corps must provide a more robust analysis on remand, there is reason to think that, in doing so, it has a substantial possibility of validating its prior conclusion.

Indeed, contrary to the Tribes' statement that a finding of a disproportionate impact would necessitate an EIS, the relevant agency guidance expressly contemplates the use of an EA to address such concerns. See ECF No. 117-19 (CEQ, Environmental Justice Guidance Under the National Environmental Policy Act, Dec. 10, 1997) at 15 ("Where a potential environmental justice issue has been identified by an agency, the agency should state clearly in the EIS or EA whether, in light of all the facts and circumstances, a disproportionately high and adverse human health or environmental impact on . . . Indian tribe[s] is likely to result from the proposed action.") (emphasis added). As a result, even if Defendants did conclude on remand that a crossing at the Lake Oahe site may disproportionately affect minority or tribal populations, such an outcome would not compel the Corps to alter its prior decision to issue an EA and FONSI.

Additionally, multiple aspects of the record suggest that the Corps is likely to justify issuing an EA, rather than completing an EIS. First, as with the hunting-and-fishing analysis, the minimal risk of an oil spill under Lake Oahe reduces the likelihood that

the project will have a significant impact on the surrounding communities. See Sierra Club, 867 F.3d at 1369 (upholding environmental-justice analysis when agency concluded, in part, that “the project would not have a ‘high and adverse’ impact on any population, meaning, in the agency’s view, that it could not have a ‘disproportionately high and adverse’ impact on any population, marginalized or otherwise”); Allen v. Nat’l Institutes of Health, 974 F.Supp.2d 18, 47 (D. Mass. 2013) (upholding environmental-justice analysis when project was located in area with larger low-income and minority populations, but agency concluded that “the likelihood of [adverse effects] is extremely low”).

Second, the impact of any such spill, if it were to occur, is in part mitigated by the relocation of the Standing Rock water-intake structure. The new structure is situated approximately 50 miles further downstream from the Lake Oahe crossing than the old site, and it is outside even the furthest radius suggested by Standing Rock as appropriate for evaluating the environmental-justice impacts of the pipeline. See Standing Rock III, 2017 WL 2573994, at \*19; ECF No. 117-24 (Memorandum from David Cooper, Chief Counsel, Corps, Oct. 20, 2016) at 19. Plaintiffs assert that the old intake structure is still in operation, see ECF No. 272-3 (Third Decl. of Dave Archambault, II), ¶ 10, but they cannot dispute that the new site will mitigate at least some of their concerns regarding the relative impact of a spill on the Tribes’ drinking water.

Finally, the Corps’ already-conducted assessment of the alternative pipeline route through Bismarck increases the likelihood that the agency will find that DAPL’s environmental-justice impacts do not require

an EIS. Under NEPA, the consideration of such alternative routes is relevant to the Corps' environmental-justice review on remand, as the statute requires only that the agency "grapple[ ] with the disparate impacts of the various possible pipeline routes." Sierra Club, 867 F.3d at 1369. As the CEQ guidance states, "The identification of a disproportionately high and adverse human health or environmental effect on a[n] . . . Indian tribe does not preclude a proposed agency action from going forward, nor does it necessarily compel a conclusion that a proposed action is environmentally unsatisfactory." CEQ at 10. "Rather, the identification of such an effect should," *inter alia*, "heighten agency attention to alternatives (including alternative sites)." Id.

As the prior Opinion discussed, the alternative Bismarck crossing would pass much closer to a drinking-water intake than the Lake Oahe location does. See Standing Rock III, 2017 WL 2573994, at \*18-19; ECF No. 209-16 at 5 (Memorandum from Tom Sig-uaw, Dakota Access, & Steve Rove, HDR Engineering, Apr. 12, 2016). The two water intakes downstream from the Bismarck site serve 84,504 people, while those downstream from the Oahe intakes serve 8,037. See Standing Rock III, 2017 WL 2573994, at \*18-19. Risks presented to this tenfold increase in population must, of course, be considered when the Corps evaluates the environmental-justice impacts, if any, of the Lake Oahe crossing. See Sierra Club, 867 F.3d at 1371 (noting that, in conducting its environmental-justice analysis, agency "also considered four route alternatives . . . but rejected them all, mainly on the ground that they would have had a greater overall im-

pact on residences and populated areas”); Latin Americans for Soc. & Econ. Dev., 756 F.3d at 477 (finding that agency took requisite hard look at environmental-justice issues when it considered alternatives to avoid or minimize disproportionately high adverse impacts and “reasonably determined its priorities based on all the comparative information available”). Under NEPA, an agency is “not required to select the course of action that best serves environmental justice, only to take a ‘hard look’ at environmental justice issues.” Sierra Club, 867 F.3d at 1368; see Latin Americans for Soc. & Econ. Dev., 756 F.3d at 476 (“Just as the [agency] is not required to select an alternative with the least environmental impact under NEPA, the [agency] is not required to select an alternative with the least environmental justice impact.”). The Court finds that there is a substantial possibility that the Corps will meet this standard on remand and will substantiate its prior decision to proceed with the Lake Oahe crossing without an EIS.

In reaching this decision, however, the Court does not seek to minimize the importance of the Tribes’ environmental-justice concerns. The purpose of this analysis under NEPA is to ensure that the government properly accounts for the “interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects” of agency actions. See CEQ Guidance at 9. There is no doubt that our nation’s history is replete with examples of Native American tribes bearing the brunt of government action. See ECF No. 270-1 (Brief of *Amici Curiae* Great Plains Tribal Chairmen’s Association, *et al.*) at 6-8. And Chairman Archambault is eloquent on why the Tribes believe



that this pipeline embodies another transgression. See Archambault Decl., ¶¶ 12-20. Yet the Court's role here is not to determine the wisdom of agency action or to opine on its substantive effects. See Robertson, 490 U.S. at 351 (holding that "NEPA merely prohibits uninformed—rather than unwise—agency action"). Instead, it must consider only the Corps' likelihood on remand of fulfilling NEPA's procedural environmental-justice requirements and justifying its prior decision.

\* \* \*

In cases in which the agency's reasoning is "so crippled as to be unlawful," vacatur is generally the appropriate remedy. See Radio-Television News Directors Ass'n v. FCC, 184 F.3d 872, 888 (D.C. Cir. 1999). If, however, the action is "potentially lawful but insufficiently or inappropriately explained," remand without vacatur may instead be imposed. Id. As is evident from the discussion above, this case falls within the latter category. Here, the Corps' decision to produce only an EA, rather than an EIS, is "potentially lawful." The errors below were substantial, but they do not present fundamental flaws in Defendants' reasoning. Although Plaintiffs contend that the issues on remand go to the "heart" of their opposition to this project, see Tribes Brief at 1, the question for vacatur is not the importance of the issue, but the extent of the error. Here, the Court cannot say that the deficiencies in the prior EA and FONSI are "crippling" flaws in the Corps' analysis. The Court previously found that the Corps "largely complied" with NEPA's requirements, and it granted remand on only a narrow subset of the Tribes' NEPA claims. See Standing

Rock III, 2017 WL 2573994, at \*28. The lengthy procedural history of this case shows, moreover, that there has been nothing hasty about the Corps' decisionmaking thus far. There is no reason to think that it will be any less thorough in analyzing the three deficiencies on remand. In light of the agency's substantial compliance with NEPA, the Court finds that the Corps has a significant likelihood of being able to substantiate its prior conclusions and determines that the first prong of the Allied-Signal framework thus counsels in favor of remand without vacatur.

#### B. Disruptive Consequences

The second consideration in determining whether to remand without vacatur is “the disruptive consequences of an interim change that may itself be changed.” Allied-Signal, 988 F.2d at 150-51; see Conservation Law Found. v. Pritzker, 37 F.Supp.3d 254, 271 (D.D.C. 2014). On this issue, the parties have much to say about the disruption, or lack thereof, that will result if the Court vacates the Corps' prior decisions. As discussed below, the Court concludes that this factor weighs only slightly in favor of remand without vacatur.

##### 1. *Direct Disruption*

Defendants and their *amici* spend much of their briefing spelling out what they believe are potentially dire economic consequences of vacatur. Dakota Access, for example, asserts that if the pipeline is paused, North Dakota's oil producers will face severe costs and delays. See DA Brief at 14; ECF No. 279 (*Amici Curiae* Brief of American Fuel and Petrochemical Manufacturers) at 6 (stating that “direct financial

impact” of taking DAPL out of service “would be staggering”). The company contends that other pipelines, refineries, and downstream users of the oil currently transported in DAPL would also “suffer greatly” and would be forced into “emergency arrangements” to compensate for the shutdown. See DA Brief at 14. The impact of vacatur, Dakota Access posits, would place in peril the jobs of all those currently involved in DAPL’s operations and would prevent Dakota Access from being able to perform the contracts it has entered into with producers. Id. at 18. Defendants assert that such a halt in pipeline operations would also deprive state and local governments of millions of dollars in tax revenue and would undermine new industries that support DAPL operations. See Brief of American Fuel Manufacturers, *et al.* at 8, 10. Finally, Defendants argue that these effects would be passed on to consumers, claiming that the disruptive market effects of vacatur would have “significant ripple effects.” DA Brief at 15. In total, Dakota Access declares that issuing vacatur in this case would incur costs of hundreds of millions of dollars. Id. at 18.

The Tribes contest both the accuracy and the relevance of Defendants’ economic concerns. As to the former, Plaintiffs have submitted declarations asserting that “DAPL revenues” are likely “substantially less than indicated” by Defendants and stating that a DAPL shutdown “will not result in the severe disruptions claimed by the Corps and Dakota Access.” ECF No. 272-5 (Declaration of Ian Goodman), ¶¶ 41, 43. They therefore argue that the company’s claims “regarding loss of revenues and other potential impacts of a DAPL shutdown should not be relied upon to determine the likely impacts” of vacatur. Id., ¶ 41. As

to the latter, the Tribes question whether “financial impacts” carry “much or even any weight” when evaluating the second Allied-Signal factor in NEPA cases. See Tribes’ Brief at 25.

As an initial matter, the Court rejects Plaintiffs’ suggestion that it should wholly disregard the potential for financial disruption. Although this perspective has been suggested in at least one district court decision, see Ctr. for Food Safety v. Vilsack, 734 F.Supp.2d 948, 953 (N.D. Cal. 2010), it is clear that courts in this Circuit have repeatedly considered the economic implications of vacatur—including in cases addressing environmental harms. See Am. Water Works Ass’n v. EPA, 40 F.3d 1266, 1273 (D.C. Cir. 1994) (declining to vacate rule addressing lead in drinking water in part because “vacatur would be unnecessarily disruptive to the [affected] industries”); Sierra Club v. U.S. Dep’t of Agric., Rural Utilities Serv., 841 F.Supp.2d 349, 363 (D.D.C. 2012) (NEPA decision considering potential “substantial financial loss if the Court were to vacate” under second Allied-Signal prong); Friends of the Capital Crescent Trail v. Fed. Transit Admin., 218 F.Supp.3d 53, 60 (D.D.C. 2016) (acknowledging that “delay in [agency] project could impose significant financial costs”); see also California Communities Against Toxics v. U.S. EPA, 688 F.3d 989, 993-94 (9th Cir. 2012) (declining to vacate in part because stopping construction of power plant would be “economically disastrous”).

That the Court will consider Defendant’s allegations of financial harm does not, however, mean that it will necessarily give determinative effect to such claims. Defendants’ *cri de coeur* over lost profits and industrial inconvenience is not fully convincing. Such

is the nature of doing business, especially in an area fraught with bureaucracy and litigation. Dakota Access began pumping oil into the pipeline with full knowledge that Plaintiffs were contesting the easement allowing them to do so. By nonetheless proceeding with its venture, the company assumed some risk of economic disruption. See ECF No. 259-2 (Declaration of David Murk), ¶ 8 (stating that impact of vacatur would not have been severe “had DAPL not begun operations in June 2017”).

There is, moreover, some cause for skepticism regarding Dakota Access’s predictions of economic devastation. This is not the first time the company has staked out this position—it previously claimed that delays in the pipeline would have disastrous economic effects. During the first preliminary-injunction briefing, the company warned that contracts for DAPL could be canceled if it was not able to start delivering oil by January 1, 2017. See ECF No. 22-1 (Declaration of Joey Mahmoud, Aug. 18, 2016), ¶¶ 69-70. Yet the pipeline did not come on line until June, and no apparent calamity ensued. See ECF 277-12 (Second Declaration of Lee Hanse), ¶ 4 (stating that “no contracts have been renegotiated or terminated”). The Court thus cannot conclude that, in the case of a halt in DAPL operations, the company would have no alternative option.

The empirical basis for Defendants’ assertion that vacatur would have catastrophic economic effects is, additionally, sharply contested by the Tribes. See Goodman Decl., ¶¶ 43-48, 75 (asserting that impacts to energy systems and market due to vacatur would likely be “small to very small”). Indeed, it is unclear from the current record how much oil is even flowing

through the pipeline at this time. Compare id., ¶¶ 19-25 (stating that DAPL appears to be operating at partial capacity) with DA Brief at 13 (claiming that DAPL carries equivalent of 500,000 barrels per day) with DA Reply at 6 (citing figure of 300,000 barrels per day). The parties ask the Court to wade into this war of the crude-oil experts. Yet, because it declines to rely heavily on economic impact as a justification for issuing vacatur, the Court need not resolve this factual dispute. See Pub. Employees for Envtl. Responsibility, 189 F.Supp.3d at 3 (stating that “absent a strong showing . . . that vacatur will unduly harm economic interests . . . [,] the Court is reluctant to rely on economic disruption” in denying vacatur).

Beyond the data, there are broader concerns with Defendants’ economic claims. Dakota Access and its *amici* focus almost exclusively on the financial and industrial implications of a temporary DAPL shutdown. In doing so, they address the “potentially disruptive effects of vacatur as if they occur in a vacuum,” thus giving short shrift to the “potentially disruptive effects that could flow from remand without vacatur.” Friends of the Capital Crescent Trail v. Fed. Transit Admin., 218 F.Supp.3d 53, 60 (D.D.C. 2016). Here, there is no doubt that allowing oil to flow through the pipeline during remand risks the potentially disruptive effect about which the Tribes are most concerned—a spill under Lake Oahe. The likelihood of any such rupture may be low, but pausing the operation of the pipeline would mitigate even this small risk. By emphasizing the financial impacts of vacatur, Defendants ignore the “devastating” consequences

that the Tribes allege could result from remand with-  
out such a remedy in place. See Archambault Decl.,  
¶ 10-11.

This economic myopia ignores the fact that the possible effects of an oil spill on the Tribes' treaty rights and communities were at the center of this Court's prior Opinion. See Standing Rock III, 2017 WL 2573994, at \*10. Defendants unfairly downplay these concerns. Indeed, the Corps alleges that "loss of life is notably absent from Plaintiffs' discussion of potential worse-case spills." Corps Reply at 8. Yet one need only refer to the Tribes' declarations to see that they do, in fact, assert that such drastic harms could flow from a spill under Lake Oahe. See ECF Nos. 117-16 (Declaration of Jeff Kelly), ¶¶ 5-9 (stating that many Tribal members rely on hunting and fishing to survive); 272-3, Exh. B (Letter from Dave Archambault to Acting Assistant Sec. Lamont and Colonel Henderson) at 4 (discussing serious, life-threatening health and safety consequences of potential oil spill); 131-4 (Declaration of Harold Frazier) (stating that water shortage on reservation previously caused "death of four children in a house fire" due to insufficient water supply for firefighting). Although the Court acknowledges the potential for economic disruption, these interests do not inherently trump the risk of environmental disruption if vacatur is withheld. See Pub. Employees for Env'tl. Responsibility, 189 F.Supp.3d at 3 (stating that it is "not clear that economic concerns are as relevant in an environmental case") (emphasis added).

The Court notes, moreover, that denying vacatur on the basis of alleged economic harm risks creating undesirable incentives for future agency actions. If

projections of financial distress are sufficient to prevent vacatur, the Court fears that agencies and third parties may choose to devote as many resources as early as possible to a challenged project—and then claim disruption in light of such investments. Such a strategy is contrary to the purpose of NEPA, which seeks to ensure that the government “looks before it leaps.” ECF No. 269-1 (Brief of *Amici Curiae* of Law Professors and Practitioners) at 5. Finding that vacatur’s alleged financial harms are dispositive under the second prong of Allied-Signal may encourage agencies to instead act first and ask later. In sum, although the Court concludes that there is likely to be some economic disruption from vacatur, this factor does not weigh heavily in Defendants’ favor under the Allied-Signal test.

## 2. *Alternative Transport*

In addition to asserting that vacatur would have devastating economic effects, Defendants also argue that such a remedy would not, in fact, ameliorate Plaintiffs’ concerns during the remand period. Dakota Access contends that, if vacatur is granted, the oil currently flowing through the pipeline will be re-routed onto trains. See DA Brief at 15-16. The company states that this form of transport involves a greater risk of accidents and thus argues that vacatur would put the Tribes in more environmental peril than the current status quo. Id. Plaintiffs dispute both the facts and the premise of this position. The Tribes contend that there is little data supporting the proposition that train transport would be used in lieu of DAPL. They point instead to expert reports stating that, if DAPL were shut down, “much of” the crude currently flowing under Lake Oahe would “shift back



to . . . other pipelines, rather than to rail.” Goodman Decl., ¶ 62. The Tribes also contest the relative safety of the two modes of transport, referring to their expert’s conclusion that it is “incorrect to state that pipelines are ‘undeniably safer’ than rail,” and that pipelines such as DAPL are “capable of releasing substantially more oil than trains.” *Id.*, ¶¶ 87-88. Examining the respective routes and capacities of train lines and DAPL, the report concludes that, for the Tribes, “DAPL has [a] . . . much greater risk than does crude by rail.” *Id.*, ¶ 114. Finally, the Tribes contend that Defendants miss the mark by relying upon the overall risks presented by train transport versus pipelines. Instead, Plaintiffs contend that the Court should concern itself solely with the risk to the Tribes from DAPL and its current crossing at Lake Oahe. See Tribes’ Sur-reply at 15.

In considering the transport question, both parties acknowledge that this Circuit has “previously remanded without vacatur . . . if vacating ‘would at least temporarily defeat . . . the enhanced protection of the environmental values covered by [the statute at issue].” Ctr. for Biological Diversity v. Env’tl. Prot. Agency, 861 F.3d 174, 188 (D.C. Cir. 2017). In Davis Cty. Solid Waste Mgmt. v. U.S. E.P.A., 108 F.3d 1454 (D.C. Cir. 1997), for instance, this Circuit found emissions guidelines to be legally inadequate, but declined to vacate them during the remand process because “greater pollution emissions would occur” without leaving the guidelines in place. *Id.* at 1459-60. Similarly, in American Farm Bureau Federation v. EPA, 559 F.3d 512 (D.C. Cir. 2009), the court remanded but did not vacate a deficient agency standard governing

air pollutants, reasoning that “vacating a standard because it may be insufficiently protective would . . . mak[e] the best an enemy of the good.” *Id.* at 528. Put otherwise, this Circuit has recognized that, at times, a flawed agency action is better than no action at all.

Yet this is not such a case. On this record, Defendants have failed to persuade the Court that transport by train is significantly more dangerous than allowing oil to continue to flow beneath Lake Oahe. The record contains no concrete figures or substantiated studies regarding the risks presented by rail transportation versus DAPL’s Lake Oahe crossing. Instead, the Court is left with vague projections such as Defendants’ assertion that vacatur “could result in at least some portion” of the oil being moved via train and their broad claim that rail transport “poses a higher accident risk” than the use of pipelines. *See* Corps Brief at 13 (emphasis added). These forecasts do little to assure the Court that vacatur would in fact put the environment in any greater peril. *See Pub. Employees for Env’tl. Responsibility*, 189 F.Supp.3d at 3-4 (granting vacatur when agency’s forecasted harms were imprecise or speculative). Plaintiffs and one *amicus* for Defendants, moreover, cast doubt on whether the oil currently flowing through the pipeline would, in fact, be re-routed onto rail. *See* Brief of Am. Fuel Manufacturers, *et al.* at 10; Goodman Decl., ¶ 62 (stating that most oil would be transferred to other pipelines). Given that it is not “guaranteed that . . . producers or shippers would choose in the near term to ship oil on transportation modes other than DAPL,” Defendant’s argument is speculative at best. *See* Brief of Am. Fuel Manufacturers, *et al.* at 10.

What is clear is that accidents and spills, however they may occur, have the potential to wreak havoc on nearby communities and ecosystems. The effects that concern the Court today are not general environmental ones throughout the Midwest, but those that may result from this pipeline in this location at Lake Oahe. Those are the impacts that the Court found were insufficiently addressed by the Corps, and those are the impacts that Plaintiffs fear during the remand period. For this reason, and because the Court does not find that alternative modes of transport required by vacatur, if any, will necessarily increase the risk of an oil spill, it rejects this argument against vacatur.

### 3. *Other Considerations*

The Corps also attempts to argue that vacatur here would “have greater disruptive consequences than in the typical NEPA case” because the pipeline has already been completed. See Corps Brief at 12. The agency contends that vacatur is the standard remedy in NEPA cases only when it would affect the “prospective application of rules or agency actions,” rather than situations in which the challenged outcome has already gone into effect. Id. Plaintiffs counter that this distinction finds little footing in the facts of the case. See Tribes Sur-reply at 5-6.

The Tribes have the better of this dispute. Although construction is complete and oil is flowing, Plaintiffs are not asking for the pipeline itself, or for any existing infrastructure, to be dismantled. Id. at 2. Instead, their concerns in this case, and the deficiencies identified in the prior Opinion, involve the risks presented by the continued passage of oil under the Lake. This is clearly an ongoing, and prospective,

event. This is thus not a case in which “[t]he egg has been scrambled and there is no apparent way to restore the status quo ante.” Sugar Cane Growers Coop. v. Veneman, 289 F.3d 89, 97 (D.C. Cir. 2002) (remanding in lieu of vacating agency action where agency had already administered program disbursing large quantities of sugar to farmers who had already plowed under their crops). The oil may currently be flowing, but Defendants do not dispute that it could be stopped. Although courts have declined to vacate improper agency actions when doing so would be an “invitation to chaos,” id. at 97, in this case vacatur would be, at most, an invitation to substantial inconvenience. Contracts may have to be renegotiated and alternative modes of transportation found, but there is no indication in the record that Defendants’ actions under the improper EA cannot be undone.

Finally, the Corps’ assertions regarding the timing of the remand process are also relevant to analyzing the disruption in this case. The agency now states that it anticipates completing its independent review and analysis of the remand issues by April 2018, which is several months after its initial estimate. See ECF No. 281 (Notice of Revised Schedule); Corps Brief at 1. This timeline aids both parties’ positions with respect to the impact of vacatur. On one hand, the multiple-month period of review increases the risk that a spill will occur prior to the new analysis and thus strengthens the Tribes’ assertion that such an incident could occur during the remand process. On the other hand, this timing also supports Defendants’ position that vacatur would have severe disruptive effects. To vacate the easement during the remand process would stop oil from flowing under Lake Oahe for

at least six months—an interruption that could cause significant harms to numerous people and entities. The remand period thus supports both sides’ arguments regarding the real-world impact of the Court’s choice today, but does not dictate the outcome either way.

\* \* \*

The second prong of Allied-Signal, consequently, does not counsel strongly in favor of remand without vacatur. It is undeniable that stopping the flow of oil beneath Lake Oahe will have some disruptive effect, but all the considerations on this prong tip only narrowly in favor of Defendants. Because the Court has concluded that the Corps’ errors are likely to be cured under the first prong, it need not define the precise scale of the potential disruption. This is because in circumstances in which the first prong of Allied-Signal supports remand without vacatur, the second prong “is only barely relevant.” Fox Television Stations, Inc. v. FCC, 280 F.3d 1027, 1049 (D.C. Cir. 2002), opinion modified on reh’g, 293 F.3d 537 (D.C. Cir. 2002). In those instances, “though the disruptive consequences of vacatur might not be great, the probability that the [agency] will be able to justify retaining [its prior decision] is sufficiently high that vacatur . . . is not appropriate.” Id. This is such a case. The Court therefore need not rely upon disruption in deciding that vacatur is not the appropriate outcome.

### C. Other Relief

In their briefing the Tribes request that, if the Court declines to vacate, it instead impose a series of conditions on the continued operation of DAPL under

Lake Oahe. Defendants, in their response, do not address the merits of these proposed remedies; rather, they assert only that the Court lacks jurisdiction to enter such an order. See Corps Brief at 4. This is not so. A reviewing court may craft relief as equity requires. W. Oil & Gas Ass'n v. EPA, 633 F.2d 803, 813 (9th Cir. 1980) (“[A] reviewing court has discretion to shape an equitable remedy.”); Montana Wilderness Ass'n v. Fry, 408 F.Supp.2d 1032, 1034 (D. Mont. 2006) (“The district court’s equitable powers are broad, and it is within the court’s authority to fashion a remedy that fits the particular facts of the case before it.”); Sierra Forest Legacy v. Sherman, 951 F.Supp.2d 1100, 1106 (E.D. Cal. 2013) (“Vacatur is clearly a form of equitable relief that the Court may award, withhold, and craft to fit the circumstances of the case before it.”) (emphasis added); Conservation Cong. v. United States Forest Serv., 2017 U.S. Dist. LEXIS 82440, at \*9 (E.D. Cal. May 26, 2017) (finding NEPA violation, declining to vacate agency decision, but enjoining Defendants from “removing any trees with 20 inches [diameter at breast height] or greater in implementing the Project”).

Because Defendants should have an opportunity to express their views on the substance of Plaintiffs’ requests, the Court will permit abbreviated further briefing on this issue.

#### **IV. Conclusion**

In light of the “serious possibility” that the Corps will be able to substantiate its prior conclusions, the Court finds that vacatur is not the appropriate remedy in this case. That determination does not, how-

ever, excuse Defendants from giving serious consideration to the errors identified in this Court's prior Opinion. Compliance with NEPA cannot be reduced to a bureaucratic formality, and the Court expects the Corps not to treat remand as an exercise in filling out the proper paperwork *post hoc*. After the agency's further work on remand, the parties may well disagree over the sufficiency of its conclusion. If and when such a dispute arises, they will again have the opportunity to address whether Defendants have in fact fulfilled their statutory obligations.

/s/ James E. Boasberg  
JAMES E. BOASBERG  
United States District Judge

Date: October 11, 2017

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**APPENDIX E**

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**DEPARTMENT OF THE ARMY**

**CORPS OF ENGINEERS, OMAHA DISTRICT**

**1616 CAPITOL AVENUE**

**OMAHA NE 68102-4901**

REPLY TO  
ATTENTION

CENWO-OC

31 August 2018

**MEMORANDUM FOR RECORD**

**SUBJECT:** Consideration 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, North Dakota

1. The purpose of this memorandum and enclosure is to respond to the issues remanded back to the U.S. Army Corps of Engineers for additional analysis by the U.S. District Court for the District of Columbia. *See Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs*, No. 16-1534, Memorandum Opinion (D. D.C. June 14, 2017)(ECF No. 239). On remand, the Corps was directed to “consider the impacts of an oil spill on fishing rights, hunting rights, or environmental justice, or the degree to which the pipeline’s effects are likely to be highly controversial.” Memorandum Opinion at 2.

2. To address these three issues, the Corps sought input from Energy Transfer Partners, the Standing Rock Sioux Tribe, the Cheyenne River Sioux



Tribe, the Oglala Sioux Tribe, and the Yankton Sioux Tribe. In addition, the Corps conducted its own analysis of available information and considered materials in the administrative record and has fully considered the impacts of an oil spill on fishing rights, hunting rights, or environmental justice, or the degree to which the pipeline's effects are likely to be highly controversial." The Corps' review on remand did not reveal "significant new circumstance[s] or information relevant to environmental concerns." 40 C.F.R. § 1502.9(c). Therefore, the Corps concludes that a formal reconsideration of the July 2016 Final Environmental Assessment and Finding of No Significant Impact or the preparation of supplemental National Environmental Policy Act documentation is not required. With respect to each of the remand issues, the Corps finds:

a. The Corps' review on remand of the potential impacts of an oil spill to hunting and fishing resources did not reveal any significant impacts because the risk of an incident is low and any impacts to hunting and fishing resource will be of limited scope and duration.

b. With respect to Environmental Justice, the Corps finds that granting Section 408 permission and conveying a right-of-way to Energy Transfer Partners to construct and operate a portion of the DAPL under federally-owned Corps-managed land does not result in disproportionately high and adverse human health or environmental effects on minority populations, including Tribes, and low-income populations. Further NEPA analysis or any new mitigation beyond the EA/FONSI and the February 8, 2017 Easement conditions is not required.

c. The Corps considered the comments and concerns expressed by the Tribes regarding the data and methodologies used by the Corps. While the Tribes opposed the Corps' authorizations for the pipeline's Lake Oahe crossing, they did not provide information that demonstrated that a substantial dispute exists as to the size, nature, or effect of the federal action. Accordingly, the Corps finds that the effects of the federal action here are not "likely to be highly controversial." 40 C.F.R. § 1508.27(b)(4).

3. The Corps has outlined the rationale supporting these findings in the enclosed document and in the Administrative Record.

Encl  
as

JOHN L. HUDSON, P.E.  
Colonel, EN  
Commanding

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**APPENDIX F**

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**Review and Analysis of Tribes' Submissions**  
August 31, 2018

The Corps reviewed the Tribal documents expressing issues of concern. The Corps characterizes the comments and presents the issues raised within each of the documents as comment excerpts (hereafter referred to as “comments”). The letter identifies the document in accordance with the ID column in Table III-1. The number following the letter is the comment number. The number following the period is the page number of the document. For example, A1.3 represents the first characterized comment from the Earth-Fax Letter, which can be found on page 3 of the Earth-Fax Letter. The Corps’ responses to comments with similar subject matter were grouped together to reduce redundancy in the response process. For comments with similar subject matter, the Corps provided a comprehensive response the first time the issue is addressed and the related comments are identified in association with the first Comment ID for that comment topic.

ID	Common Name	Document Title	Dated
Documents Received Prior to February 8, 2017			
A	EarthFax Letter	<b>Review of the Dakota Access Pipeline Project</b> Letter to President John Yellow Bird Steele and Members of the Tribal Council Oglala Sioux Tribe Richard White, PE: Earthfax Engineering Group	12/2/2016
B	Accufacts	<b>Accufacts Review of the U.S. Army Corps of Engineers (USACE) Environmental Assessment (EA) for the Dakota Access Pipeline ("DAPL")</b> Memorandum to Jan Hasselman, Earthjustice Richard Kuprewicz	10/28/2016
C	Envy Report	<b>Technical Engineering and Safety Assessment: Routing, Construction and Operation of the Dakota Access Pipeline in North Dakota</b> ENVY Enejji ve Cevre Yatirimlari A.S. <i>Attachment A-7 of Declaration of Rollie E. Wilson</i>	1/5/2017
D	Nezafati Report	<b>Examining the Potential Adverse Impacts of the Dakota Pipeline Crossings to the Water Quality at the Cheyenne</b>	01/2017

		<b>River Sioux Tribe Water Intake in the Missouri River</b> <i>Attachment A-10 of Declaration of Rollie E. Wilson</i>	
i	Wilson Decl., Attachment A	<b>Cheyenne River Sioux Tribe's Preliminary Informational Paper Concerning Dakota Access LLC's Request for an Easement to Cross Lake Oahe, North Dakota</b> , Pursuant to 30 U.S.C. § 185 Harold Frazier <i>Attachment A of Declaration of Rollie E. Wilson in Support of Cheyenne River Sioux Tribe's Motion for Summary Judgement Wilson Decl. Filed February 22, 2017</i>	1/18/2017
5	Kelly Declaration	<b>Declaration of Jeff Kelly</b> Director of Game, Fish, and Wildlife SRST <i>Filed February 14, 2017</i>	11/28/2016
6	Bowser Report	<b>Assessment and Review, Dakota Access Pipeline Environmental Assessment Terrestrial and Aquatic Organisms</b> Dr. Gillian Bowser, PhD <i>Attachment A-9 of Declaration of Rollie E. Wilson</i>	01/2017
Documents Received After February 8, 2017, but Prior to 2018			
E	Kuprewicz Declaration- 2	<b>Second Declaration of Richard B. Kuprewicz</b> (ECF No. 195-1) Earthjustice	3/24/2017

F	Kuprewicz Declaration	<b>Declaration of Richard B. Kuprewicz (ECF No. 272-1)</b> <b><u>CONFIDENTIAL</u></b> Earthjustice	2/12/2017
G	Holmstro Declaration	<b>Declaration of Donald Holmstrom</b> Earthjustice	8/7/2017
H	Goodman Declaration	<b>Declaration of Ian Goodman</b> Earthjustice	8/7/2017
I	Goodman Exhibit	<b>Declaration of Ian Goodman, Section 4- Exhibit C</b> The Goodman Group	8/7/2017
Documents Received in 2018			
K	SRST E,J Analysis	<b>An Environmental Justice Analysis of Dakota Access Pipeline Routes</b> Robin Saha, Ph.D. and Paul Mohai, Ph.D.	2/23/2018
L	SRST Oil Spill Impact Report	<b>Impacts of an Oil Spill from the Dakota Access Pipeline on the Standing Rock Sioux Tribe</b> Mike Faith, Jr. Chairman Standing Rock Sioux Tribe	2/21/2018
M	SRST Appendices	<b>Impacts of an Oil Spill from the Dakota Access Pipeline on the Standing Rock Sioux Tribe - Appendices</b>	2/21/2018

	(Extension of L)	<p><b>CONFIDENTIAL</b>  Mike Faith, Jr. Chairman  Standing Rock Sioux Tribe  <b>Appendix C: SRST's Notice of Intent Comments on the Dakota Access Pipeline to the Army Corps of Engineers</b>  <b>Appendix E: SRST Technical Team Fatal Flaw Analysis Lake Oahe HCA Pipeline Crossing: Safety Instrumented Systems Report</b>  <b>Appendix F: Preliminary Report: Landslides in the Vicinity of the Dakota Access Pipeline Crossing of the Missouri River Near the Standing Rock Indian Reservation</b></p>	
N	.Oglala-White Letter	<p><b>Preliminary Evaluation of Dakota Access Pipeline Emergency Response Plans</b>  Richard B. White, P.E., PLLC</p>	4/18/2018
O	CRST	<b>Cheyenne River Sioux Tribe Letter and Attachments</b>	4/18/2018
P	Yankton KSE Affidavit	<b>Affidavit of Kip Spotted Eagle</b> Kip Spotted Eagle, Yankton Sioux Tribal Historic Preservation Officer	4/19/2018

\*The non-sequential listing of letter or number identifiers is due in part to the timing of the receipt of documents and the Corps' coordination with ETP related to supplemental information requests. Among the items requested

**Document A: Review of the Dakota Access  
Pipeline Project  
Letter to President John Yellow Bird Steele  
and Members of the Tribal Council Oglala  
Sioux Tribe, Richard White, PE; Earthfax  
Engineering Group**

A1.3 “[T]he EA should have considered spill volumes well in excess of 100 bbl as a reasonable incident scenario rather than implying that a 4 bbl spill is the norm.”

RESPONSE: EarthFax estimates the total volume of oil available for release in the event of a pipeline rupture at the 24” pipeline crossing of the Missouri River, and the 30” crossing of Lake Oahe. EarthFax desktop estimation methodology started by determining the volume of oil that would pass a given point per unit of time based on the pipelines proposed 570,000 barrels/day (bbls/day) capacity. EarthFax then used estimates for average releases in the United States to assume a 3-minute response time to a release on the DAPL line. EarthFax then added to that quantity the volume of oil contained in a 24” or 30” diameter cylinder, respectively, that spans the length of the water body from estimated valve to valve. The second column of Table A1 shows the EarthFax results as compared to the results of the initial DAPL spill modeling as reported in the May 2016 North Dakota Lake Oahe Crossing Spill Model Discussion (“Lake Oahe Crossing Report”).



**Worst-Case Release Estimates**

	<b>Document A Earth-Fax Estimate</b>	<b>DAPL Spill Model Results</b>
24" Missouri River Crossing	2,950 bbls	█ bbls
30" Lake Oahe Crossing	4,620 bbls	█ bbls

As can be seen from Table A1, Energy Transfer Partner's (ETP) estimated worst-case release volume for the Lake Oahe crossing exceeded the estimate based on the desktop calculation provided by Earth-fax.

The PHMSA regulation requires a pipeline company to determine the relative impact of a hypothetical worst-case release in each of its emergency response zones. 49 C.F.R. § 194.105. ETP used the OIL-MAPLand software to analyze the Missouri River and Lake Oahe crossings. According to ETP, this approach has been accepted by PHMSA and the Canadian National Energy Board, and is compliant with U.S. pipeline integrity management rule 49 CFR § 195.452. The model predicts a larger volume of oil is available at these crossings, partly due to the fact that they have the benefit of the exact valve locations, proposed pump shutdown times, and valve closure rates.

As part of the analysis of these crossings, ETP estimated potential release volumes at Lake Oahe that are █% larger than those estimated by Earth-Fax. Spill models are designed to determine the relative impact of a hypothetical worst-case release in each of the Project's emergency response zones in compliance with 49 CFR § 194.105. Spill model outputs are typically used for contingency planning and

preparation of the Facility Response Plan (FRP). Accordingly, ETP performed modeling in order to develop the theoretical worst-case release volumes so that the response equipment and response team can be sized accordingly in compliance with 49 CFR § 194.105.

The predicted spills generated by the model take a very conservative approach. Lake Oahe Crossing Report at 13. Using this approach, the predicted spills are larger and therefore overestimate the majority of spills seen in actual releases. This is due to a number of factors such as:

- Most releases are not caused by full ruptures of the pipeline.
- Due to anti-siphoning effects, a full gravity drain-down rarely occurs
- The spill model assumes the pipeline is lying directly on top of the ground. In reality, the compacted back-fill over a buried pipeline restricts the volume that could be released during a spill and restricts the affected area.
- At water crossings, the spill model assumes that the pipeline is lying directly on top of the water. Because of the Horizontal Directionally Drilled (HDD) crossing of the waterway, the overburden over the installed pipeline at least 92 feet below the lake restricts the spill volume that could be released and restricts the affected area.

To summarize, the Corps considered spill volumes well in excess of 100 bbls in the EA, consistent with EarthFax's suggestion. ETP calculated a worst-case scenario specific to Lake Oahe following guidance in 49 CFR § 194.105. Final EA at 91. ETP estimated

potential release volumes that are █████% larger for the Lake Oahe crossing than the 4,620 bbls for a 30” pipe with a 3-minute response time that Earthfax indicated was realistic. Spill Model Report at iii.

Furthermore, some commenters asserted that a lack of specific information in publicly available documents about the calculation of the worst-case release values means that the estimates of potential spill volumes used for spill planning were unrealistically low. The calculation of the worst-case release values have been available to the Tribes and their experts as part of the administrative record in the district court proceeding. USACE DAPL72253.

As detailed above, the Corps considered the appropriate diameter of the pipeline in accordance with EarthFax’s comment. Therefore, this comment does not show that substantial dispute exists as to the size, nature, or effect of the major federal action because the comment does not show flaws in the methods or data the Corps actually relied on here.

*See also* A6, B8, B9, E13, F3, F4, F18, G4, G10, J18, Li, L7, L9, L13, L23, L26, L46, L30, L42, L61

A2. 4 “[T]he effects of dilution in the water were based on average annual discharge rates of the Missouri River at nearby gaging stations rather than relying on conservatively lower discharge rates. At a minimum, the lowest mean daily discharge rates for the periods of record at the nearby gaging stations should have been used in the analysis . . . . Using these more conservative discharge rates, the estimated benzene concentrations provided in Table 3-7 of the EA would have been substantially higher at each crossing than

indicated (up to approximately twice as high as presented for the Missouri River crossing).”

RESPONSE: EarthFax asserts that using more conservative river-flow rates would result in substantially higher estimated benzene concentrations at each crossing. But EarthFax did not provide any scientific evidence or studies specific to discharge rates and benzene concentrations that would cause the Corps to doubt its previous methodologies and data supporting the Corps’ reliance on ETP’s low-flow discharge rates instead of the lowest mean daily discharge rate for the periods of record. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

For further explanation, the lowest mean daily discharge rates for the period of record is the discharge rate for the one where the average flow rate was the lowest among all days considered. Even if the Corps used the lowest mean daily discharge rates in the calculations, the individual cells with exceedances for the individual categories within Table 3-7 of the EA would not have changed. Therefore, the use of lowest mean daily discharge rates would have no material impact on the assessment based on Table 3-7. Low flow rates are the appropriate unit of measurement instead of the lowest mean daily discharge rates for the period of record because the lowest mean daily discharge rates for the period of record is an absolute lowest value and may be an extreme outlier and not genuinely representative of conditions.

ETP performed additional spill modeling that includes low flow rates for Lake Oahe. In the Spill Model Report, the low flow condition was defined as being the 5<sup>th</sup> percentile daily flow rate for the 50-year period of rec-

ord. Spill Model Report at 69. This provided for a statistical low flow over a wide range of flow rates without potentially introducing extreme outliers. The results are presented in the Spill Model Report. Spill Model Report at 70-73.

*See also* A6, B8, B9, E13, K1, L26, L61

A3.5 “[T]he EA should have acknowledged that focusing on benzene would not necessarily provide the most conservative impact scenario. Quantitative assessments of individual crude-oil constituents should have also been performed to ensure that benzene was the appropriate compound on which to focus.”

RESPONSE- The EA evaluated benzene as the appropriate water quality constituent because “based on the combination of toxicity, solubility, and bioavailability, benzene is commonly considered to pose the greatest toxicity threat from crude oil spills.” Final EA at 46. According to ETP, although hydrocarbon components of crude oil have relatively limited solubility in water, the more water-soluble hydrocarbon components of crude oil are the BTEX compounds (benzene, toluene, ethylbenzene, and xylenes). Spill Model Report at 43. A study that compared the calculated dissolved-phase concentrations of 69 crude oils found that benzene was the only aromatic or PAH compound tested that is capable of exceeding groundwater protection values for drinking water (O’Reilly et al. 2001). It also has the lowest concentration criteria of the four BTEX class categories in the North Dakota Administrative Code. N.D. Admin. Code § 33-1602.1

The Corps recognizes that benzene is volatile and that other hydrocarbon components are present and responsible for impacts beyond benzene. To further address this comment, ETP performed additional spill

modeling using a pseudo component approach. Spill Model Report at 25. Under the pseudo component approach, the bulk hydrocarbon was broken into several groups and effects were determined based upon the chemical composition of the Bakken crude in its entirety. Spill Model Report at 76-79. The companion Downstream Receptor Report discusses the results relative to the drinking water standards. Downstream Receptor Report at 80-91.

EarthFax generally commented that a quantitative assessment of individual crude-oil constituents was appropriate but did not identify a particular assessment or the particular factors, criteria, or technique to perform the quantitative assessment. Earthfax did not provide any scientific evidence or even studies specific to Lake Oahe that would cause the Corps to doubt its previous methodologies and data supporting the Corps' conclusion to rely on benzene as the appropriate compound. Therefore, this comment does not show that substantial dispute exists as to the size, nature, or effect of the major federal action.

*See also* A6, D10, K1, L61

A4.5-6 “[T]he spill impact assessment was based on comparisons with two concentration limits for benzene:

- A drinking water maximum contaminant level of 0.005 mg/L and
- An aquatic organism acute toxicity level of 7.4 mg/L

Neither of these is the appropriate point of comparison for benzene for this project. Regulations contained in Section 33-16-02.1 of the North Dakota Administrative Code establish a benzene limit of 2.2 ug/L (0.0022 mg/L) for Class I waters . . . . The EA states

that the value of 7.4 mg/L used for ecological impacts was the 'lowest acute toxicity threshold for aquatic organisms' listed in EPA's ECOTOX database . . . . An LC50 value is not usually the appropriate standard against which comparisons should be made when evaluating ecological impacts. The standard approach for an ecological risk assessment is to use a concentration known as the No Observed Adverse Effect Level ("NOAEL") . . . . Based on the above summary, it is clear that the reference values used in the EA are inappropriate. Assuming that benzene is the appropriate contaminant of concern, more appropriate comparative limits are:

- Drinking water: 2.2 ug/L (based on the North Dakota surface water statute)
- Aquatic organisms: 46 ug/L (based on the Los Alamos NOAEL, the Savannah River screening value, and the NOAA chronic concentration) . . . . the comparative concentrations provided above do not account for the effects of water temperature on ecological risk . . . . spills during winter months may reduce the concentration at which impacts occur to aquatic organisms.

Since drinking water intakes occur downstream from the Missouri River and Oahe Reservoir crossings, the critical standard against which potential impacts should be compared is the lower of the above concentrations (i.e., 2.2 ug/L). Assuming that the results presented in Table 3-7 of the EA are correct, this concentration would result from a crude oil spill of approximately 12 to 13 bbl."

RESPONSE: The North Dakota Administrative Code, defines the "chronic standard" to mean the

“four-day average concentration does not exceed the listed concentration more than once every three years.” N.D. Admin Code § 33-16-02.1-04. ETP determined the 5.0 ug/L level is the appropriate unit of measurement for the worst-cases spill analysis. Chronic toxicity levels are inappropriate for comparison to concentrations based on an accidental one-time release of a worst-case discharge. Rather, the chronic toxicity levels are more appropriate units of measurement for longer term exposures. Under chronic concentration conditions, fish may suffer growth, reproductive, or other long-term consequences. Even if the 2.2 ug/L surface water criteria was utilized in the EA, the results of an analysis utilizing the 2.2 ug/L level versus the 5.0 ug/L level the conclusion would not be different since a 100 bbl spill event would result in an exceedance of either standard. The Spill Model Report shows that a one-time event might lead to concentrations exceeding chronic limits in the water column for a period or hours, or at most days, at one location along the river but these concentrations would not persistently exceed the four-day average concentration more than once every three years.

ETP performed computational modeling under various scenarios (including winter low flow conditions) to evaluate the potential fate and transport of a release of crude oil into Lake Oahe. The Spill Model Report does not predict exceedances of drinking water standards for the location and depth of the former Fort Yates intake. Spill Model Report at 172-177; *see also* Tom Thompson, US Bureau of Reclamation email to Larry Janis, USACE Omaha District (December 12, 2017)(stating that



the Fort Yates intake is now off-line and scheduled for demolition). By the time the oil reached the location of the former Fort Yates drinking water intake (26.8 miles downstream of the crossing and taken off-line), the maximum concentration of dissolved hydrocarbons is predicted to be 145 ug/L in the top 5 meters of the water column. The maximum concentration of dissolved hydrocarbons is predicted to be 74 ug/L at 5-10 meters of depth below the surface. The maximum concentration of dissolved hydrocarbons is predicted to be 0 ug/L below 10 meters to the bottom of the river. The former Fort Yates drinking water intake was at a depth below 10 meters.

The Spill Model Report predicts further reduced concentrations in the upper layers at the SRST Replacement Intake, located 75.41 miles downstream of the Lake Oahe crossing. Downstream Receptor Report at 87; Spill Model Report at 175. Reduced concentrations may result due to dilution, volatilization from the dissolved phase to the atmosphere, adsorption to suspended particulate material and sedimentation, stranding on the shoreline or aquatic plants, or degradation. Spill Model Report at 175. The depth of the SRST Replacement Intake is 60-80 feet below the surface (19.1 to 25.5 meters) depending on water surface elevation; therefore, the concentration of dissolved hydrocarbons is also predicted to be 0 ug/L at the Tribal drinking water intake. Spill Model Report at 175. The Spill Model Report does not predict affects from the modeled hypothetical releases to the replacement water intakes for the SRST, or the water intakes for the CRST (ap-

proximately 156 miles downstream of the DAPL crossing), or OST (approximately 206 miles downstream of the DAPL crossing).

The minimum water depth recorded for Lake Oahe for the entire period of record was 1570.2 feet M.S.L. The discharge pipes for the dam are at an elevation of 1425 feet M.S.L -- 46 meters (142.5 feet) below the lowest ever water depth. Thus, any released hydrocarbons that reach the dam would need to mix within the water column to at least that depth. The Spill Model Report predicts near zero values of hydrocarbons at depths greater than 10 meters.

The modeling shows that concentrations of total and dissolved hydrocarbons would typically be present for less than four days in any particular location with peak concentrations present for only one to two days. Benzene would likely volatilize and not be present in elevated concentrations downstream. Spill Model Report at 76-79. To reach the 5 lig/L drinking water standard for benzene would require a dissolved hydrocarbon concentration of 22.5 pg/L. This is a conservative assumption, as benzene is more soluble and volatile than the aromatic group as a whole.

Because of this, benzene would dissolve and evaporate more quickly than other compounds in the oil. By using the more persistent dissolved hydrocarbon compounds that are less soluble and volatile than benzene, this estimation of benzene from dissolved hydrocarbon compounds would tend to conservatively over-estimate the potential presence of benzene. Spill Model Report at 76-79.

The Corps considered EarthFax's recommendation to rely on a different concentration limit for benzene and determined, based on the above, it is not a more reliable concentration limit than the concentration limit relied on by ETP. Therefore, this comment does not show that substantial dispute exists as to the size, nature, or effect of the major federal action because the comment does not show flaws in the methods or data the Corps actually relied on here.

*See also* A6, D13, G15, G16, J3, J6, J7, J12, L46

A5.7 "Section 3.2.2.2 of the EA minimizes the potential impacts of a spill by indicating that 'the most probable spill volume (4 barrels or less) does not yield benzene concentrations that exceed the drinking water criteria even with the ultra-conservative mixing assumptions.' Even though this statement is correct, the calculated benzene concentrations provided in Table 3-7 of the EA for spills with a magnitude of 100 bbl and larger are substantially higher than the drinking water maximum contaminant level for benzene. This obvious conclusion is ignored in the EA narrative."

RESPONSE - Drinking water intakes could be at risk if there was a release that reached the vicinity of the intake structures. Final EA at 38, and 42. ETP completed additional spill modeling and the analysis does not predict drinking water exceedances. Spill Model Report at 172-177. The concentrations shown in Table 3-7 of the EA are based on a one hour event releasing 4, 100, 1000, and 10,000 bbls. The spill and mixing events outlined by the assumptions are beyond physical actualities, making this a conservative model scenario. Final EA at

46-47. The EA assumed a 1-hour release period for the entire spill volume and applied the following additional conservative assumptions were developed to estimate potential spill effects for planning purposes:

- The entire volume of a crude oil spill was released due to a catastrophic failure of the pipeline and reached the water body;
- Complete, instantaneous mixing occurred;
- The entire benzene content of the crude oil was solubilized into the water column; and
- The receptor is located at the immediate site of the crude oil spill and there is no loss due to evaporation or degradation. Final EA at 46.

Furthermore, the theoretical one-time release of 100 bbl would lead to only a single exceedance at the location of the discharge. Because it would be a single event and of short duration, based on the analysis performed, ETP stated that the one-time release would not be classified as “an impairment” to the surface water beneficial use for drinking water at the location of the release. Per the North Dakota Administrative Code, “a water body does not meet its water quality standard if the numeric targets for the acute or chronic water quality criteria are exceeded more than once every three years.” N.D. Admin. Code § 33-16-02.1. In order for a surface water beneficial use to be considered impaired, the criteria would need to be exceeded more than once in a 3-year period.

The Spill Model Report predicts downstream drinking water intakes would not likely be affected by the modeled releases. This is because the maximum predicted concentrations of hydrocarbons in the water

column were in the surface 0-5 meters (0 to 16.4 ft) with decreasing concentrations within the water column as depth increases until near zero values were predicted at depths greater than 10 m (32.8 ft). Spill Model Report at 172-177.

*See also* A6, D13, J2

A6.7 “[T]he conservative assessment indicated that unacceptable impacts could occur under reasonable impact scenarios . . . . a more detailed evaluation should have been conducted and/or detailed plans should have been presented to provide a greater assurance that impacts would be mitigated. Neither the more detailed evaluation nor the detailed mitigation plans was provided in the EA.”

RESPONSE: Earthfax did not specifically identify an alternative evaluation or plans that were more appropriate for the evaluation. Nor did EarthFax submit its preferred detailed evaluation and detailed plans for the Corps to consider and compare against the evaluation and plans prepared by ETP. EarthFax generally commented that a more detailed evaluation should have been conducted and/or detailed plans should have been presented but does not identify a particular evaluation or the particular factors, criteria, or technique to perform the quantitative evaluation. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action because a general statement that the EA should have presented a more detailed evaluation and detailed mitigation plans does not show flaws in the methods or data the Corps relied on.

While the potential risk for a worst-case release is low such a spill would result in high consequences. Final EA at 91.

The EA describes the design and operation measures ETP will implement to protect downstream intake users. Final EA at 42; 88-94. ETP's Spill Prevention Control and Countermeasure Plan (SPCC Plan) describes cleanup procedures and remediation activities during construction. Final EA, Appendix A. ETP prepared a FRP that complies with the applicable requirements of the Oil Pollution Act of 1990 (OPA), and has been prepared in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and the Mid-Missouri Sub-Area Contingency Plan (SACP). Final EA, Appendix L.

Following PHMSA modeling guidance, ETP prepared a spill model specific to the Lake Oahe crossing. ETP used the hypothetical worst-case scenario volume to design a location-specific Geographic Response Plan (GRP) for the crossing. ETP's GRP describes cleanup procedures and remediation activities during operations. ETP provided the GRP to the Corps, SRST, and CRST for review. ETP incorporated comments from the Corps, SRST, and CRST into revised versions of the GRP.

Furthermore, Corps easement conditions 8, 9, and 10 require ETP to coordinate its emergency response planning documents with the Corps.

*See also* All, A23, B9, C4, C10, C31, 134

A7.7-8 "The EA further states that 'pockets of oil naturally contained by the ice can be drilled to and

removed using vacuum trucks.’ This is an oversimplification of oil recovery operations beneath ice . . . a winter spill likely represents the worst-case scenario . . . the EA should have presented a more serious, quantitative evaluation of the winter spill scenario to ensure that the adverse impacts of a spill under on those conditions were properly evaluated.”

RESPONSE: The Corps agrees with EarthFax that the recovery of oil under ice is difficult. The Corps considered spill response during sub-freezing temperatures and icy conditions in the EA. Final EA at 39. The Corps also considered impacts to groundwater during sub-freezing temperatures and icy conditions. Final EA at 47-48. To further address this concern, the Corps mandated full-scale winter/ice exercises at Lake Sakakwea and Lake Oahe as a condition to the easement. See Easement Condition 34. ETP tentatively scheduled winter exercises at Lake Oahe for February of 2019. Further, the Spill Model Report includes an assessment of the winter spill scenario of oil movement under the ice at Lake Oahe. Spill Model Report at 102-133.

EarthFax did not specifically identify an alternative methodology that was more appropriate for the evaluation. EarthFax generally commented that a more serious, quantitative evaluation was appropriate but fails to identify a particular evaluation or the factors, criteria, or technique to perform the quantitative evaluation. EarthFax did not provide the results from its preferred quantitative evaluation to the Corps to consider and compare against ETP’s winter spill scenarios. As a result, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action

because a general statement that the EA should have presented a more serious, quantitative evaluation of the winter spill scenario does not show flaws in the methods or data the Corps relied on.

*See also A8*

A8.7 “Section 3.2.1.2 acknowledges that subfreezing temperatures during winter months will affect emergency response conditions during cleanup of a spill . . . workers require more breaks and move slower due to the bundling of clothing that is protective of both cold temperatures and pollutants, daylight hours are shorter, slip-trip-fall risk increases significantly, etc. The EA should have quantified the effect of these factors on response time and the subsequent impacts to human health and the environment.”

RESPONSE: The Spill Model Report predicts that ice cover retards the movement of oil downstream by trapping the hydrocarbons in the vicinity of the release location. Spill Model Report at 102-133. ETP anticipates that the difficult winter conditions will be counterbalanced by the slower movement of the oil beneath the ice.

A9.9 “The EA minimizes the risk of system integrity threats by stating that procedures will be implemented to minimize those threats . . . a quantitative analysis of the risk associated with failure of system components should have been provided in the EA.”

RESPONSE: ETP asserts that quantitative risk assessments are not required by regulation, nor industry standard for the design of crude oil pipelines



within the United States. ETP explained that prescriptive measures are nonetheless required that serve the purpose of providing independent protection layers for the applicable threats.

Specifically, during the design process, ETP evaluated the potential for incorrect operation and/or equipment failure at the terminals, pump stations, mainline valves, and pig launcher/receivers. The control design is established to safeguard against incorrect operation using alarms and shutdowns to operate the pipeline within the guidelines of 49 CFR § 195. The Corps considered numerous measures ETP would implement to minimize the risk of a pipeline leak and protect the users of downstream intakes. Final EA at 91-94. The design reports and risk planning documents associated with construction and operation of DAPL are described below.

The risk evaluation process for Lake Oahe involved the following:

- Risk Analysis: Based on the Sunoco Logistics Risk Algorithm Document (January 27, 2015), ETP generated qualitative risk results for the pre-operational Lake Oahe segment to evaluate the relative risk. ETP presented the results in a risk matrix and provided recommendations for potential risk reduction measures. Final Report, R-ETP-20160510: Dakota Access Pipeline Project Lake Oahe HDD Crossing Risk Analysis (“HDD Crossing Risk Analysis”) (May 10, 2016).
- Integrity Management Plan: ETP provided the SXL - Pipeline Integrity Management Plan,

ENGR-PR-0015 (“Pipeline Integrity Management Plan”) (June 2015), and the SXL Risk Algorithm Document (January 27, 2015) to the Corps on May 9, 2016. The latter describes the methods and results of the Risk Assessment. ETP used this same algorithm was used in the SXL - Integrity Management Plan.

- **Threat and Consequence Assessment:** ETP hosted a threat and consequence assessment workshop with subject matter experts to gain an understanding of the applicable threats to the integrity of the pipeline and consequences of a release at the Lake Oahe and Missouri River Crossing sections. The threat assessment approach was based on the American Society of Mechanical Engineers (ASME) standard ASME B31.8S, *Managing System Integrity of Gas Pipelines*. ETP employed this standard due to the comprehensive list of threats prescribed in Appendix A of that standard that are applicable to both liquid and gas pipelines. ETP’s analysis of the hypothetical worst-case spill data indicated that the risk for the Lake Oahe crossing is not considered to be high; the risk ranking is between 2 and 3 (out of a possible 10, with 10 being the worst). Upon evaluation of the threat and consequence potentials, ETP identified the primary risk-drivers and a provided the Corps with a summary of recommended mitigation measures to minimize the risk associated with the pipeline operation at the two Horizontal Directional Drill (HDD) locations. Dakota Access Pipeline Project Threat Assessment Report: Missouri River and Lake Oahe HDD River

Crossings (June 2016) (“Threat Assessment Report”).

EarthFax included the highlighted table below with its summary of “71 incidents”<sup>11</sup> associated with pipelines having diameters of 16 inches or larger. The highlighted portion of that table shows the most common causes of spills or incidences in the ten year period from mainline pipelines that were 16 inches or larger in diameter.

**Keystone Incident Summary, January 2002-July 2012  
(Highlights in Original).**

Incident Category	EA Risk Rank	Keystone Incident Summary	
		Number	Percent of
Third Party Damage	Low	18	25.4
External Corrosion	Low	11	15.5
Internal Corrosion	Low	18	25.4
Pipe Manufacturing	Low	15	21.1
Construction Realted	Low		
Incorrect Operations	Low	1	1.4
Equipment Failure	Low	0	0.0
Natural Forces	Low	6	8.5

EarthFax created the table using data presented in the PHMSA Hazardous Liquid Pipeline Incident Data 2002-July 2012, and PHMSA Liquid Annual Pipeline Data 2011 (PHMSA, 2017). EarthFax excerpted this analysis of all pipeline incidents from analysis prepared for the Keystone pipeline. ETP claims that EarthFax does not present the full table of PHMSA data. ETP generated Figure III-1 in the

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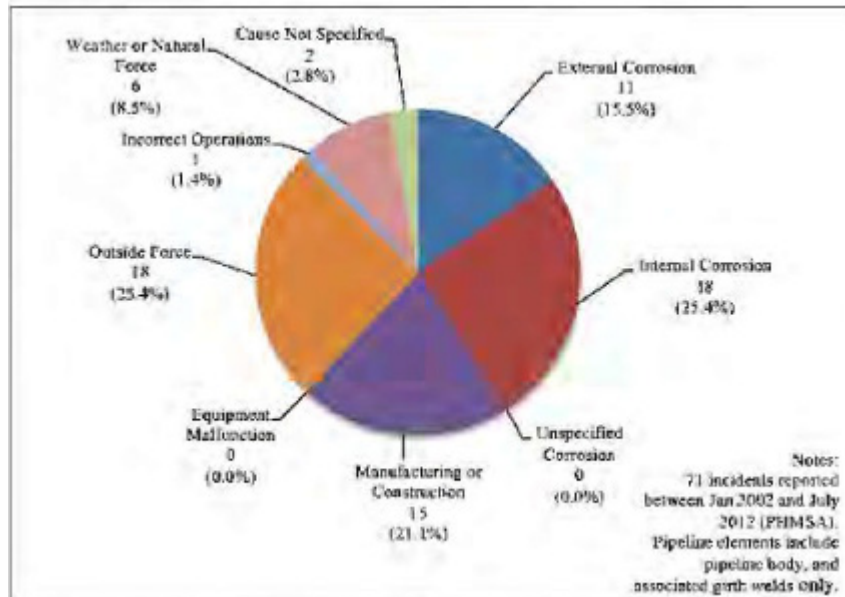
<sup>1</sup> By the Corps count, there are 69 incidents listed in the Keystone Incident Summary provided by EarthFax.

August 31 Memorandum for the Record and Table B1-4 in that

Memorandum to illustrate the PHMSA data present in the two reports. Figure III-1 is identical to Figure 6 of the PHMSA reports and Table 111-4 is identical to Table 7 of those reports.

**Figure III-1 Historic Incident Cause, Onshore Crude Oil Mainland Pipe, Diameters 16-Inch and Larger**

Keystone XL pipeline project



Representation of Figure 6 from PHMSA Hazardous Liquid Pipeline Incident Data 2002-July 2012, and PHMSA Liquid Annual Pipeline Data 2011.

**Table 111-4 Historic Incident Summary, Onshore Crude Oil Pipeline System, Tanks**

<b>Item</b>	<b>Value</b>	<b>Unit</b>
January 2002. — July 2012	10.58	Years of data
Total Incidents	93	Reported incidents
Pipeline Mileage	537,295	Mile-Years
Incident Rate per Mile Year	0.00017	Reported incident per mile-year
Equipment exposure	18,937	Tank-years
Incident Rate per equipment-year	0.0049	Incident per tank-year
Maximum Incident Volume Reported	49,000	Barrels
Median Incident Volume Reported	38	Barrels
Average Incident Volume Reported	1,720	Barrels
0-50 barrels	51%	Percentage of incidents
50-1000 barrels	30%	Percentage of incidents
100-20,000 barrels	17%	Percentage of incidents

Source: PHMSA Hazardous Liquid Pipeline Incident Data 2002-July 2012, and PHMSA Liquid Annual Pipeline Data 2004-2011

By omitting PHMSA's Table 7 ("Historic Incident Summary, Onshore Crude Oil Pipeline System, Tanks"), ETP claims that EarthFax left out important context relevant to the frequency of occurrence. EarthFax acknowledges the 71 incidents cover 10 years of record (or 7.1 incidents per year). Based on PHMSA's Table 7, the 71 incidents is a subset of the 93 total incidents reported for 537,295 miles of onshore pipeline. This calculates to an incident rate of 0.00017 per mile-year as referenced in the table. This

equates to the equivalent of one incident every 5,882 years for any 1-mile segment. Therefore, while it is true that Third Party Damage, Internal Corrosion, External Corrosion, and Manufacturing defects represented substantial percentages of the universe of reported incidents, because that universe is itself so small ETP disagrees with EarthFax's conclusion that these percentages require rating the level of risk as something other than low.

In addition, the PHMSA annual report for hazardous liquids dataset (PHMSA, 2017) establishes that the majority of actual pipeline spills are relatively small in volume. Fifty percent of the spills consist of 4 bbls or less. In 84 percent of them, the spill volume was 100 bbls or less. In 95 percent of them, spill volumes were less than 1,000 bbls. Oil spills of 10,000 bbls or more occurred in only 0.5 percent of cases. These data demonstrate that most pipeline spills are small and that releases of 10,000 bbls or more are extremely uncommon.

Furthermore, ETP notes that the calculated incident frequency referenced above includes releases from older pipelines, regardless of the standards in place at the time of construction. As indicated by Mr. Nezafati, "aging pipeline, much of it built of wrought iron and bare steel, is especially vulnerable to the elements. About 45 percent of all crude oil pipeline in the United States—more than 30,000 miles—was installed before 1970. About 7,000 miles are made of pipe that was laid before World War II." Nezafati Report at 5.

ETP reports that PHMSA is actively working with pipeline operators to decrease the risk of releases. According to ETP, new pipelines benefit from improvements in design, construction, operation, and inspection. ETP anticipates that the actual number of incidents per mile for new pipelines constructed in accordance with current PHMSA standards would be substantially lower than predicted values based on an analysis that includes older pipelines.

Pipelines installed via HDD—the installation method used at the Lake Oahe crossing—appear to experience lower risk of release. Based upon a review of the PHMSA Reportable Incident Data for Hazardous Liquid and Gas Transmission Pipelines (2010-Present), the likelihood of a failure at an HDD crossing is extremely low. Of the 3,368 reportable incidents that occurred over the past 8.5 years, only three were reported as involving an HDD crossing (0.09%). One was due to internal corrosion of a natural gas pipeline installed in 1957. One was due to an exposed natural gas pipeline. One resulted in a 1.7 bbl release with subsequent 0.9 bbl recovery.

In conclusion, EarthFax generally commented that a quantitative analysis of the risk associated with failure of system components was appropriate. While the Corps agrees that operational failure prevention is an important component in the design of a modern pipeline, ETP demonstrated that it took steps during the planning and the design of the DAPL to define and reduce the risk of failure. EarthFax has not presented data or an alternative methodology that causes the Corps to doubt its reliance on ETP's risk analysis and preventive design measures. The Corps considered numerous measures ETP would

implement to minimize the risk of a pipeline leak and protect the users of downstream intakes, including the HDD Crossing Risk Analysis, Pipeline Integrity Management Plan, and Threat Assessment Report. Final EA at 9194. The Corps reviewed PHMSA datasets to gauge the likelihood of a spill from the portion of the pipeline that cross Lake Oahe via HDD. The Corps also imposed several conditions on the easement concerning the maintenance and operation of the valves, leak detection, and notification systems. *See* Easement Conditions 21, 22, and 23.

EarthFax does not identify a particular risk analysis or the particular factors, criteria, or technique to perform the risk analysis. Nor did EarthFax provide the results from its preferred quantitative risk analysis to the Corps to consider and compare against ETP's risk analysis. Therefore, this comment does not show that substantial dispute exists as to the size, nature, or effect of the major federal action because a general statement that the EA should have provided a quantitative analysis of the risk associated with system component failure does not show flaws in the methods or data the Corps relied on.

*See also* B1, B12, B18, C3, C9, C17, C20, E9, E10, F1, F3, G4, G12, J13, J14, J18, L23, L31, L34, L46, L47, L48, M6, M10, M14, M23

A10.9 "Section 3.11of the EA also states that the impact of a release will be minimized through the use of 'motor operated isolation and/or check valves installed on either side of the Missouri River above Lake Sakakawea and Lake Oahe which can be actuated to close as soon as a leak is detected.' It is inappropriate



for the EA to imply that these valves will close immediately.”

RESPONSE: ETP explained that the phrase “actuated to close” means that the process has been initiated, not that “these valves will close immediately” as asserted by EarthFax. The EA stated, “These valves have a closure time of no greater than three (3) minutes.” Final EA at 90. This conservative estimate is six times what EarthFax estimated is a more realistic closure time for the valves on the DAPL segments valuated in the EA (24 - 30 seconds). ETP based the closure times on the Emergency Flow Restricting Device (EFRD) valves on the DAPL Pipeline Surge Analysis Report. Furthermore, the closure times are a function of the size of the valves and the electrical requirements, and electrical availability.

#### Valve Locations:

As noted in the response above to comment A1, ETP performed a worst-case release scenario specific to Lake Oahe in accordance with PHMSA guidance in 49 CFR § 194.105 in order to determine the largest possible release volume specific to the segment of the pipeline that would cross under Lake Oahe. The spill model utilized in the Lake Oahe Crossing Report assumed the pipe was resting above ground and at grade, which allows for the model to predict the largest possible volume release. Lake Oahe Crossing Report, at 10. ETP then used OILMAPLand software to model a release every 200 feet along the pipeline centerline at DAPLs highest flow rate. The total volume modeled at each point (every 200 feet) is a combination of the volume of oil released under pressure be-

fore ETP shuts the pumps off and the volume of residual oil in the pipeline between the nearest main line valves (MLV) that could drain out. ETP then used OILMAPLand to see where the predicted quantities of oil would travel if released from the pipeline at ground level. ETP applied a risk score to each modeled spill scenario based on the total volume available to release, total predicted acreage impacted, and the number of HCAs the oil might interact with. ETP adjusted the location of the DAPL valves to minimize the risk scores.

According to ETP, the valve locations on the banks of Lake Oahe reduce the total volume of oil that could be released in the event of a spill. MLV-ND-380 sits approximately 0.5 miles from the west bank of the river at the nearest location outside of the floodplain that also has road access and power. Further to the west the terrain continues to slope upward away from the low-lying Lake Oahe. Without MLV-ND-380 there would be an additional 0.3 miles of pipe that could drain out into the Lake Oahe basin in the event of a release; therefore, MLV-ND-380 reduces the total available crude inventory by approximately 1,380 bbls. The scenario for the east bank of Lake Oahe is similar, with the terrain moving uphill from the bank of the river for approximately 4.8 miles. MLV-ND-390 protects the east bank of the river. MLV-ND-390 is approximately 0.5 miles from the edge of Lake Oahe. Therefore, the valve protects the lake from 4.3 miles of pipe that would otherwise have the potential to drain into the Oahe basin in the unlikely event of a release. MLV-ND-390 reduces the total

available crude inventory by approximately 19,780 bbls.

Emergency Isolation Valve (EIV)/ Emergency Flow Restricting Device (EFRD) valves:

According to ETP, all pipeline MLVs are shut-down/isolation valves and qualify as EFRD valves which are remotely operated through a central control system. As such, an EFRD valve is located on each side of the Lake Oahe crossing.

All MLVs, and therefore all EFRD Valves, have been sized and specified to meet the industry standard API Specification 6D for the design, manufacturing, testing and documentation of such valves. These valves also meet ETP and Sunoco Logistics Valve Specifications. ETP selected the valve supplier based on consideration of experience and their performance in similar installations, their technical support, and part replacement availability.

ETP procured the 30-inch diameter valves, with Full Port internal passage, in accordance with the following specifications:

- ASME B16.47 Series A
- ANSI 600 Class Flanges (1,480 psi rating)
- Body are A350LF2 CS, (-20°F TO 300 °F)
- A350LF2 CS Ball and 17-4 PH SS STEM
- Trim and Seats are A350 LF2, 1mil, VITON GLT /A151 4140 1 mil ENP
- Block and Bleed

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- Trunnion Mounted, Full Port Ball
- Manufactured by Valvitalia-Delta Valve Europe, Model Delta T55
- Valves were fitted with an Emerson Horizontal Electric motor driven actuator Model Series M2CP, 240 VAC /1/60 Hz, Signal Input 24 DC with explosion proof electrical protection, HP 1, 16.0A, along with manual override hand wheel
- Valve and Actuator were assembled in Ponca City, OK and Channelview, TX

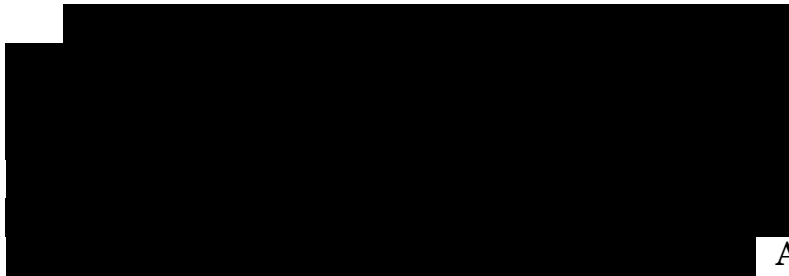
ETP developed the EFRD Inspection and Test Plans (ITPs) to verify purchase, manufacture, assembly, and performance. These test plans are followed by the manufacturers and the assemblers and were verified by Third Party Inspectors. Third Party Inspectors were present at all assembly facilities and they witnessed all tests to ensure that the ITP was followed. All valves were hydrostatically tested in the fully-open, fully- closed and partially- stroked positions at the assembly facility. Through the above testing protocol, the MLVs were documented for compliance with the ITP. All valves are also hydrostatically tested for a second time in the field for a full 8-hr period in the partially-stroked position after the EFRD final installation.

The closure times on the EFRD valves were based on the DAPL Pipeline Surge Analysis Report and are a function of the size of the valves and the electrical requirements, and electrical availability.

ETP considers any unanticipated release of crude oil as a leak. ETP does not tolerate operational failures. Leaks are not acceptable, and no minimum amount of release is acceptable for operations. The isolation provided by the EFRDs on each side of the river reduces the worst-case crude amount that could be released.

All MLVs, and therefore all EFRD valves, on the DAPL system are equipped with electric-motor operated actuators. To reduce the potential for systematic faults within the controls, the actuators are supplied with heaters, surge arrestors on the power supply in the local enclosures, and power failure alarms. Each valve is monitored and controlled (via remote control) at the central pipeline control center. In the event of an electrical power failure at an EFRD valve site, the valve will remain in its last position (i.e. "fail-safe" position). If required, the valve actuator can be operated manually via the integrated hand wheel. The controls for the EFRDs are located in local enclosures with air conditioning and heating to protect them from the elements.

ETP provided design temperature specifications to the steel mills, pipe and fitting manufacturers, as well as all pump, valve, and instrumentation manufacturers to ensure that both high- and low-temperature concerns would be considered in the manufacturing of those materials and equipment. The valves and settings are designed to meet operating temperatures ranging from - 20 degrees to 150 degrees Fahrenheit, even though the product in the pipeline and thus the pipe itself is not anticipated to drop below 60 degrees Fahrenheit, even in the coldest North Dakota winters.



A description of the functional testing procedure for all EFRDs is per Original Equipment Manufacturer (OEM) recommended procedure and test frequency defined as per 49 CFR §195. Precautions to reduce the potential for systematic faults within the EFRD

valve control is per OEM recommended Valve Preventive Maintenance Procedure and Valve Preventive Maintenance Schedule. ETP incorporated High Integrity Safety Interlocks into the DAPL system.

Surge Relief Valves (SRVs):

As required by regulation, DAPL pressure relief consists of pressure controls, thermal relief valves, and surge relief valves at select Pump Stations. The design of these systems is dependent on a complex range of factors. Systems where pressure is contained must have some type of pressure relief to reduce the risk of overpressure.

Pressure control for the DAPL pump stations systems is regulated by an integrated pressure control loop. Each pump station is equipped with redundant high pressure shutdown instrumentation, which includes the integrated pressure control loop which has an independent High pressure-Pressure Switch and Pressure Transmitter, which will override the control loop to shut down the pipeline before over-pressuring could occur.

To determine if there is a risk of surge during normal operations and to determine the design of the pressure relief system, transient flow simulation, steady-state, and normal operation flow models were developed. Given the importance of river crossing pipeline segments and the provision for EFRD closure, transient flow analysis was carried out for the purpose of sizing surge relief systems. The sizing recommendation for the SRVs was developed and issued through the DAPL Pipeline Surge Analysis Report. An SRV is located at the Redfield Pump Station in South Dakota. This SRV is a

Danflo which was supplied by SPX Corporation and sizing details were validated through both SPX and third-party engineering services. The equipment manufacturer provided ETP with technical documentation for the installation and in-service testing of the SRV.

The DAPL Pump Stations are located near Johnsons Corner ND, Redfield, SD and Cambridge, IA. Each station was positioned based on the transient and steady-state surge analysis recommendations and is equipped with a series of process instrumentation to monitor and mitigate overpressure and surge conditions. The original equipment manufacturer provided ETP with technical documentation for the installation and in-service testing of the SRV's. Each SRV contains an actuated relief valve that allows for in-service field test verification.

As part of the pressure relief system, thermal relief valves are used for protection during static conditions in accordance with DAPL systems engineering standards and applicable code requirements.

Finally, the operation of the valves system including automatic valve shutdown is addressed in Easement Condition 21.

Therefore, the EA did not rely on the premise that emergency block valves would close immediately upon leak detection, but instead based its worst-case scenario release model time on a conservative estimate of no greater than three minutes. EarthFax's comment is therefore flawed and it does not actually create any substantial evidence of controversial effects.



*See also* F8, G7, L7, L30, M28

A11.10 “[T]he EA does not present a discussion of the ‘protection and mitigation measures’ that are planned. Since the Finding of No Significant Impact is preceded by the word ‘Mitigated’, these mitigation plans should have been detailed in the EA . . . it is important that plans be developed and mitigation measures be in place to protect water intakes before the DA Pipeline is operated.”

RESPONSE: Topic is addressed in the response to Comment A6.

A12.10 “[T]he EA states that ‘in the event of a leak, Dakota Access would work aggressively to isolate the source through the use of remote-controlled shut-off valves, initiate cleanup activities, and contact appropriate federal and state authorities to coordinate leak containment and cleanup.’ These actions are necessary but are not sufficient to mitigate impacts.”

RESPONSE: EarthFax does not identify the specific actions that it believes are necessary to mitigate the impacts from an oil spill in addition to what the Corps already considered in the EA. The EA describes the design and operation measures ETP will implement to protect downstream intake users. Final EA at 42; 88-94. ETP’s SPCC Plan describes cleanup procedures and remediation activities during construction. EA, Appendix A. ETP prepared a FRP that complies with the applicable requirements of the OPA, and has been prepared in accordance with the NCP and the Mid-Missouri SACP. Final EA, Appendix L. The EA also describes ETP’s proposed remediation plans for impacts to groundwater resources. Final EA at 45-49.

In the event of a spill, ETP will consider alternative water supply sources as part of the contingency planning. Final EA at 38. ETP identified drinking water intakes and incorporated the intakes into the updated spill model and companion report. ETP also incorporated the identified drinking water intakes into the site-specific GRP. ETP will also evaluate shutting down certain intakes and utilizing others or utilizing different drinking water sources or bottled water as part of this process. The Federal On-Scene Incident Commander would be responsible for assimilating and approving the response actions under the Unified Command. ETP coordinated its emergency response planning documents with the Corps as required by USACE Easement Conditions 8, 9a, and 10.

Under the OPA, the owner or operator, as defined by 33 U.S.C. § 2701, is liable for the costs associated with the containment, cleanup, and damages resulting from a spill. ETP maintains financial responsibility for the duration of the response actions. If the responsible party cannot pay, funds from the Oil Spill Liability Trust Fund are used to cover the cost of removal or damages. The Fund is paid for through a five-cents per barrel fee on imported and domestic oil and also any fines or civil penalties collected from other operators.

*See also* A22, B9, C9, C25, C32, D4, J3, J25, G13, M23, M24

A13.11 “No mention is made of erosion control practices that will be implemented where the ground

slope is less than 25%. With the pipeline buried generally at a depth of 36 inches, erosion could be a significant factor in exposure of the pipeline.”

RESPONSE: The Corps gave special attention to areas where slopes are greater than 25% because these areas are subject to higher erosion. However, the Corps also considered areas less than 25% slope. ETP utilized temporary erosion control devices (ECDs) throughout construction and permanent restoration and re-vegetation in areas that may be prone to surficial erosion processes. Final EA, Appendix A and G. Additionally, ETP installed temporary and permanent slope breakers as necessary diagonally across the ROW on slopes to control erosion by reducing and shortening the velocity, length and concentration of runoff on slopes as little as 5%. *Id.*

Furthermore, the Corps required ETP to address temporary sediment control measures under Easement Condition 5. Easement Conditions 4 and 24 require compliance with the Stormwater Pollution Prevention Plan (SWPPP) and the Environmental Construction Plan (ECP).

A14.11 “Section 3.1.3.1 provides a discussion of landslide potential in the area of concern. This potential is qualitatively described as ranging from moderate to high. The probable depth of the landslide failure surface relative to the depth of the pipeline is also not discussed. Without this information, the potential impact of landslides on the pipeline cannot be properly quantified and assessed.”

RESPONSE: Expert geologists assessed the potential impact of landslides through a review of detailed aerial imagery, geologic maps, subsurface

maps, as well as site-specific boring data. ETP engineering experts reviewed the detailed aerial imagery, geologic maps, subsurface maps, and site-specific borings across the entire drill area during the planning and design stages for the HDD. Results of the geotechnical borings across the entire drill area are included in Appendix D of the EA. The assessment revealed no evidence of deep-seated landslides in the vicinity and the risk of landslide is low.

EarthFax's comments regarding landslide susceptibility in the vicinity of Lake Oahe appear to be based in part on the digital landslide incidence/landslide susceptibility map data compiled by Godt (1997). This mapping is very generalized because it identifies an entire area as "High Susceptibility" even though it includes Lake Oahe and surrounding upland areas that are predominantly flat to gently inclined (gradients less than 15 percent). Therefore, this geologic hazard mapping is too generalized and lacks an adequate resolution scale to draw meaningful conclusions. Every inch on that map represents approximately 60 miles (1:3,750,000 scale).

Figures A14(a) through A14(d) illustrate steep slope geohazard mapping of the proposed route and crossing at Lake Oahe and west to the Canonball River watershed divide. The ground surface along the majority of the pipeline alignment in the vicinity of the lake is relatively flat with gradients less than 15 percent. Ground surface gradients along other portions of the pipeline alignment range from 15 to 30 percent where the alignment crosses existing drainage networks. Existing ground surface slope inclinations within the entry (east side) and exit (west side) workspaces and the stringing area are

relatively flat with gradients generally less than 15 percent. USGS<sup>22</sup> and NDGS<sup>33</sup> mapped the Fox Hills Formation (late Cretaceous, about 99.6 million to 65.5 million years ago) as outcropping to the east and west of the Lake Oahe crossing site. At the location of the western Lake Oahe HDD insertion point, the quaternary alluvium and glacial deposits are present as surficial deposits within the Missouri River valley. At the location of the eastern Lake Oahe HDD exit point, quaternary sand, silt and gravel deposits with a veneer of glacial derived loess deposits are present, with the Fox Hills and Hell Creek formations outcropping approximately 0.5 to 1 mile to the east.<sup>4</sup>

ETP reviewed data from geotechnical borings across the entire drill area including two borings over 200 feet into alluvium and glacial deposits and possibly the Fox Hills Formation or top of the Pierre formation. This material is not conducive to deep-seated landslides. At the location of the steep bluff on the west side of Lake Oahe, the depth of the drill profile is 100 to 120 feet below the ground surface and 90 to 115 feet below the mud line of the river, and therefore not at risk for landslide. Data from the borings on the west side of Lake Oahe indicate

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<sup>2</sup> U.S. Geological Survey, 1980. Ground-Water Resources of Morton County, North Dakota, County Ground-Water Studies 27 – Part III, North Dakota State Water Commission, Bulletin 72 – Part III, North Dakota Geological Survey.

<sup>3</sup> North Dakota Geological Survey, 1984. Geology of Emmons County, North Dakota, Bulletin 66 – Part I, County Groundwater Studies 23 – Part I; Plate 1.

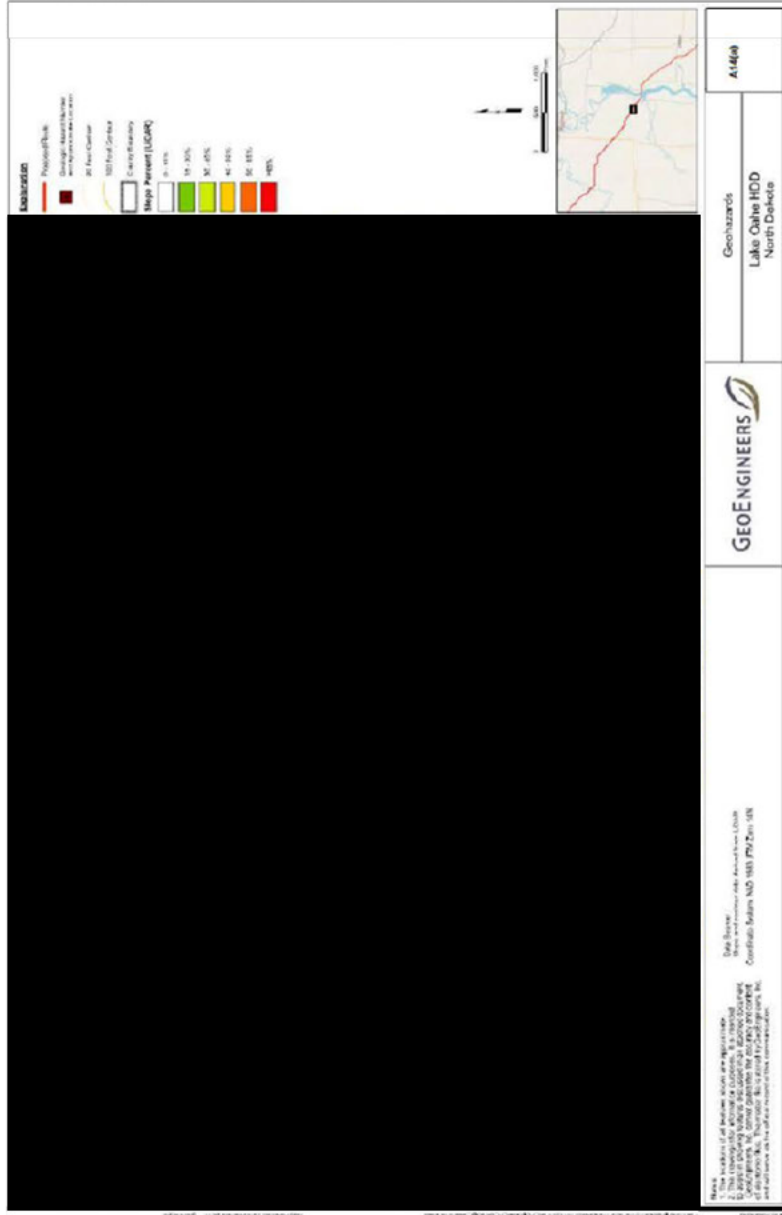
<sup>4</sup> NDGS, 1984

that alluvium and glacial deposits in this area predominately consists of medium dense to very dense sand with variable silt and clay content. These sub-surface conditions are not conducive to landslide activity in areas with ground surface gradients less than 30 percent. The top of the alluvium and glacial deposits are younger deposits that may exhibit some land creep but not the massive landslide break-away conditions that would be of concern relative to pipeline integrity. In addition, aerial imagery does not indicate a high incidence of landslide activity within several miles of Lake Oahe.

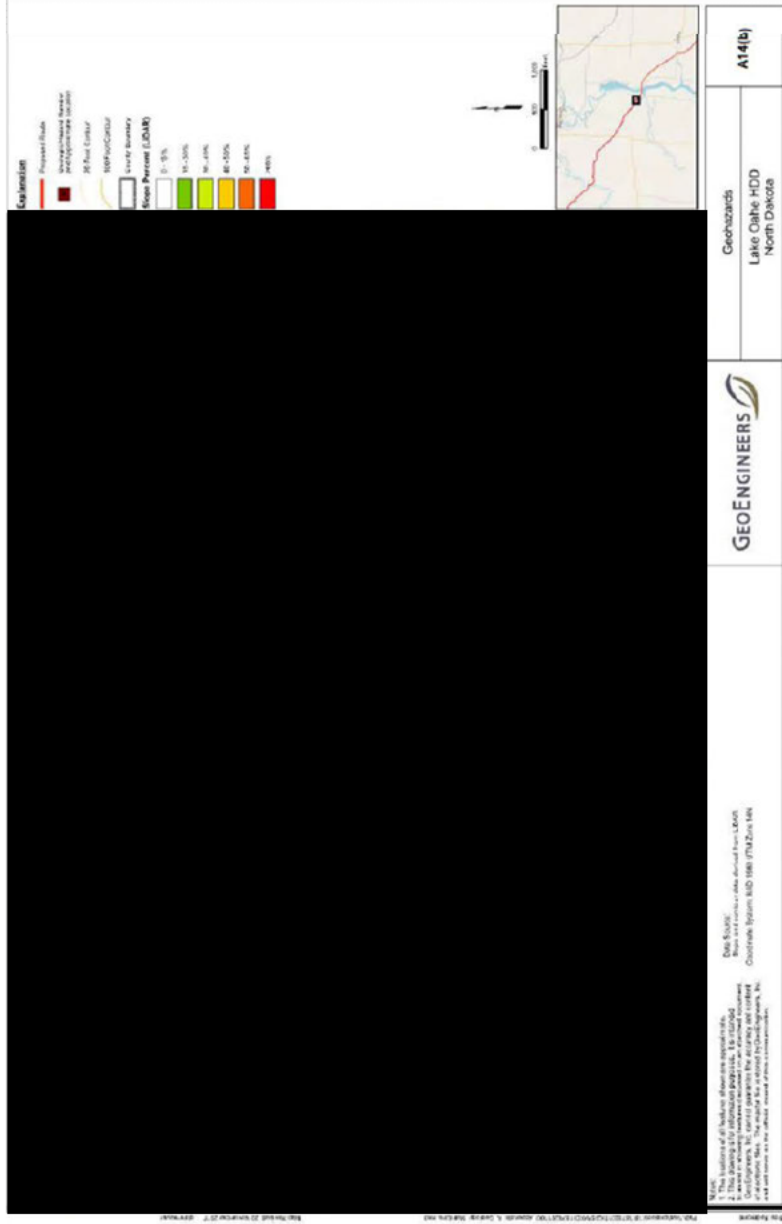
ETP designed the crossing location and HDD installation method to minimize risks associated with geologic hazards. The geotechnical analysis facilitated engineering and design, including selection of appropriate materials and construction methods to limit environmental impacts attributable to landslides. The pipeline passes through material that is not conducive to landslide activity at this location. ETP addressed areas that may be prone to surficial erosion processes through temporary ECDs throughout construction and permanent restoration and revegetation as outlined in the SWPPP and the ECP. Final EA, Appendices A and G.

*See also* A18, A19, B2, B3, B4, C8, C16, C20, C26, E1 1, F14, Ii, J20, L56, L71, M16, M17, M31

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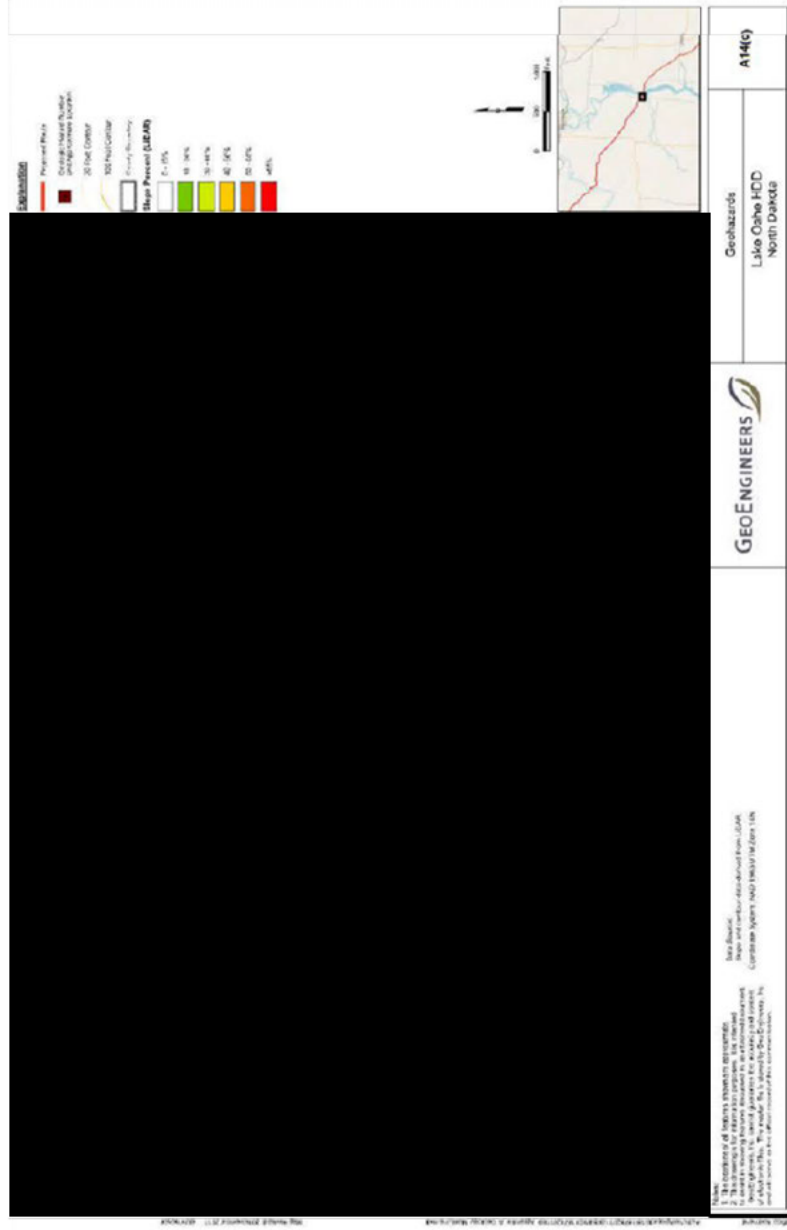


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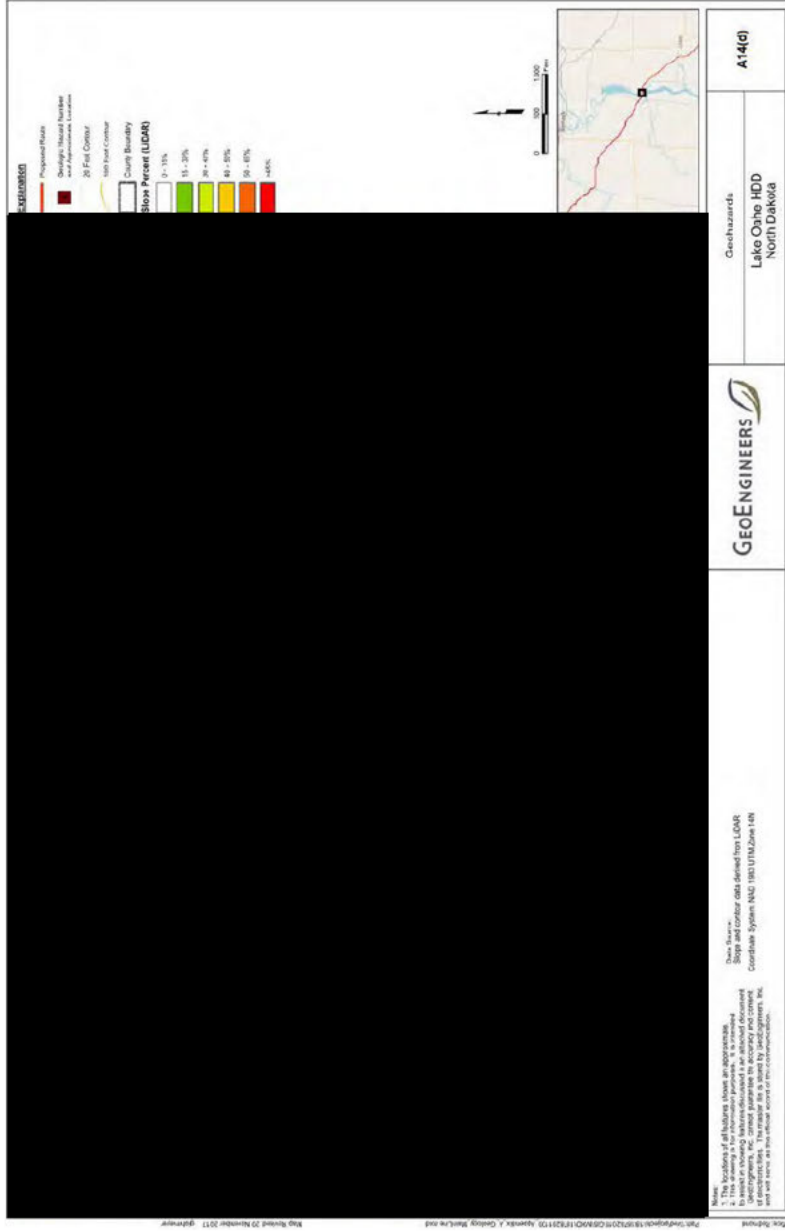
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Geohazards  
Lake Ocho HDD  
North Ditch

A14(c)

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A15.11 “Since a 500-year discharge event was used for the scour analyses, the potential extent of scour at this location should have been evaluated assuming that the dam is breached.”

RESPONSE: ETP designed the HDD profile under Lake Oahe to provide 92 feet of cover below the bottom of the lake. The pipeline below Lake Oahe is at low risk of river scour at the proposed Lake Oahe crossing due to the ponded condition of the lake at this location. Additionally, based on the borings at the location of the crossing, the depth of the pipeline is over 70 feet below the estimated depth of the free-flowing Missouri River prior to the construction of the dam. Therefore, if the dam was removed/breached, the pipeline would be below the depth of the river even if it was allowed to scour down to its pre-dam levels. GeoEngineers performed a scour analysis in order to evaluate the scour risk to the proposed pipeline during 100- and 500-year discharge events for the Lake Oahe crossing. Final EA at 16. ETP coordinated with the North Dakota Office of the State Engineer who performed an independent review of the calculations as part of the Sovereign Lands Permitting Process to verify adequate depths for the pipe to be buried relative to geomorphological movements for the Lake Oahe crossing. The North Dakota Office of the State Engineer issued ETP a Sovereign Lands Permit. Final EA, Appendix M.

EarthFax asserts that the conclusions drawn in the EA are only true if the reservoir dam functions properly and generally recommends that the scour analysis should have incorporated the assumption that the dam is breached. EarthFax did not provide

the results from any scour analysis containing their preferred assumption. Also, EarthFax did not provide any scientific evidence or studies specific to Lake Oahe that would cause the Corps doubt its previous methodologies and data supporting the Corps' reliance on ETP's scour analysis. Therefore, this comment does not show that substantial dispute exists as to the size, nature, or effect of the major Federal action.

A16.11 "The potential for this scour scenario (bend plus contraction scour occurring at the crossing) was quantified by comparing the results of multiple calculation methods and arriving at a factor of safety against exposure of 1.4 to 2.3 . . . . it is unknown if this approach was appropriate or if these calculations took into account the relative errors of the various equations, which errors would affect the interpretation of the results. Given the potential depth of scour versus the planned depth of pipeline installation, the calculations should have been presented to allow independent review of the risk by the Corps of Engineers."

RESPONSE: Comment is addressed in response to Comment A15.

A17.11 "No mention is made of pipe bedding..."

RESPONSE: According to ETP, pipe bedding is by nature only applicable to the sections of pipe installed by trench and therefore not the sections installed by HDD at Lake Oahe between the insertion and exit points. Nevertheless, ETP's contractor used padding machines over the entire length of the pipeline, not just at the Oahe crossing, such that all pipe has bedding material underneath and on top of the pipeline.

After backfill was completed, ETP required the contractor to conduct a water based hydro test. On March 24, 2017, Enduro Pipeline Services, Inc. checked pipe ovality using caliper tools over the entire length of the pipeline to ensure the hydro test did not deform any of the pipe and to locate any potential dents. The Caliper Survey Field Report shows that DAPL had zero findings and zero repairs related to the Lake Oahe crossing.

For the portions of the pipe installed within a trench, prior to lowering-in, DAPL construction specifications required bedding material be added if the bottom of the trench is rocky. The following excerpts from the DAPL construction specifications are applicable:

Section 5.9 Backfilling: After lowering-in has been completed, but before backfilling, the trench shall be inspected by Contractor to verify the ditch is dry and shall be inspected to ensure that no skids, brush, stumps, trees, timber mats, boulders or debris are in the ditch. No such materials or debris shall be backfilled into the ditch... Rock, larger than one inch in diameter, or like materials shall not be backfilled directly onto the pipe. If proper rock shield is provided, up to two inch diameter rocks are permitted. Where such materials are encountered, contractor shall haul, if necessary, sufficient earth or sand to be backfilled around and over the pipe to form a protective padding or cushion ... Large rock or boulders shall not be backfilled into the ditch shall be disposed of properly.

Section 5.8.3 Dirt Padding: Soil conditions change from site to site, therefore the Construction Manager, in consultation with the Field Engineer

and the Project Manager, has the responsibility to monitor soil conditions and verify that contractor deploys the correct method of backfilling that will assure protection of the coating and pipe. If padding is required, the Construction Manager shall communicate with the contractor to determine the proper screen sizing and backfill application, for the existing conditions. The Construction Manager shall then communicate to the inspection staff the proper backfill method and the inspector will verify that the contractor adheres to the agreed to backfill method... if required, dirt padding shall be installed in the bottom of the ditch to a minimum depth of 8 inches, prior to lowering-in the pipeline, if other acceptable support for protecting the bottom of the pipe is not utilized. A minimum of 8 inches of dirt padding shall be installed as cover on top of the line as protection prior to backfilling...

5.7 Holiday Detection: Contractor shall ensure that coating inspection, both visible inspection and electronic holiday detection shall be performed by Contractor both immediately prior to and/or immediately upon completion of the lowering-in operation as conditions require. The entire coated surface shall be inspected for holidays. Additional excavation may be required to utilize electronic holiday detection after completion of lowering in for tie-ins etc...[Note for the reader: Holidays are discontinuities in a coating, such as pinholes cracks, gaps, or other flaws, that allow areas of the base metal to be exposed to any corrosive environment that contacts the coating surface. A Jeep (Holiday detector) is an electrical device used to detect abnormalities/holidays in pipeline coating].

A18.12 “As part of a discussion about erosion control methods to be implemented, Section 3.1.3.2 of the EA indicates that ‘construction and operation of the Proposed Action facilities . . . would not be expected to increase the potential for significant landslide or slip events’. The implication of this statement is that the control of surface erosion will also control landslides. This is an inappropriate conclusion.”

RESPONSE: The Corps did not intend to imply that controlling surface erosion will also control landslides. Landslide risk is addressed in the response to Comment A14.

A19.12 “Section 3.1.3.2 of the EA also states that ‘the strength and ductility of a properly designed pipeline would allow it to span a considerable distance without compromising its integrity in the event of a landslide or other ground movement, such as subsidence.’ This statement is true only if the pipeline was designed for such a span. Friction from adjacent soil can place substantial added forces on a pipeline during a landslide, whether those forces are caused by abrupt movements or slow movements.”

RESPONSE: As part of the Section 408 review, the Corps required an HDD plan. The Corps’ geologist and geotechnical engineers reviewed ETP’s HDD plan and deemed it sufficient. EarthFax did not provide any scientific evidence or studies specific to the Lake Oahe HDD plan that would cause the Corps to doubt its previous methodologies and data supporting the Corps’ reliance on ETP’s HDD Plan. As noted in the response to Comment A14, there is no evidence of deep-seated landslides in the vicinity of the Lake

Oahe crossing. EarthFax did not provide any scientific evidence or studies specific to the Lake Oahe HDD plan that would cause the Corps to doubt its previous methodologies and data supporting the Corps' conclusion on the risk of landslides in the vicinity of the Lake Oahe crossing. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

A20.12 "In order to properly revegetate the disturbed area and minimize long-term erosion, it is critical that surficial soil be segregated and replaced throughout the length of the pipeline disturbance, whether the area has agricultural significance or not."

RESPONSE: Topsoil segregation is by nature only applicable to the sections of pipe installed by trench and therefore not the sections installed by HDD at Lake Oahe between the insertion and exit points. For portions of the pipe installed by trench, ETP performed topsoil segregation in accordance with landowner agreements and North Dakota Public Service Commission (PSC) conditions under various site condition scenarios. Final EA, Appendix C. The PSC conducted oversight and inspection of topsoil segregation. In May 2017, the ND PSC opened an investigation to look into possible siting violations discovered by a third-party construction inspector hired by the PSC. The third-party inspection reports noted inadequate subsoil and topsoil segregation. On September 20, 2017, PSC and ETP entered into a settlement agreement whereby ETP will inspect, with the participation of Commission staff, any areas of concern raised by landowners and will investigate and address any issues identified. ND Public Service Commission, Dakota Access, LLC, Dakota Access Pipeline Project



Siting Application, Case No. PU-14-842, Settlement Agreement (Sept. 20, 2017). ETP addressed avoidance and minimization of soil impacts in the SPCC, SWPPP, and ECP. Furthermore, Easement Condition 24 requires avoidance and minimization of soil impacts.

A21.12 “[N]o mention is made of [hydrostatic] testing after the pipeline is installed . . . it would be appropriate to hydrostatically test the pipeline after it is installed and before it is put into operation.”

RESPONSE: There are several references within the EA related to hydrostatic testing. Final EA, at 18, 48, 88, and 93. ETP conducted hydrostatic tests on the portion of the pipeline installed under Lake Oahe to a minimum pressure of 1,880 psig. The first test was the pre-in-service hydrostatic test at a minimum of 1.25 times maximum operating pressure (MOP) for eight continuous hours, which was performed prior to pulling the pipe under the Lake on February 28, 2017. The second test was performed under the same conditions after the pipe was pulled under the Lake and completed on March 24, 2017. ETP reported that both tests were successful. Furthermore, the Corps required post-construction hydrostatic testing as Easement Condition 15.

See also E4, E5

A22.12 “Section 3.2.2.2 of the EA states that ‘dispersion, evaporation, dissolution, sorption, photodegradation, biodegradation, and natural attenuation ultimately would allow a return to preexisting conditions in both soil and groundwater’ if a spill occurs and no active groundwater remediation occurs . . . .

relying solely on these natural attenuation factors to remediate groundwater that is contaminated with a crude-oil spill would be inappropriate under most conditions.

RESPONSE: EarthFax's assertion is incorrect that natural attenuation will be utilized in the remedy without consideration of additional measures. As described in the response to Comment A12, ETP will consider multiple measures to remediate impacts to soil and groundwater. Final EA at 48.

A23.12-13 "Section 4.2 of the EA states that operational spill-related impacts 'would be avoided or greatly reduced by requiring immediate cleanup should a spill or leak occur.' This statement oversimplifies efforts and minimizes the impacts that a spill could occur . . . the EA should have provided a more comprehensive quantitative evaluation of spill impacts rather than implying that a goal of "immediate cleanup" should be sufficient to resolve those concerns."

RESPONSE: While the potential risk for a worst-case release is low such a spill would result in high consequences. Final EA at 91. The EA describes the design and operation measures ETP will implement to protect downstream intake users. Final EA at 42; 88-94. ETP's Spill Prevention Control and Countermeasure Plan (SPCC Plan) describes cleanup procedures and remediation activities during construction. Final EA, Appendix A. ETP prepared a FRP that complies with the applicable requirements of the Oil Pollution Act of 1990 (OPA 90), the National Oil and Hazardous Substances

Pollution Contingency Plan, and the Mid-Missouri Sub-Area Contingency Plan. Final EA, Appendix L.

Following PHMSA modeling guidance, ETP prepared a spill model specific to the Lake Oahe crossing. ETP used the hypothetical worst-case scenario volume to design a location-specific GRP for the crossing. ETP's GRP describes cleanup procedures and remediation activities during operations. ETP provided the GRP to the Corps, SRST, and CRST for review. ETP incorporated comments from the Corps, SRST, and CRST into revised versions of the GRP.

Furthermore, ETP coordinated its emergency response planning documents with the Corps in accordance with easement conditions 8, 9, and 10.

Earthfax did not specifically identify an alternative methodology that was more appropriate for the evaluation. Earthfax generally commented that a more comprehensive quantitative evaluation was appropriate but does not identify a particular evaluation or the particular factors, criteria, or technique to perform the quantitative evaluation. Earthfax did not provide any scientific evidence or even studies specific to Lake Oahe that would cause the Corps to doubt its previous methodologies and data supporting the Corps' conclusion to rely on ETP's clean-up methods and spill impacts. Nor did EarthFax provide the results from its preferred quantitative evaluation to the Corps to consider. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

**Document B: Accufacts Review of the U.S.  
Army Corps of Engineers (USACE)  
Environmental Assessment (EA) for the Dakota  
Access Pipeline (“DAPL”)  
Memorandum to Jan Hasselman, Earthjustice,  
Richard Kuprewicz**

B1.2 “USACE does not provide appropriate detailed analysis as to the oil spill risks to these sensitive waters, either from the specific crossings or from other sections of the pipeline that could release oil that could reach these High Consequence Areas, or HCAs (e.g., unusually sensitive areas, or USAs). For the DAPL segments that could affect these HCAs, the EA fails to provide sufficient detail to support the finding of low risk with the proposed mitigations. The sources of risks are not prudently explained, and information is not provided in enough detail to permit an independent confirmation of USACE findings.”

RESPONSE: This topic is addressed in the response to comment A10. The Corps considered HCAs in the evaluation of DAPL. Final EA at 94. ETP used output spill pathways in geospatial data formats to consider potential interactions with HCAs, USAs, and other areas as defined by PHMSA. Lake Oahe Crossing Report at 11-18; *See also* Spill Model Report at 164-177. The spill models follow PHMSA modeling guidance and include information on hypothetical worst-case release volumes, intake locations and an analysis of the flow distance and the time that it would take for the first oil from an unabated release to travel downstream and reach water intakes.

The spill models account for the presences of HCAs. Lake Oahe Crossing Report at 16 and Appendix 3. ETP designed the pipeline and developed operational parameters to reduce the risk (probability and consequence) of a release at HCAs in accordance with PHMSA requirements. The table presented on page 16 of that document illustrates the downstream distances from the pipeline crossing and locations where the simulated oil plumes are predicted to interact with the HCAs.

ETP considered HCAs along the two alternative alignments in accordance with 49 CFR § 195.452. The impacts to mapped HCA's at the proposed crossing are similar to, or less than, those for the Alternate Route Crossing North of Bismarck. Final EA at 9-10. According to ETP, there are no known code or industry accepted procedures that state that the HCAs cannot be used as one measure to assess relative risk between points along the alignment during that evaluation.

In the "DAPL — Route Comparison and Environmental Justice Considerations" memorandum, ETP provided the Corps with data showing that the former Fort Yates municipal drinking water intake, which at that time was the first known Tribal-related drinking water (i.e., human consumption) intake downstream of the Lake Oahe crossing, is approximately 27 miles downstream of the Lake Oahe crossing. Any release at the Lake Oahe segment would have to go unmitigated for long enough to reach the off-line community intake at Fort Yates. However, this risk is further reduced since the Fort Yates water intake was replaced with a new intake structure located approximately 75 miles south of the pipeline crossing.

Furthermore, Corps Easement Conditions 34 and 35 require ETP to take measures to protect HCAs.

*See also* B8, B14, C9, C17, C29, E8, E13, F2, G1, G10, G14, J14, L47, L48

B2.3 “[T]he EA mentions nearby areas of the pipeline route that are highly susceptible or have high incidence of landslide. While some of this landslide discussion is related to construction site locations for the water crossings, there appear to be other areas of the pipeline located in high landslide risk areas. The North Dakota Geological Survey has noted for the DAPL ‘High concentrations of landslides have been mapped in many regions along the proposed route centerline shown in Figure 1 of your document.’”

RESPONSE: Topic is addressed in the response to Comment A14.

B3.3 “Further analysis and information as to the pipeline’s location in [nearby high-risk] landslide areas and its potential impacts to the federal crossings and sensitive waterways, should the pipeline fail, must be clearly incorporated into the EA. The EA specifically states, ‘This strength and ductility effectively mitigates the effects of fault movement, landslides, and subsidence. Therefore, by implementing the mitigation measures presented here, impacts on the pipeline from geologic hazards are expected to be minimal.’ But this conclusory statement is insufficient . . . Statements/inferences in the EA that pipe design/steel/weld properties can mitigate the risks of landslide threat are very misleading, if not downright false. Landslide activity that could place such severe abnormal loading on pipeline segments where a release could affect the easements, especially the

sensitive waterways, needs to be clearly delineated by threat type, prudently evaluated, and risk determinations communicated to permit an independent evaluation of such assertions to assure they are not biased. None of this was done in the EA.”

RESPONSE: As noted in the response to Comment A14, there is no evidence of deep-seated landslides in the vicinity of the Lake Oahe crossing.

B4.4 “A more complete and detailed analysis may determine that the current federal easement crossings and pipeline route entering/leaving these federal easements are inappropriate because of potential impacts from off easement locations that could have a much greater impact on the sensitive waterways. For example, since no pipeline can be designed to withstand massive landslide forces, if such a threat exists, the pipeline should be routed out of the landslide threat area.”

RESPONSE: ETP demonstrated it avoided areas of high landslide risk during the design of the pipeline route. See the response to Comment A14. A review of the site-specific data indicates that the pipeline is already located away from a landslide threat area. This information includes aerial imagery, geologic maps, subsurface maps, and site-specific borings across the entire drill area as described in the response to Comment A14. Results of the geotechnical borings across the entire drill area are included in Appendix D of the EA.

*See also* E7, E11, F14, H2, I1

B5.5 “A study performed in 2012 reported that for hazardous liquid pipelines that utilized CPM

and SCADA leak detections, 'The pipeline controller/control room identified a release occurred around 17% of the time.' This low success rate for control room remote identification of pipeline release, even ruptures, is consistent with Accufacts' many liquid pipeline failure investigations spanning more than 40 years, especially more recent investigations. Remotely determining pipeline releases, even ruptures, particularly with respect to large rate releases, is difficult for various reasons. This is especially true if the remote monitoring is generating a large number of false release alarms that tend to train control room operators to ignore a true release alarm."

RESPONSE: ETP pipeline controllers are trained to shutdown pipelines and investigate when there is any doubt regarding the alarming of the possible presence of a release/leak. Based on Accufacts reference to the investigations it has conducted over 40 years, ETP infers that Accufacts is investigating older pipeline systems/technologies. ETP asserts that a comparison to data from 40 years ago, and from older pipelines installed prior to modern pipeline standards, overstates the risk of this modern pipeline.

According to ETP, it installed state-of-the-art pipeline monitoring tools and features that provide real-time transient modeling that includes data from various field instruments every 6 seconds and updated model calculations every 30 seconds. There are numerous pressure transmitters installed on the DAPL pipeline at regular intervals, including both sides of the Lake Oahe. The effects of a pipeline rupture would cause pressure waves to travel at the



speed of sound through the pipeline and would be detected as pressure drops within seconds of the rupture occurring.

ETP installed the LeakWarn system in accordance with PHMSA requirements and API-RP-1130 guidance (API Recommended Practice 1130 — Computational Pipeline Monitoring for Liquid Pipelines). ETP will evaluate the effectiveness of the leak detection system following the guidelines set forth in API-RP-1130, which include simulated leak tests, actual leak tests, or the analysis of confirmed releases. ETP may perform the simulated leak tests by electronically overriding the computers to simulate a leak condition, whereas the actual leak tests are performed by removing product from the pipe. ETP evaluates the results of each of these tests, and the response to actual releases, to optimize the system capabilities, refine the product release tolerances, validate the response times, and train the control room operators. Instrument and custody grade measurement equipment have been included as part of the pipeline design, and will provide data for the leak detection system. ETP uses this data to refine the detection system response during transient and steady state conditions.

Furthermore, the maintenance and operation of the valves, leak detection, and notification systems are required in Easement Conditions 21, 22, and 23.

*See also* C23, F8, G7, J15, L5, L23, L31, M22, M25

B6.5 “I recommend that if remote detection via SCADA is incorporated, such detection and response should be primarily directed on rupture detection.

Leak detection, the smaller rate releases, may be warranted on selective segments of the pipeline, but such efforts complicate the efforts (i.e., generate excessive false alarms) to reliably remotely indicate pipeline release to control room operators. Such a release approach should also clearly identify the measurement equipment, its precision and placement, and important transient analysis (i.e., changes in pipeline operating parameters such as crude oil variations and pump start up and shutdown impacts on parameters being monitored by the release detection system) that would indicate a rupture has most likely occurred. Pressure loss is not the most likely timely indicator of pipeline rupture for the pipeline segment(s) that could impact the sensitive watersheds . . . . I find that the EA has failed to provide sufficient information that would support response time claims in the EA. I also place little confidence in efforts attempting to allow for further study for such remote rupture detection as the science and dynamics of such releases should be easy to verify.”

RESPONSE: ETP is utilizing Leak Warn, which according to ETP is a leading Computational Pipeline Monitoring (CPM) system software program for monitoring pipelines, to monitor the pipeline for leaks. ETP modeled, configured and tuned the Leak Warn CPM system specific to the DAPL installation facilities including elevation profiles and pipeline MOP in accordance with PHMSA requirements and API-RP-1130 guidance.

According to ETP, this LeakWarn CPM system is capable of detecting leaks down to 1 percent or better of the pipeline flow rate within a time span of approx-

imately 1 hour or less and capable of providing rupture detection within 1 to 3 minutes. Once Leak Warn detects a leak, its interface to the SCADA system will trigger an audible alarm in the SCADA system, which will alert the ETP pipeline controller. The maintenance and operation of the valves, leak detection, and notification systems are required in Easement Conditions 21, 22, and 23.

Based on ETP's responses to Accufacts comments, the Accufacts comments do not show that a substantial dispute exists as to the size, nature, or effect of the major federal action as it relates to leak detection.

*See also* B7, F4, G13, J15, L5, L7, L8, L40, M25

B7.6 "Additional information and analysis is needed that would permit an independent verification that the rapid identification mentioned in the EA is even possible for the particular pipeline segments that could release into the unusually sensitive areas. Even if the claimed release detection parameters are true, which is highly unlikely given the lack of more detailed information in the EA, a large volume of oil would still be released before the control room were to take appropriate action. Overstatement of remote response timing in an oil spill understates the risks associated with the pipeline."

RESPONSE: As indicated in the response to Comment B6, the LeakWarn CPM system is capable of detecting leaks down to 1 percent or less of the pipeline flow rate within a time span of approximately 1 hour or less and capable of providing rupture detection within 1 to 3 minutes. In the event of a slow leak, even if pressure measurements do not

show a significant drop in pressure, a detectable meter imbalance will develop over a period of time resulting in an alarm to the Control Center. While the alarm threshold may be 1%, the SCADA and LeakWarn systems are sensitive to smaller changes in flow rate and pressure. DAPL Pipeline controllers are trained to shutdown pipelines and investigate when there is any doubt regarding the alarming of the possible presence of a release/leak.

Accufacts asserts that the additional information that is needed to perform its preferred analysis is described in Section IV of its comments. However, neither Section IV, nor anywhere else in the comments, specifically identifies the additional information and analysis that was more appropriate for the evaluation. Accufacts generally commented that more detailed information is required but did not provide any scientific evidence that would cause the Corps to doubt its previous methodologies and data supporting the Corps' reliance of ETP's description of the LeakWarn CPM system. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action. Furthermore, the maintenance and operation of the valves, leak detection, and notification systems are required in Easement Conditions 21, 22, and 23.

*See also* E13, L8

B8.6 "The lack of specific information in the EA strongly suggests deficiencies in the worst case discharge determination that could affect the unusually sensitive areas, and related oil spill response planning . . . . Information concerning the worst case discharge

barrels is not verifiable because the value that could reach or impact the federal easements and unusually sensitive areas has not been provided in the public documents associated with the EA.”

RESPONSE: Worst-case release determination is addressed in the responses to Comments A1 and A2. High consequence areas are addressed in the response to Comment B1. Accufacts does not specifically identify any deficient data or methodology that supported the worst case discharge determination.

B9.6 “[T]he water intake mitigation measures in the EA . . . do not provide sufficient information to validate any possible worst case values, or the associated oil spill response plan’s effectiveness.”

RESPONSE: Water intake protection and mitigation measures are addressed in the response to Comment A12. Worst-case scenario volumes are addressed in the responses to Comments A1 and A2. The response plan is addressed in the response to Comment A6.

B10.7 “Corrosion threats should be based on actual measured in the field readings verifying ILI runs and not based on assumed ‘conservative’ corrosion rates.”

RESPONSE: The Corps agrees with the Accufacts comment that corrosion rates may vary considerably and industry averages may not accurately reflect a particular pipeline’s operations. ETP cannot calculate a pipeline-specific corrosion rate until the pipeline is in service; therefore, ETP provided the Corps with “conservative” corrosion rate to support

the EA analysis. Corrosion management is a dynamic process that ETP continuously evaluates to insure optimal protection of all Dakota Access assets. Per the pipeline integrity management regulations for hazardous liquid pipelines (49 CFR § 195.452) and according to the Sunoco Integrity management plan, the DAPL is subject to robust integrity testing.

Additionally, as per Easement Condition 32, ETP must run cleaning pigs twice in the first year. ETP collects and samples liquids from these pigs to determine if liquid water is present. If water is present then ETP samples and analyzes it, and then develops internal corrosion mitigation plans based upon lab test results. Thus far, ETP has run cleaning pigs every quarter, exceeding the frequency stated in Condition 32. According to ETP, to date, liquid build up has not been an issue and there has not even been enough water collected to provide analysis.

ETP stated that the DAPL was designed with internal corrosion coupons that give approximated worst-case corrosion rates. ETP will examine the internal corrosion coupons at least twice each calendar year, but with intervals not exceeding 7.5 months per 49 CFR § 195.579. Per ETP internal procedure, corrosion coupons are pulled every six months in exceedance of this requirement. The DAPL has an internal corrosion control coupon located at the pig receiver to the east of Lake Oahe. According to ETP, a third party review of the corrosion coupon results indicates that they were below the acceptable rate (per procedure) of 1 mil per year (above 1 mil per year, treatment may be required).

Easement Condition 28 requires ETP to complete corrosion surveys for the pipeline segment within six months of placing the cathodic protection service into operation to ensure adequate external corrosion protection. ETP conducted a Close Interval Survey (CIS) in June 2017 to obtain cathodic protection potential readings at the rectifiers and CP test stations from MLV 380 to MLV 390. A third-party review of the cathodic protection records showed that the pipeline's cathodic protection system is performing in accordance with the pipeline safety regulations and the Operator's Operations and Maintenance Manual. ETP will perform another CIS for the entire pipeline within two years of the pipeline being placed in service in accordance with PHMSA regulations and Operator procedures. ETP will also run an in-line inspection device within two years of the pipeline being in service to discern any metal loss on the pipeline. ETP will test for wall thickness with each running of a metal loss in-line inspection device. The Operator performs a CIS every 5 to 7 years in conjunction with in-line inspection per procedures.

ETP explained that the Accufacts comment that corrosion threats should be based on actual measured in the field readings is flawed because ETP cannot calculate a pipeline-specific corrosion rate until the pipeline is in service; therefore, ETP used a "conservative" corrosion rate to support the EA analysis. Based on the foregoing, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major federal action.

B11.7 "ILI cannot identify all construction and transportation (i.e. cracking) defects that can survive

a 1.25 MAOP hydrotest. Given the nature of the product anticipated to be moved on the system, the operator should provide evidence that transportation cracking threats are not introduced that might survive a hydrotest but grow with time because of pressure cycling that may be associated with the crude oil operation.”

RESPONSE: ETP utilized the highest quality fusion bond epoxy (FBE) as an external pipe coatings to reduce the risk of corrosion and stress corrosion cracking. Final EA at 42. According to ETP, external coating was used in accordance with DOT 195, Subpart H, Corrosion Control, ASME B31.4, and Dakota Access’s construction specifications. ETP utilized modern, high-performance FBE and Abrasion-Resistant Overcoat (ARO) on both the Dakota Access Pipeline mainline pipe and on the joints. ETP coated the exterior of the line pipe with a 14-16 mil thick single layer of FBE, and applied an additional 40 mil layer of ARO over the FBE coating for bores and horizontal directional drills. These measures reduce the risk of potential threats.

To address the transportation fatigue cracking threat, DAPL states that it took a “preventive” approach with the extensive use of the transportation specifications API RP 5L1 (Railroad), API RP 5LW (Marine), and API RP 5LT (Truck) to avoid inducing transportation fatigue cracks. According to ETP, NTSB investigations indicate transportation fatigue cracking is an issue for large diameter, thin wall pipe when it is shipped/transported while setting on its seam.



It is ETP 's understanding that all known cases of transportation fatigue crack failures that have occurred on liquid pipelines have involved large diameter pipe with Diameter/Wall Thickness (D/t) ratios greater than 100 making it extremely susceptible if not transported appropriately. DAPL has thick wall (0.625-inch) for the 30-inch pipeline. This results in a D/t ratio of 48 (significantly less than the D/t ratio of 100).

Accufacts did not specifically provide any scientific evidence that would cause the Corps to doubt its reliance on ETP data regarding transportation fatigue crack failures. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

Furthermore, coating requirements are addressed under Easement Conditions 17-20. *See also* C7, E5

B12.7 "Insufficient design detail has been provided in the EA to permit an evaluation as to the risks associated with incorrect operation and/or equipment failure on the segments that could affect the sensitive water crossings."

RESPONSE: Topic is addressed in the response to Comment A9.

B13.7 "Additional information is needed concerning the type of fusion bonded epoxy, or FBE, coating and whether it is of the more recent generation or type that permits CP current pass-through should the FBE disbond (separate from the pipe wall). This threat potential should be an easy issue to resolve."

RESPONSE: ETP utilized the highest quality FBE as an external pipe coating. Final EA at 42.

According to ETP, the latest technology coatings allow for cathodic protection to protect the pipe steel even under failed or disbonded coating to reduce the risk of corrosion and eliminate the potential for stress corrosion cracking. ETP pipeline utilized 3M Scotchkote 6233 FBE external pipe coating and SPC-2888 (field applied epoxy) as a joint coating. These are industry accepted high performance epoxy coatings that provide excellent adhesion and resistance to cathodic disbondment. Coating requirements are addressed under Easement Conditions 17-20.

*See also L57*

B14.8 “The risk analysis is missing critical details to permit an independent evaluation of risk for the project that could affect the sensitive waterways including Lake Oahe.”

RESPONSE: Topic is addressed in the response to Comment B1.

B15.8 “Non- destructive testing of 100 percent of girth welds should be clearly defined to mean radiological inspection (i.e., x-ray, gamma ray) of all girth welds that could impact the two crossings . . . I do not see such a clear requirement in the EA and API 1104 (a referenced industry standard providing guidance in pipeline welding) which affords too much room for misapplication . . . despite many attempts over the decades to develop and advance ILI technology, current ILI capabilities cannot accurately determine the quality of girth welds, especially as it relates to girth weld cracking.”

RESPONSE: ETP committed to inspecting welds via radiographic testing. Final EA at 18 and 88-94.

ETP completed radiographic testing. Furthermore, ETP committed to 100% girth weld radiography. Final EA at 93. According to ETP, this commitment exceeds the 49 CFR § 195 requirements which require nondestructive testing for just 10% of girth welds made by each welder per day (49 CFR § 195.234).

B16.9-10 “Any analysis should include the following information to provide assurances that the pipeline route/design/operation/ maintenance activities are complete to avoid failure, the risk analysis appropriate, and more importantly, that an oil spill response plan would likely be effective if ever needed. As too many oil spills have recently demonstrated, claims of complying with federal regulation 49 CFR § 194 (Response Plans for Onshore Oil Pipelines) do not assure that such plans will be effective in the event of an oil release. . . .

- a) the pipeline elevation profile (approximate elevation vs milepost for the pipeline segments between the nearest upstream and downstream pump stations) spanning the sensitive easements,
- b) on the elevation profile, a line indicating the Maximum Operating Pressure, or MOP,
- c) on the elevation profile, a hydraulic profile at the design rate case (various additional rates may be included as well for large elevation changes),
- d) location of mainline valves and their type of operation (e.g., manual, remote, automatic), as well as specific safety design if warranted,

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- e) general location/type of critical leak detection monitoring devices by milepost,
- f) identification by milepost range of High Consequence Areas, and
- g) given the numerous pipeline failures following ILI tool runs, further requirements are warranted on the type of ILI tool to be run, its frequency, and tool limitations for the segments that could threaten and affect the federal waters.

Without such information an EA for a specific pipeline is incomplete.”

RESPONSE: Dynamic Systems, third party engineers, conducted the risk analysis for DAPL. According to ETP, Dynamic Systems considered the items recommended by Accufacts during their preparation of the risk analysis of the Lake Oahe crossing. Dynamic Systems, considered the following factors during their preparation of the risk analysis of the Lake Oahe and Missouri River crossings:

- a) Elevations of the Lake Oahe and Missouri River crossings including elevations of the upstream and downstream isolating valves on either side of the HDD crossings of Lake Oahe and Missouri River, along with locations and type of operation, and the time to detect and isolate a leak.
- b) The Design Basis Memorandum including the Project MOP values at the locations of the two HDD crossings.

- c) A hydraulic profile for the design rate case and elevations which account for elevation changes.
- d) The location of mainline valves and the type of operation (e.g., manual, remote, automatic) with all excess flow restriction design analysis (EFRD) as design safety measures.
- e) Information on critical leak detection monitoring devices associated with the Leak Warn System consisting of pressure transmitters and ultrasonic flow meters by milepost location.
- f) Identification of High Consequence Areas by milepost location at the locations of the two HDD crossings.

Regarding Accufacts 7th item, ETP stated that the determination of protocol for the ILI tool run is based on more than just the results of the preliminary risk assessment. In particular, the protocol for the ILI tool run is determined post-construction in conjunction with the results of the as-built survey, the close interval survey, 3rd party construction risks, other identified threats, and the preliminary risk assessment. Thus, the information needed to justify “further requirements” for ETP to run in this area was not available when the Corps finalized the EA.

ETP provided the Corps with information on the risk analysis in the HDD Crossing Risk Analysis. These reports summarize risk analysis results and identify actions that would reduce the calculated likelihood of failure. The Reports concluded that the combined threat/combined consequence risk score of the

Lake Oahe Crossing is 1.27 (with 100 being the highest). It therefore falls into the low risk portion of the risk matrix.

Furthermore, the Corps acknowledged the importance of the ILI process by incorporating the inspection as a requirement in Easement Conditions 29 and 31.

The Accufacts comment is flawed. As outlined above, the DAPL risk analysis did consider the factors identified by Accufacts. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major federal action because the comment does not show flaws in the methods or data the Corps actually relied on here.

*See also* G1, L48

B17.11 (Attachment 1 page 1) “Complying with federal minimum pipeline safety regulations concerning Cathodic Protection does not insure that such systems will be effective in preventing pipeline release from corrosion.”

RESPONSE: According to ETP, DAPL exceeds the minimum pipeline safety regulations concerning Cathodic Protection. As indicated in the Pipeline Integrity Management Plan, the pipeline integrity management includes a combination of information assessment and analysis of elements. With regard to metal loss due to inadequate cathodic protection, the Corps required in-line inspection as part of Easement Condition 29. The in-line inspection is designed to assess the physical condition of the pipeline including the detection of any metal loss— pos-

sibly caused by external corrosion or other mechanisms. ETP will investigate and mitigate any anomalies as appropriate.

*See also L57*

B18.12 (Attachment 1 page 2) “No appropriate conclusions can be derived from the FRP at this time, as relevant pipeline system information important to the federal crossings has not been provided in the EA.”

RESPONSE: The Corps reviewed the FRP and relevant pipeline system information prior to the decision on the EA. This topic is addressed in response to comment A9.

*See also B19, B20, Cl, E10, J11*

B19.12 (Attachment 1 page 2) “Critical pipeline system information that can affect the federal crossings is missing, and this missing information will not permit the USACE to prudently evaluate the effectiveness of the various cited Manuals, Plans, and Models.”

RESPONSE- Topic is addressed in the response to Comment B18.

B20.12 (Attachment 1 page 3) “Training exercises cannot compensate for failures to install or evaluate proper equipment, operation and/or maintenance procedures, especially on pipeline systems that can affect sensitive areas. Key information is missing from the EA or is redacted to prevent a prudent evaluation of the proposal that could affect the federal crossings.”

RESPONSE: The Corps agrees with Accufacts that training exercises cannot compensate for failures to install or evaluate proper equipment, operation

and/or maintenance procedures. The training exercises incorporated into the Easement Conditions are added layers of protection and are not intended to substitute for improper installation or equipment maintenance. Topic is addressed in the response to Comment B18.

**Document C: Technical Engineering and Safety Assessment: Routing, Construction and Operation of the Dakota Access Pipeline in North Dakota ENVY Enerji ve Cevre Yatirimlari A.S. Attachment A-7 of Declaration of Rollie E. Wilson**

C1.3-4 “The documents withheld and specifically referenced by the USACE in their December 4, 2016 memorandum are:

- (a) North Dakota Lake Oahe Crossing Spill Model Discussion, prepared by the Wood Group Mustang Engineering;
- (b) Lake Oahe HDD Risk Analysis Report; and
- (c) DAPL Route Comparison and Environmental Justice Considerations. . . .

It is not possible to complete and compile a comprehensive technical and cost review without these key withheld documents. As the technical experts, we, therefore, recommend their release to allow for their review and analysis.”

RESPONSE: Topic is addressed in the response to Comment B18 and C22.

C2.8 “The references found reveals that ***there are no similar applications to what DAPL***



**have proposed involving crude oil as the product fluid in a low HDD bore in a large diameter/volume pipeline application underneath a wide freshwater waterbody similar to Lake Oahe . . .** Given that the HDD of Lake Oahe is perhaps the longest and largest diameter HDD efforts under a freshwater body, the USACE should incorporate a detailed and rigorous risk analysis in the proposed EIS.”

RESPONSE: ETP hired GeoEngineers to design, and hired Michels Drilling to perform, the Lake Oahe HDD. The Corps reviewed the HDD plan submitted by ETP and met with representatives of GeoEngineers and Michels Drilling in order to obtain a better understanding of the design and installation procedures.

ETP provided applicable examples of large diameter/long bore HDDs. According to GeoEngineers, there is virtually no difference with the design and construction of a large diameter/long bore HDD whether the pipeline is transporting natural gas or crude oil, or whether it is located under freshwater or saltwater. Final EA, Appendix B. Therefore, all of the referenced HDD's provided by ENVY are applicable regardless of pipeline product or type of water body. Michels Drilling has several examples of very long large-diameter crude oil HDD bores under freshwater bodies, two of them are referenced by ENVY. Four other examples provided by Michels include:

- Mississippi River HDD, Quincy IL/MO - Installation of 36-inch x 9,040 feet steel pipeline beneath Mississippi River and levees

- Lake Sakakawea HDD, North New Town, ND  
- Installation of 16-inch x 11,229 feet steel pipeline beneath Lake Sakakawea
- Mississippi River HDD, Sandusky, IA & Nauvoo, IL - Installation of 30-inch x 7,282 feet steel pipeline beneath Mississippi River
- Athabasca River HDD, Fort McMurray, AB, CA - Installation of 42-inch x 7,205 feet steel pipeline

*See also* C15, C20, C30, J14, L58

C3.11 “Why was the EA/FONSI devoid of a more robust and comparative assessment of the engineering design and safety risks that exist from HDD construction for either the 5,966-ft (1.13 mi) crossing north of Bismarck or the 7,800-ft. (1.47 mi) southern crossing that places the pipeline 92 f below the lakebed of Lake Oahe. The technical risk of crossing a freshwater lake that exceeds one mile is substantially bigger than a 100-200 ft crossing . . . Why was an engineering design and safety risk assessment not conducted as part of DAPL’s fatal flaw analysis?”

RESPONSE: According to ETP, both the Lake Oahe and the Alternative Route crossing north of Bismarck included HDDs of over one mile so the technical risk based on crossing lengths would have been similar. Even with the longer crossing at Lake Oahe, the risk of a spill was categorized as low due to the engineering design and proposed installation methodology.

ENVY did not specifically identify an alternative methodology that was more appropriate for the

assessment. ENVY generally commented that the technical risk of crossing a freshwater lake that exceeds one mile is substantially bigger than a 100-200 foot crossing but does not identify a particular assessment or the particular factors, criteria, or technique to perform the comparative assessment. ENVY did not provide any scientific evidence or studies specific to the Lake Oahe crossing or the alternative crossing north of Bismarck that would cause the Corps to doubt its previous methodologies and data supporting the Corps' reliance on ETP's risk analysis. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

Additional detail regarding the risk evaluation process is provided in the response to Comment A9.

*See also* J23, M8

C4.11 "What specific design and safety response features will DAPL incorporate in the river crossings that demonstrate maximum protection against potentially significant leaks and spills. If DAPL contends they are using "state-of-the-art" technologies, they should disclose and specify what those technologies are to allow the USACE to more rigorously evaluate potential environmental impacts and risks in the EIS."

RESPONSE: Topic is addressed in the response to Comment A6.

C5.11 "In order to lay a pipeline below Lake Oahe, the construction contractor must drill a horizontal lateral that is about 1.5 miles long and then pull a 30-inch diameter, 0.625-inch thick pre-manufactured

pipe all the way through the bore hole . . . . A 0.625-inch thick pipe is a very thick-walled metal pipe that is extremely heavy and would be hard to pull over a 7,800 ft long bore hole. In addition, metal pipe is subject to additional stresses by having to go around the two corners . . . . stresses on the pipeline sections and the pipeline as a whole increase as each welded section goes under ground into the lateral.”

RESPONSE: According to ETP, stress analysis in the detailed design report indicated that the installation stress combined by bending and tensile stress is 47,800 pounds per square inch which is 68% of the maximum allowable stress and below 90% of maximum allowable stress limited by American Association of Mechanical Engineers Section 402.3.2 of ASME B31.4.

ETP reports that the DAPL pipeline was installed without incident and the recorded pull forces and stresses were within acceptable limits. Additional information is provided in the response to Comment C15.

C6.12 “[***Actual welds on aboveground sections along the already-constructed sections of DAPL have been reported to have been, spot inspected by independent inspectors, and found to be out of compliance with pipeline standards*** . . . . Actual weld reinforcement variations observed were two times higher for both the top and bottom welds as noted in the required specs above. Significant undercut was also observed. These conditions translate to a stress-riser along the pipe.”

RESPONSE: The Corps Design Branch Mechanical Section Chief, Michael T. Smith, reviewed the

methods ETP proposed to use for welding various sections of the pipeline and concurred that the methods are compliant with applicable standards. USACE DAPL0075565 and

USACE DAPL0073915. ETP reports that all welds have been, and will be, subjected to x-ray and have been, or will be, evaluated based on acceptance criteria (e.g., API 1104).

Representatives from the Corps, SRST, ETP and various subject matter experts for the parties discussed this issue at the December 2, 2016 technical meeting. ETP believes that an unauthorized third-party conducted the October 23, 2016 “spot inspection” of the Dakota Access pipeline above-ground welds. ETP asserts that a photograph of a weld from the unauthorized spot inspection attempts to show that welds were not performed in accordance with pipeline welding specification API 1104. On December 2, 2016, Mr. Eric Amundsen, Integrity Management and Engineering Specifications Lead for Dakota Access, demonstrated that the photograph of the weld in question was of a stick weld and not a robotically controlled weld for which the pipeline welding specification API 1104 applies. Stick welds are not subject to API 1104. The technical expert for ETP described how the weld shown in the photograph appeared to be within compliance with the pipeline standard for the type of weld and if the unauthorized third-party was looking at the correct standard they would have likely concluded that the weld was in compliance. ETP states that the robotic weld is a more controlled process than what can be accomplished with the human hand. The robotic weld provides more repeatability and less standard deviation than would be observed

for a hand weld. Although both types of welds meet PHMSA requirements for safety, each has their own standard commensurate with their method of application.

Furthermore, the Corps required nondestructive tests of all girth welds under Easement Condition 14. Although ENVY prefers the Finite Element Analysis as the appropriate methodology for predicting how a product reacts to real-world forces, vibration, heat, fluid flow, and other physical effects, ENVY did not provide any scientific evidence or even studies specific to Lake Oahe that would cause the Corps to doubt its previous methodologies and data supporting the conclusions of Corps' Design Branch Mechanical Section Chief, Michael T. Smith. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major federal action.

C7.13 "Even with a pipeline pig inspection, it is not possible to detect all external wall damage or many internal pipe-wall damages due to stresses from construction. It is inevitable that some of these HDD construction risks will likely result in pipeline damage and that damaged pipe will be installed in the borehole."

RESPONSE: Topic is addressed in the response to Comment B11.

C8.13 "Undetectable underground leaks pose as some of the most significant environmental pollution risks throughout the life of the pipeline and potential risks increase over time through corrosion, landslide movement or other disruptive forces."

RESPONSE: The risk of an undetectable underground leak is low. ENVY did not specifically identify the significant environmental pollution risks or provide any scientific evidence or even studies specific to the Lake Oahe HDD that would cause the Corps doubt its previous methodologies and data supporting the Corps' reliance on ETP' risk analysis or the Corps' conclusions on landslide and corrosion risks. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

As noted in the response to Comment A14, the risk of landslide in the area is low. Leak detection is discussed in the response to Comment D13.

*See also D1*

C9.13 "The risks of damage to the pipe due to construction risks are not insignificant; once the pipeline is placed in the bore hole under Lake Oahe, there is little opportunity to remedy major problems that would require replacement of sections."

RESPONSE: The Corps considered construction risks and this topic is addressed in response to Comment F22. Groundwater remediation techniques are addressed in response to Comment A12. Final EA at 48. According to ETP, depending on the specific location of the leak, one or more of the remediation activities could be utilized according to the actual circumstances present. The proposed groundwater remediation system would be designed to treat the impacted groundwater by removing the released oil, converting it into harmless products, monitoring natural attenuation, etc. For example,

it may be possible to recover released oil by installing a recovery well either within the damaged pipeline or adjacent to the pipeline. Released product can also be removed from groundwater by applying various chemical methodologies including ozone and oxygen gas injection, surfactant enhanced recovery, and biological treatment techniques (including bioventing and bioaugmentation).

The majority of these techniques typically involve the installation of a vertical well, however, in some cases a horizontal well can be utilized. The same horizontal directional drilling methods that are used to install pipelines have been utilized for environmental and engineering applications since the late 1980's. Since then, HDD wells have been installed for a wide variety of environmental remediation activities including:

- Environmental soil sampling
- Extraction of soil vapor, ground water and free phase non-aqueous phase liquid (NAPL) contaminants
- Injection of water based substrates, air and various other fluids
- Thermal remediation of volatile contaminants
- Recirculating systems for groundwater cleanup

According to ETP, these horizontal wells have been successfully utilized for the collection of soil samples underneath rivers and ponds and for the remediation of underground storage tanks and dry cleaning fluid wastes under buildings as well as horizontal remediation wells for landfill waste, mine tailings and coal ash impoundments. There is a pump and treat horizontal well system of over 2,800 feet installed at



Vandenburg Air Force Base. Directed Technologies Drilling, one of the horizontal well installation providers, has performed over 10 HDD remediation wells for pipeline companies since 2013.

For groundwater remediation purposes, horizontal wells allow a well screen to be placed horizontally which is an advantage over vertical wells when there is a thin aquifer permeable layer to be targeted. Directed Technologies Drilling has recently installed horizontal remediation wells for one pipeline release site near Athens, Georgia that included two approximately 2,500 foot remediation wells at depth with 1,000 feet of screen on each well.

ETP will coordinate any proposed ground water treatment remediation plan with the North Dakota Department of Health and other responsible governmental authorities and may utilize a combination of technologies. The Corps recognized that a spill could be a high consequence event even though the likelihood is low. However, there is no evidence that drinking water aquifers are at risk even if there were to be a release from the pipeline segment associated with the Lake Oahe USACE Action Area. The boring logs under the river crossing show that the proposed pipeline intersects clayey sand, silty sand, and clay. This indicates that the alluvium and glacial deposits may be directly overlying the Pierre Shale (an aquitard). Therefore, if a release occurs in the pipeline segment beneath the Lake, when that release is discovered and the pipeline is shut down (preventing further release) it is likely that the released oil would have accumulated solely in these confining layers surrounding the pipeline resulting in a local area of oil contamination. Migration of the oil from a release under Lake Oahe

would be retarded by clay, clayey sand, and silty sand overlying the pipeline as well as the low permeability sediments that have accumulated at the bottom of the lake.

The surface bedrock in the area is the Hell Creek formation, which consists of sands and shales. The Hell Creek is underlain by the Fox Hills formation, which is distinguished by a general coarser sand with greenish tint and glauconitic. The Fox Hills formation is an outcropping in Sioux and Emmons Counties, where it comes to the surface.

The Hell Creek and Fox Hills formations are the major aquifers in the state and many residents depend on these formations for their water usage. One commenter asserted that the Fox Hills formation extends underneath Lake Oahe.<sup>5</sup> However, detailed localized U.S. Geological Survey mapping shows that the Fox Hills formation outcrops approximately one mile to the west of the western Lake Oahe<sup>5</sup> HDD insertion point as shown on Figure C9(a). The Hell Creek formation outcrops even further to the west. At the location of the western Lake Oahe HDD insertion point<sup>6</sup>, the quaternary alluvium and glacial deposits are present as surficial deposits within the Missouri River valley. At the location of the eastern Lake Oahe HDD exit point, quaternary sand, silt and gravel deposits with a veneer of glacial derived loess deposits

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<sup>5</sup> Rovenko, Ronald J. 2017. Report by Ronald J. Rovenko, Evaluation of Proposed DAPL Crossing of Lake Oahe, presented as Attachment 8 to the Rollie Wilson Declaration, Pages 175-179. Filed February 2, 2017.

<sup>6</sup> USGS, 1980

are present, with the Fox Hills and Hells Creek formations outcropping approximately 0.5 to 1 mile to the east<sup>7</sup>[Figure C9(c) & (d)].

Underlying the quaternary alluvium and glacial deposits is the Pierre Formation or Hell Creek formation. NDGS<sup>8</sup> describes the Hell Creek formation as poorly consolidated sand-stone, siltstone, claystone, and carbonaceous and bentonitic shales of a generally brown and brownish-gray hue. ETP boring logs indicate dark gray clay at depth and some shale, which indicates that the Pierre formation may be present. This is further supported by contours of the top of the Pierre formation in the area of the western Lake Oahe HDD insertion point at elevations of approximately 1,500 feet<sup>9</sup>, which places the Pierre formation above the base of the borings completed as part of pre-construction planning. Additionally, NDGS 1984 states: “It [The Upper Cretaceous Pierre Formation] subcrops directly beneath the glacial material in places where preglacial and interglacial (glacial diversion) valleys have been eroded through the overlying Fox Hills formation.” Regardless of the formation, the grey clays encountered in the boreholes are considered an aquitard due to low hydraulic conductivity properties. Final EA, Appendix B.

ETP completed boreholes across the proposed river crossing in April 2015. The boreholes show

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<sup>7</sup> North Dakota Geological Survey (“NDGS”), 1984.

<sup>8</sup> North Dakota Geological Survey, 1983. Geology of Morton County, North Dakota, Bulletin 72 – Part I, County Groundwater Studies 23 – Part I; Plate 1.

<sup>9</sup> USGS, 1980

clays, clayey sand, silt, sand and some gravel that is consistent with alluvium and glacial deposits shown on Figure C9(a). Final EA, Appendix B. The boring logs, under the river crossing, show that the proposed pipeline intersects clayey sand and silty sand at an elevation of 1,490 feet. The top of the Pierre Formation has been mapped at an elevation of 1,500 feet in the area of the river crossing (Figure C9(b)). Boring logs (LO-B-1, LO-B-2 and LO-B-7) on either side of the river crossing show dark gray clay at elevations of 1,600 to 1,550 and documentation of a shale lens in LO-B-2 at an elevation of 1,500 feet. Boring logs underlying the river also show alluvium and glacial deposits overlying varying thicknesses of dark gray clay. This indicates that the alluvium and glacial deposits may be directly overlying the Pierre Shale and that both the Fox Hills and the Hell Creek formations may have been eroded away and not present under the river. Based on observations during construction, ETP states that the cuttings generated downhole were consistent with the units described on the boring logs.

The Corps considered local geological information in order to evaluate the potential for a release from the pipeline associated with the Lake Oahe Corps Action Area to contaminate the Hell Creek and Fox Hills formations. The Corps determined that a release from the pipeline under Lake Oahe would not likely impact the Hell Creek and Fox Hills formations. First, there is no evidence of the Fox Hills formation or the Hell Creek formation underlying the alluvium and glacial deposits in the boring logs under the river (just the Pierre formation). Second, even if the Fox Hills unit

is present (and not just the Pierre formation) underlying the river below the depth of the borings, the Corps considered the possibility for a release from the pipeline buried over 90 feet below Lake Oahe to seep downwards into what would be component of the Fox Hills aquifer system. To determine this potential, ETP used the parameters in Table C9 used to calculate the seepage velocity using the conservative assumption that an oil leak would result in oil moving downward or downgradient.

Using Darcy's law to calculate the seepage velocity from the variables in Table C9 yields a downward velocity of 0.03 feet per day or 0.9 feet per month for fine sand. Performing the same calculation for seepage velocity through clay yields a downward velocity of 0.0003 feet per day or 0.009 feet per month. The seepage velocity is the rate at which a conservative fluid would travel vertically through the alluvium and glacial deposits beneath the river. Although this oil may move slowly through the immediate saturated alluvium and glacial deposits (primarily consisting of clays and silty/fine sand), migration downward to reach the hypothetical aquifer is not likely as oil is less dense than groundwater. Therefore, most likely a release from the pipeline underlying the river would result in a local area of oil contamination rather than traveling downward into an underlying aquifer.

**Table C9. Parameters Used to Calculate the Seepage Velocity**

Variable	Value
Fine Sand Horizontal Hydraulic Conductivity (Feet/day) <sup>10</sup>	0.14
Clay Horizontal Hydraulic Conductivity (Feet/day) <sup>9</sup>	0.001
Horizontal / Vertical Hydraulic Conductivity Ratio (unitless) <sup>11</sup>	0.10
Clay / Clayey Sand Porosity (%)	50
Fine Sand Porosity (%) <sup>12</sup>	25
Vertical Gradient (ft/ft) <sup>13</sup>	1

It was also determined that an underground leak from the pipeline adjacent to the river in the Lake Oahe USACE Action Area would not likely impact the Hell Creek and Fox Hills formations. Nearby water levels from monitoring wells were reviewed to determine if the local groundwater gradient was towards or away from the river. The closest monitoring well is USGS 462239100375601 134-079-32ADD, located approximately 2.5 miles to the west and is completed in the alluvial aquifer. Recent recorded water levels (October 2017) in the USGS National Water Information System (NWIS) show an elevation of approximately

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<sup>10</sup> Values from Domenico, P.A. and F.W. Schwartz, 1990. Physical and Chemical Hydrogeology, John Wiley & Sons, New York, 824 p.

<sup>11</sup> Ratio from Todd, D.K., 1980. Groundwater Hydrology, 2nd ed., John Wiley & Sons, New York, 535p.

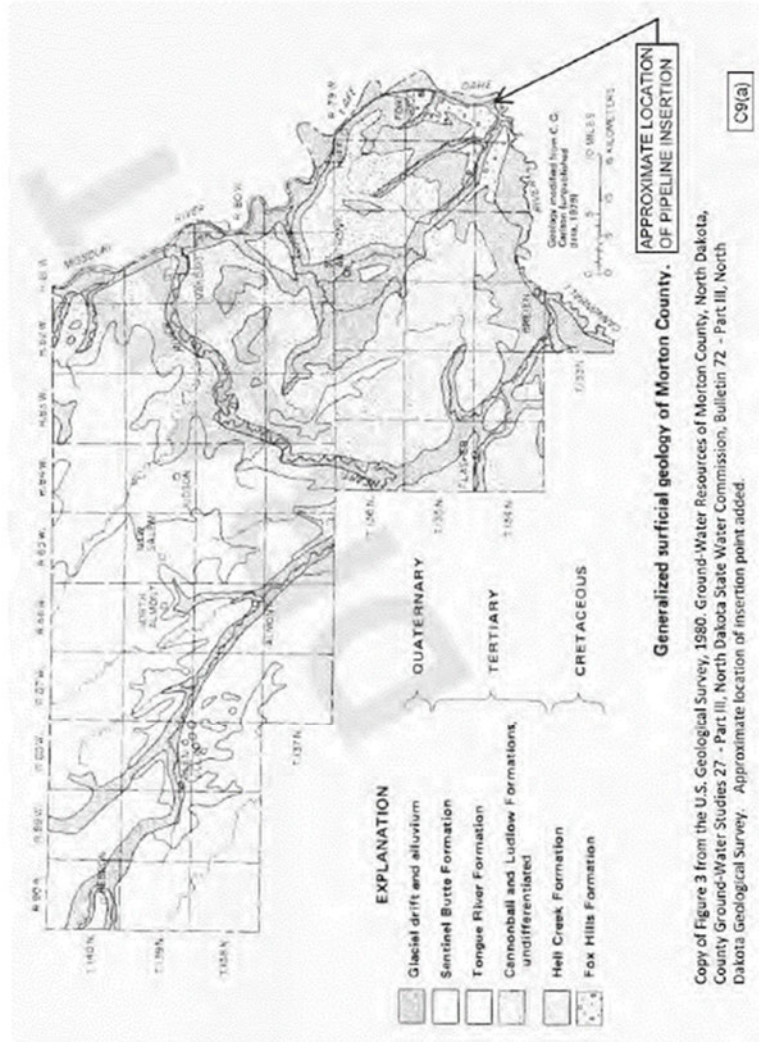
<sup>12</sup> Value from Freeze and Cheny, 1979. Groundwater, Prentice-Hall, New Jersey, 604p.

<sup>13</sup> Vertical gradient assumes that the water table is in contact with the river.

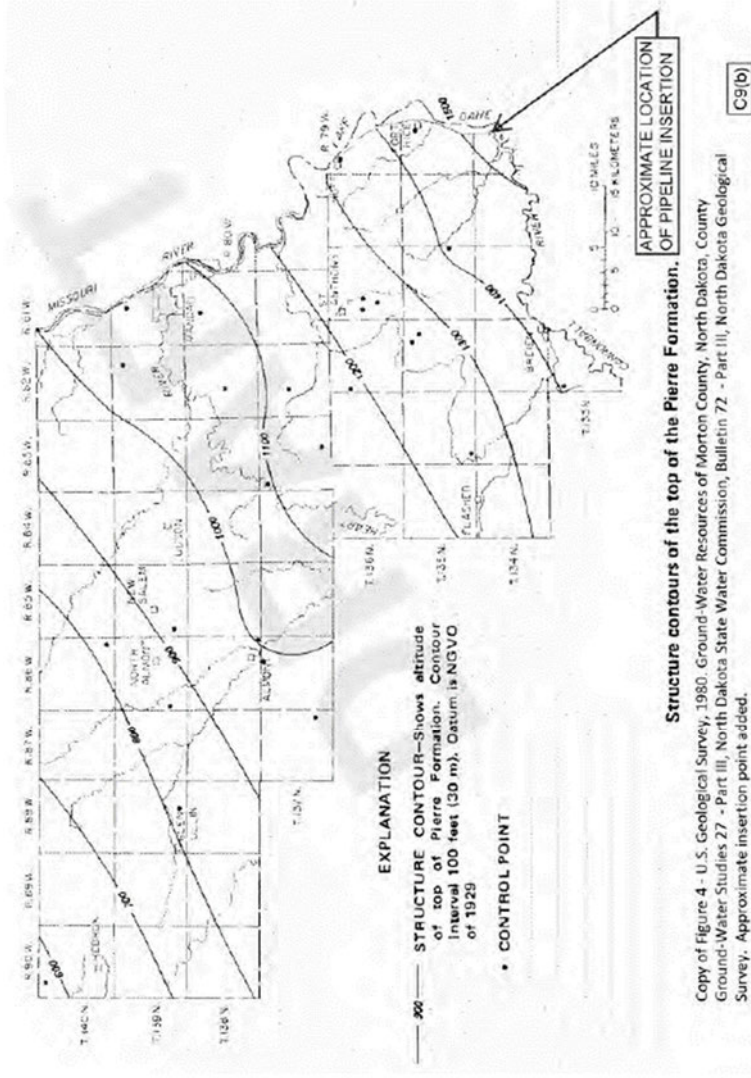
1,629 feet. The Missouri River at the proposed crossing has a stage of approximately 1,610 feet. This results in a shallow groundwater gradient (0.0014 ft/ft) generally west to east. Additionally, the seepage velocity for an underground leak adjacent to the river, within silty sand, would result in a travel rate of 0.0008 feet per day or 0.024 feet per month. Therefore, an underground release at or near the insertion point (adjacent or underlying the river) would generally travel very slowly (0.3 feet per year) and would not travel laterally west or southwest away from the Missouri River/ Lake Oahe and enter the Fox Hills groundwater system or the Hell Creek formations.

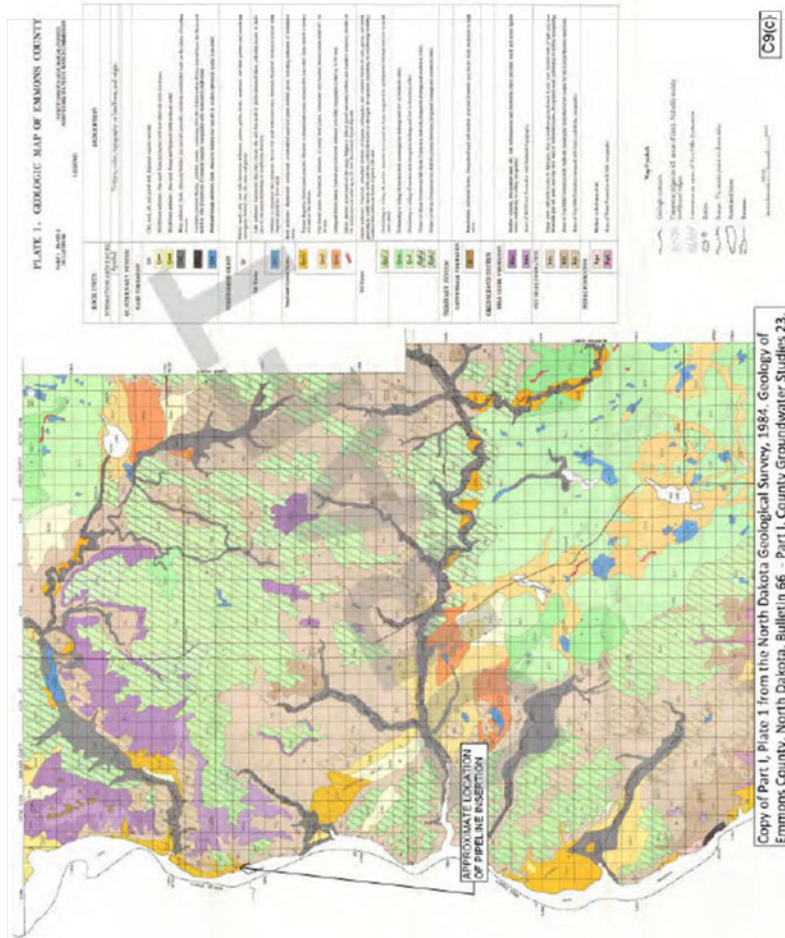
Therefore, a release associated with the Lake Oahe USACE Action Area would not likely impact the Hell Creek and Fox Hills formations and their associated municipal or private wells.

*See also C11, C21, C22, J16, J19, J22, L26, L55, L61, L64*









Copy of Plate 1, Plate 1 from the North Dakota Geological Survey, 1884. Geology of Emons County, North Dakota, Bulletin 66 - Part I, County Groundwater Studies 23.



C10.14 “[T]he EA does not specify mitigation measures or specific pre-construction and construction prevention actions that would be implemented in a Spill Prevention, Countermeasure and Control (SPCC) Plan in the event of a leak in the HDD bore.”

RESPONSE: Topic is addressed in the response to Comment A6.

C11.14 “[T]he EA did not adequately address how contaminants would travel up and through naturally-occurring geological cracks in the Hall Creek and Fox Hill formations; thereby, allowing shallow fluids to intermingle in the 92 ft wide zone between the lake and the horizontal HDD bore area.”

RESPONSE: Topic is addressed in the response to Comment C9.

C12.14 “Actual observed results have shown the HDD borehole centerline to move vertically and horizontally by as much as 20-30’ before the directional driller is even made aware that the drill bit has strayed from the intended tracking and correction is made to bring it back.”

RESPONSE: According to ETP, the Lake Oahe HDD pilot hole was drilled within the tolerance of 5 feet of left or right, 2 feet above and 10 feet below the designed path. Pilot hole survey data acquired during construction confirmed that the pilot hole was completed within the specified geometrical tolerances. Following the completion of the pilot hole, reaming tools were used to smooth out the pathway as they enlarge the hole.

*See also C13, C14*

C13.15 “We also assume that DAPL will incorporate centerline stabilizers installed on the pipeline so that the pipeline will stay near the centerline of the borehole and not drag on the sides (top, bottom or sides) of the bore hole.”

RESPONSE: ETP installed the pipeline within specified geometrical tolerances as noted in the response to Comment C12. The incidental contact between the pipeline and the borehole is a known construction risk. ETP used reaming tools to smooth out the pathway as they enlarged the hole prior to pulling through the prefabricated segment of pipe. Additionally, an ARO used as a sacrificial coating over the top of the FBE. At the Lake Oahe HDD location, the exterior of the pipe was coated with a 14-16 mil thick layer of FBE with an additional 40 mil layer of ARO.

*See also L57, M20*

C14.15 “[T]he pipeline will also drag along some of the bore-hole surfaces during installation. Stabilizers and the pipeline itself may actually scrape the open bore-hole causing further damage to both the pipeline and bore-hole during construction.”

RESPONSE: Topic is addressed in the response to Comment C12.

C15.15 “While it is possible to eventually get the pipeline moving again, **the initial forces to break the pipeline free will be another incredible force that cannot be accurately calculated and modeled to ensure a safe pipeline design. This is one of the most significant construction risks with the potential to leave the**

**pipeline unsuitable for use, even though the pipeline is eventually freed and completed.”**

RESPONSE: The HDD design engineer, Michel Drilling, calculated the pull force during various phases. Detailed design calculations prior to the HDD installation demonstrated that a conservative calculated pull force would be well below the safe pull force. Stress analysis in the detailed design report indicated that the installation stress combined by bending and tensile stress is 47,800 pounds per square inch which is 68% of the maximum allowable stress and below 90% of maximum allowable stress limited by American Associations of Mechanical Engineers section 402.3.2 of ASME B31.4. Additionally, based on Michel's experience with HDD construction as listed in Comment C2, the actual installation pull force is typically even lower than the design calculated pull force. According to ETP, during installation the on-site engineer constantly monitored the pressure gauge on the drill rig's console that illustrates the actual pull force applied anytime during pullback operation to the pullhead attached to the leading end of the pipe. Based on GeoEngineers' analysis of the installation loads and the fact that Michels planned to utilize buoyancy control within the product pipe, GeoEngineers anticipated that the pullback force during installation of the 30-inch-diameter product pipe may have been as high as approximately 690,000 pounds depending on the weight of the drilling fluid in the hole at the time of pullback. Given the cross-sectional area of the steel within the product pipe (57.68 square inches), the axial stress induced in the pipe resulting from 690,000 pounds of axial load is approximately 11,960 pounds per square inch (psi). Based on a

yield stress of 70,000 psi, GeoEngineers estimated an axial stress of approximately 17 percent of the yield stress during installation, which is well within acceptable limits. The calculated safe pull force for this installation (which includes combined axial, bending, and hoop stresses) is in excess of 2,000,000 pounds when buoyancy control is used.

According to ETP, pullback operations were completed on March 20, 2017 without incident. The maximum recorded pull force was approximately 516,000 pounds, in general agreement with the calculated installation forces and well below the safe pull force calculated for this installation. The axial stress induced in the pipe resulting from the maximum recorded axial load was approximately 8,945 psi or approximately 13 percent of the yield stress which was well within acceptable limits.

*See also C5, M20*

C16.15 “[W]e believe that DAPL and its principal, Energy Transfer Partners (ETP), have not fully and sufficiently evaluated the range of geologic and subsurface hazards factors that would likely preclude the proposed Lake Oahe crossing in favor of using a less risky route alternative.”

RESPONSE: The Corps evaluated reasonable alternatives to ETP’s preferred crossing based on the Corps’ limited jurisdiction over the portion of the pipeline that crossed federally-owned Corps managed land. Final EA at 5-22. Geologic hazards are discussed in the response to Comment A14.

C17.16 “Despite DAPL’s assertion that “state-of-the-art” construction techniques, pipeline technologies and controls, leak detections systems would be

used, and that a rigorous SPCC plan (EA, Appendix L) would be prepared and submitted by DAPL for review and approval by the USACE to protect the environment and public safety, we remain unconvinced that such assertions can be made without first conducting a more robust engineering risk analysis for a 7,800-ft long HDD below Lake Oahe. We are further unconvinced where the USACE and DAPL also relied heavily on a qualitative assessment that compared relative physical features and elements . . . without giving greater weight to construction risk considerations . . . .”

RESPONSE: Topic is addressed in the responses to Comments A9 and B1.

C18.16 “The DAPL project cannot justify any scenario whereby long distance HDD can be considered more safe than a much shorter HDD bore under a river, or where a pipeline route avoids the crossing of a significant river or lake altogether.”

RESPONSE: The risk of construction doesn’t solely depend on the length of the pipe, but must consider many factors. A shorter crossing in unfavorable soil condition contains more risk than a longer crossing in favorable soil condition. Moreover, the risk of HDD installation depends on various factors, such as geologic condition, presence of ground water, elevation differential between the entry and exit points, contractors’ experience, equipment used, technique of drilling, and type and diameter of the pipeline.

*See also C20*

C19.26 “There is no significantly impactful HDD regulation, authority and/or guidelines in the US compared to Canada, the nation most like the



US. The lack of regulation, authority, and guidance in the U.S. over crude oil pipelines suggests that further policy and regulatory development by the USACE, PHMSA (DOT) and state regulatory bodies would bring US compliance standards to a higher level and on par with protection and safety approaches found in other parts of the world.”

RESPONSE: A comparative analysis of HDD regulation, authority and/or guidelines in the U.S. and Canada, including whether U.S. regulatory bodies should emulate those in Canada is beyond the scope of the EA.

C20.18 “[W]e caution that the application of an HDD construction method for distances exceeding one mile (5,280 ft) is not a standard application . . . . many factors have to be carefully taken into consideration, including but not limited to: the diameter and wall thickness of the pipe, technology used for directing the drilling, soil conditions and substrates, and the pipe pulling technology used. In addition, other project specific constraints such as environmental, geological, sludge (water and bentonite) handling, risk of drilling fluid escape, landslide risk and other earth movement risk, such as tectonic or other, should be considered before making HDD application decisions.”

RESPONSE: As indicated in the response to Comment C18, the Corps agrees that the risk of construction doesn’t solely depend on the length of the pipe, but must consider multiple factors. As indicated in the response to Comment A14, the Corps considered the pipeline’s location relative to the landslide risk at the Lake Oahe crossing. Overall risk is addressed in the response to Comment A9. The topic

of a long-distance HDD is addressed in the response to Comment C2.

C21.27 “The [DAPL EA] states, “. . . Because the proposed pipeline would be installed at a minimum depth 92 feet below the lakebed of Lake Oahe and *there would be greater response time inevitably, and this could likely result in much more significant leakage/damage. While the potential risk for a WCD scenario could not be verified, such a spill would result in extremely high consequences for a fresh water lake.*”

RESPONSE: As addressed in response to Comment C9, the Corps recognized that a spill could be a high consequence event even though the risk is low. Final EA at 91.

C22.28 “Clean-up of the contaminated aquifer and soils would not only be problematic because of deep depth of the contamination, but the clean-up is also unlikely to be successful at remediating the long-term environmental damage and impacts to the downstream fish, wildlife, plant, agricultural resources, as well as the various Native and non-Native communities dependent on the Missouri River. Should the pipe require a major replacement of that portion under Lake Oahe, the situation will be significantly more problematic than a pipeline trenched on land surface or a more narrow and shallower river or stream crossing.”

RESPONSE: Remediation of a release to groundwater is described in the response to comment C9. ETP provided the Corps with additional spill modeling, and a companion report presenting the results of the spill model, to better understand the potential impacts of a spill to Tribes. Spill Model Report and

Downstream Receptor Report. These reports incorporate tribal concerns, including impacts to drinking water, and hunting and fishing into the analysis.

*See also* C1, D6, D17, G12, G17, J9, L58, M12

C23.28 “Alarms signaling the detection of a major leak are also not fail-safe measures.”

RESPONSE: Topic is addressed in the response to Comment B5.

C24.28 “Pipeline inspection tools may also be problematic, and similar to leak detection alarms, are not fail-safe measures.”

RESPONSE: The EA does not assume that any pipeline tools or analyses are perfect or that they can assure safety. As part of 49 CFR § 195.452, PHMSA regulations state the guidelines and required protocols for running inspection tools, interpretation of the data and requirements for remediation of any anomaly. Furthermore, this regulation governs pipeline integrity management in HCAs.

According to ETP, pipeline integrity management is not just one single item (for example only running ILI tools). It is a conglomerate of information assessment and analysis of elements of Integrity Management from inception through construction, operations and maintenance. Integrity management is required from inspection of production of materials - pipe, coating, shipping - to inspection of construction tasks - welding, lowering-in, backfilling- to hydrostatic testing and running inline inspection tools. Integrity management is required to be continuously implemented once the pipeline is placed in-service as “normal and prudent” operations include line patrols, leak detection, cathodic protection surveys, alternating-

current mitigation surveys and in-line inspection. ILI tools are only one component of an integrity management program that impacts safety and integrity of pipeline.

Recognizing that pipeline inspection tools are not fail-safe measures, the Corps incorporated several conditions in the easement. Easement Conditions 17, 18, 19, and 20 address pipeline coatings, Easement Conditions 29, 30, and 31 address ILI, Easement Condition 26 addresses cathodic protection, and Easement Condition 33 addresses pipeline patrolling. Easement Condition 27 addresses interference current surveys.

ETP uses multiple state-of-the-art ILI tools to assess DAPL's condition on regular intervals in addition to all the cathodic protection, patrols, etc. ETP has internal procedures established for these multiple activities. Additionally, the pipeline inspection protocol starts with proper material selection, delivery, and installation. According to ETP, it used high quality pipe that has been rigorously inspected from pipe mill to backfill. This pipe has the appropriate coatings, was verified to have been transported properly, and has been welded, installed and inspected properly, and tested properly.

*See also C26, E12*

C25.28 "With responsibility for maintaining more than 5,000 miles of pipeline, ETP, according to their own 2013 annual report, may not have enough cash reserves to cover damages from a significant oil leak or spill. Given ETP's 2013 annual report, the costs for the cleanup of leaks, spills and explosions will likely

be passed on to local landowners and federal taxpayers.”

RESPONSE: Topic is addressed in the response to Comment A12.

C26.29 “[T]he proposed Lake Oahe crossing is neither the best alternative from an obvious engineering and construction risk potential nor an alternative that should be considered as part of the proposed project due to potential to leak and cause irreparable environmental damage.”

RESPONSE: The Corps evaluated reasonable alternatives to ETP’s preferred crossing based on the Corps’ limited jurisdiction over the portion of the pipeline that crossed federally-owned Corps managed land. Final EA at 5-22. Landslide risk is addressed in the response to Comment A14. Pipeline integrity is addressed in the response to Comment C24. Leak detection is addressed in the response to Comment D13.

*See also* G18

C27.29 “[B]ig projects like DAPL should logically consider a comprehensive comparison and evaluation of a broader range of alternatives.”

RESPONSE: The Corps evaluated reasonable alternatives to ETP’s preferred crossing based on the Corps’ limited jurisdiction over the portion of the pipeline that crossed federally-owned Corps managed land. Final EA at 5-22. The Corps does not have jurisdiction over the entire extent of the pipeline.

C28.29-30 “[T]he EA also is largely reliant on Tables 2.1 and 2.2 [North Bismarck Route alternative Evaluation]. We contend that the comparison of the criteria listed in the tables was not done appropriately

. . . . ranking was done without the attention to weighting the value of certain selection criteria.”

RESPONSE: The Corps evaluated reasonable alternatives to ETP’s preferred crossing based on the Corps’ limited jurisdiction over the portion of the pipeline that crossed federally-owned Corps managed land. Final EA at 5-22. The alternative evaluation factors are presented in Table 2-1 of the EA. The construction cost comparison of the two alternatives is presented in Table 22. ENVY did not specifically identify an alternative methodology or particular data that was more appropriate for the evaluation than that described in Section 2.0 of the EA. ENVY generally commented that the comparison of the criteria listed in the EA was not done appropriately, that a more rigorous pipeline selection process should have been performed, and mused that the ranking was biased or arbitrary. However, ENVY did not provide any scientific evidence or studies specific to either the Lake Oahe or alternative Bismarck crossing that would cause the Corps to doubt its previous methodologies and data supporting the alternative analysis and the Corps’ reliance on ETP’s risk analysis. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

C29.30 “We could not find any analysis in the EA that evaluates the ‘potential risk for a WCD scenario’ . . . . why the potential risk to national parks were considered a criteria but a similar risk and ranking was not applied to the Lake Oahe crossing where the risk of potential environmental from engineering design is very high.”

RESPONSE: HCAs are addressed in the response to B1.

C30.41 “Both the EA and foregoing experiences show that HDD crossing activity will face many challenges and risks, and there are always risk of pipeline collapse, hydraulic fracture, loss of drilling fluids, hole collapse, etc. . . . the EA does not duly address all risks and mitigation measures. **For a preject that have another route alternatives, very deep crossing of a freshwater lake with long distance should have been the last option.**”

RESPONSE: Topic is addressed in the response to Comment C2.

C31.47 “There is no information for the accuracy of the LDS proposed for DAPL Pipeline . . . . If it is assumed that the LDS system used on this project adheres to a similar standard, it means that the **LDS will never alert for the leakage up to 5,700 barrels/day (1.0% of the capacity of DAPL)**. If that amount of leakage occurs beneath the freshwater Lake Oahe which provides drinking water to the individuals, it is inevitable that it will cause catastrophic effects for the users, and the leak may not be visibly detected. All surveillance inspections depends on the scenario that the leakage would be visible in the environment, which is not possible in the HDD tunnel section . . . . it should be noted that the ways of detection of a discharge from a pipeline system is blacked out in Appendix L (Facility Response Plan) of the DAPL EA. Thus, more detailed information is needed so as to assess the 10,000 barrel/day oil spill as per worst case discharge given in the EA to determine whether it is acceptable or not.”

RESPONSE: Topic is addressed in the response to Comment A6.

C32.48-49 IN» remediation is given for contaminated water table underneath Lake Oahe . . . . No explanation exists in the EA describing how that part of the soil will be cleaned or removed at a depth of 92 ft underneath the lake . . . . site-specific clean-up remediation techniques should be developed for contaminated soil and water table beneath the Lake Oahe.”

RESPONSE: Topic is addressed in the response to Comment A12 and Comment C9.

**Document D: Examining the Potential Adverse Impacts of the Dakota Pipeline Crossings to the Water Quality at the Cheyenne River Sioux Tribe Water Intake in the Missouri River, Attachment A-10 of Declaration of Rollie E. Wilson**

D1.1, 6 “[L]eak detection systems are only set up to detect spills of greater than 2 percent of their liquid . . . . pipelines are often seeping or leaking in small places, and there is no way to detect them. These are the types of troubling concerns that have adverse consequences. . . . Underwater or elsewhere, small leaks and ruptures can go (and have gone) unnoticed for days—even weeks—before companies manage to detect the problem and shut the pipeline down . . . . that underground seepage can quickly reach devastating volumes.”

RESPONSE: The topic is addressed in the response to Comment B6, B7, and C8.

D2.2 “More broadly, the scientific communities argue that the pipeline would contribute manmade



climate change by building up the country's oil infrastructure. The consensus among the environmental scientists is that the fossil fuels—including the vast reserves in the Bakken Shale—need to be kept in the ground to protect the world from the worst effects of climate change.”

RESPONSE: An analysis of the merits of continued use of the reserves in the Bakken Shale is beyond the scope of the EA. Final EA 3-4.

*See also* L21, M13

D3.8-9 “The EA hypothetical spill scenarios are based on a very liberal assumption of a 1-hour release period for the entire spill volume at each location. The EA claims that the acute toxicity threshold for aquatic organisms for benzene is not exceeded under any of the hypothetical spill volume scenarios. In fact, the most recent spill in North Dakota at a location less than 200 miles from the Intake took several hours before it was controlled. Spills are documented to be hours and sometimes weeks to continue before it is detected.”

RESPONSE: It is recognized that a spill could be a high consequence event even though the risk is low. Final EA at 91. The calculations that were used to prepare Table 3-7 in the EA were used to determine if the whole Lake Oahe system would receive such an in water concentration of oil under a worst-case release to become toxic across the entire water body. That is, if concentrations of benzene would be high enough to cause wide spread fish kills throughout the entire water body.

The most likely realistic spill scenario resulting in a worst-case release that could reach Lake Oahe

in a short amount of time would involve a rupture from a location where the pipeline is located near the surface or at one of the valve sites. The oil would spread out as it travels overland and within the surface drainage features on the way to the lake from the site of the rupture. This would result in oil reaching the lake over a short time instead of all at once. Additionally, the oil would also need time to mix with the water column. Ignoring certain properties of physics and chemistry, ETP assumed in the Spill Model Report that time from the initial oil reaching the lake until the time of complete mixing throughout the entire water body was one hour.

The DAPL is transporting light sweet crude oil with an API gravity between 35° and 50°. Final EA at 45. This API gravity is much greater than 10° and the oil reaching the water would therefore be lighter than water and would rise through and float on water. Because oil is not very soluble in water the concentration of oil and its constituents in the water column would be expected to be very low. However, for the sake of this analysis, ETP conservatively assumed that over a 1-hour time period the entire worst-case release would mix completely and mix completely through the entire water body. The Corps agrees that the conservative 1-hour time period for a spill to mix completely and mix throughout the entire water body was appropriate.

D4.9 “The EA . . . relies on natural forces for the remedy ‘dispersion, evaporation, dissolution, sorption, photodegradation, biodegradation, and natural attenuation ultimately would allow a return to preexisting conditions in both soil and groundwater,’ without any backup.”

RESPONSE: Topic is discussed in the response to Comment A12.

D5.9 “[T]he EA has failed to consider a failure option that when a major rupture occurs in the pipeline under Lake Oahe (for example, due to natural disaster), the soil and river bed sediments would be contaminated and become a continuous source of contamination for a long time to come, without a practical and reasonable remedy for the situation.”

RESPONSE: It is recognized that a significant build-up in the sediments could potentially result in contamination of the Lake Oahe system for longer periods of time. ETP conducted additional spill modeling using a pseudo component approach, in which the bulk hydrocarbon was broken into several groups and effects were determined based upon the chemical composition of the Bakken crude in its entirety. Spill Model Report at 76-79. The Downstream Receptor Report discusses the exposure scenario from oil stored and released from the sediments. Downstream Receptor Report at 35-48 and 51-52.

Heavy hydrocarbon fractions can submerge and have longer-lasting effects due to their persistence in the sediment layer. However, light hydrocarbons, similar to those found in the Bakken light crude, are relatively volatile do not always reach concentrations in sediments high enough to cause acute toxicity. The biological exposure model presented in the Spill Model Report estimates the volume and area of sediment contamination from worst-case releases. The mass balance information for the various unmitigated simulations for the Bakken light crude predict that very little oil (<1%) of the release volumes becomes incorporated into the bottom sediments. Total

hydrocarbon concentrations on sediments were generally low, less than 0.01 g/m<sup>2</sup>. Spill Model Report at 134-163. Based on this result, it does not appear that accumulation of hydrocarbons into consolidated sediments will lead to widespread impacts to the biological community. Even under the worst-case release unmitigated scenarios, impacts to benthic macro-invertebrates and fish species would be of limited scale and of temporary duration. Downstream Receptor Report at 94-95.

*See also* D6, D11, D12, D14, D15, D16

D6.9 “There are very serious environmental consequences of the trapped hydrocarbons in soil/sediments. Hydrocarbons would be sorbed to the sediments and eventually desorbed over time. The desorption is a very slow process, and the hydrocarbons go through transformations with toxic constituents such as benzene and PAHs, among other many constituents, that are continuously resealed to the Missouri River. Benzene and PAHs are cancer-causing toxins that would contaminate the water consumed by the Tribe at the intake.”

RESPONSE: Topics are addressed in the response to Comment C22 and D5.

D7.11 “At the moment, the chemical composition of the Bakken oil is not available to us, however, studies of petroleum leaks to water bodies at other sites indicate that the more toxic constituents of crude oil can be present in concentrations above the drinking water standards. The EA projects concentrations orders of magnitude higher than Maximum Contaminant Levels (EA, 2016).”

RESPONSE: The chemical composition variability of Bakken oil is publicly available information. C. Yan et al., Characterization of chemical fingerprints of unconventional Bakken crude oil, *Environmental Pollution* (2017) at 609-620 (study presenting “a quantitative chemical characterization of selected Bakken crude oils . . .”); *see also* ToxServices, LLC, GreenScreen for Safer Chemicals Assessment Report, DAPL Bakken Pipeline Crude (December 2017). Bakken crude oils “have very similar chemical composition.” *Id.* at 612.

Drinking water intakes located downstream from the Lake Oahe crossing could be at risk if there was a release that reached this body of water and traveled downstream in the vicinity of the intake structures. Final EA at 38. ETP’s emergency response activities would include the cleanup procedures and remediation activities described in ETP’s FRP, SPCC Plan, and GRP, which are also incorporated as Corps Easement Conditions 8 and 9a. Final EA, Appendices A and L.

The potential for a spill to compromise a potable water supply intake would be continually evaluated as part of the response action. Alternative water supply sources would be included as part of the contingency planning. Shutting down certain intakes and utilizing others or utilizing different drinking water sources or bottled water will be evaluated as part of this process. Final EA at 88-94. The Federal On-Scene Incident Commander would be responsible for assimilating and approving the response actions under the Unified Command.

ETP conducted additional spill modeling using a pseudo component approach, in which the bulk hydrocarbon was broken into several groups and effects were determined based upon the chemical composition of the Bakken crude in its entirety. Spill Model Report at 76-79. ETP preferred the pseudo-component approach as a practical means to answer specific fate and transport questions. Under this approach, chemicals in the oil mixture are grouped by physical-chemical properties, and the resulting component category behaves as if it were a single chemical with characteristics typical of the chemical group. Therefore, the fate of any particular chemical can be estimated without introducing an inordinate number of variables to the analysis. ETP preferred the pseudo-component approach over the individual component approach because individual component modeling would not have added sufficient value relative to the protection of drinking water intakes. The Spill Model Report predicts little to no dissolved hydrocarbons (DHC) to be present in the water column at the level of the drinking water intakes; therefore, no water quality thresholds are expected to be exceeded.

ETP prepared the companion Downstream Receptor Report to discuss the results relative to the drinking water standards. Downstream Receptor Report at 80-91.

*See also* D8, D9, M3

D8.11 “In 2002 and 2003 (“USGS, 2003”), the U.S. Geological Survey (“USGS”), by agreement with the National Park Service (“NPS”), investigated the effects of oil and gas production operations on groundwater quality at Big South Fork National River and Recreation Area (“BISO”) . . . . A laboratory study was

conducted to examine the dissolution of petroleum hydrocarbons from a fresh crude oil sample collected from one of the [3] study sites. The effective solubility of benzene, toluene, ethylbenzene, and total xylenes for the crude oil sample was determined to be 1,900, 1,800, 220, and 580 micrograms per liter (micro-g/L), respectively. These results indicate that benzene and toluene could be present at concentrations greater than maximum contaminant levels (5 micro-g/L for benzene and 1,000micro-g/L for toluene for drinking water) in ground water that comes into contact with fresh crude oil from the study area.”

RESPONSE: The results of the referenced report would generally be applicable at Lake Oahe. The report indicates that if released oil comes in contact with groundwater, then the impacted groundwater will likely exceed the maximum contaminant level (MCL) of the primary drinking water standard for benzene and toluene. This conclusion is likely true regardless of the region’s hydrology and geology. However, as indicated in the response to Comment C9, there is no evidence that drinking water aquifers are at risk of coming into contact with oil even if there were to be a release from the pipeline segment associated with the Lake Oahe USACE Action Area.

The boring logs under the river crossing show that the proposed pipeline intersects clayey sand, silty sand, and clay. This indicates that the alluvium and glacial deposits may be directly overlying the Pierre Shale (an aquitard). Therefore, if a release occurs in the pipeline segment beneath the Lake, that released oil likely would accumulate solely in these confining layers surrounding the pipeline, resulting in a local area of oil contamination. Migration of the oil from a

release under Lake Oahe would be retarded by clay, clayey sand, and silty sand overlying the pipeline as well as the low permeability sediments that have accumulated at the bottom of the lake.

An underground leak from the pipeline under or adjacent to the river in the Lake Oahe USACE Action Area would not likely impact the Hell Creek and Fox Hills formations and their associated municipal or private wells. As indicated in the response to Comment C9, an underground release at the USACE Action Areas would generally travel very slowly (0.3 feet per year) and would not travel laterally west or southwest away from the Missouri River/ Lake Oahe, as would be needed to enter the Fox Hills groundwater system or the Hell Creek formations.

ETP will continually evaluate the potential for a spill to compromise a potable water supply intake as part of the response action. ETP would consider alternative water supply sources as part of the contingency planning. ETP would evaluate shutting down certain intakes, utilizing other intakes, utilizing different drinking water sources, or bottled water as part of the contingency planning. Final EA at 88-94. The Federal On-Scene Incident Commander would be responsible for assimilating and approving the response actions under the Unified Command.

ETP conducted additional spill modeling using a pseudo component approach, in which the bulk hydrocarbon was broken into several groups and effects were determined based upon the chemical composition of the Bakken crude in its entirety. Spill Model Report at 76-79. ETP preferred the pseudo-component approach as a practical means to answer specific fate and transport questions. Under this approach,



chemicals in the oil mixture are grouped by physical-chemical properties, and the resulting component category behaves as if it were a single chemical with characteristics typical of the chemical group. Therefore, the fate of any particular chemical can be estimated without introducing an inordinate number of variables to the analysis. ETP preferred the pseudo-component approach over the individual component approach because individual component modeling would not have added sufficient value relative to the protection of drinking water intakes. The Spill Model Report predicts little to no dissolved hydrocarbons (DHC) to be present in the water column at the level of the drinking water intakes; therefore, no water quality thresholds are expected to be exceeded.

ETP prepared the companion Downstream Receptor Report to discuss the results relative to the drinking water standards. Downstream Receptor Report at 80-91.

The Nezafati Report is flawed in suggesting that benzene and toluene could be present at concentrations greater than maximum contaminant levels (5 micro-g/L for benzene and 1,000micro-g/L for toluene for drinking water) in ground water that comes into contact with fresh crude oil from the study area. The Nezafati Report did not provide any scientific evidence or even studies specific to Lake Oahe that would cause the Corps to doubt its previous methodologies and data supporting the Corps' conclusion to rely on the benzene concentration limits and geologic analysis as outlined in the EA. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major federal action.

Topic is further addressed in response to Comment D7.

D9.11-12 **“This is a key finding that has relevant and serious health consequences to the Cheyenne River Sioux Tribe. Meaning that the crude oil, when leaked/spilled to the Missouri River, could eventually dissolve into toxic constituents such as benzene (a well-known cancer causing agent designated by the U.S. EPA) and contaminate the drinking water resources of the Tribe.** The EA projects that the concentration of Benzene due to oil spill could be as high as parts per million level that is orders of magnitude higher than the 5 parts per billion as the Maximum Contamination Level being enforced by the U.S. EPA.”

RESPONSE: Topic is addressed in the response to Comment D7.

D10.12 “An in-depth 2010 report from Worcester Polytechnic Institute, which looked at the effects of three major oil spills, found increased incidences of cancer and digestive problems in people who had ingested the oil directly (in drinking water) or indirectly (through eating the meat of livestock exposed to the oil) (Jon Gay, et al, 2010). In addition, people who had used contaminated water for bathing or laundry appeared to experience a higher incidence of skin problems, ranging from mild rashes to severe and lasting eczema and malignant skin cancers.”

RESPONSE: The evaluation of downstream receptors is addressed in the response to Comment A3.

D11.14 “If an oil spill occurs due to either pipeline leak or rupture, the oil will contaminate the soil/sediment at the crossings since the pipeline rests more

than 100 feet below the crossings within the river bed soil/sediments. Depending on the size of the spill and how long the leak continues to occur, a considerable amount of oil could leak out and, based on its pressure, it could force itself through the river soil/sediments to pass through and finally accumulate within the river bed, impacting a sizable area under the crossings.”

RESPONSE: Topic is addressed in the response to Comment D5.

D12.14 “Since the pipeline is supposed to be more than 100 feet under the crossings, it would be very difficult to pinpoint the exact extent of the oil impacted sediments and come up with any realistic measures to remedy the situation. Digging the sediments out of Lake Oahe and hauling them away may not be a feasible option and most likely the contaminated sediments would be left in place, relying on natural remedies such as natural attenuation to address the oil contamination . . . toxic substances such as benzene and Polycyclic Aromatic Hydrocarbons (PAHs) are expected to be resealed to the Missouri River continuously, as long as the trapped oil remains within the sediments. This is considered a major risk. The EA has not addressed this concern in their evaluation, adequately (EA, 2016).”

RESPONSE: Topic is addressed in the response to Comment D5.

D13.15 “The quality of water in the Missouri River will be adversely impacted by the toxins such as benzene and PAHs that are breakdown product of oils in water, as the oil goes through transformation when introduced to and persisted in the water bodies . . . .

The benzene poisoning of the drinking waters of the Tribe may not be readily detected until it is too late with serious health consequences.”

RESPONSE: As indicated in the response to Comment A4, the Spill Model Report predicts no exceedances of drinking water standards. Nevertheless, as noted in the response to A6, the EA acknowledged that drinking water intakes could be at risk. The first Tribal drinking water intake is the SRST Replacement Intake located approximately 75.4 miles downstream of the Lake Oahe pipeline crossing. Downstream drinking water intakes would likely not be affected by the modeled releases as the maximum predicted concentrations of hydrocarbons in the water column were in the surface 0-5 meters (0 to 16.4 ft) with decreasing concentrations within the water column as depth increases until near zero values were predicted at depths greater than 10 m (32.8 ft). Spill Model Report at 172-177. The depth of the SRST intake is 60-80 feet, depending on water surface elevation (RPS, 2018). Downstream Receptor Report at 86.

#### Leak Detection System:

It is possible to detect a leak before oil sheen is visible on the surface. Pipeline integrity management is not unidimensional; it draws on a conglomeration of information assessment and analysis of elements of Integrity Management from inception through construction through operations/maintenance. While certain leak detection indicators for the LeakWarn system are based on real-time changes in pressure and oil delivery calculations, the overall inspection program is based on an absolute measurement of the physical condition of the pipeline system (for example, ILI technology) as it detects any metal loss—possibly

caused by external corrosion or other mechanisms. ETP will promptly investigate, and mitigate as appropriate, any anomalies.

In addition, ETP is using a state-of-the-art pipeline monitoring tool, with real-time transient modeling based on numerous factors including pipeline pressure, flow, and pipeline and ground temperature data. These data are scanned from various field instruments every 6 seconds, and the model calculations used to detect pipeline system variations are updated every 30 seconds. ETP will be utilizing Leak Warn, which is a leading CPM system software program used to monitor pipelines for leaks. This system will be modeled, configured and tuned specific to the DAPL installation facilities including elevation profiles and pipeline maximum operating pressure (MOP) in accordance with PHMSA requirements and API-RP-1130 guidance (API Recommended Practice 1130 – Computational Pipeline Monitoring for Liquid Pipelines).

This LeakWarn CPM system is capable of detecting leaks down to 1 percent or less of the pipeline flow rate within a time span of approximately 1 hour or less and capable of providing rupture detection within 1 to 3 minutes. Once LeakWarn detects a leak, its interface to the SCADA system will trigger an audible alarm in the SCADA system, which will alert the pipeline controller. In the event of a slow leak (leaks below 1%), even if pressure measurements do not show a significant drop in pressure, a detectable meter imbalance will develop resulting in an alarm to the Control Center. Meter imbalance in LeakWarn would be considered a part of the larger total imbalance.

LeakWarn imbalance also includes line pack calculation. Meter imbalances and line pack calculations are considered together to help detect whether a leak has occurred. For example, the meter may show a shortage if the amount of oil taken out is 100 bbls lower than amount of oil that was put in, but that difference may be offset by a corresponding increase in pressure (compression of the oil) within the relevant pipeline segment.” LeakWarn utilizes multiple time intervals. The longer the interval, the greater the ability to identify a smaller leak. While the alarm threshold may be 1%, the SCADA and LeakWarn systems are sensitive to smaller changes in flow rate and pressure.

The initial system is modeled and thresholds are developed for each pipeline. The model is then tuned to the individual characteristics of the pipeline hydraulics. Testing on the LeakWarn system will comply with API RP 1130 and API RP 1175 (*API Recommended Practice 1175 Pipeline Leak Detection – Program Management*). The effectiveness of the leak detection systems will be evaluated through simulated leak tests, actual leak tests, or the analysis of confirmed releases. The simulated leak tests will be performed by electronically overriding the computers to simulate a leak condition, whereas the actual leak tests are performed by removing product from the pipe. The results of each of these tests, and the response to actual releases, are evaluated to optimize the system capabilities, refine the product release tolerances, validate the response times, and further train the control room operators. Instrument and custody grade measurement equipment have been included as part of the pipeline design, and will provide data for the leak detection system. This data will be used to tune the detection system during transient

and steady state conditions. The leak detection may improve over the life of the pipeline as state-of-the-art leak detection equipment and software utilized during operations of the pipeline will be updated per federal standards in accordance with PHMSA requirements.

ETP implemented remote detection via SCADA during operation of the pipeline to provide constant remote oversight of the pipeline facilities. Final EA, at 88-94. The SCADA system would alert Dakota Access' OCC Operators, located in Sugarland, Texas of rapid drops in pressure, who would then activate the controls as necessary and initiate procedures for an appropriate response. The OCC prioritizes and responds to all alarms in accordance with the control room management regulations referenced in PHMSA CFR § 195.446(e). This regulation requires that the OCC Operator have a SCADA system alarm management plan. In general, the plan must include review of the SCADA alarm operations to ensure alarms support safe pipeline operations, identify any required maintenance that may affect safety at least once every calendar month, verify correct safety-related alarm values and descriptions at least once every calendar year when associated field equipment are changed or calibrated, determine effectiveness of the alarm management plan through a yearly review, and monitor content and volume of activity at least once a calendar year to assure controllers receive adequate information.

To combat issues related to false (or Nuisance) alarms, Control Center Alarm Management defines those Nuisance alarms as Bad Actors and generates a Bad Actors report. These alarms are put on a report on a weekly basis that is sent to the Control Center

Managers, Control Center Lead Controllers, Operations Engineering and the Field for further review. The object is for Alarm Management to reduce the overall number of alarms the Controllers receive, allowing them to focus on the higher priority Safety Related Alarms, such as leak detection alarms. Pipeline controllers are trained to shut down pipelines and investigate when there is any doubt regarding the alarming of the possible presence of a release/leak.

**Pinhole Leak:**

Several comments discuss the possibility of a pinhole leak that is below the threshold to trigger a SCADA alarm. The severity of such a risk should not be exaggerated by conflating a pinhole leak that goes without detection 92 feet below the lakebed of Lake Oahe with the worst-case theoretical scenario of a pipeline suspended over the top of the water (utilized in the PHMSA model). Combining the two ignores that a pinhole leak would be limited by the overburden and could not reach and instantaneously mix with the water. ETP explains several other points that show why the risk from a pinhole leak is overstated.

First, pipeline failure for the portion of the pipeline under Lake Oahe is unlikely due to the high performance external coating system that is being used (heavy epoxy-concrete abrasion resistant layer over fusion bonded epoxy) and cathodic protection system. Additionally, this portion of the pipeline was constructed with a thicker wall pipe compared to segments of the pipeline in upland-classified areas.

Second, the pipeline was installed a minimum of 92 feet below the lakebed of Lake Oahe. The final selection of the depth of the HDD below Lake Oahe was



determined based on the results of the geotechnical survey of the geologic strata. These deeper units act as a barrier to fluid flow to the surface through the clay. As noted in the response to comment C9 above, even if there were to be a release from the pipeline segment underneath Lake Oahe, migration of that oil would be retarded by clay, clayey sand, and silty sand overlying the pipeline as well as the low permeability sediments that have accumulated at the bottom of the lake.

Third, the strata and weight of the overburden will also reduce the effects of the spill. Therefore, the worst-case pinhole scenario under the lake that some comments describe cannot be used to extrapolate high contaminant concentrations in the river. These comments are mixing the theoretical “pipe installed directly over the top of the water” with a pinhole leak during operations under the river to create a continuous flow of oil from the pinhole leak into the waterbody resulting in an exceedance of the contaminant standards.

For a small pinhole leak as described in their scenario, the pressures at the release site would be expected to be dissipated within a nominal distance from the pipeline such that the weight of the soil overburden will act to restrict the flow of the crude oil. The amount would be expected to vary depending on the other factors.

As a preventative measure, the periodic use of ILI tools to detect metal loss is performed to determine if there are anomalies so that mitigation measures can be implemented prior to threats to pipeline integrity manifesting themselves and resulting in a pinhole

leak. Any unanticipated release from pipeline segments closer to the surface near the valve sites may breach the surface well away from the shoreline following the disturbed area around the pipeline as a path of least resistance.

ENVY commented that “the EA did not adequately address how contaminants would travel up and through naturally-occurring geological cracks in the Hell Creek and Fox Hill formations.” However, as noted above, the strata and weight of the overburden will minimize migration potential for the oil to rise through the clay to the water level. The deep clays under Lake Oahe have a low permeability in the range of  $1 \times 10^{-9}$  m/s for water (about 0.03 meters per year). Because oil is much more viscous than water, the seepage rate of oil would likely be even slower.

Even though the risk of a release of oil in the segment of pipe under Lake Oahe is low, and there are inherent limits to oil migration through the deep soil units below Lake Oahe, ETP conducted revised spill modeling that assumes oil has reached the sediment/water interface (regardless of mechanism of transport). Spill Model Report at ii. Therefore, a detailed analysis of how an inadvertent release would travel up through the Hell Creek and Fox Hill formations is not warranted. As noted in the Table 7-7 of the Spill Model Report the concentration of dissolved hydrocarbons is predicted to be 0  $\mu\text{g/L}$  at the location and depth of all of the downstream Tribal drinking water intakes. Spill Model Report at 175.

Furthermore, neither Mr. Nezafati nor ENVY provided any scientific evidence or studies specific to an oil release from a pinhole leak under Lake Oahe traveling up through the Hell Creek and Fox Hill fo

mations that would cause the Corps to doubt its previous methodologies and data supporting the Corps' reliance on ETP's risk analysis. Therefore, these comments do not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

*See also* C8, C26, E7, H2, J2, J6, J7, J12, L41

D14.20 “[O]ne other important oil leak scenario that has not been addressed is the impact of trapped oil within the riverbed/sediments, upon a major oil leak/rupture incident. The EA has failed to consider a failure scenario that when a major rupture occurs in the pipeline under Lake Oahe, the soil/river bed sediments would be contaminated and become a continuous source of contamination for a long time to come, without a reasonable, cost-effective, and logistically practicable option to remedy the situation.”

RESPONSE: Topic is addressed in the response to Comment D5.

D15.20 “Delineation of the contaminated area under the water and its cost effective remediation with the obvious logistical barriers would be highly impractical. The EA has failed to discuss the serious health consequences of such a continuous source of contamination to the Public (the Tribe) in the Missouri River.”

RESPONSE: Topic is addressed in the response to Comment D5.

D16.21 “I believe that there is no adequate consideration of a potential major catastrophic oil spill/rupture failure under the crossings that could create a continuous source of contamination to the Missouri River, and drastically deteriorate the water quality at

the Cheyenne River Sioux Tribe Water Intake with serious social, economic, and health consequences to the Tribe.”

RESPONSE: Topic is addressed in the response to Comment D5.

D17.20 “The EIS should evaluate more realistic worse case scenarios resulting from potential pipeline leaks/spills and ruptures and the potential adverse impacts on the water quality of the Missouri River, and specifically discuss the serious social, economic, and health consequences to the Tribe.”

RESPONSE: Due to questions related to the downstream effects in the event of a release, and the potential impacts to minority and/or low-income populations, the Corps performed additional EJ analysis. *See also* Final EA at 84-87, and 107.

ETP provided the Corps with additional spill modeling to better understand the potential impacts of a worst-case scenario spill to Tribes. Spill Model Report. The companion Downstream Receptor Report addresses potential impacts to human health, agriculture, and hunting, fishing, recreation, and cultural practices. Downstream Receptor Report at 80-99.

*See also* G17, 5-6, L75, L76, L77, L78, L79, L81, M1, M2, M3, M6, M14

**Document J: Cheyenne River Sioux Tribe's Preliminary Informational Paper Concerning Dakota Access LLC's Request for an Easement to Cross Lake Oahe, North Dakota, Pursuant to 30 U.S.C. § 185, Harold Frazier Attachment A of Declaration of Rollie E. Wilson in Support of Cheyenne River Sioux Tribe's Motion for Summary Judgment, Wilson Decl. Filed February 22, 2017**

J1.9 “The EA did not address Dakota Access’s request for a right-of-way to cross Corps-owned lands pursuant to the Mineral Leasing Act (“MLA”), 30 U.S.C. § 185.”

RESPONSE: The Corps addressed ETP’s request for a right-of-way to cross Corps-managed federal land under the Mineral Leasing Act. USACE\_ESMT000652.

*See also* J8,

J24 J2.9 “The draft EA contained no reference to the impact of the pipeline on tribal drinking water, tribal treaty rights, or tribal resources. The draft EA, however, included extensive discussion of potential negative impacts of the pipeline on the non-Indian community of Bismarck, North Dakota. The EA described how potential harm to Bismarck’s drinking supply was one reason why the pipeline was rerouted away from a planned Bismarck crossing of the Missouri River to the location just north of the Standing Rock Sioux Reservation.”

RESPONSE: The draft EA is not the final NEPA document. Based on comments received on the draft EA during the public comment period, the Corps prepared the final July 2016 EA. The Corps considered

impacts to drinking water intakes, and potential mitigation measures. Final EA, at 38 and 42. The Corps addressed tribal treaty rights and tribal resources. *See* Memorandum, Subject: Dakota Access Pipeline Crossing at Lake Oahe, North Dakota (October 20, 2016) (October 20, 2016 Memorandum), USACE\_ESMT001213-001249.

Topic is further addressed in response to Comments A5 and D13.

J3.9 “EPA Region 8 states: [A] revised EA “should disclose potential impacts to downstream water supplies from leaks and spills and include the water systems in emergency preparedness planning.”

RESPONSE: Topic is addressed in response to Comments A4 and A12.

J4.9 “The EPA likewise noted the lack of any environmental justice analysis in the EA.”

RESPONSE: Due to questions related to the downstream effects in the event of a release, and the potential impacts to minority and/or low-income populations, the Corps performed additional EJ analysis. *See also* Final EA at 84-87, and 107.

J5.10 “The Department of Interior additionally requested that the Corps conduct an Environmental Impact Study as it had not adequately explained its conclusion that there would be no significant impacts of the pipeline on the environment. . . . The Corps did not directly address the Department of Interior’s recommendation that a full EIS should [be] issue[d][.]”

RESPONSE: The project did not have significant impacts; therefore, an Environmental Assessment was the appropriate level of analysis.

J6.10 “Although the final EA was revised to acknowledge the existence of the Standing Rock Sioux Tribe and the proximity of the pipeline to their water intakes, the final EA made no reference to downstream reserved water rights or appurtenant lands of the Cheyenne River Sioux Tribe or any impact at all on waters and lands in the South Dakota.”

RESPONSE: Topic is addressed in the response to Comments A4 and D13.

J7.11 “As set forth in parts III.A-B *infra*, and in light of the Corps’ trust responsibility to the Cheyenne River Sioux Tribe described in part II.E *supra*, the Corps must consider impacts on the Cheyenne River Sioux Tribe before it grants any right-of-way to cross Lake Oahe pursuant to 30 U.S.C. § 185.”

RESPONSE: Topic is addressed in the response to Comments A4 and D13.

J8.11 “[U]nder 30 U.S.C. § 185(b)(1), the Corps must take into consideration the interplay between the proposed pipeline and the substantive statutory provisions in the Flood Control Act, which governs Lake Oahe. As set forth herein, the proposed pipeline is inconsistent with the purpose of the federal reservation that comprises the Corps-owned property such that the right-of-way should be denied.”

RESPONSE: Topic is addressed in response to Comment J1.

J9.12 “Third, pursuant 30 U.S.C. § 185(h)(2) and the Corps’ treaty and trust responsibility to the Tribe, the Corps must evaluate proposed pipeline’s impact on the environment, including impacts to fish and wildlife, hazards to public health and safety, and the interests of those who rely on the fish, wildlife, and

biotic resources of Lake Oahe for subsistence purposes. As set forth herein, the pipeline as currently proposed does not protect the environment or the fish and wildlife resources that are part of the bundle of rights the Tribe is entitled to under its treaties.”

RESPONSE: Topic is addressed in the response to Comment C22.

J10.12 “[A]s set forth in 30 U.S.C. § 185(j), the Corps may not grant the right-of-way until it is “satisfied that the applicant has the technical and financial capability to construct, operate, maintain, and terminate the project for which the right-of-way permit is requested . . . the economic viability of the applicant has not been demonstrated and is in serious question in light of the downturn in the oil market. Furthermore, although Dakota Access has touted the economic benefits of the pipeline to the nation as a whole and to the local economy, these benefits are non-existent. The financial viability of this project and its industry weighed against the pitiful economic benefits to the general population make does not satisfy the requirements set forth in 30 U.S.C. § 185(j).”

RESPONSE: Corps policy required the Corps to:

determine whether the applicant has the technical and financial capabilities to comply with the easement’s consideration, mitigation and administrative expenses. ER 1130-2-550, at para. 17-9b.(7)&(8). The applicant’s parent company, Energy Transfer, has completed more than 30 capital projects over \$50 million. Energy Transfer Capital Projects in Excess of US\$ 50 million, 2006-2014 (provided Dec, 2, 2016). Many of these projects were pipelines of 30 inches or more in diameter. *Id.* The



Corps finds that the parent company's completion of those projects demonstrates that the applicant possess the technical and financial capabilities to comply with the easement.

USACE ESMT000655 and 658.

The Corps is satisfied that ETP has the required technical and financial capability. USACE ESMT000658.

J11.14 "The Tribe and its experts have not been granted access to the technical documents, including but not limited to spill modeling, which are necessary to provide a full analysis of this issue."

RESPONSE: Topic is addressed in the response to Comment A9 and B18.

J12.20 "The Corps of Engineers has operated the Missouri River Mainstem System since 1944 for the authorized beneficial consumptive purposes set forth in the law, and recognizes in its own Master Manual its obligations to provide quality and quantity of water sufficient to meet the needs of both domestic water supply for consumption, and the water rights exercised by Tribes on the Missouri River. Risks to tribal water supplies currently being consumed from degradation of water quality conflict with the authorized purposes of the Flood Control Act and the Rivers and Harbors Act and conflict with Tribal water rights reserved under the Winters Doctrine."

RESPONSE: Topic is addressed in the response to Comments A4 and D13. *See also* October 20, 2016 Memorandum, USACE\_ESMT001213-001249.

J13.20 “The fatal flaw analysis conducted and the subsequent desktop evaluation conducted inadequately assess the risks of the Lake Oahe Crossing for several reasons. First, the rankings of risk were arbitrary.”

RESPONSE: Topic is addressed in the response to Comment A9.

J14.21 “Second, the analysis does not accurately or adequately assess and include engineering and construction risks, or the fact that Lake Oahe is the fourth largest freshwater reservoir in the United States supplying water to millions of people. . . . The EA conducted to date places no weight on construction risks associated with an HDD drilling of this magnitude the likes of which have never been attempted in the world under any fresh water body.”

RESPONSE: High consequence areas are addressed in the response to Comment B1. ETP prepared risk-planning documents associated with construction and operation of DAPL as detailed in response to Comment A9. Information regarding large diameter/ long bore HDDs is referenced in the response to Comment C2.

J15.21 “Third, the leak detection system is inadequate due to the nature of the Lake Oahe crossing and construction method and the nature of LDS leak detection systems. . . . The LDS system described in the EA lacks any detail sufficient to evaluate this proposed system. *Id.* Further, LDS systems are unable inherently to detect and manage small leaks – they only alert to larger leaks. *Id.* at 46-47. **The LDS system will never alert for leakage up to 5,700 barrels/day (1 percent of the capacity of DAPL).**”

RESPONSE: The ability of the LDS to detect and manage small leaks is addressed in the response to Comments B5 and B6.

J16.21 “Because the EA does not identify where checkpoints will be, and because of the impossibility of installing valves under the Lake, the pipeline will leak over 9,000 barrels of crude oil into Lake Oahe even if a leak were immediately detected (an impossibility) and there is no ability to stop that leak. *Id.* at 47.”

RESPONSE: According to ETP, it is unlikely that over 9,000 bbls of crude oil would leak into the Lake all at once as asserted by the commenter. In order to achieve factors of safety above 2.0, ETP specifically targeted the deeper clay, consisting predominantly of medium stiff to hard clay, below the medium dense to very dense sand layers. These deeper units act as a barrier to fluid flow to the surface through the clay.

Additionally, the strata and weight of the overburden will reduce the effects of the spill. The amount that the backfill over the soil will restrict the volume and area that a spill can affect depends on a number of things including the weight of the overburden, the permeability of soil which is dependent upon on soil properties such as particle size and void ratio of the formation soil, and fluid properties including density and kinematic viscosity.

As noted in response to Comment C9, ETP performed additional spill modeling that includes a worst-case release of [REDACTED] bbls. ETP used a FBR volume of [REDACTED] bbls for the worst-case discharge scenario. ETP used a second volume of [REDACTED] bbls to represent the “majority of spills.” This

volume is greater than 90 percent of actual pipeline releases from pipelines 16-inch or greater (90PD scenario).

J17.21 “Finally, the Corps has not disclosed to the Tribe and its experts in the Facility Response Plan how the leak detection accuracy and response time was calculated.”

RESPONSE: ETP released the FRP to the Tribes and their experts under a non-disclosure agreement. Information relating to this topic is available in the administrative record.

J18.21 “[F]ull evaluation of the actual risk is not possible, and the estimate that a leak would result in a minimum spill of 10,000 barrels of oil remains unsupported by the evidence.”

RESPONSE: A worst-case release specific to Lake Oahe was calculated following guidance in 49 CFR § 194.105. Final EA, at 91. As noted in the response to Comment A1, the estimated potential release volumes calculated by ETP were within the range estimated by one of the experts representing the SRST based on pipeline diameter, volume, pumping rates and some realistic assumptions. ETP estimated potential release volumes that are █████% larger for Lake Oahe crossing than the 4,620 bbls for a 30” pipe with a 3-minute response time that EarthFax indicated was realistic.

*See also L7 J19.21*

“Fourth, the response technique analysis was incomplete and inadequate for several reasons. It did not include any remediation plan for contamination of the water table including the two largest aquifers in North Dakota that supply the entire region. Martin

Report at 48. It did not include a remediation plan for contaminated soils around the pipeline under Lake Oahe *Id.* Third, bioremediation is not possible 92 feet below the riverbed surface and therefore may not a viable method of remediation.”

RESPONSE: Topic is addressed in the response to Comment C9.

J20.22 “[T]he risks associated with the hydrology and geology of the area of construction was not adequately assessed given the engineering method of HDD drilling. . . . Variations in subsurface conditions Pierre formation contact is possible and can cause sloughing of shale. Even Section 3.1.3.1 of the EA concludes sections of the HDD drill are susceptible to landslides.”

RESPONSE: Topic is addressed in the response to Comment A14.

J21.22 “[T]he Rovenko Report notes that wellbore stability in the geologic conditions at this site is an increasing issue as the size of the drilling increases due to the soil conditions and geology of this area... Nothing in the EA record provided to the Tribe indicates the risk associated with these soil conditions, and the construction technique was adequately included in risk assessment. Further, there was no weight given to this risk resulting from selection of HDD drilling techniques in the risk assessment.”

RESPONSE: ETP identified drill hole stability as a risk and the Corps considered it in the EA. Horizontal Directional Drill Design Services Report (“HDD Report”) (August 2015) at 3; Final EA, Appendix D. ETP retained experienced HDD consulting and drill-

ing firms: GeoEngineers to design and Michels Directional Crossings (Michels) to perform the Lake Oahe HDD. These two companies performed a detailed analysis of the proposed drill across Lake Oahe. According to ETP, GeoEngineers has successfully designed hundreds of long bore HDDs and Michels has successfully installed a total of 24 HDDs over 7,000 feet long since 2004.

ETP in general encountered soil conditions encountered in the exploration borings near the proposed HDD alignment consistent with the published geology for the area consisting predominantly of medium stiff to hard clay with varying amounts of sand, overlaid by medium dense to very dense sand with varying amounts of silt, clay and gravel. HDD Report at 3; Final EA, Appendix D. This is consistent with the information provided in the Rovenko Report as well. The GeoEngineers report expressed concern for hole instability in the overlying unconsolidated sediments at the higher elevation drill exit (west side of the crossing).

The Directional Drill Plan of Procedure Dakota Access Pipeline Project (Michels Directional Crossings, August 18, 2015) references numerous construction methods are referenced to address borehole stability. Final EA, Appendix B. Corps geotechnical and engineering experts reviewed the draft HDD planning documents relative to hole stability. In addition, GeoEngineers and Michels representatives presented the proposed drill plan to Corps specialists. ETP mitigated the risk of hole instabilities by the installation of a large-diameter casing through the loose to medium dense soils within exit tangent of the HDD profile to stabilize the soils. HDD Report at 7.

The CRST generally commented that the risk associated with the soil conditions and the construction technique was not adequately assessed but does not identify a particular assessment or the particular factors, criteria, or technique to perform the adequate assessment. The CRST did not provide any scientific evidence or even studies specific to Lake Oahe that would cause the Corps to doubt its previous methodologies and data supporting the Corps' conclusions on soil conditions and construction technique. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major federal action.

J22.22 “[T]he EA gives no weight or consideration to the fact that this deep riverbed crossing of over 1 mile is right over the Fox Hills and Hell Creek formations and aquifers: the two largest aquifers in the state of North Dakota supplying water to multiple states in the region. . . . The EA fails to assess any risk to the underlying aquifers or assign any weight to that risk in the risk analysis the Tribe has been provided with. . . . such risk was not assessed in light of the inability to detect leaks of less than 1 percent leakage by the LDS system. A slow low grade leak could go on for weeks on end before crude oil bubbles to the surface of the Lake and is detected by residents.”

RESPONSE: As indicated in response to Comment C9, there is no evidence that drinking water aquifers are at risk even if there were to be a release from the pipeline segment associated with the Lake Oahe USACE Action Area.

J23.22 “The alternatives were clearly not adequately evaluated, and the risk comparison is clearly

incomplete due to its lack of consideration of construction method risks. An HDD bore of over one mile under a freshwater lake is clearly not lower risk than no river crossing at all or a very short River crossing of less than 300 feet. The analysis done by a third-party contractor and paid for by Dakota Access is wholly inadequate and flawed.”

RESPONSE: The topic of alternatives and HDD construction risk is addressed in the response to Comment C3.

As indicated in the Executive Summary of the EA, the environmental information that supports the EA was prepared in accordance with CEQ regulations in Section 1506.5(a) and 1506.5(b), which allow an applicant to prepare an EA for federal actions. The Corps independently evaluated and verified the information and analysis in the EA and takes responsibility for the scope and content contained herein.

J24.23 “[T]he Corps has not adequately addressed the environmental protection issues regarding the right-of-way. . . . With no regulations to adhere to and no stipulations imposed upon it, Dakota Access has failed to address and ensure that the right-of-way it seeks will not violate applicable air and water quality standards; damage the environment, including damage to fish and wildlife habitat; result in hazards to public health or safety; or negatively impact the interests of individuals living the area who rely on fish, wildlife and biotic resources of the area for subsistence purposes.”

RESPONSE: The Corps imposed 36 conditions on the Lake Oahe Easement, No. DACW45-2-16-8059, issued under the Mineral Leasing Act. October 20, 2016



Memorandum, USACE\_ESMT001213-001249. Topic is additionally addressed in response to Comment J1.

J25.27 “In considering whether Dakota Access has the “financial capability to construct, operate, [and] maintain” this pipeline, the Army Corps must consider its current financial weaknesses: likely loss of huge capital infusion, debt it will soon be unable to service and weak stock prices; and the fact that market conditions do not look favorable for a future where Dakota Access can achieve sufficient revenue to overcome these financial problems. Dakota Access is not financially capable and the right-of-way must be denied.”

RESPONSE: Corps policy required the Corps to:

determine whether the applicant has the technical and financial capabilities to comply with the easement’s consideration, mitigation and administrative expenses. ER 1130-2-550, at para. 179b.(7)&(8). The applicant’s parent company, Energy Transfer, has completed more than 30 capital projects over \$50 million. Energy Transfer Capital Projects in Excess of US\$ 50 million, 2006-2014 (provided Dec, 2, 2016). Many of these projects were pipelines of 30 inches or more in diameter. *Id.* The Corps finds that the parent company’s completion of those projects demonstrates that the applicant possess the technical and financial capabilities to comply with the easement.

USACE\_ESMT000655 and 658.

Furthermore, Under the OPA 90, the owner or operator is liable for the costs associated with the containment, cleanup, and damages resulting from a

spill. ETP maintains financial responsibility for the duration of the response actions. If the responsible party cannot pay, funds from the Oil Spill Liability Trust Fund are used to cover the cost of removal or damages. The Fund is paid for through a five-cents per barrel fee on imported and domestic oil and also any fines or civil penalties collected from other operators.

The CRST generally commented that the Corps must consider speculative financial scenarios. As illustrated above, the Corps considered ETP's technical and financial capability. CRST did not provide any scientific evidence or even studies specific to ETP's financial capability to construct, operate, and maintain the DAPL that would cause the Corps to doubt its previous methodologies and data supporting the Corps' conclusion on ETP's technical and financial capability. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major federal action.

This topic is further addressed in the response to Comment A12 and J10.

**Document 5: Declaration of Jeff Kelly Director  
of Game, Fish, and Wildlife SRST, Filed  
February 14, 2017**

5-1.2 "During 2015, the Tribe issued 199 family fishing permits to Tribal members. Based on my personal and professional experience, basically all of the fishing by Tribal members takes place on Lake Oahe and is done for subsistence purposes."

RESPONSE: ETP incorporated information from SRST on subsistence fishing into the Spill Model Report and the Downstream Receptor Report. Downstream Receptor Report at 93-99.

5-2.3 “In 2015, the Tribe issued 475 deer tags to Standing Rock Tribal members, and another 134 tags to spouses or others affiliated with Tribal members. Every animal taken under these permits was taken for subsistence of Tribal members and their families.”

RESPONSE: ETP incorporated information from SRST on subsistence hunting into the Spill Model Report and the Downstream Receptor Report. Downstream Receptor Report at 93-99.

5-3.3 “The Tribe has a program under which elderly or handicapped persons may request a deer for subsistence purposes. Our Department has a list of designated hunters to address these needs. During 2015, we issued 259 elderly and handicapped deer tags for hunters to take deer in this manner. These are in addition to the deer tags referred to in paragraph 8.”

RESPONSE: ETP incorporated information from SRST on subsistence hunting into the Spill Model Report and the Downstream Receptor Report. Downstream Receptor Report at 93-99.

5-4.3-4 “Fish would be most directly impacted by such a spill, and depending on the magnitude of the spill, an oil spill would likely cause extensive fish kills.”

RESPONSE: ETP prepared a Spill Model Report and a Downstream Receptor Report to model the trajectory of a worst-case release and to better under-

stand the potential impacts of such a release. Although a relatively large area could be exposed to elevated levels of hydrocarbons at some depth in the water column, concentrations would be greatest near the surface of Lake Oahe and acute toxic mortality would be localized. The Spill Model Report does not predict extensive fish kills even under the worst-case scenario as the calculated area of mortality was just a fraction of one percent of the modeled area for species of average sensitivity. Downstream Receptor Report at 54-55. Since relatively little hydrocarbons were predicted to be deposited in the sediments in Lake Oahe (<1%) it is likely that fish species that utilize the lake bottom would have very limited impacts.

The net result is that impacts to benthic macro-invertebrates and fish species would be of limited scale and of temporary duration. Downstream Receptor Report at 94-98.

*See also 5-5*

5-5.4 “[A]n oil spill could affect animals in two ways: from the oil spill itself and from the response or cleanup operations.”

RESPONSE: Impacts to fish from the spill itself are addressed in the response to Comment 5-4. Temporary impacts to wildlife could occur during spill response or cleanup activities. Most wildlife, including the larger and more mobile animals, would disperse from the Project Area as activities occur. Displaced species may move to adjacent, undisturbed areas, or reestablish in their previously occupied habitats after cleanup activities have been completed and suitable habitat is restored. Some smaller, less mobile wildlife

species such as amphibians, reptiles, and small mammals have a greater potential to be directly impacted during spill response or cleanup activities, but given the limited extent of the proposed crossing, measurable impacts are not anticipated.

5-6.4 “[A]n oil spill into Lake Oahe would have deep and adverse consequences to all living things on the Reservation that rely on the waters of Lake Oahe - including, but by no means limited to, the fish and game that Tribal members rely on for subsistence purposes.”

RESPONSE: Topic is addressed in the response to Comment D17.

**Document 6: Assessment and Review, Dakota Access Pipeline Environmental Assessment Terrestrial and Aquatic Organisms, Dr. Gillian Bowser, PhD Attachment A-9 of Declaration of Rollie E. Wilson**

6-1.2 “The EA fails to evaluate the risk of oil spills and the impacts of response time in sensitive environments; such delays lead to *Bioaccumulations and toxicity in benthic organisms*: The ability to respond to spills in a timely matter is overstated by the EA and leads to potentially serious long term impacts on aquatic biodiversity.”

RESPONSE: ETP provided additional spill modeling that considered toxicity in benthic organisms and bioaccumulation in the food chain. Downstream Receptor Report at 39-48. All of the modeled unmitigated worst-case scenarios showed less than 1% of the oil is located in the sediments after the 10 day modeling period. Because of the potential for only a limited

amount of oil to be deposited on the sediments, bioaccumulation of contaminants by sediment-dwelling organisms is also anticipated to be limited. Therefore, there are no anticipated long-term impacts due to bioaccumulation in benthic organisms/long-term impact on biodiversity.

*See also 6-2, 6-5, 6-6, 6-7, L64*

6-2.2 “The ability to address spills within the environment at the benthic organism level is not addressed in the EA which can potentially harm at risk associated fisheries and wildlife.

RESPONSE: Topic addressed in the response to Comment 6-1.”

6-3.2 “Survey approach for endangered species in the area was insufficient to detect those species and the surveys were conducted at seasonally inappropriate times for the organisms in question.”

RESPONSE: ETP conducted pedestrian surveys of the workspace within the Project Area at the Lake Oahe crossing in April 2015 to assess suitable habitat for listed species. Final EA at 61. It is not uncommon for planning level documents to utilize biological surveys that identify potential suitable habitat without actually observing presence of the species or without conducting season-specific endangered species surveys.

Given the limited scope of the Proposed Action, minimization measures, and the implementation of specialized construction techniques, the Corps determined that the Proposed Action would have no effect on the black-footed ferret, gray wolf, northern long-eared bat, and Dakota skipper within the Project Area. The Corps also determined that the Proposed

Action may affect, but is not likely to adversely affect the interior least tern, whooping crane, piping plover, rufa red knot, and pallid sturgeon.

The “may affect, but is not likely to adversely affect” determination assumed that although unlikely, a release may occur that impacts Lake Oahe and it may occur during a season when the interior least tern, whooping crane, piping plover, rufa red knot might be utilizing the area. Detailed habitat surveys or season-specific endangered species surveys are not required to support this determination. Likewise, the Corps conservatively assumed that any pallid sturgeon passing through the area may be affected. However, pallid sturgeon, if present, would not likely be persistent in the slow moving portion of Lake Oahe downstream of the Dakota Access crossing. Pallid sturgeon have not been recorded in recent creel surveys of similar habitat of the lower reaches of Lake Oahe. USFWS concurred in the Corps’ effects determination for the species that may be affected, but are not likely to be adversely affected, in a letter on May 2, 2016.

*See also* 6-4, 6-9, 6-8, 6-11, 6-12

6-4.2 “The recent release of the Missouri River Recovery Plans has impacts on the proposed action and current EIS. These two actions need to be in congruency in the management of endangered species and the identification of critical habitat.”

RESPONSE: The DAPL EA considers the environmental impacts associated with the pipeline’s crossing at Lake Oahe. Whereas, the MRRP is addressing the operations and maintenance of the federal Missouri River Reservoir System. The Draft

MRRP EIS addresses the management of endangered species and the identification of critical habitat as they relate to changes to the hydrology of the Missouri River Reservoir System through operations and maintenance.

The Corps analyzed the portion of the pipeline that crosses Lake Oahe under Section 408 and the Mineral Leasing Act. The portion of DAPL that crossed underneath Lake Oahe does not impact the hydrology of the Missouri River Reservoir System. In the event of a release, the effect determination referenced in the response to Comment 6-3 of “may be affected, but are not likely to be adversely affected” would be of a very limited duration over a localized portion of the Missouri River relative to the whole system addressed in the MRRP. Additionally, the MRRP was not intended to address projects that do not impact the operation of the reservoir system.

6-5.3 “For a truly conservative estimate of the impacts of a potential oil spill on fresh water aquatic environments, **the spill scenarios should reflect the cascade effects of any delayed responses and address factors in detection that would lead to potential delays.**”

RESPONSE: Topic addressed in the response to Comment 6-1.

6-6.3 “**Response timing to oil spills needs to be fully addressed in the EIS with discussion of impacts on benthic environments by both the spills and clean up approaches.**”



RESPONSE: ETP committed to less than a 6 hour response time. The initial response planning and mobilization as the result of an oil spill is regulated by PHMSA.

Nevertheless, the revised spill modeling assumes a plume of oil traveling unmitigated for 10 days. ETP provided a study of the impact of oil releases on benthic environments to the Corps. Downstream Receptor Report at 39-48. As noted in the response to Comment 6-1, only a limited amount of oil would be predicted to be deposited on the sediments and bioaccumulation via benthic organisms is not likely. Therefore, widespread remediation of contaminated sediments would not be anticipated.

6-7.4 “The risk of delayed response to oil spills can lead bio-toxic accumulation on the food chain through the prey species of both species which includes macroinvertebrates (piping plovers) and small fish species (least terns) (Sanchez & Caldwell, 2008).”

RESPONSE: Topic addressed in the response to Comment 6-1.

6-8.4 “While the short term impacts on the pallid sturgeon are reduced through the use of HDD technology for pipeline construction, impacts on prey species from delayed responses to any oil spills would have impacts on the sturgeons themselves and potential for bioaccumulation in long-lived mature pallid sturgeons is unknown. The only potential source for indirect impacts on pallid sturgeon associated with the HDDs that is noted in the EA is an ‘...*inadvertent release of nontoxic bentonite mud (used for lubricating the drill path) into the water body*’ (USACE 2016 ps. 67).”

RESPONSE: As noted in the response to Comment 6-3, pallid sturgeon would not likely be present in the slow moving portion of Lake Oahe downstream of the Dakota Access crossing. Even if any sturgeon were to pass through the area, it is unlikely that they would be present long enough for bioaccumulation to have a significant impact. Dr. Bowser did not specifically identify data on bioaccumulation in long-lived mature pallid sturgeon that the Corps should have considered. Dr. Bowser generally commented that delayed responses to any oil spills would have impacts on sturgeons themselves, but that the potential for bioaccumulation in sturgeons is unknown. Dr. Bowser did not provide any scientific evidence or studies specific to sturgeon in Lake Oahe that would cause the Corps to doubt its previous methodologies and data supporting the Corps' effects determination, which was concurred in by USFWS. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

Furthermore, according to ETP, nontoxic bentonite mud (used for lubricating the drill path) was not inadvertently released into the water body during the HDD.

6-9.4 "There is little documented evidence that pallid sturgeons easily relocate when their habitat is disturbed (Jacobson et al. 2016; MRRP, 2016). Further, the EA released by USACE suggests that. '*...if pallid sturgeon were present in the area where the spill or leak occurred, they would likely relocate outside of the contaminated area*' (USCAE 2016 section 3.4). However recent data in the Missouri River Recovery

plans and scientific models suggest that adult and juvenile pallid sturgeons use different prey bases in different habitats that also differ seasonally and responses to disturbances to those prey bases is not well known.”

RESPONSE: Habitat and prey-based impacts are not applicable at this location. The seasonal differences referenced by the commenter would likely only be applicable to resident populations of pallid sturgeon. However, the slow moving portion of Lake Oahe downstream of the Dakota Access crossing is not the appropriate habitat for pallid sturgeon. Therefore, the habitat and prey based impacts by the commenter are not applicable to either an initial spill or associated restoration activities.

*See also 6-3 and 6-10*

**6-10.5 “The impact on benthic organisms and cyprinids are considered one of the contributing factors of the decline of the pallid sturgeon throughout its range and impacts on the prey bases need to be considered as part of the full EIS.”**

RESPONSE- Topic addressed in the response to Comment 6-9.

6-11.5 “While the DAPL EA determined that ‘...*the Proposed Action may affect, but is not likely to adversely affect the interior least tern [...] or piping plover...*’, the contention of individuals moving to other areas of suitable habitat in the immediate area are curious as the available habitats are extremely limited and loss of habitat is the leading cause of population decline in the area (USFWS 2017). In addition, while the DAPL EA failed to detect nesting least terns or

pipng plovers in the area (USACE 2016 pg 63) based the pedestrian surveys, there are regularly recorded observations of these species within 0.5 miles of the proposed project through well-established citizen survey databases on birds.”

RESPONSE: Topic is addressed in the response to Comment 6-3. The Corps considered that both the interior least tern and the piping plover have the potential to occur within the Project Area and Connected Action. Final EA, at 62. The EA states that suitable habitat may exist for both the interior least terns and piping plover at the Lake Oahe crossing depending on precipitation and seasonal flow variations as exposed sand/gravel bars suitable for nesting. This is consistent with the commenter’s reference to observations of these species within 0.5 miles of the proposed project. While it may be true that loss of habitat is the leading cause of population decline throughout the range of these species, there will be no permanent loss of habitat due to the proposed project. Additionally, any impacts to habitat due to a release during operations would be temporary.

**6-12.6 “Since least terns and piping plovers have both been repeatedly observed in the areas immediately surrounding the proposed pipeline, the full EIS needs to address nesting endangered and threatened bird species in more detail.”**

RESPONSE: As indicated in the response to Comment 6-3, the EA conservatively assumed the presence for four sensitive bird species (the interior least tern, whooping crane, piping plover, and rufa red knot), and that if a release would occur that it would impact Lake Oahe, and it would occur during a season

when these species would be utilizing the area. The USFWS concurred with the Corps' determination of "may affect, but is not likely to adversely affect."

6-13.6 "The results of the habitat assessment field surveys are inadequate to determine whether rufa red knots are using stopover habitats that are present at the Lake Oahe crossing . . . . **Documenting the occurrence of red knots and stop over habitats needs to be completed for the project area and correlated with citizen science observations that suggest that the species is present.**"

RESPONSE: Topic addressed in the response to Comment 6-12.

6-14.7 "The occurrence of Dakota skippers in the general area should be examined using appropriate survey timing and known behavioral traits."

RESPONSE: Dakota skipper surveys were performed during the appropriate time of the year. Adult Dakota skippers emerge from their larval form from mid-June to early July depending upon weather conditions. Males emerge as adults about five days earlier than females. The adult flight period at a specific location lasts between two to four weeks with mating and egg-laying occurring throughout the period.

In order to prepare for the species-specific surveys, a habitat screening was performed prior to the survey so that the team was prepared to conduct the survey during the appropriate survey window. ETP hired a USFWS recognized expert to perform a quantitative habitat assessment protocol along the North Dakota portions of the DAPL. It was determined that no additional Dakota skipper surveys were required

at the Lake Oahe crossing based on grassland analysis and prior records of occurrence.

The results of the Dakota skipper surveys are included within the USFWS Biological Opinion (BO) associated with other portions of the DAPL Project, outside of the EA review area, that was issued by the USFWS on May 31, 2016.

6-15.7 “Oil and gas activities are considered a threat mostly in the wintering grounds of the whooping crane (Gulf of Mexico area) along with loss of habitat at stopover points along the flyway which would include wetlands and croplands.”

RESPONSE: Consistent with the comment, the Corps considered potential threats on whooping cranes along the Central Flyway migratory route in the region of the Proposed Action, including the loss of stopover habitat from conversion of natural wetlands (e.g., prairie potholes) to croplands, as well as development activities associated with natural gas and oil production. Final EA at 103. The Corps determined that the Proposed Action would not result in any loss of stopover habitat for the whooping crane, or contribute to cumulative impacts on the species.

**Document E: Second Declaration of Richard B. Kuprewicz (ECF No. 195-1), Earthjustice**

E1.2 “PHMSA relies on self-reporting from pipeline companies, and such self-reported pipeline releases are seldom accurate as to cause or release volume. A review of NTSB accident reports on many major liquid pipeline releases will support my observation on this matter.”

RESPONSE: Congress authorized PHMSA to oversee proper design, proper installation practices,

operator's actions for compliance, and record keeping. The Corps understands the commenter's skepticism; however, the Corps defers to PHMSA on these issues since they are the regulatory authority with technical expertise on this topic.

E2.4 "I disagree that these [36 special] conditions eliminate or even meaningfully address the concerns that have been raised in this case, my previous report, and my declaration . . . . Many of the 36 conditions were already included in the Final EA, or are requirements that are already imposed by PHMSA's regulations . . . . the easement conditions address issues that are already mandated by regulation or the Final EA, but provide additional specificity."

RESPONSE: PHMSA regulations 49 CFR § 195 are designed to protect people and the environment. According to ETP, the DAPL pipeline complied with all 49 CFR § 195 and in many areas the DAPL design exceeded the requirements of 49 CFR § 195.

During the December 2, 2016 technical meeting with the Corps, the SRST and their technical experts, and ETP, the SRST technical experts asked for a number of items that should be incorporated into the design and operation of the pipeline that were not outlined in the EA (generally treating the EA as if it was a "design basis document"). As discussed during the meeting, the majority of the items SRST requested were already required by PHMSA. Nevertheless, the Corps honored the request by the SRST technical experts and incorporated those items as conditions to the easement. October 20, 2016 Memorandum, USACE ESMT001213-001249.

*See also E3*

E3.6 “The conditions [21, 22, 23] regarding the Mainline Valves, SCADA, and Leak Detection System also do not address the issues raised in my October 28, 2016 report. Another illusory condition is part of Condition 31 which discusses the use of Close Interval Surveys, but then notes that these cannot be done for the pipeline segment under Lake Oahe.”

RESPONSE: As noted in the response to Comment E2, the incorporation of some items, whether or not they were already PHMSA requirements, as easement conditions addressed the concerns expressed by the SRST technical experts at the December 2, 2016 technical meeting. Additionally, although ETP cannot conduct a CIS survey on the actual HDD (since it is under the river and physical contact is not available), the CIS survey can be done on the surrounding segments entering and leaving the HDD bore. Although CIS survey is not required under 49 CFR § 195, CIS on the adjacent areas will provide an extra layer of assessment and as an easement condition exceeds PHMSA requirements.

E4.6 “Condition 15 recites: ‘The pre-in-service hydrostatic test for mainline pipe must be to a pressure producing a hoop stress of either: a minimum 100% specified minimum yield strength (SMYS) or a minimum of 1.25 times maximum operating pressure (MOP) for eight (8) continuous hours for pipeline segments using a design factor of 0.50 or less.’ (Emphasis supplied.) Testing to a minimum of 100% of SMYS is the better of the two standards, but ETP has the option of using the less rigorous 1.25 MOP test.”

RESPONSE: According to ETP, the standard 30” diameter, 0.429” wall thickness, X70 API5L Grade pipe that was used on the DAPL project has a yield



strength 2002psi. A pressure above 2002psi for this pipe could produce permanent deformation. The Lake Oahe crossing is comprised of the standard 0.429" wall thickness connected to a thicker walled pipeline directly under Lake Oahe (30" diameter X70 API5L Grade with 0.625-inch wall thickness). This thicker pipeline, installed to increase safety, has a yield strength of 2917psi.

If ETP ran the 100% SMYS (2917psi) hydrostatic test for the thicker 0.625-inch walled pipeline under the lake, it would correspond to a pressure of 2802psi at the top of the HDD where there is 0.429-inch pipe. At this pressure, the yield strength of 2002psi is greatly exceeded (140% of SMYS) and the pipeline would be at great risk of permanent deformation or rupture - actually leading to pipeline integrity issues rather than preventing them.

As indicated in the response to Comment A21, ETP completed hydrostatic testing.

E5.6-7 "[T]he test level in Condition 15 is only consistent with the minimum federal pipeline safety regulations not intended to deal with certain threats such as "cracking," and is not the more rigorous test that PHMSA had suggested to address certain types of cracking threat such as transportation cracking. PHMSA's recommendation - the 1.5 hydrotest - would have been a better way to address one of the issues raised in my October 28 report. As I explained on page 7 of that report, In-Line Inspection tools (ILI) 'cannot identify all construction and transportation (i.e., cracking) defects that can survive a 1.25 MOP hydrotest.' It is important to note that the DAPL response to my concern about possible transportation cracking threat assessment was not appropriate, even

negligent (see Attachment to USACE email dated November 29, 2016, ESMT000942, Response 1-9). In Response 1-9, DAPL addressed only stress corrosion cracking threats, which are wholly different from the threat of transportation cracking.”

RESPONSE: Transportation cracking is addressed in the response to Comment B11. Hydrostatic testing is addressed in response to Comment A21. ETP discussed hydrostatic testing at 150% MOP with PHMSA, but this would have required hydrostatically testing to 2,160 psi. This pressure risked permanent deformation of the pipeline segment and therefore the easement condition remained at the 49 CFR § 195 requirement of 125% MOP.

E6.7-8 “PHMSA had recommended several other conditions which were not applied here. Two of these might have helped insure that the results of tests like In-Line Inspections (ILI) are then used in pipeline operations and maintenance and are effective. One of those conditions would have required a “Third Party Independent Expert Engineering Annual Audit” . . . The other would have required Dakota Access to provide annual reports to the Army Corps on the results of these tests, as well as other information on leaks, repairs to the pipeline, and on-going damage prevention initiatives. ESMT001189 (proposed Condition 29). These two conditions, however, are not among the 36 conditions of the easement.”

RESPONSE: As ordered by the Court, ETP selected a third-party independent expert engineering company to review easement conditions and regulations, and to assess compliance with all such conditions as well as other integrity threats. The independ-

ent third-party verification was completed and documented. ETP is required to keep all Integrity Management records for the life of the pipeline, which must be made available to PHMSA upon request.

E7.8-9 “Neither the EA nor any of the documents that are part of the Corps’ records in this matter provide the additional detailed information that is necessary to determine whether the route for this pipeline around Lake Oahe lies within an area of high landslide risk . . . remote sensing systems can only detect significant leaks— DAPL claims that it can detect to 1%, which I believe to be wildly over-optimistic—but even if the claimed threshold is correct, those systems are effectively blind to leaks below that level. The vast majority of leaks are discovered by visual observation, not remote sensing systems. While the conditions could arguably help reduce the risk of undetectable underground leaks, it certainly doesn’t eliminate that risk or provide any tools to help detect them. Any leak in the HDD under Lake Oahe would likely only be discovered once the oil sheen is visible on the surface, by which time a colossal and irremediable impact would have occurred.”

RESPONSE: The avoidance of landslide areas is discussed in the response to Comment B4. Leak detection is addressed in the response to Comment D13.

E8.9 “[T]he 36 conditions . . . do not in my view materially alter the risks or address the flaws in the Corps’ analysis of spill risk and response, which continue to suffer from a number of grave flaws that render its continual disregard for spill impacts invalid.”

RESPONSE: Topic is addressed in the response to Comment B1.

E9.9 “[A] three-page “analysis” of my report presented on the letterhead of a company called Nouveau, Inc. ESMT001005 . . . . It does not provide any of the additional information that I identified is essential to evaluating the risks of the pipeline route selected. And the report offers no engineering, scientific, or technical basis for its criticism of the issues I raised . . . . This document meets none of the minimum criteria for a technical or scientific analysis and in my view should be ignored.”

RESPONSE: The decision relative to the Proposed Action was made based on numerous technical documents supplied by the applicant. Planning documents associated with the evaluation of the risk construction and operation of DAPL have been prepared as detailed in the response to Comment A9.

E10.10 “A second document purports to respond to the issues raised in my report. ESMT00937-00947 . . . . For example, the document responds to a detailed critique about the EA lacking critical information to support its conclusion of low risk by simply stating yet again that the ‘risk of a leak is low.’”

RESPONSE: Topic is addressed in the response to Comment B18. Risk planning documents associated with construction and operation of DAPL are described in response to Comment A9.

E11.10-11 “[T]he document only assesses landslide risk at the HDD bore hole work area and the stringing area. It does not provide sufficient information to permit an independent evaluation of landslide risk in the nearby area where the pipeline would be routed where a rupture would result in impacts to

federal lands and Lake Oahe . . . . The threat of a landslide for a large crude oil pipeline near a major waterbody is considerably greater than it is for either a natural gas pipeline or electric transmission line . . . . Landslide risk can only be mitigated through proper route selection— something that appears to have never been looked at closely in any public document that I am aware of.”

RESPONSE: As noted in the responses to Comments A14 and B4, the Corps considered the potential impact of landslides.

E12.12 “Dakota Access’s response does not provide additional detail on how the ILI tools will be implemented, such as the action thresholds that would be applied to limit operator discretion.”

RESPONSE: Topic is addressed in the response to Comment C24.

E13.13 “Neither the EA nor Dakota Access in its responses to any of my questions provides any of the information that would permit an independent verification that the rapid identification mentioned in the EA is even possible for the pipeline segment, or that its low estimates of potential oil spill volumes or conclusions about low risk for this unusually sensitive area are supported.”

RESPONSE: Leak detection is addressed in the response to Comment B7. Worst-case scenario volume determination is addressed in the responses to Comments A1 and A2. High consequence areas are addressed in the response to Comment B1.

**Document F: Declaration of Richard B.  
Kuprewicz (ECF No. 272-1) CONFIDENTIAL,  
Earthjustice**

F1.3-4 “[A] detailed review of this Report reveals incomplete information including numerous misleading, false statements, and unsupported critical assumptions that could lead readers to make imprudent decisions understating the risks and overstating the effectiveness of proposed safety approaches on the DAPL routing that could affect Lake Oahe.”

RESPONSE: Topic is addressed in the response to Comment F20. The Corps’ assessment of risk is addressed in the response to Comment A9.

F2.4 “[T]he pipeline operator and the USACE have failed to consider all threats that could cause pipeline rupture. The Report seriously understates the risks and worst case oil release that could affect Lake Oahe.”

RESPONSE: Topic is addressed in the response to Comment B1.

F3.4 “[O]il spill release volumes and risks associated with the DAPL segments that could affect Lake Oahe presented in the Report are most likely considerably understated.”

RESPONSE: Information on the worst-case scenario and spill planning is provided in the response to Comment A9.

F4.4 “The Report’s discussion of oil spill risk makes a series of incorrect and unsupported assumptions about the volume of oil that will spill when a rupture occurs, as well as the time in which a release will

be determined by the staff in a remote control room and the pumps shutdown.”

RESPONSE: The estimated potential spill volumes used for spill planning is addressed in the response to Comment A1. The time to respond is addressed in the response to Comment B6.

F5.4-5 “[T]ransient release dynamics . . . greatly hinders reliable and timely remote SCADA determination of a pipeline oil release . . .”

RESPONSE: Topic is addressed in the response to Comment F7.

F6.5 “The reports provided in connection with DAPL do not provide sufficient detail on the SCADA system being used here.”

RESPONSE: Mr. Kuperwicz did not specifically identify the information on the SCADA system that was more appropriate or necessary for the evaluation. Mr. Kuperwicz generally commented that sufficient detail wasn’t provided but does not provide any scientific evidence or studies specific to the SCADA system that would cause the Corps to doubt its previous methodologies and data supporting the Corps’ reliance on ETP’s information and explanation of the mechanics of the SCADA system. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

F7.5-6 “One incorrect assumption in the Report is the rate at which oil will be released upon a rupture. The Report indicates that upon a guillotine break the pipeline will release at essentially the pumping rate (p. 9). This rate assumption is technically flawed and ignores the rapid transient rise in rupture release rate

out the rupture of a transmission pipeline. The actual rate at which oil will be released from the pipeline upon rupture will be much higher than pumping rates.”

RESPONSE: According to ETP, although the release rate in a full bore rupture could potentially increase for a very short duration, as the pressure within the pipeline drops and the liquid expands, this phenomenon would be short-lived (likely in the order of seconds rather than minutes). The release rate would decline after this initial spike and not have a meaningful impact on the overall volume calculated over 9 minutes. Therefore, ETP used a conservative approach in the spill model that the pumped flow rate was maintained over the entire 9 minutes.

*See also* F5, F9, F11, F13

F8.6 “The Report also assumes that releases can be determined and pumps shutdown within 9 minutes, with an additional 3.9 minutes to completely close block valves. The Report provides no specifics as to how those times are possible for the Lake Oahe segment.”

RESPONSE: This topic is addressed in the responses to Comment A10 and B5.

F9.7 “The Report attempts to convey a worst case release as a “guillotine break” with a subsequent limited explanation that fails to capture the true transient release dynamics associated with pipeline rupture.”

RESPONSE: Topic is addressed in response to Comment F7.



F10.7 “The Report limits the elevation profile to a few miles spanning Lake Oahe (at page 14) is woefully inappropriate for a pipeline oil spill rupture analysis to a sensitive water body.”

RESPONSE: Consistent with the comment, ETP performed additional spill modeling that expanded the scope of the oil spill analysis. ETP considered the interaction of the elevation profiles both upstream and downstream of the crossing. Although the Spill Model Report for Lake Oahe was limited to the portion of pipeline within USACE’s jurisdiction, ETP evaluated the elevation profiles along the entire project route and modeled potential theoretical worst-case releases along the entire project route in accordance with PHMSA modeling requirements.

Furthermore, while potential releases could reach Lake Oahe, the worst-case scenario discharge analysis in the Spill Model Report provided the most conservative rupture/greatest impact to this sensitive water body. Releases further back from the body of water will be subject to adhesion effects from the land and vegetation as well as pooling of some of the oil whereas a full bore rupture and complete separation from a pipeline suspended over or adjacent to the lake would not similarly experience adhesion effects and pooling to the same extent. Additionally, the other potential scenarios, set back from the lake, would result in a delay of the oil reaching the lake and additional volume reduction due to evaporation of the highly volatile oil and adhesion of the oil to the ground surface.

*See also F16*

F11.8 “The Report fails to capture the significantly higher transient flow rates associated with rupture.”

RESPONSE: Topic is addressed in response to Comment F7.

F12.8 “The Report fails to justify and support in my opinion the highly optimistic time to remotely determine (via SCADA) a transmission pipeline rupture has occurred in the segment that could affect Lake Oahe and initiate emergency shutdown and segment isolation.”

RESPONSE: According to ETP, there are numerous pressure transmitters installed on DAPL at regular intervals, including both sides of the Lake Oahe crossing. The effects of a pipeline rupture will cause pressure waves to travel at the speed of sound through the pipeline and will be detected as pressure drops within seconds of the rupture occurring.

F13.8-9 “The Report over credits the valves that would be used to limit the amount of oil that can be released into Lake Oahe. The Report apparently fails to recognize how fast crude oil with the specific gravity stated in that Report can be released out a rupture driven by other transient forces such as decompression, as well as the force of gravity.”

RESPONSE: Topic is addressed in the response to Comment F7.

F14.9 “Information about the areas where there is landslide risk, should not be limited to the HDD borehole and the stringing area as was done in the EA, but need to show landslide risk along the pipeline route.”

RESPONSE: Topic is addressed in the responses to Comments A14 and B4.

F15.9 “The Report also attempts to assign risk by utilizing the number of HCAs (High Consequence Areas) for risk approach and fails to grasp important differences that may be associated with each specific HCA, especially very sensitive HCAs such as Lake Oahe.”

RESPONSE: ETP considered the HCAs in the evaluation of the proposed alignment in compliance with 49 C.F.R. § 195.452. ETP prepared PHMSA-approved spill models that consider potential interaction with all HCAs as defined by PHMSA. The spill models account for the presence of HCAs and ETP designed the pipeline and developed operational parameters to reduce the risk of a release at HCAs in accordance with PHMSA requirements.

The commenter did not identify any code or industry-accepted procedure that states that the HCAs cannot be used to assess relative risk between points along the alignment during that evaluation.

F16.10 “In the Report’s section titled Reducing Risks (p. 11), the comments fail to acknowledge the importance of a broader pipeline elevation profile in liquid pipeline siting and safety as well as valve type and placement.”

RESPONSE: Topic is addressed in the response to Comment F10.

F17.10 “Anti-siphoning claims on pages 11, 15 of the Report are confusing and misleading.”

RESPONSE: The Report states that the full volume of oil at an elevation higher than the rupture in

the pipeline is allowed to drain out. The “soda straw” analogy in the spill model report was presented to help illustrate to the reader that the predicted spill volumes are larger than would likely be seen in reality due to certain properties of physics. Although it can be argued to what extent the anti-siphoning effect would reduce the spill volumes, that result would have no bearing on the spill model analysis performed and estimated volumes obtained as the spill model does not include a reduction in volume for anti-siphoning. ETP’s spill response plan is designed to handle a worst-case discharge that does not lower the volume to account for anti-siphoning.

F18.11 “The statement in the Report that ‘the backfill on top of the pipe restricts the area and volume the spill can affect’ can be very misleading to less experienced or informed personnel.”

RESPONSE: The spill model places the pipe on top of the ground. ETP addressed soil cover to demonstrate it assessed the true “worst-case release.” The information on backfill in the spill model report was presented to help illustrate to the reader that the predicted spill volumes are larger than would likely be seen in reality due to certain properties of physics.

F19.11 “The reference to the California State Fire Marshal 1993 “Hazardous Liquid Pipeline Risk Assessment,” is misused and taken out of context so as to create a false impression as to the effectiveness of liquid pipeline mainline valving, especially on large diameter liquid transmission pipelines.”

RESPONSE: The California State Fire Marshal report was referenced to point out that although the spill model assumes the worst-case guillotine break,

in reality the volumes experienced during actual pipeline incidents rarely approach the volumes predicted in the spill modeling for full bore rupture breaks.

F20.12 “The Report (p.15) makes a false statement as to the most likely cause of liquid transmission pipeline failures, especially ruptures . . . . third party damage is not the leading cause of liquid transmission pipeline ruptures. Even a cursory review of the PHMSA public incident database files will uncover that third party damage is not the leading cause of liquid transmission pipeline ruptures.”

RESPONSE: The Report references a safety statistic, commonly cited in the pipeline industry that applies to all pipelines--not just liquid transmission pipelines. The Report does not reference only liquid transmission pipelines.

*See also F1,F16*

F21.12 “PHMSA has issued a safety advisory bulletin covering this grade of pipe. 100 % radiographic assessment of girth welds may not be adequate to assure weld quality for this grade of pipe. Additional quality assurance /quality control protocols are warranted for grade X-70 welds as girth weld integrity threats may not be uncovered by just radiological assessment of the girth welds.”

RESPONSE: ETP is aware of the safety issues identified by Mr. Kuprewicz. Dakota Access’s parent company was one of the financial sponsors and technical participants in an industry project initiated to examine the phenomenon addressed in the March 24, 2010 PHMSA Advisory Bulletin, ADB-10-03, “Pipe-

line Safety: Girth Weld Quality Issues Due to Improper Transitioning, Misalignment, and Welding Practices of Large Diameter Line Pipe.”

According to ETP, the PHMSA advisory does not explicitly or implicitly deem 100% radiography inadequate. While PHMSA specifically mentions X70 grade line pipe in this advisory, the advisory is not focused on that grade, nor should it be. The issues described are not pipe grade or strength dependent. In the advisory PHMSA also specifically mentions X60 grade and refers to grades higher than X70. The advisory mentions various grades because the issues noted were identified on large diameter pipelines constructed during the 2008-2009 time period. These higher grades of pipeline materials have been in common and widespread use for larger diameter pipelines since at least the 1980s, so it is not surprising that any issues related to welding that might arise will occur on these grades, since they are what is being used. But that does not make the issue grade-dependent, and contrary to the apparent inference in the comment, PHMSA’s advisory does not invoke grade dependence.

In referring to the investigations of these failures, PHMSA does not mention grade: “Post-incident metallurgical and mechanical tests and inspections of the line pipe, fittings, bends, and other appurtenances indicated pipe with weld misalignment, improper bevels of transitions, improper back welds, and improper support of the pipe and appurtenances. In some cases, pipe end conditions did not meet the design and construction requirements of the applicable standards . . .”

PHMSA then specifically notes the applicable standards, various editions of API 5L (Specification for Line Pipe), API 1104 (Welding of Pipelines), ASME B31.8 (Code for Gas Transmission and Distribution Piping Systems), ASME B31.4 (Code for Liquid Pipeline Systems), MSS-SP-44 (Standard for Steel Pipe Line Flanges) and MSS-SP-75 (Specification for High Test Wrought Butt-Welding Fittings). These standards together provide requirements for the design, production and installation of relevant components, including compositions, properties, dimensions, fabrication, joining, inspection and testing.

PHMSA provides more specifics of the findings of these investigations, such as girth weld bevels not properly transitioned and aligned, pipe ends not meeting diameter and out-of-roundness requirements, welds not meeting API 1104 requirements, nondestructive testing (NDT) quality problems, and the transition welds being in hilly terrain and high-stress locations such as crossings, streams and slopes with unstable soils.

According to ETP, Mr. Kuperwicz ignores the specific concerns, root causes and contributing factors mentioned in the PHMSA advisory. These issues were discussed at length among operators and with PHMSA. An underlying factor, not specifically mentioned in the PHMSA advisory but broadly and thoroughly discussed among pipeline operators and PHMSA at the time, was the volume of pipeline construction that was taking place during this period. This high volume taxed the capabilities of both manufacturers and construction contractors. As a result, the need for thorough vetting and qualification of material suppliers, construction contractors, including

welders and equipment operators, NDE contractors and inspectors was highlighted. Any deficiencies in capability, experience and understanding can be manifested as the issues identified and listed by PHMSA. It is not surprising that such issues will occur in locations where the quality demands are higher. The regulations require systematic measures, further discussed below, that are designed to avoid or mitigate any weld quality deficiencies.

ETP employs additional quality assurance/quality control protocols to address or avoid the issues identified in the PHMSA advisory. Processes designed to avoid or mitigate any weld quality deficiencies include systematic QA-QC procedure development, qualification testing of welders, inspection to enforce adherence to procedures, visual inspection of welds, 100% nondestructive testing (NDT), Level 3 NDT auditing, and multiple hydrostatic tests for the pull string. ETP's comprehensive and systematic QA/QC process to address or avoid the issues in the PHMSA advisory includes:

- Stringent pipe specifications with specific attention to chemistry and dimensional requirements that can impact weldability.
- Use of well-known, experienced, qualified and vetted steel and pipe manufacturers, with a continuous DAPL inspection presence in their facilities during manufacture.
- Strict adherence to dimensional requirements.
- Qualification of welding procedures.
- Qualification of project welders.
- Utilization of demonstrably qualified welding inspectors to assure compliance with welding procedures, including bevel condition, weld



joint alignment, fit-up and transition requirements.

- Use of qualified and vetted Level 2 NDE technicians for primary weld inspection.
- Use of qualified and vetted Level 3 NDE specialists for oversight.

According to ETP, by the end of 2017, DAPL had undergone almost 80 PHMSA audits and more than 280 labor days of inspection, which are described below. None of the PHMSA-identified examples of failures occurred on DAPL or DAPL sponsor facilities. PHMSA audits and inspections are thorough and probing reviews into the operator's programs, philosophy, processes and procedures, qualifications, diligence and practices. According to ETP, PHMSA has not pursued any enforcement actions against DAPL related to the audits and inspections.

- 2015 PHMSA DAPL Kickoff Inspection (Engineering Standards/Procedures)
  - 1 Audit - 2 days in Dakota Access Houston Office.
- 2016 PHMSA DAPL Inspections – Across all Pipeline Spreads/Terminals/Pump Stations/Fab Shops/Pipe Yards.
  - 69 PHMSA Audits.
  - 20 Different PHMSA Inspectors.
  - 230 Total Days of PHMSA Inspections.
- 2017 PHMSA DAPL Inspections
  - 9 PHMSA Audits.
  - 54 Total Days of PHMSA Inspections.

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- 47 Consecutive Days of PHMSA Inspections during the HDD Drill of Lake Oahe.
  - Inspected the Lake Oahe HDD ECA Lowering In Stress Analysis Record.
  - 3 days of this included PHMSA + Four Representatives from Oakridge Research National Lab (PHMSA agent – welding SMEs). Each weld was inspected related to the HDD string for the Lake Oahe and included up to the main-line valves on each side of Lake Oahe.
  
- 6 Days of PHMSA Inspections.
  - Inspected the Commissioning from the ND Terminals through the Lake Oahe HDD.
  
- 1 Day PHMSA Inspection.
  - Final DAPL Records Inspection in the Dakota Access Houston Office.
    - Included the hydrotest records for the Lake Oahe HDD.

*See also M18, M20, M21*

**Document G: Declaration of Donald  
Holmstrom, Earthjustice**

G1.3 “[T]he Corps did not have an adequate basis to conclude that the risk of an oil spill or leak affecting Lake Oahe was so low as to be insignificant . . .”

RESPONSE: Topic is addressed in the responses to Comment B1 and B16.

G2.4 “[T]he American Petroleum Institute (API)—has taken the lead by developing voluntary standards that go significantly beyond the regulatory requirements imposed by PHMSA . . . . ‘the PHMSA standards that are applicable to the Dakota Access Pipeline...are predominately out of date with key modern standards not incorporated by reference.’”

RESPONSE: ETP designed and constructed the DAPL using standards and practices that meet or exceed all regulatory requirements which include prescriptive measures with regard to external coating systems, corrosion control systems, and inspection of the pipeline during construction. For example, all MLVs, and therefore all EFRD Valves, have been sized and specified to meet the industry standard API Specification 6D for the design, manufacturing, testing and documentation of such valves. A summary of DAPL practices and design that exceed regulatory requirements is presented in Table G2.

*See also* G12, L44, L50, L51, L52, M18, M21

**Table G2. DAPL Practices and Design in Excess of Regulatory Requirements**

DAPL Plans & Specifications	DOT CFR 195 Requirments	DOT Part 195 Reference
<b>Pipeline Cover and Separation Distances</b>		
Providing a minimum clearance of 24 inches (2 feet) between drain tile and DAPL pipeline as indicated in the Agricultural Impact Mitigation Plan	Minimum clearance required between pipe and drain tile is 2 inches	CFR § 195.250
Providing a minimum cover (from top of pipe to ground level) of 48 inches (4 feet) in cultivated fields	Pipe must be buried so that it is below the level of cultivation or to a depth of 30 inches of cover, whichever is deeper	CFR § 195.248
Providing a minimum cover (from top of pipe to ground level) of 60 inches (5 feet) at public road drainage ditches	Minimum cover required for public road drainage ditch crossings is 36 inches (3 feet)	CFR § 195.248
Providing a minimum cover (from top of pipe to ground level) of 48 inches (4 feet) through industrial, commercial, and residential areas	Minimum cover required is 36 inches (3 feet)	CFR § 195.248
Providing at least 60 inches (5 feet) of cover for waterbody crossings	Minimum cover required is 30 or 36 inches (3 feet)	CFR § 195.248
Horizontally Directionally Drilling underneath waterbody crossings wider than 100 feet in width to depth of at least 20 feet under the bottom of the waterbody	Minimum cover required is only 48 inches (4 feet)	CFR § 195.248

<b>Pipeline Strength</b>		
<p>DAPL line pipe is specified to API 5L, PLS-2 standards which mandate additional metallurgical requirements, factory inspections and record retention. Longitudinal seam of all line pipe has been 100% examined by nondestructive testing (NDT)</p> <p>All pipe mills were inspected for their quality assurance and quality testing programs prior to being allowed to bid to supply pipe for DAPL while DAPL pipe was being produced to ensure full compliance with all quality control measures</p> <p>0.50 Design factor will be used for all public road, waterway and railroad crossings, and for all above-ground sections of the DAPL system (mainline valve sites and pump stations). Line pipe with 0.625" wall thickness (WT) will be installed through these areas. Inspectors for DAPL were placed in each pipe mill-RAR000234</p>	<p>Line pipe must be fit-for-purpose</p> <p>No requirement</p> <p>Line pipe inspection only required at the job site during installation</p> <p>0.72 Design Factor is permitted throughout the entire pipeline system -which equates to providing line pipe with 0.429" WT.</p>	<p>CFR § 195.112</p> <p>N/A</p> <p>CFR § 195.206</p> <p>CFR § 195.106</p>
<b>Pipeline Valves</b>		
<p>All mainline valves on DAPL will have motorized actuators to provide for the capability to remotely close all valves to isolate pipeline segments as needed. All</p>	<p>No requirement</p>	<p>N/A</p>

mainline valves qualify as Emergency Flow Restriction Devices (EFRD).		
<b>Pipeline Construction</b>		
100% of all mainline girth welds will have an NDT inspection, either by radiographic (x-ray) or ultrasonic means	Need to perform an NDT for only 10% of girth welds made by each welder each day	CFR § 195.234
Hydrotesting entire pipeline for 8 hours at 125%	Hydrotest for 4 hours at 125% plus 4 additional hours at 110%	CFR § 195.304
Hydrotesting all valves and above-ground equipment for 8 hours at 125%	Manufacturing facilities only provide 1 hour leak tests	CFR § 195.305
An Internal Line Inspection deformation tool will be run through the entire pipeline prior to start-up	No requirement	N/A
Cathodic Protection System will be activated in stages along the right of way as the pipeline is back-filled and completed.	Cathodic protection must be activated within 1 year after the pipeline begins operation	CFR § 195.563
<b>Pipeline Operations</b>		
The pipeline right of way will be inspected weekly, weather permitting, by aerial means.	Right of way inspections are required 26 times per year, with intervals not to exceed three weeks	CFR § 195.412

G3.4 “[A] proper risk analysis would focus on the operator of the pipeline and their actual performance including verification of the effectiveness of safeguards and the use of process safety key performance metrics to achieve effective targeted risk reduction. This is the focus of the more up-to-date industry standards that are not referenced or applied in the EA . . . . A valid risk analysis would recognize the history of the operator.”

RESPONSE: Mr. Holmstrom refers to Sunoco’s incident history and safety performance based on PHMSA data for the period 2006-2016. ETP Vice President of Crude and Liquid Pipeline Operations, declared that

...approximately 70% of the 276 incidents [referenced in the PHMSA data] were confined to operators’ property, which makes these incidents less likely to affect people, property, or environment because product often stays within engineered containment or its impact is limited to facility boundaries. Moreover, Sunoco’s pipeline operations and maintenance are regularly inspected by regulators; these inspections have increased substantially in both frequency and intensity since 2013. Between 2013 and 2016, Sunoco had over 90 targeted, system-wide-program or site-specific PHMSA and state inspections for existing pipeline systems and new construction. In addition to these inspections, Sunoco frequently conducts internal reviews of its integrity management program, operations, maintenance, and emergency procedures. The integrity

management program is the systematic application of processes, procedures, and best practices to identify threats, continually assess, prevent, and mitigate risks on pipeline systems. Although the PHMSA requirements at 49 CFR § 195.452 apply to HCA segments, Sunoco, through its IMP, evaluates and remediates risk in non-HCA segments as well, therefore implementing measures above and beyond the existing regulatory requirements.

Stamm Declaration, ECF 277-1 at 6-7 (August 17, 2017).

According to ETP, if an incident is confined to the operators' property, then it would not reach Lake Oahe or any other land or water used by the Tribe. This is because the released product often stays within a fenced-in facility boundary protecting the general public from the potential for incidental contact once the product is released. The DAPL valve facilities, MLV-ND-380 and MLD-ND-390, are located in upland locations that have been graded and leveled, and the sites are surrounded by security fencing and camera systems to provide additional security. No engineered containment system is needed because these above-ground valve sites are not subject to any routine maintenance activity that could result in a release. If work becomes necessary, special containment materials are first put in place. Finally, the manner in which the valves are constructed means there are no openings to the outside environment for oil to be released.



According to ETP, all MLV assemblies were designed in accordance with DOT 195, Subpart C, Paragraph 195.116 and Subpart D – Construction, Paragraphs 195.258 and 195.260. All MLV sites are integrated with the SCADA system to provide 24-hour monitoring and emergency shutdown of MLV's and pump stations along the pipeline.

Regardless of whether product stays within engineered containment or its impact is limited to facility boundaries, the Corps recognizes that there may still be affects to employees, first responders, bystanders, and commuters. The Corps also recognizes that impacts limited to facility boundaries may still result in impacts that transcend facility boundaries and impact nearby or adjacent communities.

Mr. Holmstrom states his preferred general methodology but does not identify a specific alternative methodology or particular criteria or performance metrics that the Corps should have considered. Mr. Holmstrom generally asserts that his preferred methodology is consistent with more-up-to-date industry standards but does not specifically identify those standards. Mr. Holmstrom did not provide any scientific evidence or even studies specific to Lake Oahe that would cause the Corps to doubt its previous methodologies and data supporting the Corps' conclusion to rely on ETP's risk analysis. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major federal action.

*See also* G6, G8, G19, L4, L22, L49

G4.5-6 “[T]he EA gravely underestimates the risk of leaks and spills . . . the analysis appears to underestimate both the risk as well as the amount of a potential spill . . . Modern major accident prevention focuses on rigorous analysis of all potential hazards . . . This modern approach provided for in applicable consensus safety standards is significantly lacking in the Corps’ Environmental Assessment.”

RESPONSE: Topic is addressed in the response to Comments A1 and A9.

G5.6 “The potential for surge damage needs to be carefully evaluated for the Lake Oahe crossing . . . Although required by ASME B31.4, surge calculations, adequate controls and protective equipment are not effectively addressed in the DAPL risk studies or the EA for the Lake Oahe HCA.”

RESPONSE: The PHMSA regulations do not require a surge analysis. Nevertheless, ETP considered the potential for surge damage in the November 3, 2015 DAPL Pipeline Surge Analysis Report. ETP implemented the measures recommended in the report to mitigate or eliminate excessive pressure surges into the design and construction of the pipeline and valve system.

G6.6 “[R]easonable risk and worst-case analysis needs to incorporate . . . Information such as the companies’ safety performance data, verification efforts, mechanical integrity records and incident history . . .”

RESPONSE: Topic is addressed in the response to Comment G3.

G7.7 “The stated 12.9-minute time from leak detection to the closing of the shut-off valves lacks supporting data and is not credible.”

RESPONSE: Topic is addressed in the response to Comment B5. Discussion of the amount of time that it takes for the motor operated isolation and/or check valves to close is addressed in response to Comment A10.

G8.7 “[T]he EA and other DAPL risk-related documentation lacks vital information such as safety performance data and targeted risk reduction measures . . .”

RESPONSE: Topic is addressed in the response to Comment G3.

G9.7 “[W]inter in North Dakota can reach arctic conditions . . . . Are the DAPL valves designed for these conditions?”

RESPONSE: ETP provided design temperature specifications to the steel mills, pipe and fitting manufacturers, as well as all pump, valve, and instrumentation manufacturers to ensure that both high- and low-temperature concerns would be considered in the manufacturing of those materials and equipment. The valves and settings are designed to meet operating temperatures ranging from -20 degrees to +150 degrees Fahrenheit, even though the product in the pipeline and thus the pipe itself is not anticipated to drop below 60 degrees Fahrenheit in the coldest North Dakota winters.

G10.7 “A proper analysis examines a variety of credible scenarios including the worst-case discharge.

The EA... barely mentions that the Lake Oahe is an HCA (“high consequence areas”).”

RESPONSE: The worst-case scenario discharge is addressed in response to Comment A1. High consequence areas are addressed in response to Comment B1.

G11.8 “Bakken crude oil . . . is more volatile than many crudes . . . .Spill response planning therefore requires preparation for release of flammable vapors and fires.”

RESPONSE: According to ETP, the 2012 Emergency Response Guidebook (published by DOT/PHMSA) does not treat “Bakken” crude any different than other crude oil. This Emergency Response Guidebook is “intended for use by first responders during the initial phase of a transportation incident involving dangerous goods/hazardous materials” and is a vital resource used by first responders. The 2012 Emergency Response Guidebook does not single out Bakken crude for its flammability characteristics. Bakken crude fire/explosion incidents occurring in the recent past all involved an initial ignition source, such as a train derailment and associated sparking at the time of release. This is typically not the case with most pipeline releases.

Site Safety Plans are developed as part of individual response efforts and identify hazards associated with the release and response strategies and responses are carried out in accordance with the company’s safe work practices, including work permitting. The spill response planning emphasizes “Protection of the public and responders” as the first priority. The first response to any product release is to conduct air

monitoring to ensure protection of the public and responders. This includes elimination of any potential ignition sources. Continuous monitoring is conducted to verify that Lower Effect Levels (LELs) and any potential vapors remain below safe working levels. Should LELs or vapors be observed above safe working levels, the appropriate protections are implemented immediately, including evacuations if necessary.

*See also* L6, L23, L29, L46

G12.8 “[T]he three issues identified by the Court . . . will require a comprehensive and thoughtful analysis that collects new data, subjects it to rigorous and independent review, and adequately explains new conclusions.”

RESPONSE: The Corps is complying with the Court’s remand order.

*See also* M2, M11

G13.9 “Given that there is no technology in place that can identify leaks below the detection limit underground, any slow leak would not be detected until the potential occurrence of oil being visible on the surface of Lake Oahe. By that time, a serious oil spill incident may occur and remediation would be extremely difficult with the potential for long term environmental impacts.”

RESPONSE: As indicated in the response to Comment B6, the LeakWarn CPM system is capable of detecting leaks down to 1 percent or better of the pipeline flow rate within a time span of approximately 1 hour or less and capable of providing rupture detection within 1 to 3 minutes. In the event of a slow leak,

even if pressure measurements do not show a significant drop in pressure, a detectable meter imbalance will develop over a period of time resulting in an alarm to the Control Center. While the alarm threshold may be 1%, the SCADA and LeakWarn systems are sensitive to smaller changes in flow rate and pressure. DAPL Pipeline controllers are trained to shutdown pipelines and investigate when there is any doubt regarding the alarming of the possible presence of a release/leak. Leak detection and notification systems are required in Easement Conditions 22 and 23.

As described in the response to Comment A12, mitigating measures to address groundwater contamination are described in the EA. Final EA at 48.

G14.9 “A fair discussion of risks for a deep HDD would acknowledge the shortcomings of leak detection and the severity of potential problems, in a way that doesn’t gloss over the significance of the decision to route the pipeline at this site.”

RESPONSE: Topic is addressed in the response to Comment B1. Given the engineering design and proposed installation methodology, the risk of a leak is low. The Corps recognized that a spill could be a high consequence event even though the risk is low.

G15.10 “Bakken crude contains a number of highly toxic chemical compounds and a number of notable properties that affect what could happen in an oil spill that are not discussed in the EA.”

RESPONSE: Topic is addressed in the response to Comment A4.

G16.10 “How different chemical constituents interact with the environment, in light of the unique

characteristics of Bakken crude, is subject to a number of variables (including weather) that would need to be discussed in considerably greater detail in order to properly assess risk.”

RESPONSE: Topic is addressed in the response to Comment A4 and D7.

G17.11 “Combining an adequate worst-case discharge analysis with an adequate analysis of how different chemical constituents of spilled oil would become available, with an adequate analysis of how these constituent chemicals would affect fish and wildlife species of concern to the Tribe is a significant undertaking.”

RESPONSE: Comment is addressed in response to Comment C22 and D17.

G18.11 “[I]n light of the severe oil spill risks at the Lake Oahe location (from landslides, risks of mechanical integrity, and lack of effective leak detection), the most effective preventative measure would be alternate routing.”

RESPONSE: Topic is addressed in the response to Comment C26.

G19.12 “The integrity management system described in the EA lacks any reference to the operator’s historic data for leaks, failure rates, incidents and effectiveness of cathodic protection in the long run of HDD under Lake Oahe.”

RESPONSE: Topic is addressed in the response to Comment G3.

G20.12 “[T]he third-party team should ensure the conduct of a safety culture survey of the company . . .

. There is no reference to safety culture surveys in the EA.”

RESPONSE: Sunoco completed two comprehensive Employee Safety Culture Surveys over the past 10 years. One was completed in 2010 and the second in 2016.

*See also L49*

G21.13 “The Tribe has an emergency management department that would be expected to respond to an oil spill on the Reservation and it has never been consulted about developing a plan to do so. To the best of my knowledge, a final response plan does not even exist for the Lake Oahe site, let alone a plan that addresses the full range of spill scenarios and unique attributes of Bakken crude, including flammability. I am unaware even whether response equipment has been staged at Lake Oahe (or, if its not, where such equipment would come from in the event of an incident) . . . . I recommend that the Corps be required to immediately initiate conversations with the Tribe about finalizing such a plan, and staging the equipment and conducting whatever training may be necessary so that the Tribe (and others) are prepared and the response is coordinated.”

RESPONSE: ETP coordinated with the SRST on the location of water intakes and contacts for the spill response plan. Kelly Morgan, SRST archeologist, provided ETP with the names and telephone numbers for the SRST Chairman and the SRST Emergency Services coordinator on March 3, 2016.



Regarding spill response planning, ETP contacted Mr. Elliot Ward, SRST Emergency Services Coordinator in October of 2017. ETP provided the FRP and GRP and requested a meeting to discuss the plans. Mr. Ward indicated that although he was looking forward to meeting to discuss the FRP and the GRP and determine how the two groups can work together to provide for the safety of the citizens of SRST, the meeting would have to wait until after Special Election scheduled for October 25, 2017 and a full Tribal Council could approve Mr. Ward's coordination activities.

An Emergency Response Planning meeting was held in Bismarck, ND on January 11, 2018. ETP invited the Corps, SRST and CRST to participate. The Corps and ETP participated in the January meeting, but no SRST or CRST representatives attended. Another meeting was held in Bismarck, ND on February 8, 2018. ETP invited the Corps, SRST, and CRST to participate. The Corps and DAPL participated in the February meeting. Nine representatives from SRST and one representative from CRST briefly appeared at the beginning of the February meeting to hand deliver letters from each of the tribes, but then left the meeting and did not attend or participate in substantive portions of the Emergency Response Planning Meeting. A third meeting was held in Bismarck, ND on March 7, 2018. ETP invited the Corps, SRST, and CRST to participate. The Corps and ETP participated in the March meeting, but no SRST or CRST representatives attended.

*See also* L63, L67, L68, M10, M14, M20, M22

G22.13 “[W]hile the Corps imposed various conditions in the EA and in the easement, there is no mechanism that I can see to ensure that DAPL is complying with these requirements.”

RESPONSE: The Corps has authority to enforce compliance with the easement conditions. PHMSA has authority to enforce compliance with integrity management of the pipeline. Congress authorized PHMSA to oversee proper design, proper installation practices, operator’s actions for compliance, and record keeping.

**Document H: Declaration of Ian Goodman,  
Earthjustice**

H1.29 “It is simplistic and incorrect to state that pipelines are “undeniably safer” than rail. Moreover, large diameter high pressure pipelines (such as DAPL) are capable of releasing substantially more oil than trains.”

RESPONSE: The difference in potential release volumes is just one factor in comparing the safety of oil transport methods. Final EA at 7. A recent study states

Shipments of crude oil by rail have also grown substantially, concurrent with the rapid rise in oil production, particularly in the Bakken shale formation. Limited pipeline capacity forces over half of its production to be transported to market by rail (Shaffer, 2013). The dramatic increase in the frequency of unit trains carrying crude oil, combined with the volumes of product transported by each train

and the long transportation distances, have significantly increased the risk of spills.

C.Yan et al., Characterization of chemical fingerprints of unconventional Bakken crude oil, *Environmental Pollution* (2017) at 609-610.

Due to rail safety and environmental impacts after several train derailments and explosions, PHMSA issued a safety alert “to notify the general public, emergency responders and shippers and carriers that recent derailments and resulting fires indicate that the type of crude oil being transported from the Bakken region may be more flammable than traditional heavy crude oil.” PHMSA Safety Alert (January 2, 2014).

*See also* I2

H2.29-30 Key factors with particular relevance to DAPL that affect risks for crude transport by pipelines and rail include: (1) delay in detection of accident/spill and response time; (2) landslide risk; and (3) proximity to people, water and economic activity.”

RESPONSE: The avoidance of landslide areas is discussed in the response to Comment B4. Leak detection is addressed in the response to Comment D13.

**Document I: Declaration of Ian Goodman,  
Section 4- Exhibit C, The Goodman Group**

I1.23 “Given the nature of rail, a worst-case scenario from a landslide would require a combination of circumstances that appear to be extremely unlikely. Conversely, for pipelines, especially in the Dakotas (e.g. DAPL and KXL), realistic worst case scenarios

could include landslides. Hence, landslide risk in general (and particularly in North Dakota), is more of a risk for pipelines (including DAPL) than for rail.”

RESPONSE: The potential impact of landslides is addressed in the responses to Comments A14 and B4.

I2.36 “A very extensive analysis would be required to estimate how the risk relating to this remaining Bakken crude by rail compares with the risk relating to DAPL. Unfortunately, reliable analysis of this type has not been conducted and provided to assist in various decisions in regard to DAPL . . . . For the Plaintiffs’ reservations, the answer is clear: DAPL has much higher proximity and much greater risk than does crude by rail. For other locations, it is less clear how the risk of DAPL compares with the risk of crude by rail. But especially in terms of the risk of worst-case accidents and spills, there is no clear reason to assume that DAPL is less risky than crude by rail.”

RESPONSE: Topic is addressed in the response to Comment H1.

**Document K: An Environmental Justice  
Analysis of Dakota Access Pipeline Routes;  
Robin Saha, Ph.D. and Paul Mohai, Ph.D.**

K1.1-2 “The USACE essentially employed the ‘unit-hazard coincidence’ method of conducting a quantitative EJ analysis . . . . The method assumes that only the population in the geographic unit (such as a Census Tract) containing the hazard is impacted or at risk of being impacted by the hazard, while populations in adjacent or nearby units are not impacted. However, this assumption is problematic since environmental hazards are often located at their host unit

boundaries where populations in adjacent and nearby units may be at equal or greater risk of impact.”

RESPONSE: The Corps agrees the assumption was problematic and requested ETP to prepare additional spill modeling to assess potential impacts of a spill to populations in adjacent and nearby communities, including downstream Tribes. The results of the additional spill modeling are presented in the Spill Model Report and Downstream Receptor Report. Topic is also addressed in the responses to Comments A2 and A3.

The Corps also conducted a supplemental environmental justice (EJ) analysis to evaluate potential impacts to minority and/or low-income populations downstream of the DAPL crossing. The supplemental EJ analysis took into account downstream census block groups including those located adjacent to Lake Oahe and in the SRST reservation and downstream to the CRST’s drinking water intake on the west shore of Lake Oahe. The analysis also took into account census block groups in the northwestern portion of Sully County, South Dakota on the eastern shore of Lake Oahe. *See* August 2018 Memorandum for the Record.

*See also* K6, K9

K2.2 “Even though the Standing Rock Sioux Reservation is only a little over 0.5 mile from the pipeline crossing, the USACE discounts any impacts of the pipeline on the Reservation in its quantitative EJ analysis . . . . The USACE justifies excluding the population characteristics of the Tribal land from the demographic analysis of its “Proposed Action Area” by asserting: (1) that the pipeline crossing “maintains a minimum distance of 0.5 miles from Tribal land” and

(2) that it “is at a distance sufficient such that there are no direct or indirect impacts to Tribal lands, member, or cultural resources” . . . . However, the ACE failed to recognize that most of the areas of the two Census Tracts comprising its Proposed Action Area also lie beyond 0.5 mile. Furthermore, USACE does not consider the impacts of an above- or below- ground oil spill or leak at the crossing of Lake Oahe.”

RESPONSE: The supplemental EJ analysis evaluated the potential impacts associated with an accidental release during operation in addition to the construction impacts. For the construction impacts, the analysis focused on populations located within 0.5 mile of DAPL at or adjacent to the DAPL crossing. For potential impacts during operations, the analysis included populations within 1 mile on either side of Lake Oahe between the DAPL crossing and CRST’s drinking water intake downstream (a distance of 156.5 miles).

*See also K6*

K3.2 “Compounding the problem of USACE’s analysis is the combining of the demographics of Sioux County, which is entirely within the Standing Rock Sioux Reservation, with the comparison “Baseline” group of counties (Morton, Emmons, and Sioux). This methodological flaw results in counting large numbers of potentially impacted American Indians as part of the comparison population.”

RESPONSE: The supplemental EJ analysis includes a greater downstream impact area and uses States level reference communities in addition to counties.

*See also K6*

K4.3 “[I]n using averages of the county demographics, ACE under-weights the most heavily populated county (Morton), which is predominantly white; and Sioux County, which is predominantly non-white is given the same weight as Morton County, although Sioux County has about one sixth of the population of Morton County.”

RESPONSE: The supplemental EJ analysis revised the geographic extent of analysis and the applicable reference communities.

K5.3 “The USACE results give the impression that the areas most highly vulnerable to the impacts of a spill are not disproportionately composed of American Indians and are not disproportionately composed of people living below the poverty line.”

RESPONSE: Two census block groups (Tract 204/Block Group 3 and Tract 9665/Block Group 1) are on and adjacent to the crossing of Lake Oahe. Neither has a minority population exceeding 50 percent, a minority population that is meaningfully greater than the reference population, or a poverty level greater than 20%. Therefore, neither census block group was identified as low-income or minority for purposes of this analysis. Overall, there are 14 census block groups located downstream of the crossing along the shores of Lake Oahe that were considered in the analysis. Of those, the Corps identified five census block groups that are considered low-income populations and minority populations for the purposes of this analysis. These are Tract 9408/Block Group 1, Tract 9409/Block Group 1, Tract 9409/Block Group 2, Tract 9411/Block Group 2, and Tract 9417/Block Group 3.

Each of these have a minority population that exceeds 50 percent and, has a poverty level greater than 20 percent. Each one is located on the western shore of Lake Oahe.

Three other census block groups have a minority population that is meaningfully greater than that of the reference community, meaning the percentage of minorities in the census block group exceeds the percentage of minorities in the reference population. These are Tract 9417/Block Group 2, Tract 9652/Block Group 3, and Tract 9652/Block Group 4. Tract 9417/Block Group 2 is located on the western shore, while the other two are located on the eastern shore of Lake Oahe. These three census block groups were identified as minority populations for purposes of this analysis.

K6.3 “[A]pplication of the unit-hazard coincidence approach used by the USACE to identify the “Proposed Action Area” grossly misidentifies the area most highly vulnerable to a release or spill . . . A pre-permit supplementary EJ analysis was also performed for ACE’s Alternative Route north of Bismarck . . . . [I]t found relatively low average poverty rates in the two alternative tracts. However, the supplementary analysis suffered from much the same methodological flaws as the USACE EJ analysis of its Selected Route crossing . . . . A reasonable quantitative analysis of disparities in the distribution of risks and potential impacts from environmental contamination needs to take into account the likely area of impact . . . . The moving water of the Missouri River also is not likely be confined to within just 0.5 mile of the crossing but will likely be carried downstream many miles.”



RESPONSE Topic is addressed in the responses to Comments K1, K2 and K3.

K7.3-4 “[R]ather than using the unit-hazard coincidence method, [Saha & Mohai] use a GIS to combine small geographic areas, i.e., Census Blocks and Census Block Groups, in order to estimate the demographics within areas most likely to be impacted . . . The standard approach includes: (1) defining the “affected environment” or “affected area”; (2) identifying one or more appropriate comparison areas, also often referred to as “reference areas” or “reference communities”; (3) determining the percentages of minority, low-income and other relevant vulnerable populations in the affected area and in the comparison area(s); and (4) comparing the two to determine if there is potential for disparate, adverse impacts to minorities and other population groups that would indicate an environmental justice concern.”

RESPONSE: In the supplemental EJ analysis, the Corps used the boundary intersection method to determine the proportion of minorities and populations below the poverty level. The boundary intersection method is one of the two distance-based methods recommended by Saha and Mohai. The Corps applied the boundary intersection method to census block group data within a 1 mile buffer on each side of Lake Oahe from the DAPL crossing to CRST’s drinking water intake.

The Corps determined that the areal apportionment method used by Saha and Mohai is more appropriate to evaluate the siting of a project and determine potential EJ issues based on chronic long-term expo-

tures to airborne particulates from a continuous emission source (e.g., evaluation of a compressor station). The pipeline is not a continuous air emission source or a continuous discharge (or any known discharge) into Lake Oahe.

The Corps considered the alternative methodology offered by Saha and Mohai, but their preferred methodology does not cause the Corps to doubt the methodology and data it relied on in performing the supplemental EJ analysis. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

*See also* K9

K8.10 “Whereas the environmental justice assessment of record reported no evidence of environmental justice concerns, we found overwhelming evidence of disproportionately high percentages of American Indians, low-income populations, and other vulnerable population groups in the High Vulnerability Areas for ACE’s Selected Route Crossing.”

RESPONSE: The results of the supplemental EJ analysis indicate that the downstream area that would be potentially affected by an oil spill at the DAPL crossing is not expected to experience disproportionately high or adverse impacts. However, the comment misrepresents the policy standard established in Executive Order 12898. The policy standard does not measure whether a disproportionate percentage of minority or low-income populations are affected by a Federal action, but rather whether minority and low-income populations experience disproportionately high and adverse human health or environmental effects. Based on the supplemental EJ analysis, the

Corps determined that granting Section 408 permission and conveying a right-of-way to ETP to construct and operate a portion of the DAPL under federally-owned Corps-managed land does not result in disproportionately high and adverse human health or environmental effects on minority populations, including Tribes, and low-income populations.

*See also* K9, K10

K9.10 “ACE’s faulty conclusion that no EJ concern existed was based on the failure to properly identify areas most at risk from the effects of an oil spill or leak. This failure resulted from the use of relatively large geographic units of analysis (Census Tracts) and applying the outmoded unit hazard coincidence method. This resulted in counting populations living at great distances and not in great danger from the pipeline crossings as part of the “affected population”, while at the same time excluding many of those who are likely to be affected, which in turn, led to invalid and misleading findings and conclusions. Compounding this failure was the faulty assumption that areas upstream of the pipeline water crossings would be affected as much as areas downstream.”

RESPONSE: Topic is addressed in the responses to Comment K1, K7 and K8.

K10.11 “The findings of large racial and socioeconomic disparities associated with ACE Selected Route indicate serious environmental justice concerns. The dramatic differences between the demographic composition of the areas at risk for the ACE Selected Route where the pipeline was built and currently operates and the alternate route considered underscore the environmental injustice associated with the ACE

Selected Route. It is clear from our analysis that there are significant environmental justice concerns associated with the DAPL route that were not identified in the NEPA environmental review process as a result of a number of major flaws with the EJ analysis approved by the ACE. That potential disproportionate impacts to American Indians were not adequately considered raises questions about how seriously and thoroughly EJ issues were investigated and taken into account in pipeline decision making and whether the federal trust responsibilities were abrogated.”

RESPONSE: Topic is addressed in the response to Comment K8.

**Document L: Impacts of an Oil Spill from the Dakota Access Pipeline on the Standing Rock Sioux Tribe; Mike Faith, Jr. Chairman; Standing Rock Sioux Tribe**

L1.1 “The Corps of Engineers and DAPL’s current estimates of a worst case oil release into the Missouri River and underlying aquifer are based upon unrealistic assumptions, and the environmental impacts of an oil spill may be far greater than disclosed in the Final Environmental Assessment . . . . The Corps of Engineers must implement its Reservoir Simulation Model to determine the impacts of an oil spill under the divergent reservoir conditions caused by the operation of Oahe Dam.”

RESPONSE: The Reservoir Simulation Model is better suited for reservoir operations management and not spill modeling. The Reservoir Simulation models different conditions that would not assist in the spill impact analysis. ETP used SIMAP to better

understand the potential impacts of a worst-case scenario spill. The SIMAP model inputs provide a variety of flow and other environmental conditions to characterize potential downstream fate and transport scenarios. ETP used these to characterize the range of trajectory, fates, and potential biological effects in the event of several hypothetical large volume releases. SIMAP used these inputs to characterize the range of trajectory, fates, and potential biological effects in the event of several hypothetical large volume releases.

The Corps agrees that SIMAP was more appropriate than the Reservoir Simulation Model. For the foregoing reasons, the SRST's recommendation to use the Reservoir Simulation Model for the Lake Oahe crossing to determine impacts on the Standing Rock Reservation is flawed and unreliable and thus did not create any substantial evidence of controversial effects.

*See also* L14, L39, L46, L59

L2.1 “[R]eport entitled *Missouri River High Consequence Area Assessment: Establishing Baseline Ecological Information and Impacts to Hunting and Fishing from the Proposed DAPL Pipeline in the Event of an Oil Spill* . . . documents the significant impacts of an oil spill . . . The report finds that subsistence hunting and fishing by Tribal members shall be adversely affected by an oil spill from DAPL. Subsistence hunting and fishing are integral to the Lakota and Dakota way of life on the Standing Rock Reservation. Subsistence hunting and fishing, and the cultural norms that remain intact, are jeopardized by an oil spill from DAPL.”

RESPONSE: Even under the worst-case scenarios, the Spill Model Report predicted that impacts to downstream hunting and fishing to be limited in scale and temporary in duration. Downstream Receptor Report at 93-99.

*See also* L16, L18, L19, L20

L3.2 “The Tribe’s wildlife habitat has already been decimated by the development of Oahe Dam and Reservoir . . . . This includes the vibrant subsistence hunting and fishing culture. The Corps must consider the cumulative impact of the potential harm from an oil spill with the loss of habitat caused by the construction and operation of Oahe Dam.”

RESPONSE: Pre-Project baseline conditions for the Environmental Assessment include the existence of the dam in place which was completed in 1962. No permanent habitat loss is anticipated even under the worst-case scenarios.

*See also* L20

L4.2 “From 2006 to 2017, Energy Transfer Partners and Sunoco had incurred 291 hazardous liquid pipeline incidents . . . . However, ETP and Sunoco prior performance was not considered in a valid risk assessment.”

RESPONSE: Topic is addressed in the response to Comment G3.

L5.2 “Recently constructed pipelines can have serious spills, and the leak detection systems for oil pipelines have a poor record of effective operation. Pipeline shutdown times provided to regulators in Facility Response Plans for worst case discharge (WCD) calculations can be grossly inaccurate.”

RESPONSE: Topic is addressed in the response to Comments B5 and B6.

L6.2 “The DAPL and Corps of Engineers documentation fails to effectively identify the specific hazards of Bakken crude oil and leaves human health and the environment vulnerable to harm if not addressed . . . . Addressing the elevated hazards of Bakken crude in the risk assessment (spill consequences) and the dangers facing emergency responders is absolutely necessary to protect lives and the environment. The Corps of Engineers has failed to do so . . . .”

RESPONSE: The Corps considered Bakken crude oil hazards. Final EA, at 45-48. Additional information regarding the characteristics of Bakken Crude and special concern for emergency responders is provided in the response to Comment G11. ETP performed additional spill modeling and assessed downstream risks to human health from a release of Bakken Crude into the waterways. Downstream Receptor Report at 80-91.

*See also* L24, L29, L59

L7.2-3 “DAPL’s worst case discharge (WCD) calculations lack any documented methodology or supporting data. DAPL’s informal WCD calculations take a “best case” approach and grossly underestimate the likely volume of Bakken crude oil released . . . . DAPL’s approach severely underestimates the potential WCD, leaving out important considerations from both the regulatory requirements and good practice safety guidelines. The DAPL WCD calculation 9-minute shutdown time limited to pump shutdown time is incomplete and grossly underestimates the WCD.”

RESPONSE: Topic is addressed in the responses to Comments A1 and J18. The amount of time that it takes for the motor operated isolation and/or check valves to close is addressed in response to Comment A10. The ability of ETP to identify a release of oil in a timely manner is addressed in the response to Comment B5. The time to respond to a release is addressed in the response to Comment B6.

L8.3 “The WCD fails to consider other alternatives such as a smaller leak below the detection limit.”

RESPONSE: Topic is addressed in the responses to Comments B6 and B7.

L9.3 “The DAPL and Corps of Engineers documentation lacks a detailed technical spill plan or a realistic WCD calculation - both are essential for effective emergency response planning. DAPL does not address the adverse weather impact on the WCD for the shutdown of the pipeline. Issues include harsh ND winter conditions, deep snow, extreme cold and availability and operation of the shutdown valves in extreme environments.”

RESPONSE: Realistic spill volumes are addressed in the response to Comment A1. ETP has the response equipment and contracted personnel necessary to respond safely and quickly to emergency situations. Final EA at 90. Company-owned and contracted response equipment to efficiently respond to a worst-case scenario at the Missouri River crossing at Lake Oahe are outlined in the Project-specific GRP. ETP’s emergency response planning documents are coordinated with the Corps as required in Corps Easement Conditions 8, 9a, and 10. Adverse weather impacts to spill response is addressed in the response to



Comments A1, A7, A8, and A9. As noted in the response to Comment A10, ETP provided design temperature specifications to the steel mills, pipe and fitting manufacturers, as well as all pump, valve, and instrumentation manufacturers to ensure that both high- and low-temperature concerns would be considered in the manufacturing of those materials and equipment. The valves and settings are designed to meet operating temperatures ranging from -20 degrees to + 150 degrees Fahrenheit, even though the product in the pipeline and thus the pipe itself is not anticipated to drop below 60 degrees Fahrenheit, even in the coldest North Dakota winters.

*See also L38*

L10.3 “The DAPL and Corps of Engineers documentation lacks transparency and is poorly documented regarding the route selection methodology used to conduct spatial analysis in the evaluation of potential pipeline routes. Justification for the particular DAPL datasets used and a clear understanding of ranking/weighting methodology is similarly lacking. A truly robust “least cost” analysis needs to be conducted that properly weights the risks and benefits of the relevant engineering, environmental, and social costs and constraints of various pipeline routes alternatives. Non-pipeline oil transport alternatives (e.g., trucks and trains) must also be evaluated equally.”

RESPONSE: The Corps considered reasonable alternatives to the crossing based on the Corps’ limited jurisdiction over the portion of the pipeline that crossed federally-owned Corps managed land. Final

EA at 5-23. SRST did not specifically identify an alternative methodology that was more appropriate for the evaluation. SRST generally commented that a least cost analysis needs to be conducted but does not identify a particular analysis or the particular factors, criteria, or technique to perform the analysis. SRST did not provide any scientific evidence that would cause the Corps to doubt its previous methodologies and data supporting the Corps' analysis of alternatives. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

L11.3 "The Standing Rock Sioux Tribe has incurred a plethora of tangible and intangible costs stemming from DAPL . . . A proper accounting of the actual cost borne by the Tribe is required under Executive Order 12898 on Environmental Justice."

RESPONSE: This is not required under NEPA or Executive Order 12898.

L12.5 "[T]he information needed to evaluate the potential impacts of an oil spill on the Tribe's hunting and fishing rights has not been disclosed. An EIS is needed in order to fully disclose the maximum spill estimate and a range of spill scenarios, under varying riverine conditions, to determine the potential impacts on fish and wildlife and subsistence hunting and fishing on the Standing Rock Reservation."

RESPONSE: ETP provided the Corps with additional spill modeling to better understand the potential impacts of a worst-case scenario spill to Tribes. Spill Model Report. The companion Downstream Receptor Report addresses potential impacts to human health, agriculture, and hunting, fishing, recreation,

and cultural practices. Downstream Receptor Report at 80-99.

L13.5 “[T]he maximum spill estimate is based on optimistic and unverified assumptions. A much larger oil spill may occur than that estimated by Energy Transfer Partners.”

RESPONSE: Topic is addressed in the response to Comment A1.

L14.5-6 “In order to reasonably estimate the impacts of a potential oil spill from DAPL on fish and wildlife on the Standing Rock Reservation, the Corps of Engineers should implement its Reservoir Simulation Model to identify the movement of oil downstream under varying reservoir and hydrological conditions . . . Without the information ascertained from reservoir modelling, it is not possible for the Corps of Engineers to take the hard look required by the National Environmental Policy Act and Judge’s Boasberg’s Order Granting Partial Summary Judgment in Standing Rock Sioux Tribe v. U.S. Corps of Engineers of Engineers.”

RESPONSE: Topic is addressed in the response to Comment L1.

L15.7-8 “The Tribe and its consultants found that the Missouri River reach that would be impacted by an oil spill includes unique and sensitive habitat, with diverse submergent communities, fisheries, and aquatic and shoreline flora. The particularly sensitive habitats in depositional areas - such as the mouth of the Cannon Ball River immediately downstream from the DAPL Lake Oahe crossing- contain strata utilized as fish spawning beds . . . Shoreline plants and

grasses - including culturally-significant plants to the Lakota - are abundant, particularly in bays, inlets, and marshes, where oil naturally settles. Mammals and big game feed in these areas, especially near the abundant woody draws above the Missouri River . . . . The report found significant impacts of an oil spill on wetlands, macroinvertebrates, shellfish, fish, birds and waterfowl, as well as on mammals and big game on the Standing Rock Reservation. This includes impacts on bald eagles, the Tribe's buffalo herd along the Missouri River, and culturally-significant and medicinal plants . . . . "The Cannonball River and Porcupine Creek appear to be major tributaries that could realize the greatest impacts in the event of a spill. ...The most sensitive depositional areas in the event of a spill are found within the first 15 miles of the approximately 30 miles of river survey."

RESPONSE: The Corps reviewed the information provided by the Tribe and its consultants. This information has been referenced and incorporated into the Downstream Receptor Report.

*See also* L17, L74

L16.12 "In evaluating the environmental impact of DAPL, the Corps of Engineers must give full consideration to the extreme importance of subsistence hunting and fishing at Standing Rock. The Corps ignored this in the Final Environmental Assessment on DAPL; however, the Corps has acknowledged this in other studies and accordingly prepared an EIS. 'Opportunities for fishing, hunting and trapping can be essential for Tribal members.' The Corps of Engineers must similarly prepare an EIS for DAPL."

RESPONSE: Topic is addressed in the response to Comment L2 and the Downstream Receptor Report.

L17.13 “The MISSOURI RIVER HIGH CONSEQUENCE AREA ASSESSMENT is the most up-to-date and comprehensive survey of the aquatic and terrestrial habitat and fish and wildlife surveys in the area affected by an oil spill from the Dakota Access Pipeline. The report found that an oil spill from the Dakota Access Pipeline would undoubtedly adversely affect subsistence hunting and fishing on the Standing Rock Indian Reservation. The Corps of Engineers must incorporate these authoritative findings in the remand study and vacate the Finding of No Significant Impact (FONSI) by DAPL. An environmental impact statement (EIS) is necessary.”

RESPONSE: Topic is addressed in the response to Comment L15.

L18.17-18 “The risk of a spill threatens sensitive ecological habitat, as well as fish, wildlife, birds and water, all considered to be relatives of the Lakota and Dakota people of the Standing Rock Reservation. Subsistence hunting and fishing is integral to the way of life on the Standing Rock Reservation - a way of life that is jeopardized by the potential of an oil spill from the Dakota Access Pipeline.”

RESPONSE: Topic is addressed in the responses to Comment L2.

L19.18 “The Standing Rock Sioux Tribe’s Hunting and Fishing Rights are Treaty Rights and Must be Respected by the Corps of Engineers[.]”

RESPONSE: Topic is addressed in the response to Comment L2.

L20.23 “In order to comply with Judge Boasberg’s directive on remand, the Corps of Engineers must evaluate the adverse environmental impact of an oil spill from DAPL on Standing Rock’s hunting and fishing rights, in combination with the impact of the construction and operation of Oahe Dam on wildlife habitat at Standing Rock. The current cumulative impacts analysis in the Final EA excluded this information, and it must be supplemented in accordance with the remand instructions.”

RESPONSE: The Corps is complying with the court order. The topic is addressed in the responses to Comments L2 and L3.

L21.27-28 “Other contemporary developments, such as climate change, also impact the Missouri River habitat at Standing Rock and must be included in a cumulative impacts analysis on remand.”

RESPONSE: Topic is addressed in response to Comment D2.

L22.30 “From 2006 to 2017, Sunoco had incurred 291 hazardous liquid pipeline incidents - more than any other pipeline operator for that period in the PHMSA operator database. Those incidents resulted in \$56,590,698 in property damage. The 2016 Sunoco/ETP spill highlights many of the technical health, safety and environmental concerns raised by the Standing Rock Sioux Tribe and its experts to the Corps of Engineers in the NEPA process and Litigation related to the Dakota Access Pipeline (DAPL)[.]”

RESPONSE: Topic is addressed in the response to Comments G3.

L23.30 “[H]ighly controversial issues [were] not adequately considered for DAPL - Spill Risk, Worst Case Discharge, Leak Detection, Bakken Crude Hazards, and Emergency Response. These issues were raised by the Tribe and our experts during the NEPA process and litigation and need to be given a “hard look” by the Corps of Engineers during remand.”

RESPONSE: The Corps will comply with the Court’s order on remand.

L24.30 “The DAPL and Corps of Engineers documentation fails to effectively identify the specific hazards of Bakken crude oil and leaves human health and the environment vulnerable to harm if not addressed.”

RESPONSE: Topic is addressed in the response to Comment L6.

L25.31 In December 2014, the North Dakota Industrial Commission (NDIC) issued an Oil Conditioning Order to reduce the RVP of Bakken crude produced in the state. In 2014, PHMSA issued an alert as well warning that crude oil from the Bakken region “may be more flammable than traditional heavy crude oil.”

RESPONSE: According to ETP, the 2014 NDIC Oil Conditioning Order applies to producers and production facilities. One specific notification requirement applies to transload rail facilities operators. The DAPL is a mid-stream pipeline facility and therefore is not subject to the 2014 NDIC Oil Conditioning Order. <https://www.dmr.nd.gov/oilgas/Approved-or25417.pdf>. Likewise, the PHMSA alert applied to train derailments.

L26.34 “DAPL and the Corps of Engineers significantly underestimate the impacts to drinking water from a WCD of Bakken crude oil. The Corps of Engineers concluded in the Final EA that four (4) gallons was the most likely leak scenario for the DAPL pipeline crossing and unsurprisingly such a leak would not exceed the MCL. However, a 4-gallon leak scenario is extremely unlikely for the 30-inch pipeline 90 to 108 feet under Lake Oahe.”

RESPONSE: Worst-case scenario releases and spill model volumes are addressed in the responses to Comments A1 and A2. As noted in the response to Comment C9, ETP performed additional spill modeling that includes much greater volumes in order to estimate downstream impacts. ETP used a volume of [REDACTED] bbl to represent the “majority of spills.” This volume is greater than 90 percent of actual pipelines releases from pipelines 16-inch or greater (90PD scenario). ETP used a FBR volume of [REDACTED] bbl for the worst-case scenario. Downstream risks to human health from a release of Bakken Crude into the waterways are addressed in the Downstream Receptor Report. Downstream Receptor Report at 80-91.

*See also* L27, L30

L27.35 “The other three spill release scenarios outlined in the Final EA are hypothetical spills of 100, 1000 and 10,000 bbls . . . . These spill scenarios are more realistic for a long slow leak as we have seen from the 2016 Sunoco/ETP Permian Express II 8600 bbls spill from a pinhole leak. Bakken crude oil toxic VOCs such as benzene are water soluble and can move quickly downstream . . . . A Lake Oahe spill using the



three other more realistic scenarios can result in a significant impact on human health. Neither the Corps of Engineers nor DAPL have analyzed these more realistic spill scenarios for benzene concentrations. There is no analysis of downstream impacts of these scenarios on agricultural and drinking water intakes.”

RESPONSE: As indicated in the response to Comment L26, ETP utilized a [REDACTED] [REDACTED] bbls. The risks to downstream receptors from an unmitigated release of Bakken Crude of this magnitude into the waterways are addressed in the Downstream Receptor Report. Downstream Receptor Report at 80-91.

*See also L28, L30*

L28.35 “A WCD release would likely have serious consequences on human health and the environment for many miles downstream . . . . In addition to benzene, there are health concerns with many of the components of the Bakken crude oil, including acute and chronic non-cancer risks. It is necessary to assess the risks posed by Bakken crude oil exposures, including short-term exposures to high levels, and prolonged exposures to low levels. It is important to include an assessment of both cancer and non-cancer health harms. The impacts on vulnerable populations, including pregnant women, reproductive-aged men and women, infants, children and elders should receive special consideration. It is also important to consider the highest exposed populations, such as those with exposure through drinking water, cooking water, washing water, contaminated foods and direct contact. This is the reality of the risk facing our Tribal members from DAPL.”

RESPONSE: Topic is addressed in the response to Comment L27.

L29.37 “The Final EA does not include an [Safety Data Sheet] or a reference to Bakken crude extreme flammability . . . . The Final EA and response plans do not list PAHs in the warnings of physical and chemical characteristics. The Final EA discussion of Bakken crude on the environment is limited the impacts of benzene - toxic impacts of other VOCs and PAHs are not addressed . . . . The specific hazards of the Bakken crude oil that could be released is central to understanding the spill impacts but the Corps of Engineers and DAPL documentation is silent. Addressing the elevated hazards of Bakken crude in the risk assessment (spill consequences) and the dangers facing emergency responders is absolutely necessary to protect lives and harm to the environment. Neither the ERAP nor the FRP have any information in the plan text on Bakken crude specific hazards. The Corps of Engineers’ Final EA similarly lacks any discussion on the specific elevated hazards and safety precautions for Bakken crude. The classification warnings in the attached ConocoPhillips SDS are specific to Bakken crude oil but were ignored in the plan and other operative documents. The technical information provided in this report section and generally referenced by the Tribe prior to the remand should lead to the implementation of critical controls and precautions that are lacking in the DAPL plans and Final EA.”

RESPONSE: Topic is addressed in the responses to Comment L6 and Comment G11.

L30.38 “Worst case discharge (WCD) calculations are a vital component of any environmental assessment but DAPL’s methodology and calculations are seriously flawed . . . . DAPL’s WCD calculations lack any documented methodology or supporting data. As different DAPL WCD-related documents leave out key elements and/or provide different and contradictory shutdown and response times, their offered results lack clarity and credibility. DAPL’s approach severely underestimates the potential Lake Oahe WCD, leaving out key considerations from both the regulatory requirements and good practice safety guidelines.”

RESPONSE: ETP developed the Project-specific worst-case scenarios for the FRP. ETP developed the worst-case release in the FRP pursuant to 49 CFR § 194.105. PHMSA reviewed and approved the FRP on February 23, 2017.

ETP described the FBR volumes utilized for the spill modeling in the Spill Model Report. The FBR spill model volume is also addressed in the responses to Comments A1, L26 and L27. The amount of time that it takes for the motor operated isolation and/or check valves to close is addressed in response to Comment A10.

*See also* L34

L31.38-39 “In April 2016, DAPL’s only WCD calculation for Lake Oahe was documented in correspondence with the Corps of Engineers. DAPL presented a 9-minute shutdown time merely stating ‘the pump stations are designed to shut down in 9-minutes.’ This communication took place in a 4-5-16 email and was not included in any formal report or project plan. The calculation lacked any time to detect

the WCD and associated variables, (such as interpret or verify data; check for false alarms, inaccurate pipeline SCADA indications, or transient effects; impacts of decision-making under the stress of a possible emergency shutdown; personnel discussions or trouble-shooting; etc.) or the time for shutdown of the emergency flow restriction devices (EFRDs) which are pipeline remotely operated valves on either side of Lake Oahe . . . . ETP's calculation did not evaluate the possibility of human error or equipment malfunction - key considerations for any worst case scenario. The DAPL calculation multiplied only the pump shutdown time by the maximum flow rate and added the drain down volume. DAPL concluded the WCD for Lake Oahe to be [REDACTED] bbls ([REDACTED] bbls for pump shutdown plus [REDACTED] bbls drain down volume). The evaluation of DAPL's WCD calculations received concurrence by the Corps of Engineers who closed the issue on 4-7-16."

RESPONSE: The Corps extensively reviewed the initial spill planning document for Lake Oahe. Lake Oahe Crossing Report. ETP conducted additional spill modeling as described in the Spill Model Report. Other risk planning documents associated with construction and operation of DAPL have been prepared as detailed in the response to Comment A9. The potential for incorrect operation, equipment failure, and human error are addressed in the response to Comments A9 and B5.

*See also* L32, L33, L36

L32.39 "In a different DAPL document dated 8-5-15 entitled *North Dakota Lake Oahe Spill Model Discussion*, a different shutdown time was presented.

The model input parameters list a detection and shutdown time of 12.9 minutes - stating ‘the mainline pumps are shutdown within 9 minutes of detection, and the adjacent block valves are completely closed within an additional 3.9 minutes.’ While the table used the wording that included “time to detect,” like the April 2016 WCD email no actual detection time was provided or utilized. The document was created in 2015 and contained no WCD calculations. It is evident from the spill model document above that DAPL was aware that detection time and time to shut down the EFRD was relevant to calculating the WCD. The Lake Oahe spill model discussion document was issued for review but never approved or issued for use.”

RESPONSE: According to ETP, the typical time of detection for a WCD rupture is less than 1 minute through SCADA and LeakWarn systems, which trigger the alarms and initiate the shutdown procedure. The reference to the mainline pumps being shutdown within 9 minutes of detection is not just limited to pump shutdown time as it already includes 1 minute for time of detection.

As indicated in the response to Comment L31, the Corps reviewed the Lake Oahe Crossing Report numerous times resulting in numerous revisions by the applicant. DAPL’s 12.9 minute (total) is based on the sum of the time to detect a break on the line and shutdown pumps (9 minutes) and the time to close the valves (3.9 minutes for standard valves). These times have been consistently presented and utilized in the calculations of the FBR volume at Lake Oahe.

*See also L36*

L33.40 “Leak detection time is intended to be part of the WCD calculation formula. The formula in the 2016 PHMSA presentation lists an equation with response time in addition to shutdown time. In fact, the 2016 PHMSA presentation states ‘response times and shutdown times less than 10 minutes raises red flags!’ (emphasis added in red by PHMSA). The DAPL 2016 calculation was less than 10 minutes and should have raised red flags with the Corps of Engineers, but did not. The DAPL WCD approach and outcome have a number of serious issues that lead to a gross underestimation of the realistic maximum spill . . .”

RESPONSE: The total of 12.9 minutes for response and shutdown is greater than (not less than) the response and shutdown time of 10 minutes indicated by the PHMSA staff member in the presentation referenced.

*See also* L36

L34.40-41 “The DAPL Lake Oahe crossing lacks a description of the methodology as required by PHMSA and a formal documented and supported worst case discharge (WCD) analysis in any project report or plan. The WCD calculations and methodology for Lake Oahe are not available to emergency responders in any Facility Response Plan or the Lake Oahe Geographic Response Plan.”

RESPONSE: ETP submitted risk planning documents associated with construction and operation of DAPL for the Corps’ review as detailed in response to Comment A9. PHMSA’s review and approval of the FRP is addressed in the response to Comment L30. The Lake Oahe worst-case scenario from the FRP is utilized in the Spill Model Report, the results of which

informed the updated GRP. As the spill response planning is designed to address the modeled worst conditions/fastest travel times, the inclusion of additional/more detailed information from the Spill Model Report or the FRP into the GRP is not required.

Emergency response activities would include the cleanup procedures and remediation activities described in DAPL's FRP and GRP, and required in Corps Easement Conditions 8 and 9a. This topic is also addressed in the response to Comment A6.

*See also L61*

L35.41 "DAPL stated without explanation in their Facility Response Plan that the 'maximum historic discharge is not applicable for WCD covered by this plan.' The Corps of Engineers asked DAPL why they did not use historic discharge in their WCD calculations but received no explanation. Nowhere does DAPL explain why historic shutdown discharges from other Sunoco/ETP pipeline incidents are not discussed or relevant to the Lake Oahe WCD calculation. This is particularly important given the 12-day shutdown time for the 2016 Sunoco/ETP Permian Express II serious spill discussed above. How did Sunoco/ETP improve their corporate safety system leak detection capabilities to ensure a 12-day response time would not be repeated? Leak detection estimates to be realistic or scientific need to be based upon actual historic performance data. API Recommended Practice 1173, Pipeline Safety Management Systems, emphasizes the key role such data plays in its continuous assessment and improvement approach called 'Plan-Do-Check-Act.'"

RESPONSE: ETP calculated the worst-case scenario based on a rupture of the pipeline and then applying some conservative assumptions. Rather than using data from a different pipeline, ETP calculated the worst-case scenario is based on the specific parameters associated with this pipeline being installed at this particular location. ETP contends that multiplying the release volume from a full bore rupture by some historic time it took to detect a smaller leak is not an accurate predictor of the worst-case discharge.

L36.41 “Different DAPL documents provided different shutdown and response times (4 minutes, 9-minutes, 12.9 minutes) creating confusion and undermining the credibility of DAPL’s WCD calculations.”

RESPONSE: Topic is addressed in the responses to Comments L32 and L33.

**L37.41 “The DAPL WCD calculation 9-minute shutdown time limited to pump shutdown time is incomplete and grossly underestimates the WCD. As PHMSA stated this should have raised red flags and led to greater scrutiny and review. The DAPL WCD calculation fails to include necessary elements such as detection time (from the initiation of the leak to detection) and EFRD shutdown time.”**

RESPONSE: Topic is addressed in the responses to Comments L32 and L33.

L38.41-42 “DAPL does not address the adverse weather impact on the WCD for the shutdown of the pipeline. Issues include harsh ND winter conditions, deep snow, ice cover limitations on oil spill sighting,



extreme cold and the availability and operation of the EFRD shutdown valves in extreme environments.”

RESPONSE: Topic is addressed in the response to Comment L9.

L39.42 “The record indicates that neither the Corps of Engineers nor ETP has utilized ResSim or HecRas to determine impacts on the Standing Rock Reservation. The failure to properly determine these impacts under different hydrological conditions increases the risk to the Tribe and demonstrates that ETP is unprepared to address an oil spill under different hydrological conditions at Lake Oahe.”

RESPONSE: The Reservoir Simulation Model is better suited for reservoir operations management and not spill modeling. The River Analysis System model allows the user to perform one-dimensional steady flow, one and two-dimensional unsteady flow calculations, sediment transport/mobile bed computations, and water temperature/water quality monitoring. The Reservoir Simulation and River Analysis System model different conditions that would not assist in the spill impact analysis. ETP used SIMAP to better understand the potential impacts of a worst-case scenario spill. The SIMAP model inputs provide a variety of flow and other environmental conditions to characterize potential downstream fate and transport scenarios. SIMAP used these inputs to characterize the three-dimensional range of trajectory, fates, and potential biological effects in the event of several hypothetical large volume releases.

The Corps agrees that SIMAP was more appropriate than the Reservoir Simulation and River Analysis System models. For the foregoing reasons, the SRST’s

recommendation to use the Reservoir Simulation or HecRas models for the Lake Oahe crossing to determine impacts on the Standing Rock Reservation is flawed and unreliable and thus did not create any substantial evidence of controversial effects.

L40.42 “The WCD and risk assessment fails to consider other credible alternative scenarios such as a smaller leak below the detection limit.”

RESPONSE: Topic is addressed in the response to Comment B6.

L41.42 “DAPL has asserted an extremely low 1% leak detection limit. The Corps must verify that detection limit claim with performance and testing data. Using that stated detection limit of 1% with maximum flow, leaks under 6000 bbls a day could not be detected . . . . Given the requirement of no more than 21 days between visual observation overflights, 126,000 bbls potentially can be released before a spill is spotted visually.”

RESPONSE: Topic is addressed in response to Comment D13.

**L42.42 “WCD estimates that lack actual realistic data such as DAPL’s run contrary to known, well-regarded studies of actual industry performance and grossly underestimate WCD.”**

RESPONSE: Topic is addressed in response to Comment A1.

L43.43 “The Lake Oahe site lacks external leak detection that has advantages over SCADA and CPM and can be used in addition to software systems.”

RESPONSE: ETP has an ongoing maintenance, inspection, and integrity testing program to monitor the safety of the DAPL pipeline system.

*See also M27*

L44.44 “DAPL fails to apply good industry standards and practices to demonstrate a high degree of reliability and availability of the SCADA operator actions and shutdown valve functioning - all necessary to minimize crude oil spills and provide a credible WCD estimate . . . . DAPL also fails to consider the automation of the Lake Oahe EFRD that could improve equipment availability over a remotely activated valve that relies upon the fallibility of human performance.”

RESPONSE: A summary of Dakota Access Pipeline practices and design that exceed regulatory requirements is presented in Table G2.

L45.44 “DAPL’s informal WCD calculations take a “best case” approach and grossly underestimate the likely volume of Bakken crude oil released . . . . [N]ote the Final EA’s analysis of benzene concentration in one hypothetical spill scenario is based upon “the release of benzene over a one hour period.”

RESPONSE: The one hour reference in the EA is the hypothetical time for all of the oil assumed in the various scenarios to drain out of the pipe and completely enter the water body. The assumed timeframe of “complete drain of pipe” was combined with additional conservative assumptions to calculate theoretical concentrations of benzene in river water. The theoretical timeframe used for “complete drain of pipe”

cannot be substituted with time for detection and shutdown.

L46.44-45 With the specific elevated hazards of Bakken crude oil not identified and the WCD grossly underestimated, key components of the DAPL risk assessment are seriously flawed from the onset. Much of the DAPL and Corps of Engineers' analysis adopts a "check-the-box" approach to risk assessment, focusing on generic pipeline risks and mitigations. This outdated approach minimizes risk and fails to apply company integrity management data and system safety performance metrics to the risk assessment. More rigorous modern industry safety standards developed in response to the ongoing occurrence of serious pipeline incidents are not applied. These technical and scientific shortcomings have been raised in expert declarations and the Tribes EIS scoping comments in the litigation and NEPA process."

RESPONSE: The Corps considered Bakken crude oil hazards. Final EA at 45-48. Additional information regarding the characteristics of Bakken Crude and special concern for emergency responders is provided in the response to Comment G11.

Potential spill volumes used for spill planning are addressed in the response to Comment A1. Spill impacts and risk evaluation process are addressed in response to Comments A4 and A9. ETP performed additional spill modeling and assessed downstream risks to human health from a release of Bakken Crude into the waterways. Downstream Receptor Report at 80-91.

L47.45 "Risk is typically described as the probability of failure and the magnitude of consequence . . .

. DAPL and the Corps' documentation uniformly assign low risk to stated pipeline threats, they acknowledge the consequences are high . . . Assertions of low pipeline spill risk based upon generic pipeline frequency statistics by DAPL is misplaced. Risk assessment must evaluate real risk including available performance data and project specific hazards. Major hazardous material incidents - large spills and toxic releases, fires, and explosions, etc. - are described in industry safety guidelines as low frequency, high consequence events. Even though these major incidents are infrequent, because of the potential for catastrophic consequences, risk evaluation and treatment for these events must receive high priority.”

RESPONSE: While the potential risk for a worst-case scenario is low, such a spill would result in high consequences. Final EA at 91. Topic is addressed in the response to Comments A9 and B1. ETP performed additional spill modeling and assessed downstream risks to human health from a release of Bakken Crude into the waterways. Downstream Receptor Report at 80-91. As indicated in response to Comment C9, there is no evidence that drinking water aquifers are at risk even if there were to be a release from the pipeline segment associated with the Lake Oahe USACE Action Area.

L48.45-46 “Citing low frequency to downgrade risk when all major incidents have that characteristic misses important opportunities for implementing needed risk reduction measures for high risk projects. Moreover, threats examined by the risk assessment need to be much broader than the typical index model focusing almost exclusively on a handful of integrity

management issues . . . . A recent PHMSA study concluded there were “serious documented issues with index scoring models” that may lead to “undermining” spill prevention. API RP 1173 however emphasizes the importance of a broader review that was not done for the Dakota Access Pipeline . . . .”

RESPONSE: Topic is addressed in the responses to Comment A9, B1, and B16. The third party engineers who conducted the risk analysis for ETP considered the specific items recommended by Accufacts during their preparation of the risk analysis of the Lake Oahe crossing.

*See also* L49, L53, L54

L49.46 “The more modern approach to major accident prevention would have the operator assess all threats and take all necessary measures to prevent a major accident where a catastrophic potential is present. More importantly, relying on generic industry statistics is also misplaced where - as with Sunoco/ETP - there is ample data available related to its own incident performance.”

RESPONSE: Topic is addressed in the responses to Comments L48, G3, and G20.

L50.48 “DAPL and the Corps of Engineers have failed to apply recognized industry safety good practice to the DAPL design, construction and operation. The Final EA asserts that: ‘To prevent pipeline failures resulting in inadvertent releases, Dakota Access would construct and maintain the pipeline to meet or exceed industry and governmental requirements and standards.’ **However, DAPL failed to cite or apply**

**key recent more rigorous relevant industry standards . . .”**

RESPONSE: A summary of DAPL practices and design that exceed regulatory requirements is presented in Table G2.

L51.49 “Implementing the minimal compliance of PHMSA regulations alone creates unacceptable risk to DAPL pipeline operations . . . . The finding that current pipeline regulations are inadequate has been identified in numerous recent government reports, recommendations, studies and Congressional action.”

RESPONSE: As noted in the response to Comment G2, DAPL was designed and constructed using standards and practices that meet or exceed all U.S. regulatory requirements. A summary of DAPL practices and design that exceed applicable regulatory requirements is presented in Table G2.

L52.49 “As a result, major oil companies have recognized the need to move beyond minimal compliance and have developed more rigorous pipeline standards such as API RP 1173, Pipeline Safety Management System Requirements to manage risk and prevent spills and releases. This key standard is not referenced in DAPL or Corps of Engineers’ documents.”

RESPONSE: Topic is addressed in the response to Comment G2.

L53.50-51 “The Muhlbauer analysis claimed to be utilized by DAPL is very detailed and requires all relevant information to be included. There are many subcategories for different risk elements that don’t appear in the DAPL documentation to be captured, explained or the assumptions and rational provided.

Some of the scoring requires a safety factor which is not provided by DAPL. The Muhlbauer scoring published in 2004 appears dated and does not capture the use of performance data, recent key elements of API standards and good major accident prevention practices such as human factors and safety instrumented systems. Lack of more rigorous standards leads to erroneous assumptions in the DAPL analysis - for example lack of mechanical integrity data such as failure rates and other key indicators.”

RESPONSE: Topic is addressed in response to Comment L48.

L54.51 “Good practice risk assessments also include a robust discussion of previous incidents and corrective actions . . . none of these factors have been taken into account.”

RESPONSE: Topic is addressed in response to Comment L48.

L55.51 “The DAPL and Corps of Engineers documentation lacks an actual detailed technical spill model. Only examining a complete “guillotine” pipeline rupture on the surface of Lake Oahe is not a factual scenario. A leak 92-feet under Lake Oahe needs to be modeled as it presents additional elevated hazards and challenges such as delayed leak detection and unanticipated release location(s). A smaller leak below a reasonable detection limit and its impact on the water intakes and sensitive receptors also needs to be modeled and included in the risk assessment given the difficulties of detection. Water soluble Bakken crude oil VOCs such as benzene can more easily flow in groundwater. Any discussion of such a leak



and plume modeling requires a sophisticated technical analysis that doesn't appear in any project documentation."

RESPONSE: Topic is addressed in the response to Comment C9.

L56.54-56 "The DAPL planning documents also fail to effectively assess the serious threat of landslides and the appropriate mitigation . . . . Future landslides and reactivation of old landslides pose a serious risk of rupturing the pipeline . . . . DAPL and the Corps of Engineers must more effectively evaluate the potential for a massive landslide not only on the federal easement crossing Lake Oahe, but also whether such landslide risks can occur on nearby, off federal easement lands, where a pipeline release from possible landslide could result in oil reaching Lake Oahe."

RESPONSE: Topic is addressed in the response to Comment A14.

L57.56 "The DAPL risk assessment has not effectively addressed the issue of pipeline coating damage from HDD construction and the difficult challenges of monitoring cathodic protection to prevent external corrosion in an HDD crossing."

RESPONSE: Topic is addressed in the response to Comment B13, B17, and C13.

L58.56-57 "The Corps of Engineers and DAPL documentation include no examples of similar HDD applications involving crude oil as a product fluid in a large diameter pipe (30" pipe in a 48" open borehole assembly) over a long well bore (7500') under a fresh water lake . . . . These risks were not addressed by the Corps of Engineers and DAPL and if left unaddressed

elevate the risk of external corrosion to the Lake Oahe HDD pipeline.”

RESPONSE: Topic is addressed in the response to Comment C2.

L59.57 “The identification of the specific hazards of Bakken crude, a realistic worst case discharge calculation and a technical spill model for Lake Oahe are all essential for emergency response planning, but are seriously flawed or lacking completely in the DAPL and Corps of Engineers documentation. These deficiencies weaken oil spill response and place emergency responders in harm’s way. In failing to provide the specific hazards of Bakken crude, DAPL’s Facility Response Plan does not effectively identify the necessary methods, equipment, personal protective equipment, and precautions necessary to respond to a Bakken crude release.”

RESPONSE: Topic is addressed in the responses to Comments L1 and L6.

L60.57 “DAPL and the Corps of Engineers have failed to effectively consult with the Tribe and provide vital information.”

RESPONSE: The Corps consulted appropriately with the Tribe.

See also L68, M5

L61.58-59 “The WCD and spill modeling deficiencies have the following negative impacts on DAPL emergency planning and response:

1. The project lacks a formal technical spill model which prevents identification of potential spill

impacts on sensitive environmental areas, locations sensitive to aquatic organisms and wildlife, areas with tribal cultural significance.

2. The lack of a realistic WCD calculation leads to an underestimation of the resources needed to respond to a WCD Lake Oahe spill and the impacts from the accurate crude oil volume and concentration to specific areas.
3. DAPL uses a spill modeling scenario of a guillotine rupture on the surface of Lake Oahe that is not factual. This flaw underestimates the potential hazards from a release 92-feet or more under Lake Oahe. A guillotine rupture in the actual pipeline location under the lake bed presents a much more complex response scenario. The geotechnical/hydrogeological movement of the Bakken crude in the formations under the lake bed, the potential for movement in the groundwater, likely release locations and timing of crude entering the lake environment all could lead to delayed leak detection, ineffective emergency response activities and greater spill impacts.
4. The DAPL Geographic Area Response Plan states that “based on the current Spill Model, the first oil from an unabated release of this volume would take an estimated [REDACTED] to travel downstream before reaching Intake 1,” an agricultural water intake. The 2015 Lake Oahe Spill Model Discussion document asserted that the total travel time for responders and equipment to arrive on site was 6 hours. Less than 45 minutes is an insufficient safety

margin to protect water intakes. Moreover, the lessons learned from recent Bakken spills indicate that timely response is critical as the oil will spread quickly. Given realistic larger WCD volumes and the rapid spread of Bakken crude the time to reach sensitive receptors would likely be much shorter than the DAPL estimates.

5. The most recent geographic response plan (GRP) for Lake Oahe lacks WCD or spill modeling results for use by emergency responders. The GRP is merely a tactical document addressing necessary equipment and the deployment of booms, boats, etc. and does not justify or correlate the response planning with a WCD or spill model. This leaves responders vulnerable to more serious hazards and increases the likelihood that Lake Oahe resources will be insufficient.”

**RESPONSE:**

1. As indicated in response to Comments A2 and A3, ETP performed additional technical spill modeling and incorporated the results into a Downstream Receptor Report, which addresses impacts to ecological receptors as well as impacts to hunting, fishing, recreation, Tribal culture and human health.
2. Topic is addressed in the response to Comment A1.
3. Topic is addressed in the response to Comment C9.

4. ETP committed to emergency response within 6 hours as indicated in the GRP. During a training exercise in October 2017, the first responders from the company arrived on site downstream from the Lake Oahe crossing in [REDACTED] and contract responders arrived on site in [REDACTED]. Therefore, responders are anticipated to be on-site prior to a worst-case release reaching the first downstream intake. The agricultural intake referenced is approximately 11.3 miles downstream of the crossing. As indicated in the Spill Model Report, the estimated travel time for a FBR within Lake Oahe to reach the first drinking water intake (#5 South Central Regional Water District) is [REDACTED] or over [REDACTED]. As indicated in the response to Comment A4, no exceedances of drinking water standards are predicted for any downstream drinking water intakes even under the unmitigated worst-case scenarios.
5. As indicated in the response to Comment L34, the worst-case release for Lake Oahe from the PHMSA-approved FRP is already utilized in the GRP.

Overall, the comment does not specifically identify any additional information that would improve the GRP that the Corps and ETP did not already consider.

L62.60 “[T]he DAPL Facility Response Plan lacks any listing or reference to the inclusion of tribal representatives in the Unified Command.”

RESPONSE: The GRP states that the Unified Command will consist of the Federal On-Scene Coordinator, State On-Scene Coordinator, and the Responsible Party. The GRP also states that additional stakeholders may be included in the Unified Command based on incident complexity. In consultation with the Federal On-Scene Coordinator and State On-Scene Coordinator, a representative from potentially affected Tribes may be included in the Unified Command.

*See also* N11 L63.60 “DAPL and the Corps of Engineers stated in the Final EA that they would follow the requirements in API RP 1174. It must be emphasized here that DAPL has fulfilled none of those provisions thus undermining tribal response planning and threatening its first responders despite the fact that the response zone is within the boundary of the Standing Rock Sioux Tribe. In particular, DAPL has failed to share the critical information listed above including realistic anticipated volume release, spill model or an unredacted facility response plan.”

RESPONSE: Topic is addressed in response to Comment G21.

L64.60 “The spill response and remediation for the realistic WCD 92-108 feet under the Oahe lakebed is not addressed in the Corps of Engineers and DAPL documentation. The impact from such a release at such depths on the timeliness of spill response, downstream impacts, extreme difficulties of spill cleanup, repair of the pipeline, and the likelihood of a persistent toxic contamination of the soil, groundwater, and lake are not addressed. Also, not addressed by the Corps of Engineers and DAPL is the fact that typically

most crude oil from spills is not recovered. Nor do they examine on-going impacts from the likely lingering toxic contamination.”

RESPONSE: A potential leak beneath Lake Oahe is addressed in the response to Comment C9. The impact of delayed response/lingering toxicity is addressed in the response to Comment 6-1.

L65.61-62 “The DAPL geographic response plan ...does not provide sufficient precautions to conduct LEL [lower explosive limit] testing or eliminate sources of ignition in the area of the spill. Needed special precautions on avoiding the use of powered watercraft or other sources of ignition to conduct LEL testing on water or land where extremely flammable hydrocarbons vapors are likely to be present is missing.”

RESPONSE: The GRP addresses the use of “four gas” monitors, which would test for LEL. The specific operation of the instrumentation to monitor the atmosphere for the safety of emergency responders is defined in the owner’s manual for the specific instrumentation being utilized, and the action levels would be defined within the governing health and safety procedures of the response team on site. According to ETP, the LEL is the lowest concentration (percentage) of a gas or vapor in air capable of producing a flash of fire in presence of an ignition source (arc, flame, heat). Concentrations lower than LEL are “too lean” to burn. The LEL is calculated by the instruments utilized by the responders and they are not “typed in” at the response scene based on what they believe the product spilled to be.

According to ETP, as a general rule, [REDACTED]

[REDACTED]. However, this health and safety procedure is defined in the health and safety protocol documents and not in the Lake Oahe-specific GRP.

Local authorities have authority to shut down roads or waterways due to the presence of potentially flammable materials. ETP will coordinate with local authorities to shut down roads or waterways and prevent the use of ignition sources (e.g. powered watercraft) should vapor concentrations dictate.

L66.62 “Guidance recommends the possible use of vapor suppressing foam as necessary and to ensure adequate foam supplies are available. The geographic response plan lacks foam totes staged near the Lake Oahe location.”

**RESPONSE:** According to ETP, vapor suppressing foams, or Aqueous Film Forming Foams (AFFFs), are not typically utilized for open water response activities such as those expected for a spill on the land near, or the local surface waters around, Lake Oahe. AFFFs are typically used by responders to suppress volatile hydrocarbon vapors in contained areas (e.g. man-made structures) or other areas where natural air movement and adequate vapor dispersion is limited. Typical scenarios may include, but are not limited to, hydrocarbon releases within an enclosed structure or within containment structures void of adequate air dispersion. A spill within the rolling terrain near, or within the open surface waters of Lake Oahe, would be considered well ventilated and exposed to



wind currents, which naturally disperse hydrocarbon vapors.

Furthermore, there are reasons to avoid use of AFFFs when not warranted by the location of a spill. According to ETP, most AFFFs consist of fluorocarbon and hydrocarbon surfactants blended with various solvents, preservatives, and stabilizers. These surfactants, or emulsifying ingredients, enable the AFFF to mix with hydrocarbon fuels. One result, though, is an increase in dispersion rates and reduced oil recovery rates. For a typical AFFF, precautions should also be taken to prevent foam concentrate from entering ground water, surface water, or storm drains. Based on the open areas and persistent wind currents around Lake Oahe, the emulsifying properties of vapor suppressing foam, and the precaution to prevent foam concentrations from entering surface water, ETP does not recommend the use of vapor suppressing foams on a hydrocarbon release in the vicinity of Lake Oahe.

L67.62 “EPCRA [Emergency Planning and Community Right-To-Know Act] requirements, EPA guidance and the recent Executive Order 13650 (largely in response to the West Fertilizer incident) address communication, coordination and data sharing requirements between the feds, state agencies (SERCs), LEPCs and includes Tribal Emergency Response Committees (TERCs) and Tribal Emergency Planning Committees (TEPCs). Although pipelines are exempt from some provisions of EPCRA, they are covered related to emergency response and planning. The DAPL and Corps of Engineers documents do not effectively address these important authorities and obligations, which currently leave the Tribe extremely vulnerable

to increased impacts from DAPL spills. There is an overall lack of effective monitoring, notification, coordination of response and protection of people and the environment.”

RESPONSE: ETP met with the Emergency Response Coordinators from each of the counties crossed by the entire pipeline (over 1,100 miles beginning near Stanley, North Dakota, and ending at Patoka, Illinois. Coordination with the Tribes is addressed in response to Comment G21.

L68.62 “The Tribe has not been adequately consulted and provided information that would aid in its emergency response planning activities through its TEPC. The Tribe lacks sufficient information related to unredacted spill modeling, response plans (including a realistic WCD), and the most recent risk analysis that were required to be developed by DAPL as noted in the Final EA.”

RESPONSE: Topic is addressed in response to Comments G21 and L60.

L69.65 “ETP and the Corps of Engineers have failed to provide sufficient information to allow the Tribe, as well as the public, to understand why alternative routes, including routes north of Bismarck, were deemed infeasible. The Corps of Engineers must re-evaluate potential routes north of Bismarck and other viable non-pipeline transportation modes . . . . Given the significant potential impacts of the pipeline on treaty hunting and fishing rights, inadequate spill risk assessment, and a deficient environmental justice assessment, the Corps of Engineers cannot comply with Judge Boasberg’s remand directive except through a more comprehensive route analysis. As

such, the only appropriate path is to also prepare an environmental impact statement (EIS) which would more fully disclose analysis methods, impacts, and risk.”

RESPONSE: The Corps is complying with the Court’s remand order.

L70.65-70 “A robust geo-processing suitability model is necessary to determine the best route for a pipeline, or any linear transportation facility . . . . The Final EA also states that 60 data sets were used and that the “ranking system” was based on “a scale of 1,000,” an unclear and unsubstantiated ranking system (Table 2). The criteria that was utilized to assign weights to the various features in the GIS analysis was not explained. The publicly-accessible North Dakota GIS Hub Data Portal and is an open source data platform with over 500 datasets provided by 13 North Dakota state agencies, yet ETP/DAPL only incorporated 60 data sets without justification for selecting these datasets and excluding others . . . . The Final EA stated, ‘the company carefully considered possible route alternatives in the EA.’ However, the Final EA fails to disclose anything about the methodology as to how this analysis was done, much less the basis on which the conclusions were reached. Under NEPA, it is not up to the applicant to choose the route “with the least impact”; rather, it is the federal agency’s responsibility. What the project proponent considers as having the “least impact” is subjective and should never be determinative of an agency action . . . . Table 2-2 of the Final EA relies heavily on the comparative construction costs to Energy Transfer Partners, but fails miserably at quantifying the social and environmental costs to the Tribe in the event of a spill.”

RESPONSE: The Corps evaluated reasonable alternatives to ETP's preferred crossing based on the Corps' limited jurisdiction over the portion of the pipeline that crossed federally-owned Corps managed land. Final EA at 5-22. SRST preferred a geo-processing suitability model but did not specifically identify any flaws in the data or methodology used in the Corps' alternatives analysis evaluation. SRST generally commented that it did not favor the process ETP followed in examining and ranking datasets but SRST did not provide any scientific evidence or the results of a geo-processing suitability model for the Corps to consider and that would cause the Corps to doubt its previous methodologies and data supporting the Corps' conclusion on the alternatives analysis. Therefore, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action.

L71.71 "Landslide factors were not attributed risk values in the route selection analysis and omitted as dataset to better evaluate risks and constraints (See Table IV-1). This is a serious error in the route selection analysis. This is made more serious as the discussion regarding the risk of landslides is further downplayed in the Final EA. That discussion largely focuses on the potential landslide impacts from workspaces, while failing to address potential short- and long term risks of landslide that would result in a catastrophic spill . . . . The Corps of Engineers must incorporate landslide risks in additional route selection modeling and analysis as they have failed to fully appreciate how significant landslide risks would impact the Tribe's treaty-protected hunting and fishing rights and has a high potential for disproportionately

impacting the Tribe and its sole water source. Because these are potentially significant impacts, the Corps of Engineers must prepare of an EIS.”

RESPONSE: Topic is addressed in response to Comment A14.

L72.72 “Without adequate discussion of both the rail and trucking alternatives, DAPL and the Corps have provided insufficient baseline information to adequately understand the current use of trucks and rail to transport Bakken Oil.”

RESPONSE: The Corps considered truck and rail alternatives. Final EA at 5-7. Topic is addressed in response to comment H1. L73.72 “DAPL and the Corps of Engineers have not disclosed sufficient information relating to the north of Bismarck route . . . . [T]he reasons for rejecting the route north of Bismarck apply equally to a pipeline crossing just upstream from the Standing Rock Reservation.”

RESPONSE: The Corps evaluated reasonable alternatives to ETP’s preferred crossing based on the Corps’ limited jurisdiction over the portion of the pipeline that crossed federally-owned Corps managed land. Final EA at 5-22. *See also* October 20, 2016 Memorandum,

USACE ESMT001213-001249.

L74.72 “We remind the Corps of Engineers that they have not equally weighted and given serious consideration to the elements of the Tribe’s MISSOURI RIVER HIGH

CONSEQUENCE AREA ASSESSMENT.”

RESPONSE: Topic is addressed in the response to Comment L15.

L75.73 The Corps of Engineers concluded that the route crossing Lake Oahe is the more preferable alternative, as compared to the route north of Bismarck. The conclusion was reached, in large part, based on the comparative lower overall costs that ETP/DAPL estimated (\$232,556,008 v. \$255,122,888) for Lake Oahe and North of Bismarck crossings. The Corps of Engineers failed to adequately evaluate the route alternatives by omitting the potential catastrophic risks and high costs that could result from operational failures due to an accident, leak or spill . . . . Ultimately, the impacts of spills and leaks on the Tribe's communities have not been properly addressed for environmental justice issues. While Dakota Access Pipeline and the Corps of Engineers have relied heavily on a comparison of construction costs between the existing route and the route north of Bismarck to justify their route selection, they have failed to adequately quantify and evaluate the social costs of the pipeline's proximity to Standing Rock Indian Reservation."

RESPONSE: Environmental justice is addressed in response to Comment D17. The Corps evaluated reasonable alternatives to ETP's preferred crossing based on the Corps' limited jurisdiction over the portion of the pipeline that crossed federally-owned Corps managed land. Final EA at 5-22. *See also* October 20, 2016 Memorandum, USACE\_ESMT001213-001249.

L76.74 "The Corps of Engineers must fully examine the short-term and long-term impacts of an oil spill on the Standing Rock Reservation. There must

be express recognition that our Reservation suffers the disproportionate adverse effects of a potential oil spill from the Dakota Access Pipeline.”

RESPONSE: Environmental justice is addressed in response to Comment D17. The Corps considered the potential impacts of a worst-case scenario spill to the Tribes based on the updated Spill Model Report and the companion Downstream Receptor Report.

L77.75-76 “In order to implement environmental justice considerations in a meaningful way, both the benefits and costs of an activity must be taken into account, and attempts must be made to understand what costs exists, what their magnitudes are, and whom they impact. In the case of DAPL, clear and obvious costs have been simply ignored and others have been grossly understated . . . . In the case of DAPL, substantial costs associated with operating the pipeline have not been quantified and are currently unknown.”

RESPONSE: Environmental justice is addressed in response to Comment D17.

L78.83 “Many costs to the Tribe from DAPL have been overlooked and not properly quantified . . . . More specifically, the Tribe has been treated unfairly because many known costs to the Tribe have not been taken into account and, as a result, the deadweight loss associated with DAPL is being born by the Tribe.”

RESPONSE: Environmental justice is addressed in response to Comment D17.

L79.84 “The Corps of Engineers’ conclusion that, “The pipeline route expressly and intentionally does not cross the Standing Rock Sioux Reservation and is

not considered an Environmental Justice issue,' is inconsistent with the microeconomic theory outline above and, from a common-sense perspective nonsensical.”

RESPONSE: Topic is addressed in response to Comments D17 and L80. *See also* Final EA at 80-83 and 106. The Corps considered SRST’s microeconomics analysis. To further address this concern, ETP prepared the Downstream Receptor Report to address impacts to commercial fishing and tourism. Downstream Receptor Report at 49 and 97. Although SRST doesn’t agree with the scope or conclusion of the analysis with regard to economic impacts, this comment does not show that a substantial dispute exists as to the size, nature, or effect of the major Federal action because the SRST’s microeconomic analysis does not show flaws in the methods or data the Corps actually relied on here.

L80.85 “The construction of the pipeline has adversely affected revenues generated by the Prairie Knights Casino (PKC), which are used in no small part for the provision of social services on the reservation . . . . The construction of the pipeline has resulted in diversion of management costs. These costs can include the time that Tribe personnel has spent dealing with any activity associated with the construction of DAPL that otherwise would not have been necessary . . . . The construction of the pipeline has deepened hostilities against the Tribe among the general population in North Dakota. ETP has been promoting DAPL publically in North Dakota. One implication of this PR campaign is that it paints opponents, including the Tribe, in a negative light. The negative perceptions of the Tribe painted by ETP expose decades



of hostility between residents of North Dakota and Tribal members . . . . The construction of the pipeline has resulted in the willful destruction of the Tribe's historical sites, none of which have been quantified . . . . The current operation of the pipeline has had and continues to have a negative impact on the Prairie Knights Casino . . . . The current operation of the pipeline has had and continues to divert the management activities of Tribal staff from their everyday efforts.

RESPONSE: ETP did not propose to close the road for construction as a component of the portion of the project for which it sought Corps approval. Local law enforcement officials closed the road due to protests. No known historic properties were adversely affected by the construction of DAPL within the Lake Oahe USACE Action Area.

*See also L79*

L81.86 "The Final EA by the Corps of Engineers inexplicably completely ignores any economic implications associated with a spill . . . . to date, a zero-dollar value has been placed on this potential destruction which, to put it mildly, is incorrect."

RESPONSE: Environmental justice is addressed in response to Comment D17.

**Document M: Impacts of an Oil Spill from the Dakota Access Pipeline on the Standing Rock Sioux Tribe; Appendix C: SRST's Notice of Intent Comments on the Dakota Access Pipeline to the Army Corps of Engineers**

M1. APP. C. 3 "The Final EA did not separately evaluate or provide any information related to the Tribe's treaty rights. As discussed below, the Tribe

has treaty rights within Lake Oahe and depends on fish, wildlife and plants in and around the lake for subsistence. An analysis of the Tribe's treaty rights must be done in coordination with the Tribe. Moreover, given the high risks related to the proposed Lake Oahe crossing for this crude oil pipeline and potential adverse impacts to the Tribe's treaty and religious freedom rights, it is necessary to evaluate and analyze reasonable alternatives to the proposed crossing."

RESPONSE: The Corps evaluated reasonable alternatives to ETP's preferred crossing based on the Corps' limited jurisdiction over the portion of the pipeline that crossed federally-owned Corps managed land. Final EA at 5-22. The Corps considered the Tribe's treaty rights. October 20, 2016 Memorandum, USACE\_ESMT001213-001249. Hunting and fishing is addressed in the Downstream Receptor Report. Consultation/coordination is addressed in the response to Comment L60. Environmental Justice is addressed in the response to Comment D17.

*See also* M7, M8, M9 M2. APP. C 4 "The Tribe also has special expertise with respect to its rights, cultural beliefs and tribal member reliance on the waters and resources of the lake, and can provide information related to its Reservation that is not generally publicly available, but is needed to adequately assess impacts and issues like environmental justice."

RESPONSE: The Corps requested information from the Tribes, including information on subsistence hunting and fishing and cultural practices. Corps letter to SRST at 2 (August 25, 2017).

M3. APP C. 4-5 “The Final EA does not discuss the impacts that spills will have on the Tribe’s communities. Nor does it properly address environmental justice issues. The EIS must discuss the proximity of the Tribe’s Reservation and the existence of the tribal population that relies on the resources of Lake Oahe.”

RESPONSE: The Corps recognized that drinking water intakes located downstream from the Lake Oahe crossing could be at risk if there was a release that reached this body of water and traveled downstream in the vicinity of the intake structures. Final EA at 38. Further analysis and discussion is provided in the Downstream Receptor Report and in the responses to Comments D7 and D17.

M4. APP C 5 “The EIS must fully examine the short and long terms impacts that spills or releases of oil can have on tribal communities and there must be express recognition that these communities are greatly impacted by environmental justice issues. The environmental justice analysis must take into account the disproportionate adverse effects of a proposed pipeline crossing immediately upriver from the Reservation in terms of both quantitative as well as qualitative effects - as required by the CEQ guidance on environmental justice.”

RESPONSE: Topic is addressed in the response to Comment M3.

M5. APP C 9: “The EIS must also analyze and evaluate any impacts to the Tribe’s cultural sites and religious beliefs in coordination and collaboration with the Tribe . . . . The EIS must acknowledge that

the Tribe has water rights to the Missouri River, including Lake Oahe, and discuss the proposed project's impacts to tribal water resources.”

RESPONSE: Topic is addressed in the response to L60 and within the Downstream Receptor Report.

M6 APP C 10 “The Final EA incorrectly states that ‘the majority of reservation residents depend on wells water supply.’ Final EA at 38. This is incorrect, and the consequences of the error are significant. Based on this fundamental factual error, the Final EA then incorrectly dismisses the risk of oil spill to the Tribe and the people who live on the Reservation. The Tribe relies on waters of Lake Oahe for irrigating over 3,000 acres of land, and the nearest intake for this purpose is just seven miles downriver from the proposed Lake Oahe crossing. The waters of Lake Oahe also provide habitat for fish, wildlife, and plants important to the diet and cultural and religious practices of the Tribe. The EIS must recognize that Lake Oahe is fundamental to the health and welfare of the Tribe, fully analyze the Tribe’s Water rights and discuss the potential for the proposed Lake Oahe crossing to negatively impact those rights . . . . The EIS must acknowledge the importance of the Lake Oahe and discuss the proposed project’s impacts to the Tribe’s cultural and religious beliefs.”

RESPONSE: The information regarding reservation resident’s well use came from the Standing Rock Sioux Tribe website at the time of the preparation of the EA in 2016. Final EA at 38. [Standing Rock Sioux Tribe. 2016. Environmental Profile. Originally available at: <http://standingrock.org/environmental-pro>

file/, now available at: <https://web.archive.org/web/20160315010925/http://stand-ingrock.org/environmental-profile/> (last visited August 27, 2018). The current website states: “The MR & I Water Distribution System supplies water lines to the districts to bring clean water to all enrolled members. Most enrolled members in the rural districts still use well water.” <https://www.standingrock.org/content/environmental-profile> (last visited August 27, 2018). The risks associated with the Project are addressed in the response to Comment A9 and the potential impacts to Tribal communities are addressed in the response to Comment D17. The Corps considered potential impacts to water resources used by the Tribe. Downstream Receptor Report at 80-99.

M7 APP C 13-14 “[T]he EIS must recognize that the current controversy over the proposed easement has brought to light the need for further legal analysis and examination of the impacts that the proposed route would have on the Tribe, including the need to analyze reasonable alternatives.”

RESPONSE: Topic is address in the response to Comment M1.

M8 APP C 14-15 “[T]he Final EA provided insufficient information relating to the north of Bismarck route . . . although the reasons for rejecting the north of Bismarck route have equal application to a pipeline crossing just upstream from the Reservation, there is no discussion or comparison of the risks associated with the Bismarck route versus the risks associated with the significant horizontal directional drilling (“HDD”) drilling that will occur at Lake Oahe. In

short, the north of Bismarck route is summarily rejected with little justification, especially given the presence of similar facts and potential for higher risks associated with the Lake Oahe route. The EIS should re-examine and fully evaluate the feasibility of the north of Bismarck route.”

RESPONSE: The alternative route crossing location is addressed in responses to Comments C3 and M1.

M9 APP C 15 “The Final EA/FONSI did not meet the requirements of NEPA, and was flawed because it contained inadequate information, as recognized by the Army in their memorandum of December 4, 2016. The Final EA should not be used as a baseline for the EIS due to its deficiencies and the need for an analysis of viable route alternatives for the proposed project.”

RESPONSE: The Corps is not in the process of preparing an EIS. The Corps is complying with the court’s remand order.

M10. APP C 16 “[T]he EIS should also identify and analyze the risk of pipeline oil spills, the causes of such spills, the elements necessary to reduce the risk of spills (including pipeline design and operation), the measures that are needed to properly maintain, monitor and inspect the pipeline, as well as measures to ensure proper and effective response systems in the event of a spill. Specific project requirements (especially crossing techniques) should be analyzed and the best available technical engineering implemented for the protection of related surface and ground water, tributaries/upstream segments, flood plains, and other sensitive water resources.”

RESPONSE: As indicated in the response to Comment A9, the Corps reviewed risk planning documents associated with construction and operation of DAPL that addressed the risks of pipeline failure. Easement Conditions 17, 18, 19, and 20 address pipeline coatings; Easement Conditions 29, 30, and 31 address in-line inspection; Easement Condition 26 addresses cathodic protection; and Easement Condition 33 addresses pipeline patrolling. Easement Condition 27 addresses interference current surveys. ETP's FRP and GRP describe emergency response activities, including cleanup procedures and remediation activities. Coordination with the Tribes relative to the GRP is discussed in G21. The GRP is a living document and ETP will continually update the plan upon the receipt of new relevant information.

*See also M22*

M11 APP C 17 "Consultation [with USFWS] must include consideration of new information the Tribe has obtained regarding the spill and safety risks from HDD and pipeline operation for route alternatives crossing the Missouri River."

RESPONSE: The Corps has reviewed all of the information submitted electronically, verbally, and in writing to date. The information received does not reveal new effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered. Therefore, reinitiation of consultation under the Endangered Species Act is not required.

M12 APP C 18 “The USACE should also conduct consultation with the Tribe’s Tribal Historic Preservation Officer (“THPO”) regarding historic and medicinal plants and their location.”

RESPONSE: Topic is addressed in response to Comment C22.

M13 APP C 19 “Given the substantial volume of crude proposed to be transported in the pipeline, the EIS should . . . evaluate the proposed project’s cumulative impact on climate change.”

RESPONSE: Topic is addressed in response to Comment D2.

M14. APP C 20 “The EIS should discuss and evaluate impacts to the health, safety, and wellbeing of the Tribe and tribal communities that would be impacted by the project - not simply the area where the pipeline would be constructed, but also those living downstream of the pipeline’s crossing of the Missouri River . . . . Additionally, the Final EA failed to acknowledge the lack of emergency responders and infrastructure in the Lake Oahe area to adequately address safety hazards from any pipeline spills and leaks given the remoteness of the communities, and lack of emergency response and safety personnel in the area. The Final EA said nothing about any of these issues and they must be evaluated and addressed in the EIS.”

RESPONSE: The risks associated with the Project are addressed in the response to Comment A10 and the potential impacts to downstream tribal communities are addressed in the response to Comment D17. The Corps considered potential impacts to water



resources used by Tribes. Downstream Receptor Report at 80-99. ETP contracted for the response equipment and contracted personnel to respond to emergency situations. Final EA at 90. Company-owned and contracted response equipment to respond to a worst-case scenario at the Missouri River crossing at Lake Oahe are outlined in the Project-specific GRP as well as response actions to be taken in the event of a release. ETP coordinated the emergency response planning documents with the Corps per Easement Conditions 8, 9a, and 10. Coordination with the Tribes relative to the GRP is discussed in G21. The GRP is a living document and ETP will continually update the plan upon the receipt of new relevant information.

M15 APP C 21-22 “The EIS must specifically discuss the physical attributes of Bakken oil and the human health and environmental impacts and risks associated with Bakken oil . . . . [T]he EIS must contain a robust discussion of the physical attributes of Bakken oil and analyze the risks associated with Bakken oil spills . . . .”

RESPONSE: The Corps considered the physical attributes of Bakken oil Final EA at 45-49. Additional analysis and discussion of potential impacts is provided in the Spill Model Report and the Downstream Receptor Report.

M16 APP C 22 “[T]he Army Corps also evaluate the potential for massive landslide not only on the federal easement crossing Lake Oahe, but also whether such landslide risks can occur on nearby, off federal easement lands, where a pipeline release from possible landslide could result in oil reaching Lake Oahe.”

RESPONSE: Topic is addressed in the response to Comment A14.

M17 APP C 23 “Such slower moving land creep risks can still result in pipeline failure . . . . [I]f not adequately addressed, land creep can still result in oil release, either a lower rate leak or a high rate release rupture.”

RESPONSE: Topic is addressed in the response to Comment A14.

M18 APP C 24 “QA/QC is not a federal requirement of standards for pipeline construction for monitoring or reporting. The EIS must address this limitation as it relates to risks associated with the pipeline construction, operation and maintenance.”

RESPONSE: QA/QC is addressed in the response to Comment F21. As noted in the response to Comment G2, ETP designed and constructed DAPL using standards and practices that meet or exceed all regulatory requirements. A summary of DAPL practices and design that exceed regulatory requirements is presented in Table G2.

M19 APP C 24-25 “The Final EA also incorrectly assumes no risks to plant, flora and fauna because the project utilizes an HDD pipe under Lake Oahe. See Final EA at 117-125; Table 8-2. As a result, the Final EA does not address the potential impacts to aquatic and land wildlife, plants, flora and fauna . . . . The EIS must fully identify all risks and impacts to the surrounding environment as a result of spills or leaks, not just water contamination.”

RESPONSE: Topic is addressed in Section 2.0 of the Downstream Receptor Report. Downstream Receptor Report at 10-80.

M20 APP C 25-26 “[T]he Final EA totally lacks a critical discussion of post construction inspection and mitigation of problems resulting from the construction . . . . The EIS must include an exhaustive study of these post construction risks, identification of damage to the pipeline external wall, girth welds and internal pipe wall from over-pulling, scraping and other various factors. A detailed mitigation or remediation plan that avoids any acceptable leak volumes from the HDD pipeline section should specifically be addressed in the EIS.”

RESPONSE: As described in response to Comment F21, processes designed to avoid or mitigate any weld quality deficiencies include systematic QA-QC procedure development, qualification testing of welders, inspection to enforce adherence to procedures, visual inspection of welds, 100% nondestructive testing (NDT), Level 3 NDT auditing, and multiple hydrostatic tests for the pull string. Damage to external pipe and coatings is addressed in the response to Comment C13. Potential pull-force damage is addressed in the response to Comment C15. The EA describes the design and operation measures ETP will implement to protect downstream intake users. Final EA at 42; 88-94. ETP prepared a FRP that complies with the applicable requirements of the OPA 90, and has been prepared in accordance with the NCP and the Mid-Missouri SACP. Final EA, Appendix L. ETP’s emergency response activities would include the cleanup procedures and remediation activities described in the FRP and the site-specific Lake Oahe

GRP. ETP provided the GRP to the Corps, SRST, and CRST for review. Coordination with the Tribes relative to the GRP is discussed in G21. ETP incorporated comments from the Corps, SRST, and CRST into revised versions of the GRP. The GRP is a living document and ETP will continually update the plan upon the receipt of new relevant information.

*See also M31*

M21 APP C 27-30 “The EIS should recognize that the Pipeline and Hazardous Materials Safety Administration (“PHMSA”) standards are dated and significant oil spill incidents are increasing . . . . The Final EA failed to apply standards that are key to the Lake Oahe crossing . . . . It is especially important that up-to-date consensus technical standards and rigorous review of the risks of oil spill be conducted for the proposed Lake Oahe crossing . . . . The purpose of NEPA, and the need for an EIS, is to provide specific detailed information about which standard will be met and how those will be met by this specific proposed project. The Final EA did not do this. The Final EA fails to cite or apply more rigorous modern safety and environmental standards applicable to pipelines that need to be addressed in the EIS.”

RESPONSE: As noted in the response to Comment G2, ETP designed and constructed DAPL using standards and practices that meet or exceed all U.S. regulatory requirements. A summary of DAPL practices and design that exceed applicable regulatory requirements is presented in Table G2. QA/QC is addressed in the response to Comment F21.

M22 APP C 31 “The Final EA’s prevention and mitigation descriptions are also vague and lack adequate information on issues considered. For example, the Final EA fails to adequately examine control systems, equipment operability, adequacy of procedures, training, drills and accountabilities, adequacy of leak detection and incident response time and capability to organize an incident command system - as required by API RP 1173.”

RESPONSE: The identification and analysis of the risk of pipeline oil spills, the elements necessary to reduce the risk of spills (including pipeline design and operation), the measures to maintain, monitor and inspect the pipeline are discussed in the response Comment M10.

As indicated in the response to Comment B5, ETP installed the LeakWarn system in accordance with PHMSA requirements and API-RP-1130 guidance (API Recommended Practice 1130 – Computational Pipeline Monitoring for Liquid Pipelines).

ETP developed the FRP pursuant to 49 CFR § 194. PHMSA reviewed and approved the FRP on February 23, 2017. The incident response time and incident command system specific to the Lake Oahe crossing are outlined in the GRP. Coordination with the Tribes relative to the GRP is discussed in G21. The GRP is a living document and ETP will continually update the plan upon the receipt of new relevant information

M23 APP C 32 “The Final EA lacks any analysis of the adequacy of the prevention and mitigation measures to control the risk of an oil spill.”

RESPONSE: The risk associated with the pipeline is addressed in response to Comment A9. Mitigation is addressed in the response to Comment A12.

M24 APP C 33 “The Final EA lacks any data related to safety assurance. While the Final EA vaguely asserts prevention activities and states certain risks will be “mitigated” it fails to provide performance data to buttress its claims.”

RESPONSE: Topic is addressed in the response to Comment A12.

M25 APP E 3 “The existing system relies upon the use of a computation model based on pipeline process measurements (most likely flow and line pressure) that is not available 100% of the time. To verify that the LDS is operating as required, provisions for functional testing is required to release validate/calibrate the model to measured leaks under normal operations.”

RESPONSE: ETP evaluates the effectiveness of the leak detection systems through simulated leak tests, actual leak tests, or the analysis of confirmed releases. According to ETP, there have been no confirmed releases since operation began in June 2017. ETP performed the simulated leak tests by electronically overriding the computers to simulate a leak condition, whereas the actual leak tests were performed by removing product from the pipe. ETP evaluates the results of each of these tests, and the response to actual releases (if applicable), to optimize the system capabilities, refine the product release tolerances, validate the response times, and further train the control room operators. Instrument and custody grade measurement equipment have been included as part of the

pipeline design, and provide data for the leak detection system. ETP uses this data to tune the detection system during transient and steady state conditions. Additional information is provided in the responses to Comments B5 and B6.

M26 APP E 4 “Carry out functional testing of the LDS and model calibration under normal flow conditions by removing measured amounts of crude oil from the pipeline. Carry out and document the LDS calibration in cooperation with a US Govt. approved I3P agency. If faults are detected, propose modifications to improve the LDS performance.”

RESPONSE: Topic is addressed in the response to Comment M25.

M27 APP E 4 “The installation of an integrated [Oil Monitoring System] OMS made up of instrumented monitoring wells along the HCA pipeline route to allow direct observation of oil accumulations due to leaks under the detectable limit. Manual observation and verification is required to ensure action is taken to reduce the leak ‘release time.’”

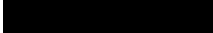
RESPONSE: Topic is addressed in the response to Comment L43.

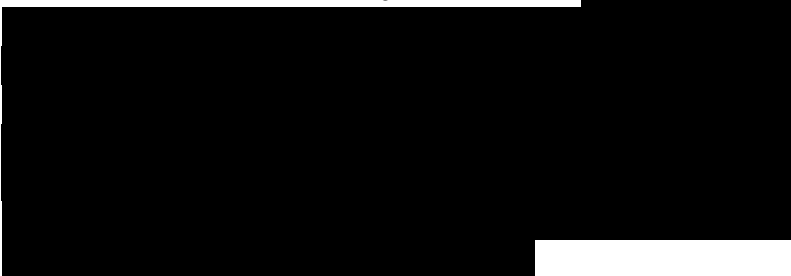
M28 APP E 5 “Although communications availability may be improved by the use of dual-redundant, non-safety certified communications channels, the ability to verify the safety system information is not provided.”

RESPONSE: ETP installed motor operated isolation and/or check valves on both sides of the Missouri River, which can be actuated to close as soon as a leak is detected. ETP based the closure times on the EFRD

valves on the DAPL Pipeline Surge Analysis Report and are a function of the size of the valves and the electrical requirements, and electrical availability. Additional information is provided in the response to Comment A10. The operation of the valves system including automatic valve shutdown is addressed in Easement Condition 21.

M29 APP E 6 “[I]mplement dedicated, hardwired, safety certified signals from the LDS sensors (LDS and OMS), to a local safety certified logic solver and to the ESD final elements . . . . Implement fully automated, cause and effects based logic, within a certified safety logic solver to replace the manual human intervention required in the existing design.”

RESPONSE: SCADA and LeakWarn systems provide constant oversight of the pipeline facilities. These systems alert Dakota Access’ Operational Control Center (OCC) of operational changes. The OCC prioritizes and responds to all alarms in accordance with the control room management regulations referenced in PHMSA 49 CFR § 195.446 (e). 



M30 APP E 7 “The ability of the final elements (pump interlocks and Emergency Isolation Valves) to provide the level of risk reduction required to reduce the WCD volume of crude oil was not demonstrated. There was no documentation of a review of the pump



controller design, maintenance, and operating procedures that verified that it was suited for use as a SIS final element. In a similar way, there was no documentation of the design, functional testing, and maintenance procedures for the EIV's (valves, actuators, and local controls) that they are suited to provide the positive isolation required during a pipeline leak emergency."

RESPONSE: Topic is addressed in the response to Comment M28.

**Document M: Impacts of an Oil Spill from the Dakota Access Pipeline on the Standing Rock Sioux Tribe; Appendix F: Preliminary Report: Landslides in the Vicinity of the Dakota Access Pipeline Crossing of the Missouri River Near the Standing Rock Indian Reservation**

M31 APP F 2 "Because of the possibility of landslides and subsequent leaks of the DAPL at the crossing of the Missouri River upstream from the Standing Rock Indian Reservation, the geology of the area should be investigated carefully and the potential for a leak should be assessed. In addition, an oil spill response plan should be formulated clearly."

RESPONSE: As indicated in the response Comment A14, the risk of landslides is low. Oil spill response planning is addressed in the response to Comment M20.

**Document N: Preliminary Evaluation of  
Dakota Access Pipeline Emergency Response  
Plans; Richard B. White, P.E., PLLC**

N1.1-2 “Table 2-3 of the FRP and (to some degree) Table 2.1 of the GRP list various Federal, State, and Tribal authorities that should be contacted in the event of an applicable spill.

However, OST is not included on either list . . . . the Mni Wiconi water treatment plant intake is located approximately 205 miles downstream from the DAPL Lake Oahe crossing. Notwithstanding this distance, the potential long-term impacts to the quality of water at this intake due to an oil spill into the Missouri River or Lake Oahe should not be ignored . . . . OST should be added to the lists contained in Tables 2-3 of the FRP and 2.1 of the GRP, with appropriate contact individuals.”

RESPONSE: ETP committed to including representatives from the OST, CRST, SRST and YST in Table 2-3 of the FRP and Table 2.1 of the GRP.

N2.2 “Table 2-3 of the FRP lists several tribes that should be contacted in the event of ‘any spill that poses an impact to’ one of the designated reservations or to ‘properties under the stewardship of’ one of the designated tribes. Neither OST nor the Cheyenne River Sioux Tribe was included on this list . . . . OST and the Cheyenne River Sioux Tribe should be included on Table 2-3 of the FRP to ensure that all potential stakeholders are notified early in the spill response effort. Furthermore, additional discussion should be provided in the FRP regarding ‘properties under the stewardship’ of tribes that may be impacted by an oil spill, even if those tribes and their areas of

stewardship or concern are considered to be remote from a spill source.”

RESPONSE: Topic is addressed in the response to Comment N1.

N3.3 “Although the travel distances from Bismarck, ND are noted on maps provided in Appendices A through C of the GRP, it is recommended that those figures and Table 4.6 of the GRP, as a minimum, include a listing of the travel time for each response contractor to reach the DAPL Lake Oahe crossing since most of the listed contractors are more remote than Bismarck from the crossing.”

RESPONSE: PHMSA requires a 6-hr response time and DAPL has demonstrated response times of [REDACTED] for both company and contractor resources. As indicated in Mr. White’s comment, estimated response times are included in the GRP in the appendices.

N4.3 “[T]he GRP should explicitly acknowledge the travel times for all of the listed contractors and the potential flow velocity of the river.”

RESPONSE: Hydrodynamics for Lake Oahe were calculated based upon different river flow conditions using discharge data from a US Geological Service and USACE gaging stations and the Corps monthly reservoir statistics from 1967-2017 (USACE, 2017) using the RPS WQMAP model system, which contains the BFHYDRO hydrodynamic model. As discussed in the Spill Model Report, each of the four release scenarios consisted of 290 individual model runs including 97 individual trajectories modeled under spring-

time high river flow conditions (RPS 2018). ETP utilized this information to update the GRP. The spill response planning is designed to address the modeled worst case scenario/fastest flow conditions.

N5.3-4 “Page 23 of the FRP and page 14 of the GRP indicate that [REDACTED] of containment boom and [REDACTED] of sorbent boom will be maintained at Cannon Ball Ranch near the DAPL Lake Oahe crossing for use in the event of an oil spill . . . it is likely that [REDACTED] feet of containment and sorbent boom will be considerably inadequate to control an oil spill into the Missouri River and Lake Oahe.”

RESPONSE: ETP has the response equipment and contracted personnel necessary to respond to emergency situations. Final EA, at 90. ETP identified appropriate response tactics and resources based on results from OILMAPLand and SIMAP modeling. As indicated in the FRP, [REDACTED]

[REDACTED] ETP secured additional response resources by means of contract with local, regional and national Oil Spill Removal Organizations (OSRO). Each listed OSRO has their own response equipment with a minimum of 1,000 feet of containment.”

N6.4 “Appendix A of the GRP indicates that a planning quantity of [REDACTED] of containment boom will be required to respond to an oil spill into the Missouri River at the Lake Oahe crossing. The GRP does

not provide an indication of the planned quantity of sorbent boom that will be required to control a spill at the crossing.”

RESPONSE: Sorbent boom totals do not need to equal containment boom totals as sorbent booms are not utilized as a primary containment device on open water. ETP has sufficient company-owned and contracted response equipment to respond to a worst case release at the Missouri River crossing, as outlined in the GRP. The release modeling indicates that plume migrations are highly dependent upon current and wind conditions and likely will not have a uniform leading edge or cover the river from bank to bank. Furthermore, containment booms are deployed to pool, deflect, or guide released oil to smaller areas in waterways where it can be effectively recovered using skimmers, vacuum trucks, or sorbent materials.

N7.4-5 “[U]nless the response contractors are required by contract to maintain large quantities of boom for use only on a DAPL spill into the Missouri River or Lake Oahe, it may be essentially impossible to meet boom requirements in a timely manner to control an oil spill from DAPL into these water bodies. The FRP and the GRP should address this deficiency either by substantially increasing the quantity of owner/operator boom near the Lake Oahe crossing or by frequently certifying the quantity of boom that contracted oil spill response organizations are required to maintain on their premises for the sole use of DAPL spill projects at the Lake Oahe crossing.”

RESPONSE: Topic is addressed in the responses to Comments N5 and N6.

N8.5 “Table 4-1 of the FRP and Table 4.1 of the GRP provide checklists of typical response actions taken during an oil spill . . . As sovereign nations, all tribes in the region, including OST, should be added to this list.”

RESPONSE: This topic is addressed in the response to Comment N1.

N9.5 “Table 4.4 of the GRP provides a list of drinking water intakes downstream from the DAPL Lake Oahe crossing. The Mni Wiconi intake is not included on that list, but should be.”

RESPONSE: The intakes associated with the OST and CRST are not anticipated to be affected by even a worst-case unmitigated release from the DAPL. The SIMAP modeling shows that, even without mitigation, the maximum predicted concentrations of hydrocarbons in the water column for a hypothetical worst-case release were within 5 m of the surface, associated with floating oil and entrained oil droplets. Hydrocarbon concentrations were predicted to be highest at upstream locations nearer the DAPL crossing.

The SIMAP modeling shows that lower concentrations were predicted further downstream as more time had passed for oil to reach these locations, which resulted in further evaporation, dissolution, dispersion, and degradation of the oil within the environment. Concentrations within the water column decrease rapidly as depth increases (5-10m), until near zero values were predicted at depths greater than 10m. Therefore, even the replacement water intake for the SRST (approximately 75 miles downstream of the DAPL crossing at a depth of 60-80 feet) was not

predicted to be affected by the modeled hypothetical releases. The CRST intake, approximately 156 miles downstream of the DAPL crossing, would be less likely to be impacted than the SRST replacement intake.

The Mni Wiconi intake is not likely to be impacted based on the fact that it is another 50 miles downstream of the CRST intake (205 miles downstream of the DAPL crossing) and its location downstream from the Lake Oahe dam. The minimum water depth recorded for Lake Oahe for the entire period of record was 1570.2 feet M.S.L. The discharge pipes for the dam are at an elevation of 1425 feet M.S.L - 46m (142.5 feet) below the lowest ever water depth. Thus, any released hydrocarbons that reach the dam would need to mix within the water column to at least that depth, even though near zero values of hydrocarbons are predicted at depths greater than 10m.

*See also* N10, N17

N10.5 “Sections 4.5.2 and 4.5.3 of the GRP indicate that ‘Multiple requests for the identification and location of Tribal significant environmental receptors [and archaeological and significant Tribal receptors] were made to the [US Army Corps of Engineers,] Standing Rock Sioux Tribe, and Cheyenne River Sioux Tribe, but no information was provided’ . . . . OST was not included in the original request for information but should have been.”

RESPONSE: ETP complied with the Court order to coordinate with the Corps, SRST, and CRST to finalize the Lake Oahe GRP.

*See also* N19 N11.5 “As sovereign nations, the affected Tribal On-Scene Coordinators should be included as part of the Unified Command structure [in Section 4.5 of the FRP and Section 4.7 of the GRP].”

RESPONSE: This topic is addressed in the response to Comment L62.

N12.5 “[I]t is recommended that several potential scenarios be presented in the GRP describing appropriate responses to spills that reach the Missouri River and Lake Oahe under both open water and ice conditions. Field training exercises should also focus on not only worst-case spill quantities but also worst-case field conditions.”

RESPONSE: ETP is prepared to respond to spills under various conditions as required by Easement Condition 34. The GRP includes response and mitigation measures for various scenarios (spill in slow moving water, spill in large river, spill to lake, spill on ice, spill under ice, etc.). The DAPL response team conducts drills/exercises in accordance with the National Preparedness for Response Exercise Program (PREP). Drills/exercises are designed utilizing various scenarios, field conditions, and exercise injects (unannounced specific written exercise situations). DAPL personnel and response contractors train and exercise on various scenarios, including broken ice.

*See also* N14 N13.5-6 “In order to increase the likelihood of successfully installing moorings, typical installation methods and diagrams should be presented in the FRP and GRP, along with a discussion of when each installation method is applicable.”



RESPONSE: In the unlikely event of a release, mooring locations and installation methods will be determined based on oil migration and current site conditions, and in consultation with responding agencies and stakeholders.

N14.6 “An equally likely scenario will be a spill that occurs during periods when ice is forming (but not yet strong enough to support access) and/or when ice is breaking up. These conditions create unique safety and remediation concerns (e.g., ice buildup that puts additional stress on booms, difficulties with boom and mooring installation, difficulties with site access, etc.). Therefore, this condition should be addressed in the FRP and GRP as well as in training exercises.”

RESPONSE: As indicated in the response to Comment N12, ETP is prepared to respond to a spill that may occur when broken ice is present.

N15.6 “Worst case discharge volumes are redacted from the FRP . . . Without access to the calculations or details regarding the system, it is impossible to assess whether the calculations or the reductions are appropriate when assessing spills into the Missouri River or Lake Oahe. These calculations should be critically reviewed by an independent agency or individual who has access to the redacted figures.”

RESPONSE: ETP developed the FRP pursuant to 49 CFR § 194. Section 194.105 discusses the requirement for worst-case discharges. ETP calculated a worst-case discharge as set forth in Section 194.105 and included it in the FRP. PHMSA reviewed and approved the FRP on February 23, 2017. Additionally, the full bore rupture volumes utilized for the spill modeling is described in the Spill Model Report.

N16.6 “Table 7.3 of the GRP provides a list of organizations that will have access to the GRP as it is updated. OST is not included on that list but should be.”

RESPONSE: ETP committed to adding OST to the Emergency Contact List as noted in the response to Comment N1.

N17.6 “[W]ater intakes and environmentally sensitive areas should be noted on the maps much further than 5 mile downstream from potential spill sites. Furthermore, given the critical nature of drinking water intakes, all such intakes should be specifically shown or noted on the Missouri River sensitivity maps at least as far downstream as the Mni Wiconi intake, located about 4 miles downstream from the Lake Oahe dam.”

RESPONSE: Appendix E of the GRP, Lake Oahe Sensitive Receptors, contains maps that extend more than 26 miles downstream of the pipeline crossing. Inclusion of the Mni Wiconi intake is addressed in the response to Comment N9.

N18.6 “[A]ll affected tribes should be explicitly given permission in the GRP to independently observe the sampling team (and preferably accompany the team and independently collect samples) if this plan is implemented. This will allow the tribes to independently determine the reliability of the resulting data.”

RESPONSE: The Unified Command has the authority to determine which representatives would be allowed on-site during sampling.

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N19.6-7 “Species with traditional value may be pre-identified as part of environmental assessments (Traditional Ecological Knowledge) or may be identified at the time of the incident and detailed on the [Resources at Risk] form. If not pre-identified it is important to engage tribal communities to identify species with traditional value and, where applicable, incorporate them into the wildlife response.’ It is my understanding that OST has not been requested to provide that information but that request should be made to OST.”

RESPONSE: Topic is addressed in the response to Comment N10.

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**APPENDIX G**

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**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA****STANDING ROCK SIOUX  
TRIBE, *et al.*,****Plaintiffs,****v.****U.S. ARMY CORPS OF  
ENGINEERS, *et al.*,****Defendants.****Civil Action No.  
16-1534 (JEB)****MEMORANDUM OPINION**

The Court returns once more to the segment of the Dakota Access Pipeline running under the Missouri River and to its effects on the Indian Tribes living nearby. In February 2017, Defendant U.S. Army Corps of Engineers concluded that granting an easement for the crossing would yield no significant environmental impact, thus exempting the agency from having to prepare an Environmental Impact Statement under the requirements of the National Environmental Policy Act. In these consolidated cases, several Tribes whose reservations lie near Lake Oahe challenge that decision.

In one of its many prior Opinions in this case, the Court held that the agency's decision "not to issue an EIS largely complied with NEPA." Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs (Standing Rock III), 255 F. Supp. 3d 101, 147 (D.D.C. 2017). "Yet

there [we]re substantial exceptions” to such compliance, one of which being the agency’s failure to address expert comments noting that the pipeline suffered from serious flaws that could result in extensive environmental harm in the event of a spill. *Id.* The Court thus ordered the Corps to consider these issues on remand. *Id.* at 160. That remand is now complete, and the Tribes, not surprisingly, strongly disagree with the Corps’ most recent conclusions.

In analyzing those conclusions, this Court has received significant guidance from a recent case decided by the D.C. Circuit, National Parks Conservation Association v. Semonite, 916 F.3d 1075, 1082 (D.C. Cir. 2019). The appeals court there clarified the inquiry to be conducted by a district court when determining whether an agency has adequately dealt with expert criticisms such as these. Applying Semonite, this Court ultimately concludes that too many questions remain unanswered. Unrebutted expert critiques regarding leak-detection systems, operator safety records, adverse conditions, and worst-case discharge mean that the easement approval remains “highly controversial” under NEPA. As the Court thus cannot find that the Corps has adequately discharged its duties under that statute, it will remand the matter to the agency to prepare an Environmental Impact Statement.

## **I. Background**

In order to reacquaint the reader with the landscape against which this dispute unfolds, the Court will first briefly set out the statutory framework of NEPA. It will then separately discuss the factual

background, the procedural history, and the recent remand and resulting claims.

A. Statutory and Regulatory Scheme

The National Environmental Policy Act requires agencies to “consider every significant aspect of the environmental impact of a proposed action,” Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 97 (1983) (quoting Vt. Yankee Nuclear Power Corp v. NRDC, 435 U.S. 519, 553 (1978)), so as to “inform the public that it has indeed considered environmental concerns in its decisionmaking process.” Id. (citing Weinberger v. Catholic Action of Haw., 454 U.S. 139, 143 (1981)). In order to achieve these goals, NEPA imposes on agencies certain procedural requirements, Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 193-94 (D.C. Cir. 1991), but it “does not mandate particular consequences.” Id. at 194.

First, an agency must draft an Environmental Assessment, see 40 C.F.R. § 1501.4(b), that “[b]riefly provide[s] sufficient evidence and analysis for determining whether to prepare an environmental impact statement [EIS] or a finding of no significant impact [FONSI].” Id. § 1508.9(a). “If any ‘significant’ environmental impacts might result from the proposed agency action[,] then an EIS must be prepared before agency action is taken.” Grand Canyon Trust v. FAA, 290 F.3d 339, 340 (D.C. Cir. 2002) (quoting Sierra Club v. Peterson, 717 F.2d 1409, 1415 (D.C. Cir. 1983)); see also 42 U.S.C. § 4332(2)(C) (requiring a statement of the environmental impact of any proposed action “significantly affecting the quality of the human environment”). If, on the other hand, the agency determines that no EIS is required, it must

prepare either a FONSI or a Mitigated FONSI, depending on whether the lack of significant impact results from an agency's commitment to mitigation measures. See 40 C.F.R. §§ 1501.4(e), 1508.13; Council on Environmental Quality, Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact 2, 7 (2011), [https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Mitigation\\_and\\_Monitoring\\_Guidance\\_14Jan2011.pdf](https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf).

In order to determine whether its actions may result in “significant” environmental impacts—and therefore whether it must prepare an EIS—an agency must examine both the “context” and the “intensity” of the action. See 40 C.F.R. § 1508.27. When looking at intensity, an agency must consider ten factors, *id.* § 1508.27(b), and “[i]mplicating any one of the[se] factors may be sufficient to require development of an EIS.” Semonite, 916 F.3d at 1082 (citing Grand Canyon Trust, 290 F.3d at 347). Relevant here is the fourth of these factors—*viz.*, “[t]he degree to which the effects on the quality of the human environment are likely to be highly controversial.” 40 C.F.R. § 1508.27(b)(4). This factor will be discussed at length below. See *infra* Section III.A.1.

Although not in the above-described list of ten factors, two other issues require the Corps' attention under its NEPA obligations. First, in this Circuit, NEPA creates, through the Administrative Procedure Act, a right of action deriving from Executive Order 12,898. This order requires federal agencies to “make achieving environmental justice part of their mission”—“[t]o the greatest extent practicable and permitted by law”—“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.” 59 Fed. Reg. 7629 (Feb. 11, 1994), § 1-101; see Cmtys. Against Runway Expansion, Inc. v. FAA, 355 F.3d 678, 688-89 (D.C. Cir. 2004) (recognizing right to environmental-justice review under NEPA and APA). Indian tribes are one of the populations that must be considered. See Council on Env'tl. Quality, Environmental Justice: Guidance Under the National Environmental Policy Act 9 (1997), <https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf>.

Second, the parties agreed during the first round of summary-judgment briefing that NEPA additionally requires an agency to determine how a project will affect a tribe's treaty rights, in this case those arising from the Fort Laramie Treaty of 1851. Standing Rock III, 255 F. Supp. 3d at 130-31 (citing Fort Laramie Treaty of 1851, art. 5, 11 Stat. 749, 1851 WL 7655). As relevant at this stage, the Corps is required to consider how the pipeline would affect the Tribes' hunting and fishing resources. Id. at 130-32; see 11 Stat. 749, art. 5 (reserving to Tribes “the privilege of hunting” and “fishing” on treaty lands).

#### B. Factual History

As the issues present in the current round of briefing are fairly cabined, the Court will provide only an abbreviated version of the factual history laid out in its prior Opinions in this case. See, e.g., Standing Rock III, 255 F. Supp. 3d at 114-16.

The Dakota Access Pipeline, designed to carry crude oil from North Dakota to Illinois, crosses several



waterways along its 1,200-mile path. Id. at 114 (citing Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs (Standing Rock I), 205 F. Supp. 3d 4, 7 (D.D.C. 2016)). One of these is Lake Oahe, an artificial reservoir in the Missouri created by construction of a dam in 1958. Id. (citing Standing Rock I, 205 F. Supp. 3d at 13). The “lake” begins near Bismarck, North Dakota, and extends about 231 miles south, ending at the Oahe Dam in South Dakota. See ECF No. 172-1 (Final EA) at 35. 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. Standing Rock III, 255 F. Supp. 3d at 114 (citing Act of Sept. 2, 1958, Pub. L. No. 85-915, 72 Stat. 1762). The Tribes now rely on the waters of Lake Oahe in myriad ways, including for drinking, agriculture, industry, and sacred religious and medicinal practices. Id.; see, e.g., ECF No. 289-3 (Declaration of Faith Spotted Eagle), ¶¶ 5-22.

As the first step in determining whether it would permit Dakota Access to construct a portion of DAPL under Lake Oahe, the Corps published a Draft EA, finding that it would not need to prepare the more involved EIS. Standing Rock III, 255 F. Supp. 3d at 115-16; ECF No. 6-19 (Draft EA) at 1. The Tribes and the Department of the Interior commented, both urging the Corps to go further and prepare an EIS. Standing Rock III, 255 F. Supp. 3d at 115-16. The EPA also commented, suggesting that the Corps must at least prepare a Mitigated FONSI. Id. at 116. In July 2016, the Corps published its Final EA—again finding that no EIS was required—and a Mitigated FONSI. See ECF Nos. 172-1 (Final EA), 172-2 (Mitigated FONSI).

Both the Draft and the Final EA were prepared by Dakota Access with input from the Corps, as is permitted by NEPA regulations under certain circumstances. Standing Rock III, 255 F. Supp. 3d at 116 (citing 40 C.F.R. § 1506.5(a)-(b)).

### C. Procedural History

Shortly after the Corps published the Final EA, the Standing Rock Sioux Tribe filed suit against the agency in this Court, principally claiming that its decisions violated the National Historic Preservation Act and NEPA. See Complaint, ¶¶ 128-93. Dakota Access moved successfully to intervene as a defendant, see ECF No. 7; Minute Order of Aug. 8, 2016 (granting intervention), and the Cheyenne River Sioux Tribe so moved as a plaintiff. See ECF No. 11; Minute Order of Aug. 19, 2016 (granting intervention). On September 9, 2016, the Court denied Plaintiffs' Motion to enjoin construction of the pipeline, finding that the Tribes were unlikely to prevail on their NHPA claims that the construction process desecrated sacred lands adjoining Lake Oahe. Standing Rock I, 205 F. Supp. 3d at 37. As political protests in the pipeline's vicinity grew, the Departments of Justice, the Interior, and the Army that same day jointly announced that DAPL construction would be suspended pending the Corps' reconsideration of its statutory obligations. See ECF No. 42-1 at 1-2. Reversing course, the Corps subsequently published notice of its intent to prepare an EIS as to Dakota Access's request for an easement to cross Lake Oahe. See 82 Fed. Reg. 5,543 (Jan. 18, 2017).

Following the change of administration in January 2017 and a presidential memorandum encouraging acceleration of the DAPL project, see 82 Fed. Reg. 8,661 (Jan. 24, 2017), the Corps again reconsidered its decision and ultimately decided to terminate its intent to prepare an EIS. See 82 Fed. Reg. 11,021 (Feb. 17, 2017). After notifying Congress on February 7, 2017, see ECF No. 172-10, the agency then issued the easement to Dakota Access on February 8, 2017. See ECF No. 172-11. The Court thereafter rejected a second preliminary-injunction motion, this time brought by Cheyenne River on Religious Freedom Restoration Act grounds, finding obstacles in both the doctrine of laches and the Tribe's low likelihood of success on the merits. Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs (Standing Rock II), 239 F. Supp. 3d 77, 100 (D.D.C. 2017). Around this time, the case was consolidated with two others against the Corps, such that the Oglala Sioux Tribe and Yankton Sioux Tribe were added as Plaintiffs in this matter. See Minute Order of Mar. 16, 2017. All four Tribes currently remain in the suit.

Finally sending their ace pitcher out to the mound in Game 3—after previously pushing weaker counts under the NHPA and RFRA—Standing Rock and Cheyenne River next sought summary judgment under NEPA, arguing that the Corps was required to prepare an EIS, and Defendants similarly cross-moved. In June 2017, the Court largely upheld the Corps' decision, including on the ground that it had fulfilled any consultation duties toward the Tribes. Standing Rock III, 255 F. Supp. 3d at 147. Yet, it nonetheless found “substantial exceptions” warranting remand. Id. As to Standing Rock, there were

three such deficiencies in the Corps' work. The agency had inadequately considered, in accordance with its obligations under NEPA: (1) whether the project's effects were likely to be "highly controversial," *id.* at 127-29 (citing 40 C.F.R. § 1508.27(b)(4)); (2) the impact of a hypothetical oil spill on the Tribe's fishing and hunting rights, *id.* at 132-34; and (3) the environmental-justice effects of the project. *Id.* at 136-40. The Court consequently remanded the matter to the agency to address these issues. *Id.* at 160. It also reserved decision on two of Cheyenne River's arguments pending the results of the remand, *id.* at 150, 153, but the Tribe does not now re-assert those positions. *See* ECF No. 436 (Cheyenne River Second MSJ).

Oglala's and Yankton's claims, meanwhile, were in earlier stages. Yankton and Defendants cross-moved for summary judgment the following year, and the Court found in favor of the Corps. Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs (Standing Rock V), 301 F. Supp. 3d 50, 75 (D.D.C. 2018). Both Yankton and Oglala later preserved issues they intended to pursue following a remand. *See* ECF Nos. 385 (Oglala); 386 (Yankton).

#### D. Remand and Results

While the Court remanded to the agency a few of Standing Rock's and Cheyenne River's claims, it did not at that point determine whether the easement for the pipeline would be vacated during the remand. Standing Rock III, 255 F. Supp. 3d at 147-48. In October 2017, it found that "[i]n light of the 'serious possibility' that the Corps w[ould] be able to substantiate its prior conclusions," vacatur was not appropriate. Standing Rock Sioux Tribe v. U.S. Army Corps of

Eng'rs (Standing Rock IV), 282 F. Supp. 3d 91, 109 (D.D.C. 2017) (quoting Nat'l Parks Conservation Ass'n v. Jewell, 62 F. Supp. 3d 7, 20 (D.D.C. 2014)).

The Corps completed its remand analysis in February 2019, see ECF No. 398 (Notice of Service of Remand Analysis), and the parties filed a joint appendix containing that record the following month. See ECF No. 406 (Remand Analysis Record). The Corps' work on remand will be discussed in more detail below. See infra Section III.

All parties have now again moved for summary judgment—for the first time, in the case of Oglala. In their briefs, the Tribes raised not only the remanded issues but several others. All Tribes jointly argue that the Corps has failed to remedy its three NEPA violations on remand. In addition, Standing Rock, Cheyenne River, and Yankton attempt to resurrect their NHPA claims, which the Court rejected in earlier Opinions. See Standing Rock I, 205 F. Supp. 3d at 10; Standing Rock V, 301 F. Supp. 3d at 64. Yankton also raised a preserved non-NHPA consultation claim (as to the Corps' actions before the remand), and Oglala argued its preserved claims under the Mni Waconi Act. All Tribes further contend that the Corps violated its consultation duties toward them during remand. The Court heard oral argument via teleconference on March 18, 2020, and it is now prepared to rule on the Motions.

## **II. Legal Standard**

Upon a party's motion, Federal Rule of Civil Procedure 56(a) requires the Court to “grant summary judgment if the movant shows that there is no genuine

dispute as to any material fact and the movant is entitled to judgment as a matter of law.” A fact is material if it would change the outcome of the litigation, Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986); Holcomb v. Powell, 433 F.3d 889, 895 (D.C. Cir. 2006), and a dispute is genuine if the evidence is such that a reasonable jury could return a verdict for the non-moving party. Scott v. Harris, 550 U.S. 372, 380 (2007); Holcomb, 433 F.3d at 895. In the event of conflicting evidence on a material issue, the Court is to construe the conflicting evidence in the light most favorable to the non-moving party. Sample v. Bureau of Prisons, 466 F.3d 1086, 1087 (D.C. Cir. 2006). “Factual assertions in the moving party’s affidavits or declarations may be accepted as true unless the opposing party submits its own affidavits[,] . . . declarations[,] or documentary evidence to the contrary.” Defs. of Wildlife v. U.S. Border Patrol, 623 F. Supp. 2d 83, 87 (D.D.C. 2009) (citing Neal v. Kelly, 963 F.2d 453, 456 (D.C. Cir. 1992)).

The above-described standard, however, does not apply to the Tribes’ NEPA claims, which will be analyzed under the Administrative Procedure Act’s judicial-review standard. Sierra Club v. FERC, 867 F.3d 1357, 1367 (D.C. Cir. 2017) (“[B]ecause NEPA does not create a private right of action, we can entertain NEPA-based challenges only under the [APA] and its deferential standard of review.”). That standard, set out below, applies in place of the typical summary-judgment standard of Rule 56: “[W]hen a party seeks review of agency action under the APA, . . . the district judge sits as an appellate tribunal.” Rempfer v. Sharfstein, 583 F.3d 860, 865 (D.C. Cir. 2009) (quoting Am. Bioscience, Inc. v. Thompson, 269 F.3d 1077, 1083

(D.C. Cir. 2001)). In other words, “[t]he entire case on review is a question of law.” *Id.* (quoting Marshall Cty. Health Care Auth. v. Shalala, 988 F.2d 1221, 1226 (D.C. Cir. 1993)).

The Administrative Procedure Act “sets forth the full extent of judicial authority to review executive agency action for procedural correctness.” FCC v. Fox Television Stations, Inc., 556 U.S. 502, 513 (2009). It requires courts to “hold unlawful and set aside agency action, findings, and conclusions” that are “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). Agency action is arbitrary and capricious if, for example, the agency “entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

“‘The scope of review [in an APA case] is narrow and a court is not to substitute its judgment for that of the agency,’ provided the agency has ‘examine[d] the data and articulate[d] a satisfactory explanation for its action including a rational connection between the facts found and the choice made.’” Airmotive Eng’g Corp. v. FAA, 882 F.3d 1157, 1159 (D.C. Cir. 2018) (second and third alterations in original) (quoting State Farm, 463 U.S. at 43). While the Court “may not supply a reasoned basis for the agency’s action that the agency itself has not given, [it] will uphold a decision of less than ideal clarity if the agency’s path may reasonably be discerned.” Bowman Transp., Inc. v. Ark.-Best Freight Sys., Inc., 419 U.S. 281, 286

(1974) (citation omitted) (citing SEC v. Chenery Corp., 332 U.S. 194, 196 (1947); then citing Colo. Interstate Gas Co. v. FPC, 324 U.S. 581, 595 (1945)). It is only these “certain minimal standards of rationality” to which a reviewing court holds an agency. Nat’l Env’tl. Dev. Ass’n’s Clean Air Project v. EPA, 686 F.3d 803, 810 (D.C. Cir. 2012) (quoting Ethyl Corp. v. EPA, 541 F.2d 1, 36-37 (D.C. Cir. 1976) (*en banc*)).

### III. Analysis

We now arrive at the crux of the matter: has the Corps remedied the three NEPA shortcomings that necessitated remand? And what of the other claims raised by the Tribes? The Court will focus on NEPA and then briefly address the remaining claims brought under two other statutes.

#### A. NEPA

As noted above, while the Court “[found] that the Corps’ decision on July 25, 2016, and February 3, 2017, not to issue an EIS largely complied with NEPA,” it also concluded that there were three “substantial exceptions”—that is, the Corps had violated NEPA in three ways. Standing Rock III, 255 F. Supp. at 147. To wit, it found wanting the Corps’ analysis of: (1) whether the project’s effects were likely to be highly controversial, id. at 129; (2) the impact of an oil spill on the Tribe’s fishing and hunting rights under the Treaty of 1851, id. at 134; and (3) “whether,” under a required environmental-justice analysis, “Standing Rock would be disproportionately harmed by a spill.” Id. at 140.



The Court will begin its analysis by discussing relevant aspects of the standard of review of agency action under NEPA. It will then proceed to consider how the Corps fares under that standard. It will finish by explaining how its findings on the “highly controversial” factor obviate a need for discussion of the other two remand issues as well as some other claims raised by the Tribes.

### 1. *NEPA Standard*

NEPA requires an agency to prepare an Environmental Impact Statement “[i]f any ‘significant’ environmental impacts might result from the proposed agency action.” Grand Canyon Trust, 290 F.3d at 340 (quoting Peterson, 717 F.2d at 1415). A court’s “role in reviewing an agency’s decision not to prepare an EIS is a limited one, designed primarily to ensure that no arguably significant consequences have been ignored.” Myersville Citizens for a Rural Cmty., Inc. v. FERC, 783 F.3d 1301, 1322 (D.C. Cir. 2015) (emphasis added) (internal quotation marks omitted) (quoting TOMAC v. Norton, 433 F.3d 852, 860 (D.C. Cir. 2006)). It “must review whether the agency: (1) has accurately identified the relevant environmental concern, (2) has taken a hard look at the problem in preparing its EA, (3) is able to make a convincing case for its finding of no significant impact, and (4) has shown that even if there is an impact of true significance, an EIS is unnecessary because changes or safeguards in the project sufficiently reduce the impact to a minimum.” Michigan Gambling Opposition v. Kempthorne, 525 F.3d 23, 29 (D.C. Cir. 2008) (quoting TOMAC, 433 F.3d at 861). While NEPA does not direct agencies “to take one type of action or another,” it does require courts to hold them accountable to its

procedural requirements. Busey, 938 F.2d at 193-94. The decision not to prepare an EIS is part of the latter category—that is, courts may find that an agency was arbitrary and capricious not to prepare an EIS and order it to do so. See, e.g., Semonite, 916 F.3d at 1088.

As noted above, an agency considering whether a project will have a “significant” effect on the environment—and thus whether it must prepare an EIS, see Peterson, 717 F.2d at 1415; 42 U.S.C. § 4332(2)(C)—must analyze both the proposed action’s “context” and its “intensity.” 40 C.F.R. § 1508.27. “[I]n evaluating intensity,” the agency must consider ten factors, id. § 1508.27(b), only one of which is relevant here. “Implicating any one of these factors may be sufficient to require development of an EIS.” Semonite, 916 F.3d at 1082. For example, in Grand Canyon Trust, the D.C. Circuit found that, having decided that the FAA had not sufficiently considered one of the factors, it need not “reach[]” the plaintiff’s claim that the agency had also failed to adequately analyze another of the ten. See 290 F.3d at 347.

The § 1508.27(b) factor at issue here is “[t]he degree to which [the project’s] effects on the quality of the human environment are likely to be highly controversial.” 40 C.F.R. § 1508.27(b)(4). Effects are “controversial” 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.” Town of Cave Creek v. FAA, 325 F.3d 320, 331 (D.C. Cir. 2003) (emphasis added) (quoting Found. for N. Am. Wild Sheep v. USDA, 681 F.2d 1172, 1182 (9th Cir. 1982)). While “what constitutes the type of ‘controversy’ that requires a full EIS is not entirely clear,” Nat’l Parks Conservation Ass’n v. United States, 177

F. Supp. 3d 1, 33 (D.D.C. 2016) (quoting Nat'l Wildlife Fed'n v. Norton, 332 F. Supp. 2d 170, 184 (D.D.C. 2004)), “something more is required besides the fact that some people may be highly agitated and be willing to go to court over the matter.” Id. (quoting Fund for Animals v. Frizzell, 530 F.2d 982, 988 n.15 (D.C. Cir. 1975)). In other words, the significant public protests near Lake Oahe do not transform the pipeline’s approval into a highly controversial action within the meaning of 40 C.F.R. § 1508.27(b)(4).

This “something more” is often “scientific or other evidence that reveals flaws in the methods or data relied upon by the agency in reaching its conclusions.” WildEarth Guardians v. Zinke, 368 F. Supp. 3d 41, 81 (D.D.C. 2019) (quoting Nat'l Parks Conservation Ass'n, 177 F. Supp. 3d at 33). In its first summary-judgment Opinion, the Court found that “[t]he expert reports submitted to the Corps after the Final EA was published but before the Corps again decided in February 2017 that an EIS was not required . . . present such scientific critiques.” Standing Rock III, 255 F. Supp. 3d at 129 (emphases omitted); see also id. (listing, as examples, seven methodological critiques made in the Tribes’ expert reports). The agency’s failure to sufficiently respond to these critiques was one of the issues necessitating remand. Id.

While the remand in this case was ongoing, the D.C. Circuit issued a significant opinion clarifying a court’s role in reviewing an agency’s finding that a project was not “highly controversial.” In Semonite, the Corps examined the construction of power lines that would run through historic Jamestown and determined that it did not need to prepare an EIS. See 916 F.3d at 1078-80. Many commenters, including the

National Park Service, the Advisory Council on Historic Preservation, the Virginia Department of Historic Resources, and “many non-governmental organizations,” raised concerns about various aspects of the project. Id. at 1080. Some of these commenters “identified what they viewed as serious flaws in the Corps’s methodologies.” Id. In response, the Corps “twice directed [the power company building the lines] to revise its photo simulations,” but “[c]ommenters remained unsatisfied.” Id. The D.C. Circuit found that, contrary to the Corps’ position, the agency action was likely to be “highly controversial”—and thus the project must be halted while the Corps prepared an EIS—because there was “consistent and strenuous opposition, often in the form of concrete objections to the Corps’s analytical process and findings, from agencies entrusted with preserving historic resources and organizations with subject-matter expertise.” Id. at 1086.

Crucially, the Semonite court explicitly rejected the agency’s argument that it had fulfilled its duty under NEPA by “acknowledg[ing] and try[ing] to address concerns raised during the NEPA process by, for example, instructing [the equivalent of DAPL here] to revise its analyses to address the shortcomings identified by commenters.” Id. at 1085. That argument, the D.C. Circuit stated, “misse[d] the point.” Id. “The question is not whether the Corps attempted to resolve the controversy, but whether it succeeded. Given that many critical comments, including from [agencies and non-governmental organizations], post-dated [those] revisions, the Corps obviously failed.” Id. at 1085-86 (emphases added).

The Corps argues that Semonite does not control—and thus that “considering” responses “is all that is required,” Oral Arg. Tr. at 44:5-6—because in that case both private organizations and federal agencies with subject-matter expertise raised concerns with the agency’s proposed plans. See ECF No. 458 (Corps Opp. to Standing Rock) at 29-30. Whereas “in Semonite, you had the neutral expert agency” objecting to the Corps’ plans, it contends, “[Y]ou have the opposite here.” Oral Arg. Tr. at 6:25-7:6. By “the opposite,” the agency means that in this case, the Pipeline and Hazardous Materials Safety Administration (PHMSA) “did not object to the worst case discharge methodology or underlying assumptions.” Corps Opp. to Standing Rock at 30.

The Court does not believe that these points distinguish the clear instruction of Semonite. First, the D.C. Circuit in that case did not rest its holding exclusively on the existence of federal-agency criticisms, ignoring those raised by private organizations. See, e.g., 916 F.3d at 1085 (describing the “considered responses” of “highly specialized governmental agencies and organizations”). Second, both the Department of the Interior and the EPA, under the previous administration, did express concerns with the agency’s analysis here. Interior, for example, found that the Corps’ Draft EA “did not adequately justify or otherwise support its conclusion that there would be no significant impacts upon the surrounding environment and community.” USACE\_DAPL 5750. EPA recommended, among other things, that the Corps analyze more closely the leak-detection system it had selected, including its “ability . . . to identify small volume leaks.” USACE\_DAPL 5746. In fact, as the Corps itself

noted, 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'. See USACE\_DAPL 72184, 72252 (citing U.S. Nat'l Response Team, Mid-Missouri River Sub-Area Contingency Plan 9 (2015)). The agencies' position changed after a new administration took office and President Trump urged the Corps to "review and approve [DAPL] in an expedited manner." 82 Fed. Reg. 8661. This is certainly their prerogative, see State Farm, 463 U.S. at 59 (Rehnquist, J., concurring in part and dissenting in part) ("A change in administration brought about by the people casting their votes is a perfectly reasonable basis for an executive agency's reappraisal of the costs and benefits of its programs and regulations."), but the existence of the prior comments undercuts the Corps' emphasis on the lack of federal-agency critique in this case.

Third and finally, the Corps' position treats the Tribes and their experts as more akin to the "non-governmental organizations" in Semonite, 916 F.3d at 1080, than governmental entities. As the Government well knows, however, "Indian tribes are 'domestic dependent nations' that exercise inherent sovereign authority over their members and territories." Okla. Tax Comm'n v. Citizen Band Potawatomi Tribe of Okla., 498 U.S. 505, 509 (1991) (quoting Cherokee Nation v. Georgia, 30 U.S. (5 Pet.) 1, 10 (1831)). Here, these sovereign nations prepared expert comments with the help of not only third-party consultants but also their own relevant governmental departments. See, e.g., RAR 7453 (report submitted by Standing Rock in collaboration with, among others, its Department of Water Resources, Department of Game and Fish, Tribal Emergency Management Commission,

Department of Environmental Regulation, and a five-member “Technical Consulting Team”). In sum, the Court does not find a reason to deviate from Semonite here.

In addition to the nature of the Court’s review, the parties also disagree as to its scope. Dakota Access maintains that, in determining whether the Corps has fulfilled its NEPA obligations, the Court should consider only the critiques raised between July 2016 and February 2017—that is, those that generated the unresolved scientific controversy prompting the Court’s remand. See ECF No. 456 (Dakota Access Consolidated Opp.) at 14; Oral Arg. Tr. at 46:8-11 (arguing that Court should consider “the results of [the] new modeling” but not Plaintiffs’ responses to them). The Tribes, on the other hand, believe that the Court should also review their comments submitted during the remand and the Corps’ responses to those.

Once again, Semonite lights the way. Arguably, under that precedent, the Court could find the “highly controversial” factor met merely from the existence of “consistent and strenuous opposition” in the form of experts’ “concrete objections to the Corps’s analytical process and findings” that “post-dated” the Corps’ revision efforts. Semonite, 916 F.3d at 1085-86. But this case stands in a more developed procedural posture than Semonite: here the agency has had an additional chance to respond to these renewed criticisms during the remand. See RAR 103 (confirming Corps considered in its remand analysis “the letters, written comments, and expert reports” as well as “all information verbally communicated at the meetings with the Tribes” during remand); id. at 104 tbl.III-1 (listing documents considered and responded to, including

those received after the easement and during remand). As a result, and particularly since both Defendants argued the sufficiency of those responses in their briefs, see, e.g., Dakota Access Consolidated Opp. at 25-27; ECF No. 446 (Corps Opp. to Standing Rock) at 28, the Court finds it prudent to analyze the substance of expert comments made both before and during the remand to determine whether they “succeed” in resolving the points of scientific controversy that continue to be raised by experts.

## 2. *Points of Controversy*

Having thus delineated the nature and scope of its review, the Court may now engage in the business of reviewing. Given the volume of expert comments submitted both before the granting of the easement and during the remand, it finds that the best approach is to group these criticisms by subject matter. For each topic, the Court will discuss the concerns raised by the Tribes’ experts, the responses offered by the Corps, and whether the latter succeed in resolving the scientific controversy. Plaintiffs’ experts will be introduced as they appear in the below comments. The Corps also relied on reports prepared for Dakota Access by a third-party consulting expert. See, e.g., RAR 8743 (noting that Spill Model Analysis was done by private consulting group RPS for ETP); Final EA at 126-27 (including, in “List of Preparers and Reviewers,” three “Environmental Specialists” from a private environmental consulting company). Citations to Bates numbers beginning with USACE\_ESMT, USACE\_DAPL, USFWS\_DAPL, and OAHE indicate references to the pre-remand administrative record, including the expert comments contained therein. Citations to Bates numbers beginning with RAR refer to the remand-



analysis record, again including expert comments raised during that time.

While there are many topics to choose from, the Court finds that examining four will be sufficient to demonstrate the amount of unresolved scientific controversy that remains. As will be explained, even this non-extensive selection suffices to show the necessity of an EIS.

*a.* Leak-Detection System

The Court begins by discussing concerns raised about DAPL's leak-detection system—one of the areas of unaddressed scientific controversy noted in the first summary-judgment Opinion. Standing Rock III, 255 F. Supp. 3d at 129 (quoting USACE\_ESMT 1081). Experts for both Standing Rock and Cheyenne River expressed their skepticism as to the effectiveness of this system both before and during the remand.

First, they asserted that there was serious reason to doubt the efficacy of the system. As the above-mentioned report submitted by Standing Rock noted, “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.” RAR 7505. 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.” ECF No. 117-15 (Accufacts Report of October 2016) at 4-5. DAPL, it should be noted, uses a CPM leak-detection system. See RAR 173-74.

The Corps' response to the first of these comments was to merely refer to its response to a different comment that did not specifically address the PHMSA data. See RAR 257 (directing reader to RAR 143-44); RAR 143-44 (addressing worst-case discharge generally and not PHMSA data from 2012). Its response to the second—which raised the same PHMSA data—addressed only Accufacts's assertion that the PHMSA data was consistent with its 40 years of experience investigating pipeline failures: "ETP asserts that a comparison to data from 40 years ago, and from older pipelines installed prior to modern pipeline standards, overstates the risk of this modern pipeline." RAR 173. It then went on to describe some features of DAPL's "state-of-the-art pipeline monitoring tools" and practices. See RAR 173-74.

These responses plainly do not succeed in resolving the serious concerns raised. Most critically, the Corps failed entirely to respond to the 2012 PHMSA study that indicated an 80% failure rate in the type of leak-detection system employed by DAPL. Instead, it focused on the expert's comment that its own experience corroborated the PHMSA data. The agency mischaracterized this comment as drawing only on "data from 40 years ago, and from older pipelines installed prior to modern pipeline standards," RAR 173, when the expert had specifically stated that its experience was drawn from a 40-year period and "especially more recent investigations." Accufacts Report at 5. Accufacts made no indication that its experience was only with "pipelines installed prior to modern pipeline standards." The Corps' statement that the expert's

comment “overstates” the risk of a leak-detection failure, therefore, holds no water (or oil, as the case may be).

Second, experts noted that the apparent likelihood that DAPL’s leak-detection system would not perform the detections for which it was designed was only part of the problem. In addition, the system was not even designed to detect leaks that constituted 1% or less of the pipe’s flow rate. See RAR 7683. 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.” Id. Oglala’s expert, a civil and environmental engineer working for an engineering consultancy group, made similar points in a December 2016 report. See RAR 1250. The Corps did not respond to these comments, see RAR 155-59, 274, but in responses to other related topics, it stated that “[a]ccording to ETP,” the leak-detection system in place for DAPL “is capable of detecting leaks down to 1 percent or better of the pipeline flow rate.” RAR 127. “In the event of a slow leak,” it continued, “even if pressure measurements do not show a significant drop in pressure, a detectable meter imbalance will develop over a period of time resulting in an alarm to the Control Center.” Id. “While the alarm threshold may be 1%,” DAPL’s leak-detection system is “sensitive to smaller changes in flow rate and pressure.” Id.

The Court similarly cannot find that the agency adequately disposed of the experts’ concerns here. Even while stating that the system was “sensitive to smaller changes in flow rate and pressure,” the Corps confirmed that the threshold for a leak-detection

alarm was 1%. See RAR 127. Its further response that a less-than-1% leak would eventually be detected over an unspecified “period of time” after building up enough to cause a meter imbalance, id., was less than reassuring given that the amount of undetected leaking oil could be as much as 6,000 barrels per day. See RAR 7683. 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 when there was an “imbalance indication[]” because that imbalance did not exceed “established normal operating tolerances.” RAR 7491 (quoting PHMSA report of the incident). At oral argument, moreover, when asked why the spill modeling did not include such a slow-leak scenario, the Corps stated that “there was no particular reason that they didn’t look at a slow leak.” Oral Arg. Tr. at 12:8-9.

Third, Accufacts commented that a “complete risk analysis require[s], *inter alia*, consideration of . . . location and type of ‘critical leak detection monitoring devices by milepost.’” RAR 7491 (quoting USACE\_ESMT 1081); see also USACE\_ESMT 1078-79 (same expert finding “key variables” such as “time to remotely recognize and react to a possible release” were not considered by Corps). The agency responded that the third-party engineering company that had performed the risk analysis had, according to representations made to the Corps by ETP, considered “[i]nformation on critical leak detection monitoring devices associated with the [leak-detection system] consisting of pressure transmitters and ultra-sonic flow meters by milepost location.” RAR 129.

This response does not quite succeed in resolving the issues raised. Stating that it had considered the

information was a good start, but, while the Corps did indicate the type of monitoring devices that were used, it did not mention their locations, and, most critically, it did not point to any analysis that did in fact take these two details into consideration. Were this the only point of expert contention, it might be a closer call, but the Corps' responses to the first two groups of expert comments show that the scientific controversy surrounding DAPL's leak-detection system was not resolved.

*b. Operator Safety Record*

The next topic is the safety record of DAPL's operator, referred to interchangeably by the parties as ETP and Sunoco (the two completed a merger during this litigation). The thrust of these comments was that any analysis of the risk or magnitude of a spill for a certain pipeline should take into account the performance history of its operator. Donald Holmstrom, an "attorney, investigator, and process safety practitioner with many decades of experience in the oil industry and U.S. government," ECF No. 272-4 (Declaration of Donald Holmstrom), ¶ 1, commented, "A valid risk analysis would recognize the history of the operator, but that didn't happen here." *Id.*, ¶ 9. Standing Rock's remand report made a similar comment. *See* RAR 7503 ("Nowhere d[id] DAPL explain why historic shutdown discharges from other Sunoco/ETP pipeline incidents are not discussed or relevant. . . . Leak detection estimates to be realistic or scientific need to be based on actual historic performance data."). In this case, the operator's history did not inspire confidence: "PHMSA data shows Sunoco has experienced 276 incidents resulting in over \$53 million in property damage from 2006-2016," which

one expert described as “one of the lower performing safety records of any operator in the industry for spills and releases.” Holmstrom Decl., ¶ 9.

The Corps focused its responses on defending the operator’s performance record itself rather than on justifying its decision to not incorporate that record into its analysis. It did not directly reply to the comment that it had not explained “why historic shutdown discharges from other Sunoco/ETP pipeline incidents are not discussed or relevant.” RAR 7503; see RAR 255. And in response to the comment that “[a] valid risk analysis would recognize the history of the operator,” Holmstrom Decl., ¶ 9, it gave a verbatim repetition of its answer to the comment that “PHMSA data shows Sunoco has experienced 276 incidents resulting in over \$53 million in property damage from 2006-2016.” Id.; compare RAR 235-36, with RAR 136-37. That response, which addressed only the safety record (and not the failure to consider it), noted that 70% of the 276 incidents were confined to operators’ property, and “if an incident is confined to the operators’ property, then it would not reach Lake Oahe or any other land or water used by the Tribe.” RAR 137. It also noted that Sunoco had increased inspections of its pipelines in recent years, see RAR 235, and stated that the commenter(s) “d[id] not identify a specific alternative methodology or particular criteria or performance metrics that the Corps should have considered” or studies “that would cause the Corps to doubt its previous methodologies and data supporting [its] conclusion to rely on ETP’s risk analysis.” Id.

This response does not resolve the issues raised by the Tribes’ experts. Two central concerns went unaddressed: (1) the 30% of spills—about 80 of them—

that were not limited to operator property; and (2) the criticism that the spill analysis should have incorporated the operator's record. 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. Finally, the Corps' form language about lack of "specific alternative methodology" and studies "that would cause the Corps to doubt its previous methodologies"—which appears, without alteration or explanation, in many of its responses, see, e.g., RAR 116, 119, 125, 130, 132—is a *non sequitur* and does nothing to resolve the specific issues raised by the Tribes' experts.

c. Winter Conditions

Another concern captured in expert comments was the Corps' failure to consider the impact of harsh North Dakota winters on response efforts in the event of a spill. First, as Oglala's expert noted, "[S]ubfreezing temperatures during winter months will affect emergency response conditions during cleanup of a spill," creating "significant difficulties that are not present during other periods," such as that "workers require more breaks and move slower due to the bundling of clothing," "daylight hours are shorter," and "slip-trip-fall risk increases significantly." Earthfax Report at 7. The Final EA, then, "should have quantified the effect of these factors on response time and the subsequent impacts to human health and the environment." Id.

The same expert pointed out, moreover, that the EA's statement that "ice itself often serves as a natural barrier to the spread of oil" by "naturally contain[ing]" pockets of oil, see Final EA at 39 (USACE DAPL 71263), was an "oversimplification of oil recovery operations beneath ice." Earthfax Report at 7. In the first place, the report stated, ice makes it "difficult to determine where the largest pockets of oil may occur." Id. 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." Id. 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." Id. at 8. The expert noted that the study cited by the Corps for the proposition that ice may benefit spill response also indicated the ways in which winter may simultaneously hinder it. Id. Ultimately, the expert concluded, "[T]he EA should have presented a more serious, quantitative evaluation of the winter spill scenario" to ensure that the above-described factors "were properly evaluated." Id. Standing Rock and its experts made a similar point that will be discussed in the following section. See infra Section III.A.2.d.iii.

In its response to Oglala's expert, the Corps "agree[d]" that "the recovery of oil under ice is difficult." RAR 150. The agency stated that it had considered winter conditions in the EA, pointing to parts of the Final EA that the Oglala expert had criticized. Id. (citing Final EA at 39). It also stated that it had "mandated full-scale winter/ice exercises at . . . Lake Oahe



as a condition to the easement,” and that such exercises were “tentatively scheduled” for February 2019. Id. Finally, it noted that “the Spill Model Report includes an assessment of the winter spill scenario of oil movement under the ice at Lake Oahe.” Id. (citing RAR 8875). That report “predicts that ice cover retards the movement of oil downstream by trapping the hydrocarbons in the vicinity of the release location.” RAR 151. Thus, “ETP anticipates that the difficult winter conditions will be counterbalanced by the slower movement of the oil beneath the ice.” Id.

The Court finds the Corps’ response insufficient to resolve the points raised by Oglala’s expert. To start, the agency’s reference to the Spill Model Report does not necessarily support ETP’s prediction. The report in fact found that, in simulations presuming 100% ice coverage, “[t]he ice effectively capped the oil, prevented evaporation, and resulted in enhanced dissolution, all of which led to the maximum mass of oil in the water column.” RAR 8875. This is in line with the expert’s prediction, see Earthfax Report at 8 (winter response complications will “increase the extent to which the oil dissolves into the water”), and does not support ETP’s conclusion that slow winter flow rates and the entrapment of oil pockets within the ice would counteract the response difficulties presented by winter conditions. The Corps’ reference, moreover, to the parts of the EA that formed the basis of the expert’s criticism does not “resolve” the scientific controversy. Semonite, 916 F. Supp. 3d at 1085-86. And practicing a winter response, while prudent and perhaps a good avenue for producing data as to how exactly winter conditions would delay response efforts, does not get to the point of addressing the concern that the spill

model does not currently take that kind of data into account.

*d.* Worst-Case Discharge

The largest area of scientific controversy, particularly during remand, was the worst-case-discharge estimate for DAPL used in the spill-impact analysis. As relevant here, the “worst case discharge” is

[t]he pipeline’s maximum release time in hours, plus the maximum shutdown response time in hours (based on historic discharge data or in the absence of such historic data, the operator’s best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest line drainage volume after shutdown of the line section(s) in the response zone expressed in barrels (cubic meters).

40 C.F.R. § 194.105(b)(1). In other words,

$$\text{WCD} = ((\text{maximum release time} + \text{maximum shutdown response time}) \times \text{maximum flow rate}) + \text{largest line drainage volume}$$

The idea, then, is to calculate the maximum amount of oil that could possibly leak from the pipeline before a spill is detected and stopped. The regulations further provide that the “[w]orst case discharge means the largest foreseeable discharge of oil . . . in adverse weather conditions.” 49 C.F.R. § 194.5.

One final introductory note. Defendants argue that the PHMSA regulations cited above, which require calculation of a worst-case discharge, see 40 C.F.R. § 194.105(a), are not mandatory under NEPA

and thus that the Corps need not have complied with them under that statute. See Corps Opp. to Standing Rock at 12 (citing Robertson v. Methow Valley Citizens Council, 490 U.S. 332 (1989)). But even if it was not required to do so, the agency did perform such calculations using 40 C.F.R. § 194.105(b)(1), which formed the basis for other conclusions about the effects of a spill. See id. at 12-13 (“[T]he Corps based some of its analysis on an extremely pessimistic “worst case discharge” figure derived from a Spill Model Report prepared pursuant to PHMSA regulations.”). Expert critiques raising serious doubts about the Corps’ application of 40 C.F.R. § 194.105(b)(1) cannot be resolved by the fact that the agency may not have been required to use this particular method in the first place. Such a rule would immunize vast swaths of the Corps’ analysis from judicial or expert review. Cf., e.g., Sierra Club v. Sigler, 695 F.2d 957, 966 (5th Cir. 1983) (“The purpose of judicial review under NEPA is to ensure the procedural integrity of the agency’s consideration of environmental factors in the EIS and in its decision to issue permits. If the agency follows a particular procedure, it is only logical to review the agency’s adherence to that procedure, not to some altogether different one that was not used.”). Indeed, the Corps seemed to concede this at oral argument. See Oral Arg. Tr. at 8:25-9:4 (“The Court: . . . But since you did [a WCD analysis] here, shouldn’t that analysis be subject to expert criticism?” Mr. Schiffman: “Yes. It is absolutely, just as any analysis that the Corps or any agency does is subject to expert criticism in the appropriate comment period or whatever the case may be. So, it was subject to that criticism, the Corps evaluated the criticism in great

depth . . .”). The Court, therefore, will consider expert critiques of the agency’s calculation of the WCD as valid as any other critique.

Both before the easement was issued and during remand, experts raised myriad concerns with the WCD used by the Corps to evaluate impacts of a potential DAPL spill. While there were many axes on which the WCD was challenged, the Court will discuss only three, finding them sufficient to illustrate the unresolved scientific criticisms posed by the Tribes’ experts.

i. Leak-Detection Time

In addition to the concerns raised about whether the leak-detection system would function as claimed and that it was not designed to detect spills of less than 1%, see supra Section III.A.2.a, experts also voiced strong criticisms of how quickly the Corps claimed the system would catch a spill in its WCD analysis. Standing Rock’s remand report commented that, while “[1]eak detection time is intended to be part of the WCD calculation formula,” RAR 7502, “no actual detection time was provided or utilized.” RAR 7501. (Recall that inclusion of detection time was also one of the areas for improvement suggested by EPA in its comment on the Draft EA. See USACE\_DAPL 5746 (“recommend[ing] that the NEPA analysis describe . . . the time that would be required for detection and shutoff of the pipeline”).) Instead, “[t]he DAPL calculation multiplied only the pump shutdown time by the maximum flow rate and added the drain down volume.” RAR 7501. And far from being instantaneous, several experts noted, the worst-case leak-detection time was likely to be quite long. See, e.g.,

RAR 1347 (commenting that spills have been documented to continue undetected for “hours and sometimes weeks”); RAR 7689 (recommending that the WCD “release time assumption” be increased to 8 hours to “reflect[] the actual (proven in use) performance of the Leak Detection System and the track record of the pipeline operator to identify pipeline leaks in remote locations such as the Lake Oahe pipeline crossing”); Accufacts Report at 8 (“There appears to be considerable optimism in the EA in assuming a quick recognition and response by control room personnel.”).

The Corps countered that, after “review[ing] the Lake Oahe Crossing Report numerous times resulting in numerous revisions by the applicant,” it had determined that the estimated total time for leak detection, pump shutdown, and valve closure used in the WCD was “12.9 minute[s].” RAR 254. This was “based on the sum of the time to detect a break on the line and shutdown pumps (9 minutes) and the time to close the valves (3.9 minutes for standard valves.” *Id.* The agency stated that the 9-minute portion, to which it had previously referred only as the amount of time required to shut down mainline pumps, was in fact “not limited to pump shutdown time as it already includes 1 minute for time of detection.” *Id.* The 1-minute figure was used because, “[a]ccording to ETP, the typical time of detection for a WCD rupture is less than 1 minute.” *Id.*; see also RAR 126 (“According to ETP, the LeakWarn CPM system is . . . capable of providing rupture detection within 1 to 3 minutes.”); RAR 127 (same).

The Corps’ response does not resolve the issues raised by the experts’ comments on many levels. To

start, the Court finds it difficult to make sense of the agency's statement that its previous "reference to the mainline pumps being shutdown within 9 minutes of detection is not just limited to pump shutdown time as it already includes 1 minute for time of detection." RAR 254 (emphasis added). The "reference" is in the spill-model analysis prepared for Dakota Access by a third-party private consultant. See RAR 14959-87. There, the consultant explains that the numbers "utilized in the DAPL computer model" allow 12.9 minutes for "Detection and Shutdown\*." RAR 14967. Below that, the asterisk is explained: "\*The mainline pumps are shutdown within 9 minutes of detection and the adjacent block valves are completely closed within an additional 3.9 minutes." Id. Given that the latter sentence is meant to explain the reference to "Detection and Shutdown," the Corps' statement that the 9 minutes include 1 minutes for detection appears unsupported. The clear meaning of "within 9 minutes of detection" is "9 minutes after detection." At best, the Corps' statement that the 9 minutes included time for detection requires more explanation.

But even if the Court accepted, *arguendo*, that the WCD did allow one minute for detection of the rupture, this does not resolve the serious concerns noted by experts about the propriety of using that number to calculate the WCD. Most obviously, what DAPL's leak-detection system is "capable of," RAR 126, 127, or what its "typical" performance would be, see RAR 254, are not necessarily the same as the figure that should be used in calculating its "maximum release time." 40 C.F.R. § 194.105(b)(1). The Corps itself betrays that one minute is not the longest time it could take for a full-bore rupture to be detected, since it admits that

DAPL's leak-detection system is "capable of providing rupture detection within 1 to 3 minutes." RAR 126, 127. 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.

But the difference between the one-minute number used in the WCD and the actual maximum detection time may be much larger. In response to the many experts who commented that hours, rather than minutes, were more accurate figures for the WCD, the Corps merely repeated that ETP had assured it that DAPL's system was capable of detecting a full-bore rupture one to three minutes after it occurred. See RAR 127, 205, 254. Of course, the fact that the system is capable of detecting a leak in this time does not mean that it will do so, only that it may. And in neither case does the one-to-three-minute timeframe purport to be the maximum release time the WCD regulation requires and which the experts posited could well be hundreds of times longer than ETP's number.

#### ii. Shutdown Time

Once a leak is detected, the pipeline's pumps must be shut down in order to stop the flow of oil. In addition, valves help to "reduce the total volume of oil that could be released in the event of a spill," RAR 120, by blocking already-pumped oil before it reaches the point of a leak or rupture. DAPL has two such valves near Lake Oahe; failure of these valves would cause the discharge amount to skyrocket. See RAR 121.

Recall that the WCD regulations require calculation of "the maximum shutdown response time in

hours (based on historic discharge data or in the absence of such historic data, the operator’s best estimate).” 40 C.F.R. § 194.105(b)(1). As noted above, the Corps used a total time of 12.9 minutes for shutdown—9 minutes for the pumps and 3.9 minutes for the valves. See RAR 254, 14967. (As discussed, the 9-minute figure may also include 1 minute for leak detection, thus leaving 8 minutes for pump shutdown. See *supra* Section III.A.2.d.i.)

Holmstrom contended that the 12.9 (or possibly 11.9) minutes “from leak detection to the closing of the shut-off valves lacks supporting data and is not credible.” Holmstrom Decl., ¶ 14. This number, he pointed out, was “based on a ‘best case’ scenario in which all systems function precisely as intended,” including that “the correct decision and response is immediately initiated, and all equipment such as controls, sensors, pumps and valves function as intended.” *Id.*, ¶ 11. Such assumptions have no place in a worst-case scenario, experts said, since in reality “[m]ajor spill incidents typically occur with multiple system causes, when people, or equipment, or systems do not function exactly as they are expected to.” *Id.* By failing to consider such eventualities, which is the modern standard for major accident prevention, the model had not, in fact, given a worst-case discharge analysis. *Id.*

The Corps responded to this criticism by stating that the valves at Lake Oahe “have a closure time of no greater than three (3) minutes.” RAR 155 (quoting Final EA at 90); see RAR 236-37 (referring to RAR 155-59). The other parts of Holmstrom’s comment—*i.e.*, those identifying why assuming a perfect valve-closure time was unrealistic for a WCD—were omitted from the Corps’ response to the relevant paragraph of



his declaration. See RAR 236. In its limited answer, moreover, the agency largely focused on the fact that its WCD figure was lower than an earlier, non-WCD spill-volume estimate made by Oglala's expert. See RAR 143-44; see also RAR 236 (referring to RAR 143-44,151-55). It further explained that, "during the design process, ETP evaluated the potential for incorrect operation and/or equipment failure at the . . . pump stations[ and] mainline valves," resulting in a design that is "established to safeguard against incorrect operation using alarms and shutdowns to operate the pipeline within the guidelines of [the PHMSA pipeline regulations]." RAR 151.

The Corps' responses are, again, inadequate. The agency's statement that it takes no more than three minutes for the valve-closure process to occur, see RAR 155 (quoting Final EA at 90), does not respond to the fact that human or machine error might result in the valves' not beginning the closure process at all (even after a leak has been detected). See Holmstrom Decl., ¶ 11; see also Oral Arg. Tr. at 10:4-5 ("It does assume the valves close as they are, you know, able to do."); id. at 10:25-11:2 ("[T]here's no portion of the remand analysis that directly says here's what happened [if] the valves never closed.").

The Corps' myopic preoccupation with the Earthfax estimate, moreover, which pervades its responses to expert comments about flaws in the WCD, see RAR 143-44; see also RAR 155, 175, 213, 225, 226, 236, 237, 247, 248, 249, 251, 253, 257, 258, 261 (referring reader to RAR 143-44 for discussion of WCD), is not the *coup de grace* the agency believes it to be. The spill-volume estimate provided by Earthfax, which responded to

the July 2016 EA, was not intended as a WCD estimate, see Earthfax Report at 3, since the Tribes had not yet been provided with the amount or supporting calculations of the Corps' WCD. See Final EA at 91 (USACE DAPL 71315) (stating only that it had determined “a largest possible release volume” “[b]ased on a worst case discharge (WCD) scenario specific to . . . Lake Oahe”). Even had Earthfax's estimate been a WCD estimate, the fact that it was lower than that calculated by ETP and the Corps would not resolve the many comments raising concrete disagreements about factual assumptions underlying the numbers used for the DAPL WCD.

Finally, that human error was considered in the design of the pumps and/or valves does not mean that it was considered in a worst-case-discharge analysis, nor does the Corps so contend. The Court does not understand the Corps to be claiming that the design of the pipeline precludes all opportunities for human error between detection of a leak and triggering of valve closure such that it need never be considered when determining a worst-case discharge. Indeed, such a statement would recall assurances like “God himself could not sink this ship” (*RMS Titanic*), or “You're confused, RBMK reactor cores don't explode” (Chernobyl). The Corps' response, then, does not address the heart of the issue raised by experts—namely, that the numbers used in the WCD assume, contrary to the idea of a worst-case discharge, that “correct decision and response is immediately initiated, and all equipment such as controls, sensors, pumps and valves function as intended.” Holmstrom Decl., ¶ 11.

## iii. Adverse Conditions

A third criticism of the worst-case-discharge calculation was that it did not comply with the portion of the WCD regulation that defines a WCD as “the largest foreseeable discharge of oil . . . in adverse weather conditions.” 49 C.F.R. § 194.5 (emphasis added); see RAR 7503 (quoting same). Standing Rock’s remand report expressed concern that “DAPL d[id] not address the adverse weather impact on the WCD for the shutdown of the pipeline.” RAR 7503-04. In so doing, the report continued, it ignored important complicating factors like “harsh ND winter conditions, deep snow, ice cover limitations on oil spill sighting, extreme cold and availability and operation of the . . . shutdown valves in extreme environments.” RAR 7504. The Corps did not respond to the first comment, see RAR 253-54, and in response to the second, it referred to the WCD response that, as noted above, focuses on a non-WCD estimate provided by Earthfax. See RAR 256 (referring to RAR 247-48, which in turn refers to RAR 143-44). It also provided information on equipment and personnel that are in place to respond to emergency situations and stated that “ETP provided design temperature specifications to . . . manufacturers to ensure that both high- and low-temperature concerns would be considered in the manufacturing of those materials and equipment.” RAR 248.

As noted above, the Corps’ reference to its catch-all WCD discussion that focuses largely on an Earthfax estimate does not move the needle. The fact that DAPL manufacturers incorporated low-temperature considerations into their designs runs into the same problem as discussed in the previous section: assurances that a product was designed to prevent certain

problems does not answer the question of what the worst-case discharge would be if those problems occurred. Again, the Court cannot find that these rebuttals do away with the controversy created by expert comments.

\* \* \*

As shown at great length in the preceding analysis, the Corps has not “succeeded” in “resolv[ing] the controversy” created by “consistent and strenuous opposition, often in the form of concrete objections to the Corps’ analytical process and findings,” by “organizations with subject-matter expertise.” Semonite, 916 F.3d at 1086. As in Semonite, “[t]his demonstrates the ‘something more’ needed to show that the ‘effects on the quality of the human environment are likely to be highly controversial.’” Id. (quoting 40 C.F.R. § 1508.27(b)(4)). The Corps has thus violated NEPA by determining that an EIS was unnecessary even though one of the EIS-triggering factors was met.

The Court acknowledges that in projects of this scope, it is not difficult for an opponent to find fault with many conclusions made by an operator and relied on by the agency. But here, there is considerably more than a few isolated comments raising insubstantial concerns. The 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.

The Court will therefore remand to the agency for it to complete such EIS. *See id.* at 1082 (“Implicating any one of the factors may be sufficient to require development of an EIS.”) (citing Grand Canyon Trust, 290 F.3d at 347); Grand Canyon Trust, 290 F.3d at 340 (“If any ‘significant’ environmental impacts might result from the proposed agency action[,] then an EIS must be prepared before agency action is taken.”) (quoting Peterson, 717 F.2d at 1415).

### 3. *Effect on Other Claims*

Having directed the Corps to prepare an EIS because the pipeline’s “effects on the quality of the human environment are likely to be highly controversial,” 40 C.F.R. § 1508.27(b)(4), the Court need not discuss the other two NEPA issues on which it remanded, *see Standing Rock III*, 255 F. Supp. 3d at 132-34, 136-40, given that the remedy for them would be the same. *See Semonite*, 916 F.3d at 1088 (remanding for preparation of EIS without discussing all grounds for appeal because, as here, “[i]n preparing its EIS, the Corps [would] have to revisit” those issues in any case) (citing American Iron & Steel Inst. v. EPA, 115 F.3d 979, 1008 (D.C. Cir. 1997)).

This holding also obviates examination of three groups of consultation claims: (1) Yankton’s preserved claim that the Corps violated its consultation duties prior to granting the easement, *see* ECF No. 435-1 (Yankton Second MSJ) at 19-21; (2) Oglala’s similar, also-preserved claim that the Corps did not consult with it under the Mni Waconi Act prior to issuing the EA and Mitigated FONSI; and (3) all Tribes’ claims that the Corps violated its consultation duties during remand. *Id.* at 22-24; ECF No. 433-2 (Standing Rock

Second MSJ) at 39-45; ECF No. 434 (Oglala MSJ) at 16-17; ECF No. 436-1 (Cheyenne River Second MSJ) at 18-22. This is because the Court has already found the decisions on which they claim the Corps failed to consult—that is, the EA, the Mitigated FONSI, and the Remand Analysis—to be invalid. In other words, a favorable holding by the Court on those other issues would not change the result in this case or offer the Tribes any greater relief than their success on the “highly controversial” issue already has.

#### B. NHPA

Three of the Tribes also “ask[] the Court to revisit” its prior holding that their claims under the National Historic Preservation Act were moot. See Standing Rock Second MSJ at 46-47; see also Yankton Second MSJ at 19 (adopting this portion of Standing Rock’s brief); Cheyenne River Second MSJ at 17-18 (same). The Court so found because the construction of the pipeline under and around Lake Oahe had been completed, thus inflicting all damage that could have been enjoined by a successful NHPA claim. Standing Rock V, 301 F. Supp. 3d at 61-64 (finding no “means by which the Court can still grant Plaintiffs ‘meaningful relief’”) (quoting Sierra Club v. U.S. Army Corps of Eng’rs, 803 F.3d 31, 44 (D.C. Cir. 2015)). The Tribes now contend that, even if the claim is moot, it falls into “an exception to the mootness doctrine for a controversy that is “capable of repetition, yet evading review.” Kingdomware Techs. v. United States, 136 S. Ct. 1969, 1976 (2016) (quoting Spencer v. Kemna, 523 U.S. 1, 17 (1998)). The exception on which the Tribes rely “applies ‘only in exceptional situations’ where (1) ‘the challenged action [is] in its duration too short to be fully litigated prior to cessation of or expiration,’

and (2) ‘there [is] a reasonable expectation that the same complaining party [will] be subject to the same action again.’ Id. (alterations in original) (quoting Spencer, 523 U.S. at 17). The parties here dispute both parts of this test.

The Court need only address the second element to find that this case does not qualify for the exception. The Tribes argue that “the legal questions presented” are “all but certain to arise again.” Standing Rock Second MSJ at 47. Standing Rock’s Historic Preservation Office, it states, “receives over 250 requests to consult with federal agencies annually, and participates in around 50,” including “other crude oil pipelines proposed in the Tribe’s ancestral homelands that will need Corps permits.” Id. Because of this, the Tribe states that “[i]t is possible, if not probable, that such permitting would trigger the same dispute over the scope of § 106 review [under the NHPA] that happened here.” Id.

The Tribes misconstrue the scope of the exception. “The ‘wrong’ that is, or is not, ‘capable of repetition’ must be defined in terms of the precise controversy it spawns.” PETA v. Gittens, 396 F.3d 416, 422 (D.C. Cir. 2005). Here, that would not include all consultations with all agencies, as the Tribes suggest. Even narrowing the scope to the other pipelines mentioned by Standing Rock, the Tribe provides no evidence for its bare assertion that the same NHPA issue may arise in a hypothetical litigation over those pipelines. Without any supporting facts, the Court cannot call such a remote and unsubstantiated possibility a “reasonable expectation” that the same harm will befall the Tribe again.

In any event, even if the Tribes' NHPA claims were not moot, they would fail on the merits for the reasons stated in the Court's first Opinion in this case. See Standing Rock I, 205 F. Supp. 3d at 8-10 (finding Standing Rock unlikely to succeed on merits of its NHPA claim). The Tribes attempt to resurrect only one of the three NHPA issues considered in that Opinion—*viz.*, whether the Corps used too narrow a scope when evaluating whether DAPL would have an adverse effect on an identified historic property by “alleging], directly or indirectly, any of the characteristics of a historic property that qualify it for inclusion in the National Register” under NHPA regulations. Standing Rock I, 205 F. Supp. 3d at 10 (quoting 36 C.F.R. § 800.5(a)(1)). The Court found the scope to be appropriate, rejecting the Tribes' “sweeping claim that the Corps was obligated in permitting this narrow activity—*i.e.*, certain construction activities in U.S. waterways—to consider the impact on potential cultural resources from the construction of the entire pipeline.” Id. at 30. Guided by highly relevant and binding precedent, the Court refused to find “that a federal agency with limited jurisdiction over specific activities related to a pipeline is required to consider all the effects of the entire pipeline to be the indirectly or directly foreseeable effects of the narrower permitted activity.” Id. at 31; see also id. (citing Sierra Club v. U.S. Army Corps of Eng'rs, 803 F.3d 31,34-35 (D.C. Cir. 2015)).

The Court now affirms this holding at the summary-judgment stage, finding that the Tribes' arguments lack merit for the same reasons stated in that Opinion. See id. at 30-32. Even if correct that the



controversy is not moot, Plaintiffs would not prevail on this count.

C. Mni Waconi Act

Last up is the claim brought by Oglala under the Mni Waconi Act of 1988, Pub. L. No. 100-516, 102 Stat. 2566. (*Mni wiconi* means “water is life” in Lakota.) The Act declares that “the United States has a trust responsibility to ensure that adequate and safe water supplies are available to meet the economic, environmental, water supply, and public health needs of the Pine Ridge Indian Reservation,” *id.* § 2(a)(4), which is home to the Oglala Sioux Tribe. It directs the Secretary of the Interior to, among other things, “plan, design, construct, operate, maintain, and replace a municipal, rural, and industrial water system, to be known as the Oglala Sioux Rural Water Supply System.” *Id.* § 3(a). The Act further provides that “[t]itle to the [OSRWSS] shall be held in trust for the Oglala Sioux Tribe by the United States.” *Id.* § 3(e). After the passage of the Act, the Corps duly created the OSRWSS as part of the Mni Waconi Project. The OSRWSS has its water intake 205 miles down the Missouri River from where DAPL now crosses Lake Oahe. See RAR 92; USACE\_ESMT 1358-59.

Oglala argues that the Act imposes a continuing fiduciary duty on the Corps to “provid[e] clean drinking water to residents of the Reservation and ensur[e] that the OSRWSS is maintained and preserved for that purpose and others,” Oglala MSJ at 14, and that by failing to consider the effects of the pipeline’s Lake Oahe crossing on the Mni Waconi Project, the United States (through the agency) has breached that duty. The Corps rejoins that Oglala overstates the scope of

the trust duty, that any duty was not breached by the approval of a project so far upstream from the OSRWSS, and that any breach of duty was remediated during the remand. The Court will first consider the nature of the duty owed to Oglala before taking up whether there has been a violation of such duty.

As the Court has had occasion to note previously in this case, “The trust obligations of the United States to the Indian tribes are established and governed by statute rather than the common law.” Standing Rock III, 255 F. Supp. 3d at 143 (alteration omitted) (quoting United States v. Jicarilla Apache Nation, 564 U.S. 162, 165 (2011)). In order to bring a breach-of-trust claim, therefore, Oglala “must identify a substantive source of law that establishes specific fiduciary or other duties, and allege that the Government has failed faithfully to perform those duties.” United States v. Navajo Nation, 537 U.S. 488, 506 (2003). It is not enough that a statute places land in trust for the benefit of a tribe—it must also impose a “correlative duty of management” over the trust corpus in order to give rise to a cause of action. El Paso Natural Gas Co. v. United States, 750 F.3d 863, 897 (D.C. Cir. 2014).

The parties agree that the Mni Waconi Act does impose a trust duty on the United States, see ECF No. 450 (Corps Opp. to Oglala MSJ) at 7, but they disagree as to the scope of that duty. Whereas the Tribe believes that the Act’s direction to “maintain . . . a municipal, rural, and industrial water system,” § 3(a) (emphasis added), requires the Corps to continue to provide “adequate and safe water supplies” for the reservation, id. § 2(a)(4), the agency argues that this

duty is “cabined by limited Congressional appropriations” as set out in the Act. See Corps Opp. to Oglala at 7 (citing Mni Waconi Act § 10(a)—(b)). Rather than creating a “perpetual trust obligation,” the Corps argues, the Act limits any duty to the activities for which it provides funding. Id. at 8; see also id. at 7 (citing Cobell v. Salazar, 573 F.3d 808, 811 (D.C. Cir. 2009); then citing Mni Waconi Act § 6(b)).

The Court need not determine the precise contours of the United States’ trust duty toward Ogalala with respect to the OSRWSS because, regardless of scope, the Corps has not breached that duty by granting an easement under Lake Oahe for DAPL. The Tribe does not dispute that, at present, the OSRWSS does constitute an “adequate and safe water suppl[y].” Mni Waconi Act § 2(a)(4). The possibility of a future spill, which this Court has accepted is low, see Standing Rock III, 255 F. Supp. 3d at 127, does not render the drinking water inadequate and the Government’s duty breached. This is particularly true since the OSRWSS takes its water from a point 205 miles downstream from where DAPL passes under Lake Oahe. See RAR 92; USACE\_ESMT 1358-59.

The Tribe rejoins that the Corps owed it a fiduciary duty to consider the impacts of the Lake Oahe crossing on the Mni Waconi Project. See Oglala MSJ at 13 (citing Nw. Sea Farms Inc. v. U.S. Army Corps of Eng’rs, 931 F. Supp. 1515, 1520 (W.D. Wash 1996); then citing Muckleshoot Indian Tribe v. Hall, 698 F. Supp. 1504, 1523 (W.D. Wash 1988)). But the cases it cites, which in any case are not binding on this Court, discuss treaty rights, not statutory rights, and only the latter are at issue here. Even if there were a duty

to consider the project's effects on the OSRWSS, moreover, the Court agrees with the Corps that, at the very least, it has done so during the remand. See, e.g., RAR 94 (finding the OSRWSS unlikely to be affected because of the predicted "near zero" concentration of hydrocarbons in water many miles upstream of the OSRWSS intake), 95 tbl.II-6 (listing predicted hydrocarbon concentrations at increasing points downstream of the DAPL crossing). The Court, accordingly, finds that the Corps has adequately performed any fiduciary duty imposed by the Mni Waconi Act.

#### D. Remedy

The Corps must prepare an EIS, but what is the status of the easement—and, ultimately, the oil—in the meantime? As it has done before in this case, the Court will order the parties to brief the issue of whether the easement should be vacated during the remand. See Standing Rock III, 255 F. Supp. 3d at 147-48. Certainly, "vacating a rule or action promulgated in violation of NEPA is the standard remedy." Humane Soc'y of U.S. v. Johanns, 520 F. Supp. 2d 8, 37 (D.D.C. 2007) (citing Am. Bioscience, Inc. v. Thompson, 269 F. 3d 1077, 1084 (D.C. Cir. 2001)). Because "[s]uch a move" would "carry serious consequences that a court should not lightly impose," Standing Rock III, 255 F. Supp. 3d at 147, the Court will ask the parties for dedicated briefing on the subject, which neither side addressed with much conviction in this round of briefing. As before, "[t]his is not surprising—absent knowledge of whether or to what extent the Court would remand, the parties were unable to fully address the Allied-Signal factors in their summary-judgment briefs." Id. (citing Allied-Signal, Inc. v. U.S. Nuclear Regulatory Comm'n, 988 F.2d

146, 150-51 (D.C. Cir. 1993)). The Court will therefore allow the parties to argue the issue of vacatur with the benefit of knowing the basis for remand set out above.

#### **IV. Conclusion**

For the foregoing reasons, the Court will grant in part and deny in part the Tribes' Motions for Summary Judgment and grant in part and deny in part the Corps' corresponding Cross-Motion for Summary Judgment. A contemporaneous Order so stating will issue this day.

/s/ James E. Boasberg  
JAMES E. BOASBERG  
United States District Judge

Date: March 25, 2020

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**APPENDIX H**

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**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA**

**STANDING ROCK SIOUX  
TRIBE, *et al.*,**  
**Plaintiffs,**  
**and**  
**CHEYENNE RIVER SIOUX  
TRIBE, *et al.*,**  
**Plaintiff-Intervenors,**  
**v.**  
**U.S. ARMY CORPS OF  
ENGINEERS,**  
**Defendant,**  
**and**  
**DAKOTA ACCESS, LLC,**  
**Defendant-Intervenor.**

**Civil Action No.  
16-1534 (JEB)**

**MEMORANDUM OPINION**

Lake Oahe is a large reservoir lying behind a dam on the Missouri River and stretching between North and South Dakota. Fearing severe environmental consequences, American Indian Tribes on nearby reservations have sought for several years to invalidate federal permits allowing the Dakota Access Pipeline to carry oil under the lake. Today they finally achieve that goal—at least for the time being.

Following multiple twists and turns in this long-running litigation, this Court recently found that Defendant U.S. Army Corps of Engineers had violated the National Environmental Policy Act when it granted an easement to Defendant-Intervenor Dakota Access, LLC to construct and operate a segment of that crude-oil pipeline running beneath the lake. This was because the Corps had failed to produce an Environmental Impact Statement despite conditions that triggered such a requirement. The Court consequently remanded the case to the agency to prepare such an EIS, but it asked for separate briefing on the appropriate interim remedy. In other words, the Court asked the parties whether the easement should be vacated and the pipeline emptied during the remand process. Although mindful of the disruption such a shutdown will cause, the Court now concludes that the answer is yes. Clear precedent favoring vacatur during such a remand coupled with the seriousness of the Corps' deficiencies outweighs the negative effects of halting the oil flow for the thirteen months that the Corps believes the creation of an EIS will take.

## **I. Background**

The Court recounts here only the background information necessary to set the stage for the remedy analysis. For the full history of this case, the interested reader can refer to the Court's ten prior Opinions in this matter. See, e.g., [Standing Rock Sioux Tribe v. U.S. Army Corps. of Eng'rs \(Standing Rock III\)](#), 255 F. Supp. 3d 101, 114-16 (D.D.C. 2017); see also ECF Nos. 39, 158, 206, 239, 284, 304, 392, 418, 496. The Court begins with the relevant statute and then describes the procedural history of the litigation.

### A. Statutory Scheme

The National Environmental Policy Act requires agencies to “consider every significant aspect of the environmental impact of a proposed action,” Balt. Gas & Elec. Co. v. NRDC, 462 U.S. 87, 97 (1983) (quoting Vt. Yankee Nuclear Power Corp v. NRDC, 435 U.S. 519, 553 (1978)), so as to “inform the public that it has indeed considered environmental concerns in its decisionmaking process.” Id. (citing Weinberger v. Catholic Action of Haw., 454 U.S. 139, 143 (1981)). In order to achieve these goals, NEPA imposes on agencies certain procedural requirements, Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 193-94 (D.C. Cir. 1991), but it “does not mandate particular consequences.” Id. at 194.

First, an agency must draft an Environmental Assessment, see 40 C.F.R. § 1501.4(b), that “[b]riefly provide[s] sufficient evidence and analysis for determining whether to prepare an environmental impact statement [EIS] or a finding of no significant impact [FONSI].” Id. § 1508.9(a). “If any ‘significant’ environmental impacts might result from the proposed agency action[,] then an EIS must be prepared before agency action is taken.” Grand Canyon Trust v. FAA, 290 F.3d 339, 340 (D.C. Cir. 2002) (quoting Sierra Club v. Peterson, 717 F.2d 1409, 1415 (D.C. Cir. 1983)); see also 42 U.S.C. § 4332(2)(C) (requiring statement of environmental impact of any proposed action “significantly affecting the quality of the human environment”). If, on the other hand, the agency determines that no EIS is required, it must prepare either a FONSI or a Mitigated FONSI, depending on whether the lack of significant impact results from an agency’s commitment to mitigation measures. See 40



C.F.R. §§ 1501.4(e), 1508.13; Council on Environmental Quality, Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact 2, 7 (2011), [https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Mitigation\\_and\\_Monitoring\\_Guidance\\_14Jan2011.pdf](https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf).

In order to determine whether its actions may result in “significant” environmental impacts—and therefore whether it must prepare an EIS—an agency must examine both the “context” and the “intensity” of the action. See 40 C.F.R. § 1508.27. [I]n evaluating intensity,” the agency must consider ten factors, *id.* § 1508.27(b), only one of which is relevant here. “Implicating any one of the[se] factors may be sufficient to require development of an EIS.” Nat’l Parks Conservation Ass’n v. Semonite, 916 F.3d 1075, 1082 (D.C. Cir. 2019) (citing Grand Canyon Trust, 290 F.3d at 347). The decision here turned on the fourth of these factors— “[t]he degree to which the effects on the quality of the human environment are likely to be highly controversial.” 40 C.F.R. § 1508.27(b)(4).

Effects are “controversial” 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.” Town of Cave Creek v. FAA, 325 F.3d 320, 331 (D.C. Cir. 2003) (emphasis omitted) (quoting Found. for N. Am. Wild Sheep v. USDA, 681 F.2d 1172, 1182 (9th Cir. 1982)). While “what constitutes the type of ‘controversy’ that requires a full EIS is not entirely clear,” Nat’l Parks Conservation Ass’n v. United States, 177 F. Supp. 3d 1, 33 (D.D.C. 2016) (quoting Nat’l Wildlife Fed’n v. Norton, 332 F. Supp. 2d 170, 184 (D.D.C. 2004)), “something more is required besides the fact that some people may be highly

agitated and be willing to go to court over the matter.” Id. (quoting Fund for Animals v. Frizzell, 530 F.2d 982, 988 n.15 (D.C. Cir. 1975)).

#### B. Procedural History

This case involves efforts by several American Indian Tribes to enjoin Defendant United States Army Corps of Engineers from permitting Defendant-Intervenor Dakota Access, LLC to construct and operate a segment of its oil pipeline under Lake Oahe, which lies on the Missouri River. In 2016, Plaintiff Standing Rock Sioux Tribe filed its Complaint in this Court, followed shortly by Plaintiff-Intervenor Cheyenne River Sioux Tribe and later by Plaintiffs Oglala and Yankton Sioux Tribes, the latter two in cases that have now been consolidated into the present one. Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs (Standing Rock VI), No. 16-1534, 2020 WL 1441923, at \*3 (D.D.C. Mar. 25, 2020). Early on, both Standing Rock and Cheyenne River were unsuccessful in seeking preliminary injunctions under the National Historic Preservation Act and the Religious Freedom Restoration Act. Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs (Standing Rock II), 239 F. Supp. 3d 77, 100 (D.D.C. 2017); Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs (Standing Rock I), 205 F. Supp. 3d 4, 37 (D.D.C. 2016). In between these two Opinions, the Corps “announced that DAPL construction would be suspended pending the Corps’ reconsideration of its statutory obligations” under NEPA. Standing Rock VI, 2020 WL 1441923, at \*3. A few months later, however, following the change of administration in January 2017 and a presidential memorandum urging acceleration of the project, the Corps again reconsidered and decided to move forward. Id.

It granted the sought permit, construction was completed, and oil commenced flowing through the Dakota Access Pipeline. Standing Rock III, 255 F. Supp. 3d at 120.

Undeterred, later in 2017, Standing Rock and Cheyenne River switched focus and “sought summary judgment under [the National Environmental Policy Act], arguing that the Corps was required to prepare an [Environmental Impact Statement], and Defendants similarly cross-moved.” Standing Rock VI, 2020 WL 1441923, at \*4. The Court found that the Corps’ decision “not to issue an EIS largely complied with NEPA,” but three “substantial exceptions” to that compliance necessitated a remand. Standing Rock III, 255 F. Supp. 3d at 147. Specifically, the Court “found wanting the Corps’ analysis of: (1) whether the project’s effects were likely to be highly controversial; (2) the impact of an oil spill on the Tribe’s fishing and hunting rights under the Treaty of 1851; and (3) ‘whether,’ under a required environmental-justice analysis, ‘Standing Rock would be disproportionately harmed by a spill.” Standing Rock VI, 2020 WL 1441923, at \*5 (citations omitted) (quoting Standing Rock III, 255 F. Supp. 3d at 140). This raised the significant question of whether the permit should be vacated—and the oil flow arrested—during the remand. In a subsequent Opinion, the Court declined to so order, finding that there was a “serious possibility’ that the Corps w[ould] be able to substantiate its prior conclusions.” Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs (Standing Rock IV), 282 F. Supp. 3d 91,109 (D.D.C. 2017).

During the remand, which stretched on for well over a year, the D.C. Circuit “issued a significant opinion clarifying a court’s role in reviewing an agency’s finding that a project was not ‘highly controversial.’” Standing Rock VI, 2020 WL 1441923, at \*7. In Semonite, that court held that it was not sufficient for an agency to simply “acknowledge and try to address concerns raised during the NEPA process.” 916 F.3d at 1085 (emphasis added). “The question is not whether the Corps attempted to resolve the controversy, but whether it succeeded.” Id. at 1085-86. Because the Corps in that case had failed to resolve the scientific controversy raised by expert and agency comments, the Semonite court found that it had been wrong to choose not to prepare an EIS and remanded for such action. Id. at 1087-88.

After the remand in this case was completed, the parties again cross-moved for summary judgment. Realizing that Semonite guided both “the nature and scope of [this Court’s] review,” Standing Rock VI, 2020 WL 1441923, at \*8; see id. at \*6-8 (detailing reasons for following Semonite), the Court conducted a detailed analysis of some of the many expert critiques of the environmental effects of the proposed project. Id. at \*8-16 (discussing leak-detection system, operator safety record, winter conditions, and worst-case discharge). Ultimately, “even this non-extensive selection suffice[d] to show the necessity of an EIS.” Id. at \*9. The Court found that “the Corps ha[d] not ‘succeeded’ in ‘resolv[ing] the controversy’ created by ‘consistent and strenuous opposition, often in the form of concrete objections to the Corps’ analytical process and findings,’ by ‘organizations with subject-matter expertise.’” Id. at \*16 (second alteration in original)

(quoting Semonite, 916 F.3d at 1086). As in Semonite, “[t]his demonstrate[d] the ‘something more’ needed to show that the ‘effects on the quality of the human environment are likely to be highly controversial.’” Id. (first alteration in original) (quoting Semonite, 916 F.3d at 1086). “The Corps ha[d] thus violated NEPA by determining that an EIS was unnecessary even though one of the EIS-triggering factors was met.” Id.

While there were two remaining NEPA topics—other than the “highly controversial” factor—that had formed the basis for the Court’s first remand, it found no need to reach them, since the remedy for any finding in the Tribes’ favor would be the same—*viz.*, an EIS—and such EIS would require consideration of them in any case. Id. After disposing of a handful of other, non-NEPA issues, id. at \*16-19, the Court again “remand[ed] to the agency for it to complete such EIS.” Id. at \*16 (citing Semonite, 916 F.3d at 1082; then citing Grand Canyon Trust, 290 F.3d at 340). It asked for separate briefing, however, on “the status of the easement—and, ultimately, the oil—in the meantime.” Id. at \*19. Unsurprisingly, the Tribes have argued for vacatur of the permits, Defendants have opposed, and each side is joined by an army of *amici*. See ECF Nos. 504, 514-19, 521, 532-33, 537. With the benefit of this bountiful briefing, the Court is now prepared to rule as to vacatur.

## II. Legal Standard

“The ordinary practice is to vacate unlawful agency action.” United Steel v. Mine Safety & Health Admin., 925 F.3d 1279, 1287 (D.C. Cir. 2019) (citing 5 U.S.C. § 706(2)); accord FCC v. NextWave Personal Comms. Inc., 537 U.S. 293, 300 (2003) (“In all cases

agency action must be set aside if the action . . . failed to meet statutory, procedural, or constitutional requirements.”) (quoting Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 413-14 (1971)). Vacatur is also the “standard remedy” in this Circuit for an “action promulgated in violation of NEPA.” Humane Soc’y of U.S. v. Johanns, 520 F. Supp. 2d 8, 37 (D.D.C. 2007) (citing Am. Bioscience, Inc. v. Thompson, 269 F.3d 1077, 1084 (D.C. Cir. 2001)); see Reed v. Salazar, 744 F. Supp. 2d 98, 118-20 (D.D.C. 2010) (finding NEPA violation and ordering vacatur); Sierra Club v. Van Antwerp, 719 F. Supp. 2d 77, 78-80 (D.D.C. 2010) (finding NEPA violation and ordering remand with partial vacatur); Greater Yellowstone Coal. v. Kempthorne, 577 F. Supp. 2d 183, 204-05, 210 (D.D.C. 2008) (finding NEPA violation and ordering vacatur); see also Pub. Emps. for Env’tl. Responsibility v. U.S. Fish & Wildlife Serv., 189 F. Supp. 3d 1, 2 (D.D.C. 2016) (surveying “cases in this district” and noting “the primacy of vacatur to remedy NEPA violations”).

Although vacatur may be the “presumptively appropriate remedy,” Sierra Club, 719 F. Supp. 2d at 78, it is not the only option. Instead, as equity requires, the reviewing court has discretion to leave the agency action in place. See, e.g., Advocates for Highway & Auto Safety v. Fed. Motor Carrier Safety Admin., 429 F.3d 1136, 1151 (D.C. Cir. 2005) (declining to vacate vehicle-safety rule found arbitrary and capricious under APA); Int’l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin., 920 F.2d 960, 966-67 (D.C. Cir. 1990) (same for mine-safety rule). Indeed, that is precisely what this Court did last time around. See Standing Rock IV, 282 F. Supp. 3d at 109.

In Allied-Signal v. United States Nuclear Regulatory Commission, 988 F.2d 146 (D.C. Cir. 1993), the court laid out the operative test for whether to vacate a deficient agency action during remand. First, a court must consider “the seriousness of the order’s deficiencies (and thus the extent of doubt whether the agency chose correctly).” Id. at 150 (quoting Int’l Union, 920 F.2d at 967). Second, it analyzes “the disruptive consequences of an interim change that may itself be changed.” Id. at 150-51 (quoting Int’l Union, 920 F.2d at 967). “Because vacatur is the default remedy, . . . defendants bear the burden to prove that vacatur is unnecessary.” Nat’l. Parks Conservation Ass’n v. Semonite, 422 F. Supp. 3d 92, 99 (D.D.C. 2019).

### III. Analysis

The Court analyzes each prong of the Allied-Signal test separately, keeping in mind that “[t]here is no rule requiring either the proponent or opponent of vacatur to prevail on both factors.” Shands Jacksonville Med. Ctr. v. Burwell, 139 F. Supp. 3d 240, 270 (D.D.C. 2015). It ultimately concludes that shutting down the pipeline is warranted.

#### A. Seriousness of Deficiencies

Unlike the Court’s last Opinion on remedy in this case, the first Allied-Signal prong is quite straightforward here. The Court’s task in considering this first factor is to determine whether there is “a significant possibility that the [agency] may find an adequate explanation for its actions” on remand. Williston Basin Interstate Pipeline Co. v. FERC, 519 F.3d 497, 504 (D.C. Cir. 2008) (citing Allied-Signal, 988 F.2d at 150-51); accord Nat’l Parks Conservation Ass’n v. Jewell, 62 F. Supp. 3d 7, 20 (D.D.C. 2014) (“[R]emand without

vacatur is appropriate where ‘there is at least a serious possibility that the [agency] will be able to substantiate its decision on remand.’”) (second alteration in original) (quoting Allied-Signal, 988 F.2d at 151). In its prior remedy Opinion, this Court went through the three topics to be covered on remand in significant detail, see Standing Rock IV, 282 F. Supp. 3d at 97-103, finding in each case that the Corps was likely to be able to “substantiate its prior decision to issue an EA.” Id. at 100 (fishing and hunting rights); see also id. at 99 (highly controversial); id. at 102 (environmental justice).

Now, however, that decision has been weighed, it has been measured, and it has been found wanting. The Court’s March 2020 Opinion examined the first of the three remand topics—namely, whether the effects were highly controversial—and found definitively that, notwithstanding the Court’s earlier optimism, the Corps had not been able to substantiate its decision to publish only an EA and not an EIS:

As shown at great length in the preceding analysis, the Corps has not “succeeded” in “resolv[ing] the controversy” created by “consistent and strenuous opposition, often in the form of concrete objections to the Corps’ analytical process and findings,” by “organizations with subject-matter expertise.” As in Semonite, “[t]his demonstrates the ‘something more’ needed to show that the ‘effects on the quality of the human environment are likely to be highly controversial.’” The Corps has thus violated NEPA by determining that an EIS was unnecessary even though one of the EIS-triggering factors was met.



Standing Rock VI, 2020 WL 1441923, at \*16 (alterations in original) (citations omitted) (quoting Semonite, 916 F.3d at 1086). There is no longer any question of the Corps being able to justify its choice.

In such a circumstance, Circuit precedent overwhelmingly dictates that vacatur is appropriate. That court routinely vacates agency action when remanding for preparation of an EIS, and often without discussion. See, e.g., Sierra Club v. FERC, 867 F.3d 1357, 1379 (D.C. Cir. 2017) (vacating agency approval of interstate natural-gas pipelines); Am. Wild Horse Preservation Campaign v. Perdue, 873 F.3d 914, 932 (D.C. Cir. 2017) (vacating Forest Service decision to eliminate 23,000 acres of wild horse territory); see also Sierra Club v. U.S. Army Corps of Eng'rs, 803 F.3d 31, 43 (D.C. Cir. 2015) (“If the NEPA analysis were legally inadequate, ‘we could order that the [pipeline] be closed or impose restrictions on its use,’ at least on federally authorized segments, ‘until [the agencies] complied with NEPA.’”) (alterations in original) (quoting Airport Neighbors All., Inc. v. United States, 90 F.3d 426, 429 (10th Cir. 1996)). When vacatur is discussed, the seriousness of a failure to produce an EIS under NEPA is emphasized. See, e.g., Oglala Sioux Tribe v. U.S. Nuclear Regulatory Comm’n, 896 F.3d 520, 536 (D.C. Cir. 2018) (“The seriousness of the NEPA deficiency is particularly clear here because the point of NEPA is to require an adequate EIS before a project goes forward . . .”).

In fact, to the Court’s and the parties’ knowledge, only twice has a court (once the Circuit, once the district court here) not vacated agency action that violated NEPA because of a missing or defective EIS. Defendants attempt to hang their hat on these cases, but

to no avail. In both, the second prong of the Allied-Signal test, but not the first, weighed in favor of remand without vacatur, leading those courts to find that the scales tipped toward the agency. See id.; Se-monite, 422 F. Supp. 3d at 99-100 (“[T]he seriousness of the defect is significant. If the first Allied-Signal factor were the only consideration, the standard remedy [of vacatur] would likely apply.”); id. at 103 (“For all of these reasons, the second Allied-Signal factor forces the Court to conclude that vacating the permit would be inappropriate.”). That second factor will be analyzed presently, see infra Section III.B, and the Court will revisit these two cases at that time. As to this first prong, however, both decisions strongly support the Court’s conclusion here.

Defendants and Defendant-Intervenor next argue that, instead of focusing on the Corps’ decision not to prepare an EIS, the Court should be analyzing whether “the Corps will likely substantiate its substantive easement decision.” ECF No. 507 (Corps Remedy Brief) at 7 (emphasis added); see ECF No. 509-1 (DA Remedy Brief) at 14 (“The Corps’ key premises for granting the easement . . . remain intact, and they strongly suggest that the Corps will be able to reach the same top-line conclusion on remand.”). They maintain that focusing on the EIS decision “would render the first part of th[e Allied-Signal] test surplusage,” since it suggests that any agency action that is invalid for failure to produce an EIS will always flunk this first prong of the vacatur test. See ECF No. 536 (Corps Remedy Reply) at 5; see ECF No. 541 (DA Remedy Reply) at 9 (arguing that focusing on the EIS “alter[s] that prong such that it could never apply in NEPA cases like this”). Instead, they would

have the Court evaluate their ability in an EIS to remedy the specific areas of concern stated in its prior Opinion. They thus spill considerable ink rehashing the merits of the Court's prior Opinions. See, e.g., DA Remedy Br. at 19-31 (arguing in great detail why Corps will be able to “easily address the four discrete issues that this Court found ‘highly controversial,’ id. at 19); Corps Remedy Br. at 10-14 (arguing that pipeline's Mineral Leasing Act easement is valid for the reasons argued in first round of summary judgment).

To the extent that Defendants complain that the “seriousness” of an agency's failure to produce an EIS under NEPA is a foregone conclusion, they are taking issue with the caselaw in this Circuit, as just explained. See also Dep't of Transp. v. Pub. Citizen, 541 U.S. 752,757 (2004) (describing EIS as being gait the heart of NEPA”). But the magnitude of those shortcomings is even clearer here, where the Court had the benefit of a second round of summary-judgment briefing to determine that the defects in the EA were, in fact, too serious to be ignored. See generally Standing Rock VI, 2020 WL 1441923. The Court determined in March of this year that these infirmities were so significant as to merit the preparation of an Environmental Impact Statement, id. at \*16, and, as just explained, an EIS failure under NEPA is considered a very serious deficiency in this Circuit. The Court's focus on the EIS, rather than on the entire easement decision, is in fact supported by one of the aforementioned two cases on which Defendants rely. See Se-monite, 422 F. Supp. 3d at 99 (“Looking at the first Allied-Signal factor, the Court does not assess the deficiency of the ultimate decision itself—the choice to

issue the permit—but rather the deficiency of the determination that an EIS was not warranted.) (emphasis added).

Defendants’ argument, moreover, betrays what appears to be a misunderstanding of their obligations going forward. The time for justifying the Environmental Assessment has passed—the Court has ordered an Environmental Impact Statement, and another limited remand analysis will not fit the bill. Contra DA Remedy Br. at 14 (arguing that task on remand is to address only “four areas of criticism pertaining to one remand topic”). Indeed, the Court explicitly did not reach the other two remand topics because “the remedy for them would be the same,” and “[i]n preparing its EIS, the Corps [would] have to revisit’ those issues in any case.” Standing Rock VI, 2020 WL 1441923, at \*16 (alterations in original) (quoting Semonite, 916 F.3d at 1088). Contra Corps Remedy Br. at 10 (“[T]he Court found no fault with the Corps’ consideration of environmental justice or of the impacts to the Tribes’ treaty hunting and fishing rights . . .”).

An EIS, it is important to remember, is a separate regulatory beast, with its own requirements. See, e.g., Taxpayers of Mich. Against Casinos v. Norton, 433 F.3d 852, 857 (D.C. Cir. 2006) (describing EIS as “detailed” and “comprehensive”). The fact that the Corps has submitted a detailed EA does not minimize its obligations when preparing that EIS. See Anderson v. Evans, 371 F.3d 475, 494 (9th Cir. 2004) (“No matter how thorough, an EA can never substitute for preparation of an EIS, if the proposed action could significantly affect the environment.”). Compare 40 C.F.R. § 1501.4 (laying out considerations for “whether to

prepare an environmental impact statement”), with 40 C.F.R. §§ 1502.1-1502.24 (laying out requirements for environmental impact statement). Contra DA Remedy Br. at 10 (arguing that Corps can “continue to rely largely, if not exclusively, on its prior analysis”). The Corps must perform a full and complete EIS for the entire project, potentially subject to the full scope of judicial review normally applied to environmental impact statements. See, e.g., 40 C.F.R. § 1502.14 (comparison of environmental impacts of alternatives to proposed agency project “is the heart of the environmental impact statement”); Sierra Club, 867 F.3d at 1371-72 (discussing agency’s duty in preparing EIS to consider indirect environmental effects of pipeline operations).

In sum, the first Allied-Signal factor weighs entirely in favor of vacatur. The Court has had ample opportunity to consider the serious deficiencies in the Corps’ decision not to prepare an EIS, see Standing Rock VI, 2020 WL 1441923, at \*8-16, and it finds no “possibility that the [agency] may find an adequate explanation for its actions.” Williston Basin Interstate Pipeline, 519 F.3d at 504; see Allied-Signal, 988 F.2d at 151.

#### B. Disruptive Consequences

The second Allied-Signal factor is less straightforward here than the first. At issue are “the disruptive consequences of vacating,” 988 F.2d at 151, particularly those that threaten to “set back’ the Act’s objective[s].” Am. Bankers Ass’n v. Nat’l Credit Union Admin., 934 F.3d 649, 674 (D.C. Cir. 2019); accord Env’tl. Def. Fund, Inc. v. EPA, 898 F.2d 183, 190 (D.C. Cir.

1990) (remanding without vacatur when no party requested to vacate and doing so would defeat “the enhanced protection of the environmental values covered by the [Clean Air Act]”). Courts may choose “not [to] vacate regulations when doing so would risk significant harm to the public health or the environment.” Wisconsin v. EPA, 938 F.3d 303, 336 (D.C. Cir. 2019) (citing Allied-Signal, 988 F.2d at 150-51).

1. *Economic Disruption*

Dakota Access’s central and strongest argument as to the second Allied-Signal prong is that shutting down the pipeline would cause it, and the industries that rely on it, significant economic harm, including substantial job losses. See, e.g., DA Remedy Br. at 32 (stating that shutdown would “pose an existential threat to DAPL” due to “massive” revenue loss). It submits declarations stating that DAPL could lose as much as \$643 million in the second half of 2020 and \$1.4 billion in 2021 if shut down pursuant to the Court’s order. See ECF No. 509-9 (Declaration of Glenn Emery), ¶ 10. “All of these financial losses would be absorbed by the owners of Dakota Access,” particularly Energy Transfer Partners, the current parent company of DAPL after a merger with Sunoco. See DA Remedy Br. at 33; Standing Rock VI, 2020 WL 1441923, at \*10.

In addition, both Dakota Access and many *amici* argue, shutting the pipeline down would have serious repercussions for the entire North Dakota oil industry. “There is no viable pipeline alternative for transporting the 570,000 barrels of Bakken crude that DAPL is capable of carrying each day,” Dakota Access states, and railroads do not have the capacity “to fill

the breach.” DA Remedy Br. at 35-36; see ECF No. 504 (Amicus Brief of State of North Dakota) at 11 (“An increase in crude by rail volumes sufficient to offset current pipeline deliveries by DAPL would take an unknown amount of time to assemble the required tank cars, engines, and crews, and to ensure market destinations would be prepared for a surge in rail volume.”). Several states also argue that their grain farmers would be harmed by having to pay a premium for railroad cars once oil, which is more valuable by volume, enters that market and drives up prices. See ECF No. 514 (Amicus Brief of IN, MT, AL, AR, IA, KS, KY, LA, NE, OH, SD, TX, UT, and WV) at 9-10. “[Many North Dakota oil producers,” meanwhile, with no way to get their oil to market, “would have no choice but to respond by ‘shutting in’ some of their wells and ceasing production entirely,” with consequent effects on the workers at those wells. See DA Remedy Brief at 35 (citing ECF No. 509-11 (Declaration of Jeff D. Makhholm), ¶ 17; then citing Emery Decl., ¶¶ 14, 18). Specifically, Dakota Access estimates, “producers would have to shut-in between 3,460 and 5,400 wells, stranding up to 34.5% of North Dakota crude production.” Id. at 36; see also, e.g., North Dakota Br. at 8 (estimating that “[e]ach of those wells represents 1.6 full time jobs”) (citing ECF No. 504-2 (Declaration of Lynn Helms), ¶ 10). This would also have a reverberating effect on the state of North Dakota, whose economy derives a large part of its revenue from oil and gas taxes, largely from the Williston Basin, which includes the Bakken fields that supply DAPL. See North Dakota Br. at 2-3; DA Remedy Br. at 4; see also North Dakota Br. at 2 (explaining that

“despite the small overall size of North Dakota’s economy, [it] is a large producer of oil and natural gas”).

The Tribes and other *amici* respond that these projected consequences are “wildly exaggerated” because, following “a precipitous collapse in oil prices, demand, and production” caused in part by the COVID-19 pandemic, “production in North Dakota has [already] plummeted.” ECF No. 527 (Tribes Remedy Brief) at 21-22; see also ECF No. 531 (Amicus Brief of Members of Congress) at 9 (“Since [the Court’s last remedy Opinion in this case in] 2017, the price and demand for oil has plummeted due to factors well beyond the operation of this pipeline.”); ECF No. 519 (Amicus Brief of North Dakota Petroleum Council) at 8 (“In recent weeks, of course, the coronavirus pandemic has turned the nation’s economy and the oil industry upside down.”). They point out that North Dakota estimates that “as many as 5,000 wells may now be shut-in” because of “the current economic situation,” North Dakota Br. at 3 n.4, noting that this is more than the number of wells Dakota Access claimed would be affected by a DAPL shutdown. See Tribes Remedy Br. at 22-23; see also id. at 23 (citing news articles reporting that North Dakota well shut-ins have now increased to 7,000). Other briefs allude to the pandemic, admitting some effect on the oil market but maintaining more optimism than realism. See, e.g., N.D. Petroleum Council Br. at 8 (“In recent weeks, of course, the coronavirus pandemic has turned the nation’s economy and the oil industry upside down. Nevertheless, NDPC continues to hope and expect that our country’s economy and the industry will recover in coming months.”); North Dakota Br.



at 12 (“[T]he potential impacts of the COVID-19 pandemic are impossible to quantify due to rapidly changing oil prices, employment numbers, and capital investment plans . . .”). The Tribes further claim that this drop in production may mean that there will be “little or no increase in rail transportation.” Tribes Remedy Br. at 25 (citing ECF No. 527-2 (Declaration of Marie Fagan), ¶ 5). And to the extent that a DAPL shutdown causes crude-oil demand to drop even further or its transportation to switch to railroads, the Tribes argue that with “some participants in the North Dakota oil market [facing] increased costs,” “other participants,” such as railroads and other oil-producing states, would “benefit from the shift.” Tribes Remedy Br. at 26 (citing ECF No. 272-2 (Third Declaration of Richard Krupewicz), ¶ 30; then citing Fagan Decl., ¶ 7). Defendant-Intervenors, for their part, dismiss the Tribes’ take on the pandemic, calling their analysis of the continuing effects of a pandemic-depressed oil market “bearish” and “erroneous[.]” DAPL Remedy Rep. at 17-18.

The Court need not pick apart the various positions in these disputes, for it is clear that at least some immediate harm to the North Dakota oil industry should be expected from a DAPL shutdown, even if its effects are tempered by a decreased demand for oil. See DA Remedy Rep. at 18 (averring that “demand for [the pipeline]’s services has remained strong”). Indeed, the Court does not take lightly the serious effects that a DAPL shutdown could have for many states, companies, and workers. Losing jobs and revenue, particularly in a highly uncertain economic environment, is no small burden. Ultimately, however, these effects do not tip the scales decisively in favor of

remanding without vacatur. This is so for several reasons.

First, “the Corps anticipates the [EIS] process” for DAPL “will take approximately thirteen months,” Corps Remedy Br. at 5, whereas in general “the mean time from initiation to completion of an EIS is 3.6 years” across all federal agencies, and the Corps’ own average time is even longer. *See* Tribes Remedy Br. at 16 n.4 (citing Council on Env’tl. Quality, Environmental Impact Statement Timelines (2010-2017), at 1, 8, <https://www.whitehouse.gov/wp-content/uploads/2017/11/CEQ-EIS-Timelines-Report.pdf>). This expedited process, if it proceeds on track, would cabin the economic disruption of a shutdown. *See* Standing Rock IV, 282 F. Supp. 3d at 108 (“[T]he Corps’ assertions regarding the timing of the remand process are also relevant to analyzing the disruption in this case.”). Without vacatur, conversely, the Corps and Dakota Access would have little incentive to finish the EIS in a timely matter.

Second, while economic disruption is a proper consideration for the second Allied-Signal prong, it may not necessarily be “determinative.” Standing Rock IV, 282 F. Supp. 3d at 104; *see also* Am. Water Works Ass’n v. EPA, 40 F.3d 1266, 1273 (D.C. Cir. 1994) (considering “disrupti[on] to the [affected] industries” in vacatur analysis). Courts more often cite “harm to the public health or the environment,” Wisconsin, 938 F.3d at 336 (citing Allied-Signal, 988 F.2d at 150-51), and those that “set back’ the Act’s objective[s].” Am. Bankers Ass’n, 934 F.3d at 674. The Court will discuss environmental disruption shortly. *See infra* Section III.B.2.,

Third, accepting Dakota Access's arguments wholesale would subvert the structure of NEPA, the "objective[s]" of which are an important touchstone when considering disruption. Am. Bankers Ass'n, 934 F.3d at 674. NEPA's "requirement that a detailed environmental impact statement be made for a 'proposed' action makes clear that agencies must take the required hard look before taking that action." Oglala Sioux Tribe, 896 F.3d at 532; see also Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989) ("The statutory requirement that a federal agency contemplating a major action prepare such an environmental impact statement serves NEPA's 'action-forcing' purpose . . .") (citing Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 97 (1983); then citing Weinberger v. Catholic Action of Haw., 454 U.S. 139, 143 (1981)). When it comes to NEPA, it is better to ask for permission than forgiveness: if you can build first and consider environmental consequences later, NEPA's action-forcing purpose loses its bite.

Dakota Access attempts the same workaround of this principle as was offered last time, and the Court again finds it unavailing. In 2017, Defendants "argue[d] that vacatur here would 'have greater disruptive consequences than in the typical NEPA case' because the pipeline has already been completed." Standing Rock IV, 282 F. Supp. 3d at 107 (citing ECF No. 258 at 12); see DA Remedy Br. at 33-34 ("[H]owever one might have quantified what the 'economic disruption' risk was back then, the potential economic risk now is quantifiable and catastrophic. And after almost three years of operations and several court rulings, it has been reasonable for Dakota Access, the state of North Dakota, and all the other interested

third parties to assume that the ‘risk’ of a shutdown would decrease significantly over time.”) The Court’s response to these arguments is the same now as then:

[D]enying vacatur on the basis of alleged economic harm risks creating undesirable incentives for future agency actions. If projections of financial distress are sufficient to prevent vacatur, the Court fears that agencies and third parties may choose to devote as many resources as early as possible to a challenged project—and then claim disruption in light of such investments. Such a strategy is contrary to the purpose of NEPA, which seeks to ensure that the government “looks before it leaps.”

Standing Rock IV, 282 F. Supp. 3d at 106 (quoting ECF No. 269-1).

Fourth and finally, such “economic myopia,” id. at 105, causes Dakota Access to “address the ‘potentially disruptive effects of vacatur as if they occur in a vacuum,’ thus giving short shrift to the ‘potentially disruptive effects that could flow from remand without vacatur.” Id. at 105 (quoting Friends of Capital Crescent Trail v. Fed. Transit Admin., 218 F. Supp. 3d 53, 60 (D.D.C. 2016)). As before, “there is no doubt that allowing oil to flow through the pipeline during remand risks the potentially disruptive effect about which the Tribes are most concerned—a spill under Lake Oahe.” Id. Indeed, even while “[t]he likelihood of any such rupture may be low,” id., the impact of such a spill has been one of the Court’s central concerns throughout the case. See Standing Rock III, 255 F. Supp. 3d at 139 (“As to the effects from a spill (as

distinct from the risk of a spill occurring), the EA's discussion is minimal . . . Standing Rock IV, 282 F. Supp. 3d at 105 (“[T]he possible effects of an oil spill on the Tribes’ treaty rights and communities were at the center of this Court’s prior Opinion.”). Indeed, while the most recent Opinion in this case did not have cause to reach the topic of the impact of a spill on tribal hunting and fishing rights, it did spend much time discussing the possibility that, in the unlikely event of a spill, systems may not be in place to prevent that spill from becoming disastrous. See, e.g., Standing Rock VI, 2020 WL 1441923, at \*10 (discussing unaddressed possibility that DAPL’s leak-detection system was incapable of detecting leaks of less than 1% of its flow rate, meaning that “6,000 barrels per day” could leak without triggering an alarm); id. at \*11 (noting that 30% of spills on pipelines operated by DAPL’s operator occurred outside of operator property); id. at \*11-12 (recounting expert concerns that wintertime spill would be difficult to contain and had not been sufficiently prepared for in EA). Even assuming the risk of a spill remains small, “pausing the operation of the pipeline would mitigate even this small risk.” Standing Rock IV, 282 F. Supp. 3d at 105.

One final word here so that the Court may make good on its earlier promise to address the two cases offered by Defendant-Intervenor as examples of courts’ declining to vacate when faced with an EIS failure. Recall that both cases based their decision not on the first Allied-Signal factor, which they found supported vacatur, but on the second. See Oglala Sioux Tribe, 896 F.3d at 538; Semonite, 422 F. Supp. 3d at 99-100, 103. In Oglala Sioux Tribe, the D.C. Circuit held that this second factor disfavored vacatur simply

because a “South Dakota permitting requirement independently bar[red] it from moving forward with construction on the site until the [agency] complete[d] its compliance with NEPA.” 896 F.3d at 538. In Semonite, however, there was significant disruption anticipated from vacatur: the district court was concerned by “the risk that hundreds of thousands of people will be left with an unreliable power source if the permit is vacated.” 422 F. Supp. 3d at 103. It would be “unjust,” that court reasoned, “to force all of those people to bear the brunt of the harm when they are not responsible for its cause.” Id. at 102. Such is not the case here: the disruption Dakota Access focuses on is to its own interests and those of the industry, both of whom relied on the continued operation of the pipeline in the face of ongoing litigation as well as changes in the administration’s stance on the environmental propriety of the pipeline. The parties do not raise any possibility that hundreds of thousands of ordinary citizens will be deprived of a reliable source of oil if DAPL is shut down, and, in fact, as already discussed, oil wells are currently being closed given a low demand having nothing to do with the pipeline.

The other reason that the district court in Semonite considered the disruption too weighty to ignore was that the removal of the agency project in question—which “would [have] involve[d] dismantling seventeen steel lattice towers and removing 37.8 miles of conductor, 8.4 miles of fiber optic shield wire, 32 solar panels and solar lighting systems, and all associated hardware” would have posed a “risk of massive waste” should the Corps ultimately “reissue the permit after conducting an EIS.” 422 F. Supp. 3d at 103. The Corps admittedly does raise a similar removal issue

here, pointing out that the dismantling of the pipeline under Lake Oahe would lead to “waste of time, energy, and resources, as well as environmental impacts such as ground disturbance and increased emissions from heavy construction machinery.” Corps Remedy Br. at 17. But the Court is not ordering that such step be taken, and any decision to remove is entirely within the Corps’ control. As the agency explains, once the Court vacates the easement, the pipeline is considered an “encroachment” on federal lands and can be dealt with in one of four ways at the Corps’ discretion. See *id.* at 6. Removal is indeed one of those options, but so is “outgrant or consent (for easements).” *Id.* (quoting one of the Corps’ engineering regulations). Removal is therefore not the remedy being considered by the Court today, and it may not be the remedy chosen by the Corps in the future. Accord Standing Rock IV, 282 F. Supp. 3d at 107 (“Plaintiffs are not asking for the pipeline itself, or for any existing infrastructure, to be dismantled.”).

## 2. *Environmental Disruption*

Dakota Access here attempts to resurrect an unsuccessful argument from the last round of remedy briefing. It argues that if DAPL is inoperative, the crude oil must be transported by rail, and rail transport has worse environmental consequences than any potential pipeline spill. In 2017, however, the Court “reject[ed] th[e] argument” that “alternative modes of transport required by vacatur, if any, will necessarily increase the risk of an oil spill.” *Id.* at 107.

Not much has changed this time around. DAPL once again frames the shift to rail transportation in

speculative terms. Compare id. (“Defendants[] assert[] that vacatur ‘could result in at least some portion’ of the oil being moved via train . . .”), with Corps Remedy Br. at 21 (“The Corps cannot state definitively that a particular percentage of the oil currently being transported by pipeline would be switched to rail in the event the Pipeline’s easement is withdrawn.”). Even assuming that some more oil will be transported by rail than would have been without a shutdown, the only new evidence the Corps and DAPL point to is a recent study by the Pipeline and Hazardous Materials Safety Administration comparing modes of oil transport, which ultimately concluded that “[e]ach mode has its own unique safety risks, and more factors or different methodologies need to be considered to comprehensively answer the question of which mode is the safest.” ECF No. 507-2 (PHMSA Report) at 9; see id. (“Significant knowledge gaps exist for the exposure, vulnerability, and consequences of crude oil transportation.”). The report did find that, subject to these warnings, pipelines appear to have lower spill occurrences and amounts than rail transport. Id. While this is certainly an improvement on the dearth of information provided in the last round of remedy briefing, the report’s self-stated limitations do not get Defendants and Defendant-Intervenor much farther than before.

The Court cannot forget, moreover, its responsibility to consider the potential environmental disruption of not vacating the easement, which it has discussed at length in prior Opinions and recapped above. See supra Section III.B.1. On balance, the inconclusive evidence of environmental harm from an unknown number of barrels being transferred to rail



transportation does not move the needle toward remand without vacatur.

\* \* \*

Putting this all together, the Court finds that vacatur is the only appropriate remedy here. The first Allied-Signal prong weighs strongly in its favor, even if the second is a much closer call. The Court does not reach its decision with blithe disregard for the lives it will affect. It readily acknowledges that, even with the currently low demand for oil, shutting down the pipeline will cause significant disruption to DAPL, the North Dakota oil industry, and potentially other states. Yet, given the seriousness of the Corps' NEPA error, the impossibility of a simple fix, the fact that Dakota Access did assume much of its economic risk knowingly, and the potential harm each day the pipeline operates, the Court is forced to conclude that the flow of oil must cease. Not wishing to micromanage the shutdown, it will not prescribe the method by which DAPL must achieve this. The Court will nonetheless require the oil to stop flowing and the pipeline to be emptied within 30 days from the date of this Opinion and accompanying Order. This time period was proposed by the Tribes and should provide sufficient time for the pipeline to be shut down in a safe and efficient manner, which is undoubtedly in everyone's interest.

#### **IV. Conclusion**

For the foregoing reasons, the Court will vacate the Corps' decision to grant Dakota Access an easement under the Mineral Leasing Act and order that the Dakota Access Pipeline be shut down within 30

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days. A separate Order consistent with this Opinion shall issue this day.

/s/ James E. Boasberg  
JAMES E. BOASBERG  
United States District Judge

Date: July 6, 2020

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**APPENDIX I**

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**United States Court of Appeals  
for the District of Columbia Circuit**

**No. 20-5197**

**September Term, 2019**

**1:16-cv-01534-JEB**

**Filed on: August 5, 2020**

STANDING ROCK SIOUX TRIBE, ET AL.

*Appellees*

v.

UNITED STATES ARMY CORPS OF ENGINEERS,

*Appellee*

DAKOTA ACCESS LLC,

*Appellant*

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Consolidated with 20-5201

**BEFORE:** Henderson, Tatel, and Griffith, Circuit  
Judges

**ORDER**

Upon consideration of the emergency motions for stay pending appeal, the opposition thereto, and the replies; the motions for leave to participate as amicus, the oppositions thereto, and the filings by amici and movant-amici in support of a stay; and the administrative stay entered on July 14, 2020, it is

**ORDERED** that the administrative stay entered on July 14, 2020 be dissolved. It is

**FURTHER ORDERED** that, to the extent the district court issued an injunction by ordering Dakota Access LLC to shut down the Dakota Access Pipeline and empty it of oil by August 5, 2020, the injunction be stayed. The district court did not make the findings necessary for injunctive relief. *See Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 158 (2010) (explaining that, before issuing an injunction in a National Environmental Policy Act case, “a court must determine that an injunction should issue under the traditional four-factor test”). It is

**FURTHER ORDERED** that appellants’ motion for stay of the district court’s order vacating the Mineral Leasing Act easement authorizing the Dakota Access Pipeline to cross the Missouri River at Lake Oahe be denied. At this juncture, appellants have failed to make a strong showing of likely success on their claims that the district court erred in directing the Corps to prepare an environmental impact statement, *see Nat’l Parks Conservation Ass’n v. Semonite*, 916 F.3d 1075, 1087 (D.C. Cir.), *amended on rehearing*, 925 F.3d 500 (D.C. Cir. 2019), or that the district court abused its discretion in refusing to remand without vacatur pending the statement’s completion, *see Allied-Signal, Inc. v. U.S. Nuclear Regulatory Comm’n*, 988 F.2d 146 (D.C. Cir. 1993). It is

\* \* \*

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**Per Curiam**

**FOR THE COURT:**  
Mark J. Langer, Clerk

BY: /s/

Scott H. Atchue  
Deputy Clerk

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**APPENDIX J**

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**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA**

**STANDING ROCK SIOUX  
TRIBE, *et al.*,**  
**Plaintiffs,**  
**and**  
**CHEYENNE RIVER SIOUX  
TRIBE, *et al.*,**  
**Plaintiff-Intervenors,**  
**v.**  
**U.S. ARMY CORPS OF  
ENGINEERS,**  
**Defendant,**  
**and**  
**DAKOTA ACCESS, LLC,**  
**Defendant-Intervenor.**

**Civil Action No.  
16-1534 (JEB)**

**MEMORANDUM OPINION**

Just like the Dakota Access Pipeline, which meanders over hill and dale before carrying its crude oil underneath Lake Oahe—a large reservoir on the Missouri River between North and South Dakota—the current litigation has wound its way through myriad twists and turns. Last year, in a hard-earned victory for the American Indian Tribe Plaintiffs whose reservations lie nearby, this Court found that Defendant

U.S. Army Corps of Engineers had violated federal law by failing to produce an Environmental Impact Statement before granting Defendant-Intervenor Dakota Access, LLP an easement to run the pipeline under Lake Oahe. The Court subsequently vacated that easement and ordered the pipeline emptied of oil until the Corps could complete the federally mandated EIS.

Wasting no time, both Dakota Access and the Government promptly appealed to the D.C. Circuit. In a partial win for the Tribes, the Court of Appeals affirmed the two central elements of this Court's rulings—specifically, that the Corps should have prepared an EIS and that the easement was properly vacated in the interim. The Circuit thus confirmed that the pipeline was, in legal speak, an unlawful encroachment on federal land.

It was there, however, that the Tribes ran out of luck. Prior to the cessation of any oil flow, the Circuit stayed and eventually reversed the aspect of this Court's order shutting down the pipeline, reasoning that it had not made the necessary findings for what was essentially injunctive relief. In other words, although vacatur of the easement rendered the pipeline an encroachment on federal property, vacatur could not itself bring about the stoppage of oil. For that to occur, the Court of Appeals clarified, this Court needed to conduct an additional, distinct inquiry, a component of which requires the Tribes to demonstrate that—among other things—they will likely suffer irreparable harm in the absence of an order closing the pipeline.

As a result, for all of the headlines and controversy that this litigation has spawned, its tangible

consequences for the pipeline itself have been few. Even though this Court vacated the easement for DAPL to cross beneath Lake Oahe, and even though the D.C. Circuit affirmed such vacatur, the pipeline has maintained operations as if none of these developments had occurred. Those seeking an explanation for the persistence of this surprising state of affairs over the past ten-odd months need look no further than the Defendant in this case: the Corps.

Ever since this Court's vacatur order in July 2020, and across two presidential administrations, the Corps has conspicuously declined to adopt a conclusive position regarding the pipeline's continued operation, despite repeated prodding from this Court and the Court of Appeals to do so. On the one hand, the agency has refrained from exercising its enforcement powers to halt Dakota Access's use of the pipeline, notwithstanding its status as an unlawful encroachment. At the same time, however, neither has the Corps affirmatively authorized the pipeline's occupation of the area underneath Lake Oahe per the process contemplated in its internal procedures. Its chosen course has instead been—and continues to be—one of inaction. Such indecision, it is important to note, does not stem from a lack of time. Nor from a lack of attention. Whatever the reason, the practical consequences of the Corps' stasis on this question of heightened political controversy are manifest: the continued flow of oil through a pipeline that lacks the necessary federal authorization to cross a key waterway of agricultural, industrial, and religious importance to several Indian Tribes.



Those Tribes thus find themselves forced to return to this Court to seek what they have so far been unable to obtain from the Government: an order halting pipeline operations until the Corps completes its new EIS. Before the Court may grant them such relief, however, binding caselaw requires that the Tribes make an evidentiary showing far beyond anything the Corps needs to itself shut down DAPL. As previously mentioned, they must demonstrate a likelihood of irreparable injury from the action they seek to enjoin—to wit, the pipeline’s operation. For the reasons articulated in this Opinion, Plaintiffs have not cleared that daunting hurdle.

The Court acknowledges the Tribes’ plight, as well as their understandable frustration with a political process in which they all too often seem to come up just short. If they are to win their desired relief, however, it must come from that process, as judges may travel only as far as the law takes them and no further. Here, the law is clear, and it instructs that the Court deny Plaintiffs’ request for an injunction.

### **I. Background**

The Court has recounted the factual and procedural history underlying this litigation on numerous occasions since it commenced in the summer of 2016. Eleven Opinions later, the Court need relate only information necessary to set the stage for the present Motion; it refers readers hungry for more to its prior writings. See, e.g., Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs (Standing Rock III), 255 F. Supp. 3d 101, 114-16 (D.D.C. 2017); Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs (Standing Rock VII), 471 F. Supp. 3d 71, 77-78 (D.D.C. 2020).

### A. Pre-Vacatur

This case began as an effort by several Tribes to halt the construction—and eventually the operation—of DAPL. The pipeline carries crude oil from North Dakota to Illinois along a 1,200-mile path, a small segment of which runs deep beneath Lake Oahe. Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs (Standing Rock VI), 440 F. Supp. 3d 1, 9 (D.D.C. 2020). An artificial reservoir created in 1958 following a congressional taking of land from the Standing Rock Sioux Tribe and the Cheyenne River Sioux Tribe, the “lake” supplies the Tribes with drinking water and supports myriad other critical functions. Id. at 9-10.

Given that no permit is generally required for oil pipelines traversing private land, the legal dispute here has largely fixated on that relatively small segment buried under Lake Oahe. After an initial pair of failed bids to enjoin the pipeline’s construction and operation under two federal statutes irrelevant to the present Motion, the Tribes finally pinned their hopes on the National Environmental Policy Act. Id. at 10-11. Under NEPA, agencies must “consider every significant aspect of the environmental impact of a proposed action,” Balt. Gas & Elec. Co. v. NRDC, 462 U.S. 87, 97 (1983) (quoting Vt. Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 553 (1978)), so as to “inform the public that it has indeed considered environmental concerns in its decisionmaking process.” Id. (citing Weinberger v. Catholic Action of Haw., 454 U.S. 139, 143 (1981)). Agencies must draft an Environmental Assessment, see 40 C.F.R. § 1501.4(b), that “[b]riefly provide[s] sufficient evidence and analysis for determining whether to prepare an environmental impact statement [EIS] or a finding of no significant

impact [FONSI].” Id. § 1508.9(a). “If any ‘significant environmental impacts might result from the proposed agency action[,] then an EIS must be prepared before agency action is taken.” Grand Canyon Trust v. FAA, 290 F.3d 339, 340 (D.C. Cir. 2002) (quoting Sierra Club v. Peterson, 717 F.2d 1409, 1415 (D.C. Cir. 1983)); see also 42 U.S.C. § 4332(2)(C). In order to determine whether an action may have “significant” environmental impacts, an agency must consider—among other criteria—“[t]he degree to which the effects on the quality of the human environment are likely to be highly controversial.” 40 C.F.R. § 1508.27(b)(4).

In its EA, the Corps concluded that no EIS was necessary before issuing Dakota Access a couple of necessary authorizations—a permit for DAPL’s placement at Lake Oahe under the Rivers and Harbors Act, 33 U.S.C. § 408, and an easement to cross beneath the lake under the Mineral Leasing Act, 30 U.S.C. § 185—on July 25, 2016, and February 8, 2017, respectively. Standing Rock VI, 440 F. Supp. 3d at 10; Standing Rock III, 255 F. Supp. 3d at 114, 116; ECF No. 183-9 (Section 408 Decision Package) at ECF pp. 3-4, 6-7; ECF No. 172-11 (Easement). The Tribes argued that the Corps’ failure to require an EIS before granting those approvals violated NEPA. Standing Rock VI, 440 F. Supp. 3d at 11. Following a 2017 decision in which this Court remanded the matter to the agency for additional evaluation, see Standing Rock III, 255 F. Supp. 3d at 112, the Court in March 2020 finally agreed that the Corps should have prepared an EIS before conferring the easement. Standing Rock VI, 440 F. Supp. 3d at 8, 17 (finding “unresolved scientific controversy” that confirmed “necessity of an EIS”). It

thus granted summary judgment to Plaintiffs and remanded for the agency to complete one. *Id.* at 26.

Such NEPA violation established, the question then became what to do about the easement during the time necessary to prepare an EIS. This Court provided the answer on July 6, 2020, when it vacated such easement and ordered that the pipeline be emptied of oil during the remand process. *Standing Rock VII*, 471 F. Supp. 3d at 88; *see also id.* at 79 (noting that vacatur is “the ‘standard remedy’ in this Circuit for an ‘action promulgated in violation of NEPA’” (quoting *Humane Soc’y of U.S. v. Johanns*, 520 F. Supp. 2d 8, 37 (D.D.C. 2007))). Although it acknowledged that “at least some immediate harm to the North Dakota oil industry should be expected from a DAPL shutdown,” the Court determined that the “seriousness of the Corps’ NEPA error, the impossibility of a simple fix, the fact that Dakota Access did assume much of its economic risk knowingly, and the potential harm each day the pipeline operates” collectively outweighed such negative economic effects. *Id.* at 84, 88. The legal effect of vacating the easement was to render the pipeline an “encroachment” on federal land. *Id.* at 87; *see also* ECF No. 562-4 (8/17/20 Ltr. from Corps to Dakota Access) at ECF p. 2 (explaining that, following Court’s remedy order, “the portion of the pipeline subject to the vacated easement is no longer considered by the Corps as an active easement, and its status has been changed to an encroachment on the Corps-managed federal land at Lake Oahe”). As for vacatur’s practical effect, the Court “require[d] the oil to stop flowing and the pipeline to be emptied within 30 days.” *Standing Rock VII*, 471 F. Supp. 3d at 88.

### B. Post-Vacatur

Displeased with that outcome, Dakota Access and the Corps promptly noticed their appeals. See ECF Nos. 548, 557. Their recourse to the court upstairs soon bore fruit—at least in part. On August 5, 2020, a D.C. Circuit motions panel denied Defendants’ bid to stay this Court’s decisions that the Corps erred in not preparing an EIS and that the MLA easement should be vacated pending the statement’s completion. Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs (Standing Rock VIII), 2020 WL 4548123, at \*1 (D.C. Cir. Aug. 5, 2020). The panel, however, placed on hold the aspect of this Court’s order shutting down the pipeline and emptying it of oil, reasoning that the Court “did not make the findings necessary for” such injunctive relief in NEPA cases. Id. (citing Monsanto Co. v. Geertson Seed Farms, 561 U.S. 139, 158 (2010)). The Circuit also noted, “We expect [Government] appellants to clarify their positions before the district court as to whether the Corps intends to allow the continued operation of the pipeline notwithstanding vacatur of the easement and for the district court to consider additional relief if necessary.” Id.

Such “clari[t]y,” id., did not obtain. As merits briefing continued in the Court of Appeals, the parties returned to this Court where the Corps, in light of the Circuit’s having stayed the stoppage of oil flow, took its first stab at “detailing the options it is considering on vacatur.” 8/10/20 Min. Order. Acknowledging that the pipeline now constituted an encroachment, the agency explained that its “general policy is to require removal of encroachments and restoration of the premises.” ECF No. 562 (8/31/20 Status Rep.) at 3 (internal quotation marks and citation omitted). That

outcome was not inevitable, though, as another option available to the Corps—called an “outgrant”—would authorize Dakota Access to use the government-controlled property as it did prior to vacatur, thus effectively issuing it another easement. Id. at 4-5. As the agency admitted, however, that process was subject to the strictures of NEPA, the very statute under which this Court had ordered the preparation of an EIS before any such easement could be granted. Id. at 5-6; Standing Rock VI, 440 F. Supp. 3d at 8.

The Corps additionally maintained—without citing any authority—that it was under no obligation “to take any particular action to cure an encroachment within a specified time period” or even “to ultimately cure the encroachment at all.” 8/31/20 Status Rep. at 4. It estimated that it would make an “initial decision” as to a potential enforcement action against the pipeline by early October 2020, though it emphasized that it retained the “enforcement discretion to adapt its enforcement recommendations based on new information” at any time. Id. at 9. In the meantime, the agency would engage in multi-level “coordination . . . to ascertain whether the Pipeline’s unauthorized use presents risk to the Corps’ project and to find the best way . . . to resolve the situation of unauthorized use of the property interest.” Id. at 6; see also ECF No. 564 (9/8/20 Joint Status Rep.) at 2 (Corps reiterating that it “is proceeding with its encroachment review process”). It also expressed its desire to discuss “potential additional safety measures” with both Dakota Access and the Tribes. See 8/31/20 Status Rep. at 7-9.

Having thus received minimal concrete assistance from the Corps, the Court acceded to the Tribes’ re-

quest for a briefing schedule on the propriety of an injunction to halt the flow of oil (as contemplated by the D.C. Circuit's August stay order). See ECF No. 567 (9/11/20 Order) at 1-2; 9/17/20 Min. Order (setting briefing schedule). The Court noted its expectation that such briefing would focus on the issue of irreparable harm, one of the four requirements for permanent injunctive relief. See 9/11/20 Order at 2. The Tribes soon filed the present Motion, see ECF No. 569 (Pl. Mot.), which the Corps and Dakota Access opposed. See ECF Nos. 573 (Corps Opp.), 577 (DA Opp.). October, meanwhile, came and went without any word from the Corps regarding its promised "initial decision" as to a potential enforcement action. See 8/31/20 Status Rep. at 9.

On January 26, 2021—shortly after the district-court briefing on Plaintiffs' injunctive-relief request became ripe, see ECF No. 586 (Pl. Reply)—the D.C. Circuit issued its merits-panel opinion in the pending appeal of this Court's summary-judgment and vacatur orders. In a detailed and comprehensive ruling, that court followed the roadmap previewed by the motions panel and affirmed this Court's top-line conclusions that: 1) the Corps' decision not to prepare an EIS violated NEPA, and 2) the easement should be vacated pending such statement's completion. Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs (Standing Rock IX), 985 F.3d 1032, 1039 (D.C. Cir. 2021). The Circuit subsequently denied Dakota Access's request for *en banc* review of these holdings on April 23, 2021, and the court's mandate issued shortly thereafter. See Order, No. 20-5197 (D.C. Cir. Apr. 23, 2021); Mandate (D.C. Cir. May 19, 2021).

The Circuit also reversed this Court’s order shutting down the pipeline. Standing Rock IX, 985 F.3d at 1053-54. This time, the Court of Appeals elaborated on why vacatur of the easement was not itself sufficient to bring about a stoppage of oil flow. Unlike a challenge to an agency-issued construction or operating permit, vacatur of which would “naturally impl[y] an end” to such construction or operation, the present litigation involves an easement merely “authorizing the pipeline to cross federal lands.” Id. at 1054. “With or without oil flowing,” accordingly, “the pipeline will remain an encroachment, leaving the precise consequences of vacatur uncertain.” Id. That posture, the Circuit emphasized, rendered this case “quite unusual”; it could not identify a single other instance “in which the sole issue before a court was whether an easement already in use (rather than a construction or operating permit) must be vacated on NEPA grounds.” Id. At any rate, the panel made clear that this Court “could not order the pipeline to be shut down without . . . making the findings necessary for injunctive relief” under the traditional four-factor test. Id. (citing Monsanto, 561 U.S. at 158).

The Circuit closed in the same fashion as its August 2020 stay order: with an overt prod of the Corps. While noting that “how and on what terms the Corps will enforce its property rights is, absent a properly issued injunction, a matter for the Corps to consider in the first instance,” the Court of Appeals emphasized that it “would expect [the agency] to decide promptly. To do otherwise would be to issue a *de facto* outgrant without engaging in the NEPA analysis that the Corps concedes such an action requires.” Id.



With the Circuit’s opinion and attendant guidance in hand, this Court promptly scheduled a status hearing for the purpose of discussing its impact on Plaintiffs’ bid for injunctive relief, as well as “how the Corps expects to proceed given the vacating of the easement.” 1/27/21 Min. Order. Two days before that hearing, the Corps—fresh off a change of administration in January 2021—sought a two-month continuance for the purpose of “brief[ing] new officials regarding this case.” ECF No. 587 at 1. No party opposed the request, which the Court granted. *Id.* at 2; 2/9/21 Min. Order.

When the long-awaited hearing finally arrived on April 9, 2021, however, the Corps—despite the instruction from both the Court of Appeals and this Court, as well as its own continuance request—had surprisingly little to say about the pipeline’s encroachment status. Indeed, far from issuing the contemplated “prompt[]” determination as to how it would “enforce its property rights,” Standing Rock IX, 985 F.3d at 1054, the Corps’ decision appeared to be that it would make no decision at all. According to Government counsel, “[T]he Corps is in a [*sic*] essentially continuous process of evaluating the status of the encroachment and what steps are best to take.” ECF No. 602 (4/9/21 Tr.) at 10:23-25. While the agency would “continue[] monitor[ing]” the pipeline and could “take an enforcement action at any time,” it had “no . . . enforcement action to announce” at present nor any “timeline” for such potential action moving forward. *Id.* at 8:5-6, 8:12-14, 9:3-5, 11:7-8. At one point, the Corps seemed to acknowledge the possibility that it might not even decide how to enforce its property rights prior to completion of the judicially mandated

EIS (currently estimated for March 2022). Id. at 8:19-20; ECF No. 601 (5/3/21 Status Rep.) at 1. In light of that report, both Plaintiffs and the Government agreed that the proper course was for the Court to resolve the fully briefed injunction motion. See 4/9/21 Tr. at 13:10-12, 15:9-14.

Following receipt of short supplemental filings from both Dakota Access and the Tribes, see ECF Nos. 593 (Dakota Access Surreply), 597 (Pl. Surreply Resp.), the Court ordered the Corps to clarify its position on whether an injunction should issue. See 4/26/21 Min. Order. The agency's response was less than decisive. While the Corps appeared to tepidly reiterate its prior opposition to the Tribes' injunctive-relief bid, its submission also contained some hedging:

As to whether an injunction should issue, the EIS process in which the Corps is currently engaged examines many factors including some that may be relevant to the permanent injunction standard. It is possible that in the EIS process the Corps would find new information, but to date the Corps is not aware of information that would cause it to evaluate the injunction factors differently than in its previous filing.

5/3/21 Status Rep. at 2 (citing Corps Opp.). With this long procedural history in tow, the Court is finally prepared to rule on the Tribes' request for an injunction.

## **II. Analysis**

The Court begins with an overview of the permanent-injunction factors, devoting particular attention to the requirement that a plaintiff suffer irreparable

injury. It then applies that requirement to the circumstances of this case. Because the Court concludes that Plaintiffs have not established irreparable harm, it has no need to address the other factors or Defendants' additional arguments for why injunctive relief is improper.

Before diving in, the Court briefly disposes of a threshold argument made by the Tribes—specifically, that it should “clarify that pipeline operations must be suspended pursuant to its vacatur order even without an injunction.” Pl. Mot. at 3 (emphasis added). This misses the mark. The D.C. Circuit held precisely to the contrary in its January 2021 opinion reversing this Court’s shutdown order. See Standing Rock IX, 985 F.3d at 1054 (“[W]e nonetheless conclude that [the district court] could not order the pipeline to be shut down without, as required by Monsanto, making the findings necessary for injunctive relief.”); id. at 1053-54 (explaining why vacatur of easement was itself insufficient to stop oil flow). That ruling postdated Plaintiffs’ briefing on the present Motion. Because it is now clear that the Tribes’ shutdown request “seeks more than mere vacatur,” the Court must find the permanent-injunction criteria fulfilled before issuing such relief. Ctr. for Biological Diversity v. Ross, 480 F. Supp. 3d 236, 250 (D.D.C. 2020).

#### A. Irreparable Harm

A permanent injunction “is a drastic and extraordinary remedy.” Monsanto, 561 U.S. at 165. It “should not be granted as a matter of course,” id., and it “does not follow from success on the merits.” Winter v. Nat. Res. Def. Council, Inc., 555 U.S. 7, 32 (2008).

Rather, it “should issue only if the traditional four-factor test is satisfied.” Monsanto, 561 U.S. at 157. In order to pass that test, a plaintiff must convince the Court:

- (1) that it has suffered an irreparable injury;
- (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury;
- (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and
- (4) that the public interest would not be disserved by a permanent injunction.

Id. at 156-57 (quoting eBay Inc. v. MercExchange, LLC, 547 U.S. 388, 391 (2006)) (applying four factors when plaintiff sought permanent injunction to remedy NEPA violation). While the irreparable-harm requirement is recited in the past tense, it is clear that future harm may qualify. Id. at 162 (determining that respondents did not adequately show “that they will suffer irreparable injury” if agency were “allowed to proceed”).

The Supreme Court “has repeatedly held that the basis for injunctive relief in the federal courts has always been irreparable injury and the inadequacy of legal remedies.” Weinberger v. Romero-Barcelo, 456 U.S. 305, 312 (1982); see also Chaplaincy of Full Gospel Churches v. England, 454 F.3d 290, 297 (D.C. Cir. 2006) (same). “A movant’s failure to show any irreparable harm is therefore grounds for refusing to issue” injunctive relief. Chaplaincy of Full Gospel Churches, 454 F.3d at 297; see also CityFed Fin. Corp. v. Off. of Thrift Supervision, 58 F.3d 738, 747 (D.C. Cir. 1995)

“Because [plaintiff] has made no showing of irreparable injury here, that alone is sufficient for us to conclude that the district court did not abuse its discretion by rejecting [plaintiff’s] request.”); Sierra Club v. U.S. Army Corps of Eng’rs, 990 F. Supp. 2d 9, 38 (D.D.C. 2013) (“Plaintiffs must demonstrate that they will suffer irreparable harm absent an injunction in order to be eligible for injunctive relief.”). “Indeed, if a court concludes that a movant has not demonstrated irreparable harm, it need not even consider the remaining factors.” Dallas Safari Club v. Bernhardt, 453 F. Supp. 3d 391, 398 (D.D.C. 2020) (citing CityFed Fin. Corp., 58 F.3d at 747); see also Colo. Wild Horse v. Jewell, 130 F. Supp. 3d 205, 218 (D.D.C. 2015).

The D.C. Circuit “has set a high standard for irreparable injury.” Chaplaincy of Full Gospel Churches, 454 F.3d at 297. “[T]he injury must be both certain and great; it must be actual and not theoretical.” Id. (quoting Wis. Gas Co. v. FERC, 758 F.2d 669, 674 (D.C. Cir. 1985)). Of critical importance is a demonstration that the “injury complained of is of such imminence that there is a clear and present need for equitable relief to prevent irreparable harm.” Id. (quoting Wis. Gas., 758 F.2d at 674) (cleaned up); see also Wis. Gas., 758 F.2d at 674 (“Injunctive relief will not be granted against something merely feared as liable to occur at some indefinite time . . . .”) (citation and internal quotation marks omitted). Notwithstanding some Circuit language using a “certainty” standard, all agree here that a plaintiff seeking permanent injunctive relief must at least “demonstrate that irreparable injury is likely in the absence of an injunction.” Winter, 555 U.S. at 22; see Pl. Reply at

13; DA Opp. at 9-10; Corps Opp. at 5-6; see also Winter, 555 U.S. at 32-33 (noting that analysis of preliminary-injunction requirements applies to permanent injunctions); Monsanto, 561 U.S. at 162; Ctr. for Biological Diversity, 480 F. Supp. 3d at 251 (acknowledging lack of clarity regarding whether future irreparable harm must be “certain” or merely “likely” to occur). A mere “possibility” of future harm is insufficient. Winter, 555 U.S. at 21-22; see also 11A Charles Alan Wright & Arthur R. Miller, Fed. Prac. and Proc. § 2942 (3d ed.) (“There must be more than a mere possibility or fear that the injury will occur.”).

A plaintiff attempting to establish irreparable harm thus faces a “considerable burden,” Save Jobs USA v. U.S. Dep’t of Homeland Sec., 105 F. Supp. 3d 108,112 (D.D.C. 2015) (citation omitted), and a “very high bar.” Coal. for Common Sense in Gov’t Procurement v. United States, 576 F. Supp. 2d 162,168 (D.D.C. 2008). In order to clear it, the movant must “substantiate [its] claim that irreparable injury is ‘likely’ to occur.” Wis. Gas, 758 F.2d at 674. “Bare allegations” to that effect “are of no value”; a court, rather, requires affirmative “proof of likelihood and imminence. Id. Additionally, “the movant must show that the alleged harm will directly result from the action which [it] seeks to enjoin.” Id.

#### B. Application

The Tribes posit three different kinds of injuries, each of which they claim independently qualifies as imminent irreparable harm and entitles them to permanent injunctive relief. The Court will spend most of its time on the first of these before disposing of the last two with greater dispatch.

1. *Threat Of Damaging Oil Spill*

Plaintiffs' principal claim of irreparable injury derives from the threat of an oil spill underneath Lake Oahe. See Pl. Mot. at 9-14; Pl. Reply at 13-16. That reservoir, as previously mentioned, provides the Tribes with water for drinking, industry, and sacred practices. In order for them to realize any harm from a pipeline leak, however, a series of contingent events must occur: 1) a spill under Lake Oahe; 2) of sufficiently large size; 3) the oil from which rises 92 feet from the pipeline to the bottom of the lake; and 4) which cannot be sufficiently mitigated or contained either before or upon entering the lake. See DA Opp. at 11. Simply itemizing that causal chain suggests the fundamental problem with Plaintiffs' irreparable-harm argument: they have not established, as they must, that any of the chain's individual components—let alone the feared end result—is “likely,” as opposed to merely “possibl[e].” Winter, 555 U.S. at 22. Without such showing, of course, they cannot demonstrate the probability of a damaging DAPL spill at Lake Oahe sufficient to warrant injunctive relief.

Start with the threat of a spill itself. Throughout this long-running litigation, the Court has repeatedly determined that such risk is low. See Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs (Standing Rock IV), 282 F. Supp. 3d 91, 101, 105 (D.D.C. 2017) (referencing “low” likelihood and “minimal risk” of oil spill under Lake Oahe); Standing Rock VI, 440 F. Supp. 3d at 29 (similar); Standing Rock VII, 471 F. Supp. 3d at 85 (similar). Indeed, in 2017, this Court rebuffed Standing Rock's challenge to the Corps' assessment that the risk of a spill under Lake Oahe is “very low,” “unlikely,” or “negligible,” finding that the

agency had taken a “hard look” at the issue and sufficiently “support[ed] its conclusion that such a risk was low.” Standing Rock III, 255 F. Supp. 3d at 125-27, 149; see also ECF No. 172-1 (Final EA) at 48, 87, 92 (“[T]he risk of an inadvertent release in, or reaching, Lake Oahe . . . is extremely low.”). Even Plaintiffs seem to acknowledge that a spill at Lake Oahe is of “lower probability.” Pl. Mot. at 11.

The Court need not rehash all the evidence giving rise to those prior determinations. See, e.g., Standing Rock III, 255 F. Supp. 3d at 125-27; DA Opp. at 14-15. It bears noting, though, that reportable-incident data from the Pipeline and Hazardous Materials Safety Administration (PHMSA) reflect but a single, 1.7-barrel leak between 2010 and 2020 on any crude-oil pipeline installed using horizontal directional drilling technology, the very method in place at DAPL’s Lake Oahe crossing. See ECF No. 593-4 (Supplemental Declaration of John F. Godfrey), ¶ 16. Dakota Access deployed HDD in order to bury the pipeline far beneath the bottom of Lake Oahe, thus mitigating—among other things—the risk of damage from outside forces. See ECF No. 543-2 (Second Declaration of John F. Godfrey), ¶ 40; ECF No. 520-1 (Declaration of Michael C. Aubele), ¶ 8. In addition, Dakota Access reports that no spills have occurred at Lake Oahe or anywhere else along DAPL’s nearly 1,200-mile mainline since the pipeline commenced operations nearly four years ago. See Godfrey Suppl. Decl., ¶ 3e; ECF No. 585-6 (Fifth Declaration of Todd Stamm), ¶ 4. The Tribes do not dispute that record, instead pointing to several spills on a different pipeline operated by Energy Transfer (DAPL’s owner), along with a few minor incidents at Dakota Access facilities (as opposed to the



mainline), the spilled oil from which was all remediated. See Pl. Mot. at 14 (citing ECF No. 527-5 (Third Declaration of Donald Holmstrom), ¶¶ 14,18); Godfrey 2d Decl., ¶ 6; DA Opp. at 14. An early declaration from one of Plaintiffs' own experts, moreover, indicates that a DAPL mainline spill is even less probable today than during its (incident-free) start-up phase, as "pipelines are mostly likely to leak or fail when they are brand new." ECF No. 272-2 (Third Declaration of Richard B. Kuprewicz), ¶¶ 9-10; see also Godfrey 2d Decl., ¶ 20. These historical data, when combined with the numerous safety measures in place at Lake Oahe, see ECF No. 562-5 (8/20/20 Ltr. from Dakota Access Counsel to Plaintiffs' Counsel) at 2 (listing some), suggest that the chance of a spill at the crossing is especially unlikely.

The Tribes face similar challenges when it comes to the remaining links in the aforementioned causal chain. With respect to the size of any pipeline leak under Lake Oahe—should one occur—their present briefing never rebuts Dakota Access's evidence that, in light of historical spill data and DAPL's leak-detection and shutdown systems, the probability of any large spill is relatively low. See DA Opp. at 15-16. Nor do they acknowledge additional safety features recently added at Lake Oahe, including backup power for remotely actuating local shutoff valves in the event of a primary-power failure. See Stamm 5th Decl., ¶ 7. While Plaintiffs gesture at Dakota Access's "plans" to increase the pipeline's throughput, see Pl. Mot. at 18, they have not explained precisely how any such occurrence would measurably augment the likelihood of a large spill, nor offered any information suggesting that a significant increase in oil flow is imminent.

Even if a large leak did occur underneath the lake, moreover, the oil would have to rise more than 90 feet—roughly the length of an NBA basketball court—through a collection of low-permeability deposits, sediments, and clay before reaching the lakebed. See Aubele Decl., ¶ 15. That is no easy journey. Indeed, according to the Corps’ remand analysis, the deep, underground HDD installation “virtually eliminates the ability of a spill to interact with the surface water.” ECF No. 407-1 (Remand Analysis Record) at 58 (alteration omitted); see also Aubele Decl., ¶ 15 (similar); ECF No. 520-3 (Declaration of Todd Stamm), ¶ 41. Plaintiffs, once again, never acknowledge these physical barriers. Finally, the Tribes do not here account for Dakota Access’s PHMSA-approved response plans, which are aimed at promptly mitigating and remediating any large hypothetical spill that might reach the lake. See Stamm Decl., ¶¶ 19-23; Aubele Decl., ¶ 22; cf. Manzanita Band of Kumeyaay Nation v. Wolf, 496 F. Supp. 3d 257, 264-65 (D.D.C. 2020) (finding plaintiff’s irreparable-harm argument “undermined by . . . measures in place” to “mitigate” any such harm, including surveys, re-surveys, consultation, and additional protocol).

Whether framed in terms of likelihood or imminence, Plaintiffs have not made a successful showing of irreparable harm based on the threat of an oil spill at Lake Oahe. Not only do they fail to engage with Dakota Access’s evidence that a large, damaging, irreparable spill is unlikely, they never actually point to evidence suggesting that such an incident is likely. That will not do. The “burden is on the Tribe[s] to indicate why” the flow of oil “must be enjoined to prevent an injury likely to occur to [them].” Standing Rock

Sioux Tribe v. U.S. Army Corps of Eng'rs (Standing Rock I), 205 F. Supp. 3d 4, 36 (D.D.C. 2016); see also Wis. Gas, 758 F.2d at 674 (explaining that movant must “substantiate the claim that irreparable harm is ‘likely’ to occur” with affirmative “proof,” not just “[b]are allegations of what is likely to occur”). Without such substantiation, each successive link in Plaintiffs’ chain of events—along with the ultimate outcome they fear—appears far too “hypothetical” to support an award of injunctive relief. Wis. Gas, 758 F.2d at 675; see also Cuomo v. U.S. Nuclear Regulatory Comm’n, 772 F.2d 972, 976 (D.C. Cir. 1985) (deeming likelihood of irreparable harm “too small” where plaintiffs “only vaguely sketch[ed] the contours of th[e] asserted harm”); Bill Barrett Corp. v. U.S. Dep’t of Interior, 601 F. Supp. 2d 331, 335-36 (D.D.C. 2009) (no irreparable harm where “the weight of the evidence is, at best, inconclusive as to whether” injury “is likely to occur”).

It so happens that another court in this district has encountered a similar argument from plaintiffs in comparable circumstances—to wit, that operation of a particular pipeline “risks a devastating oil spill that would be damaging to nearby communities” and that such “harm is sufficient to warrant an injunction.” Sierra Club, 990 F. Supp. 2d at 41. There, as here, the movants insisted that a potential spill “poses an unacceptable risk” to water supplies. Id. at 41 n.18; see, e.g., Pl. Mot. at 11 (quoting ECF No. 527-8 (Declaration of Patrick S. Flanders), ¶¶ 9, 20 (same exact language)). Judge Ketanji Brown Jackson, however, found such assertions insufficient to establish irreparable harm because the plaintiffs “have not shown that a damaging oil spill is likely to occur.” Sierra

Club, 990 F. Supp. 2d at 41. In other words, because “the harms that an oil spill might potentially someday cause . . . are not certain,” they could not “satisfy the ‘irreparable harm’ standard.” Id.; see also Sierra Club v. U.S. Army Corps of Eng’rs, 482 F. Supp. 3d 543, 559 (W.D. Tex. 2020) (rejecting irreparable-harm argument based on “a series of assumptions” that “tends toward speculation”—namely, “that a similar drilling accident is likely to happen again at a water crossing, that drilling fluid will be released, that drilling fluid will cause harm, and that the harm will be irreparable”); City of Austin v. Kinder Morgan Tex. Pipeline, LLC, 447 F. Supp. 3d 558, 570-71 (W.D. Tex. 2020) (rejecting irreparable-harm argument where “the conditions required for that harm to occur are neither imminent nor reasonably certain” and where plaintiffs’ posited “causal chain becomes increasingly attenuated by surmise and speculation”). The same is true in this case.

Rather than actively disputing the low likelihood of a damaging spill and offering evidence to the contrary, the Tribes’ briefing gestures back to this Court’s summary-judgment ruling, which determined that expert commenters had identified “serious gaps in crucial parts of the Corps’ analysis” regarding the effectiveness of the pipeline’s leak-detection system, its operator’s less-than-sterling safety record, and the agency’s worst-case-discharge calculation. See Pl. Mot. at 10 (quoting Standing Rock VI, 440 F. Supp. 3d at 26). That tack, however, confuses the evidentiary showing required at summary judgment with the distinct and lofty burden they encounter here. While the existence of “unresolved scientific controversy” and

“unanswered” questions in the Corps’ published materials could win the Tribes a remand for preparation of an EIS under NEPA on the ground that such issues made the easement approval “highly controversial,” Standing Rock VI, 440 F. Supp. 3d at 8, 17, it does little to establish a likelihood that the Tribes will suffer imminent, irreparable harm at Lake Oahe from the pipeline’s continued operation. Put differently, Plaintiffs cannot simply fall back on their evidentiary proffer at summary judgment and this Court’s concomitant conclusions, as that stage involved a different legal inquiry than does the present.

So, too, with their invocation of last year’s vacatur proceedings. For instance, the Tribes contend that the Court “has already considered all th[e] evidence” of low spill risk cited by Dakota Access “and nonetheless found that shutting down the pipeline was warranted under a vacatur standard.” Pl. Reply at 15. This Court’s vacatur Opinion, however, did not have cause to explore the likelihood of a damaging pipeline spill in any capacity; it instead turned on “the serious deficiencies in the Corps’ decision not to prepare an EIS” and “the disruptive consequences” that might follow a shutdown order. See Standing Rock VII, 471 F. Supp. 3d at 82 (citing Allied-Signal v. U.S. Nuclear Regulatory Comm’n, 988 F.2d 146, 150-51 (D.C. Cir. 1993)). Notwithstanding that ruling, the Court of Appeals has since made clear that this Court may only order an oil stoppage upon finding that (among other things) the Tribes will likely experience irreparable harm absent such relief. The prior vacatur holding has little relevance to that question.

Nor can Plaintiffs argue that, regardless of the “precise extent” of the risk of a spill, they “have made

the requisite showing that DAPL has cut corners on safety, thereby exacerbating the risks of a dangerous enterprise, which supports injunctive relief.” Pl. Reply at 15. The mere fact that an injunction would cause a “reduction in risk” is insufficient “to establish that irreparable harm is likely in the absence of an injunction.” Ctr. for Biological Diversity, 480 F. Supp. 3d at 251. It is precisely that latter showing that they have not made out. Similarly, they cannot point to the Corps’ NEPA violation as somehow discharging or lowering the “very high bar” they must clear in proving a likelihood of irreparable injury. Coal. for Common Sense, 576 F. Supp. 2d at 168; see Brady Campaign to Prevent Gun Violence v. Salazar, 612 F. Supp. 2d 1, 24 (D.D.C. 2009) (“[A] procedural violation of NEPA is not itself sufficient to establish irreparable injury . . .”). To the extent that the agency’s incomplete environmental evaluation deprived the Tribes of certain information that might aid their case, see Pl. Mot. at 13, “[b]y definition,” such “uncertainty falls short of the type of actual and imminent threat needed to show irreparable injury.” Cal. Ass’n of Pvt. Postsecondary Schs. v. DeVos, 344 F. Supp. 3d 158, 172 (D.D.C. 2018) (citing Wis. Gas, 758 F.2d at 674). The absence of information regarding potential environmental harm is a far cry from affirmative evidence of irreparable injury. Contrary to the Tribes’ formulation, the question is not whether “the Corps . . . can[] assure that [an irreparable spill] will not occur,” Pl. Mot. at 14 (emphasis added), but rather whether they can establish a likelihood of such harm. Indeed, no lesser authority than the Supreme Court has expressly rejected the argument that there is a “thumb on the scales” favoring injunctive relief—or a shifting

of the burden of proof therefor—when an agency runs afoul of NEPA. Monsanto, 561 U.S. at 157.

At times, the Tribes adopt a different approach. Seemingly acknowledging that damage from a large oil spill at Lake Oahe is of “lower probability,” they maintain that an injunction is nonetheless warranted because any such spill would be “devastating” and have “catastrophic consequences.” Pl. Mot. at 9-11. This Court, Plaintiffs volunteer, should take it upon itself to “exercise [its] equitable discretion to balance the probability and the consequences of harm on the facts of the case before it. Id. at 11. Such invitation notwithstanding, the Court must take the law as it finds it. And the law requires that irreparable injury be “likely in the absence of an injunction,” Winter, 555 U.S. at 22, and “of such imminence that there is a clear and present need for equitable relief to prevent” it. Chaplaincy of Full Gospel Churches, 454 F.3d at 297 (quoting Wis. Gas., 758 F.2d at 674) (cleaned up). The D.C. Circuit has provided no exception to these longstanding principles for harms that are of remote possibility but of great potential effect. Indeed, in an earlier stage of the present litigation, the Court spoke to this very issue:

Although the potential injury may be significant, the Tribe must show that it is probable to occur in the absence of the preliminary injunction it now seeks. . . . This is the burden the law imposes for this form of relief. The Court must faithfully and fairly apply that standard in all cases, regardless of how high the stakes or how worthy the cause.

Standing Rock I, 205 F. Supp. 3d at 33-34 (citing Winter, 555 U.S. at 22). So too here. See Sierra Club, 990 F. Supp. 2d at 41 & n.18 (notwithstanding plaintiff's argument that pipeline operation "risks a devastating oil spill that would be damaging to nearby communities" and "threaten [their] survival," no irreparable harm because plaintiffs "have not shown that a damaging oil spill is likely to occur") (citation omitted); Nat. Res. Def. Council v. Kempthorne, 525 F. Supp. 2d 115, 126 (D.D.C. 2007) (deeming irreparable harm not "likely" given its remote chance of occurring, even though alleged potential harm was severe).

None of Plaintiffs' cited cases from this district finding a likelihood of irreparable harm remotely suggests otherwise. See, e.g., Nat'l Ass'n of the Deaf v. Trump, 486 F. Supp. 3d 45, 58 (D.D.C. 2020) ("little debate" that irreparable harm established where plaintiffs were denied access to critical health information in midst of COVID-19 pandemic, thus hampering their ability to protect themselves against virus that had already infected millions); Brady, 612 F. Supp. 2d at 25 (finding likelihood of irreparable harm given "almost universal view" that agency action "will have some environmental impacts," even if "extent" of such harm was "not fully known"); Ctr. for Biological Diversity, 480 F. Supp. 3d at 251-52 (deploying "probabilistic reasoning" to determine that irreparable injury was "likely" in absence of injunction). Nor does their non-binding, out-of-circuit precedent move the ball. See, e.g., Michigan v. U.S. Army Corps of Eng'rs, 667 F.3d 765, 785-86, 789 (7th Cir. 2011) (irreparable harm would "likely . . . come to pass" where invasive carp were already "knocking on the door" to Great



Lakes, where carp had demonstrated ability to “dominate” ecosystems, and where threat “may be increasing with each day that passes”); Greater Yellowstone Coalition v. Flowers, 321 F.3d 1250, 1258 (10th Cir. 2003) (pre-Winter case requiring only “significant risk” of irreparable harm); Van De Sande v. Van De Sande, 431 F.3d 567, 568-70 (7th Cir. 2005) (Hague Convention case unrelated to irreparable harm). At bottom, the Tribes have not put forth a single case involving an improbable and remote future harm—let alone of the degree present here—that somehow satisfied the irreparable-injury requirement on account of its great potential magnitude.

To be sure, the concept of irreparable harm “does not readily lend itself to definition.” Wis. Gas, 758 F.2d at 674. The Court does not gainsay that the extent or severity of a potential future harm may factor into the irreparable-injury calculus. Neither does it hold that a plaintiff cannot establish irreparable harm absent a “specific finding that the threatened harm was more likely than not.” Pl. Reply at 14. Indeed, it readily acknowledges that courts have found the requirement satisfied without undertaking a “statistical analysis to calculate the precise likelihood” of future injury. See Pl. Mot. at 12. The Court does not purport to know the precise probability of a damaging, irremediable oil spill at Lake Oahe. What it does know, however, is that the law requires the Tribes to make a “clear showing” that such harm is at least “likely” in the absence of an injunction. Winter, 555 U.S. at 22; see also Monsanto, 561 U.S. at 162 (requiring “present or imminent risk of likely irreparable harm”). While the concept of “likelihood” may blur around the edges

in certain hypothetical applications, the above discussion renders abundantly plain that—at least at present—Plaintiffs have not come close to discharging this burden. All they have shown, rather, is a mere “possibility” of injury—and a fairly minimal one at that. This cannot get them over the hump. No matter the stakes and no matter the cause, courts may not grant the “extraordinary remedy” of an injunction “based only on a possibility of irreparable harm.” Winter, 555 U.S. at 22.

## 2. *Other Claimed Harms*

Apart from the risk of a damaging oil spill, the Tribes assert two other harms that require somewhat less discussion. They maintain that they are irreparably injured by “the ongoing trauma of the government’s refusal to comply with the law,” as well as the “undermining [of] the Tribes’ sovereign governmental role to protect their members and respond to potential disasters.” Pl. Mot. at 1, 14-18. Neither tack finds the wind.

The problem with both is simple: they depend on the same remote threat of a pipeline spill that the Court has just found insufficient to constitute irreparable injury. Consider the first. According to Plaintiffs, they are irreparably injured from “the impacts of living under the existential threat of a pipeline [oil spill]” in the form of “anxiety, trauma, and stress.” Id. at 15. In the words of the Cheyenne River Sioux Tribe’s historic preservation officer, such emotional harms stem from the “looming threat of seepage, leak, and rupture,” which “inflicts ceaseless anxiety upon us that will not end until the pipeline is removed.” Id. (quoting ECF No. 527-10 (Declaration of Steve

Vance), ¶17); see also id. (arguing that Tribes' "sense of safety is compromised by the operation of the pipeline"); id. at 16 (referencing "stress of living under an existential catastrophe"). The Court does not doubt the sincerity of these feelings. As Judge Jackson explained in Sierra Club, however, the fact that "some of the people who live in areas near the pipeline . . . are sincerely worried about the harm that an oil spill might cause" does not constitute irreparable harm absent a showing that "a damaging oil spill is likely to occur." 990 F. Supp. 2d at 41; see also Wis. Gas, 758 F.2d at 674 ("Injunctive relief will not be granted against something merely feared as liable to occur at some indefinite time.") (citation and internal quotation marks omitted). As no damaging, irremediable spill at Lake Oahe is likely to occur here, the Tribes cannot establish irreparable injury simply by raising their fear of a hypothetical future spill. Were it otherwise, the irreparable-harm bar would not be much of a bar at all.

Plaintiffs' reliance on Fund for Animals v. Norton, 281 F. Supp. 2d 209 (D.D.C. 2003), is misplaced for the same reason. There, the plaintiffs made a showing of irreparable injury based in part on emotional distress from their contemplation of the government's impending killing of hundreds of swans. Id. at 221-22. As multiple courts have subsequently explained, however, when the risk of the feared harm from the agency action in question is "low," plaintiffs cannot claim irreparable injury from any "emotional distress" surrounding the prospect of that speculative harm. See Colo. Wild Horse, 130 F. Supp. 3d at 220 (distinguishing Fund for Animals); see also Friends of Animals v. U.S. Bureau of Land Mgmt., 232 F. Supp. 3d

53, 66 (D.D.C. 2017) (“Plaintiff’s observation or contemplation of the possible—though unlikely—physical harm that [animals] may suffer [from agency action] does not rise to the level of a ‘certain and great’ irreparable injury.”) (quoting Wis. Gas, 758 F.2d at 674); Manzanita Band, 496 F. Supp. 3d at 267 (“The [Tribe] only cite[s] . . . concerns and fears about the Projects’ effect on the sacred sites, not any evidence that injuries are likely to occur. While sincere, [these] sentiments do not meet the required showing for a preliminary injunction.”) (citation omitted). That principle controls here: the Tribes’ anxiety and trauma regarding a hypothetical damaging spill at Lake Oahe do not constitute irreparable harm where they have not demonstrated a likelihood of any such spill.

Plaintiffs adopt a slightly different approach in their Reply brief, more directly emphasizing a related, but ultimately distinct, type of emotional injury. Specifically, they claim that “allowing the pipeline to continue operating despite a serious NEPA violation is part of a pattern” of “historic trauma” experienced by “every Tribal member,” one deriving from the government’s “continued refusal to respect the rights of the Tribes throughout the nation’s history” and its “prioritizing non-Indians” at the expense of Tribal members. See Pl. Reply at 17 (cleaned up) (quoting ECF No. 569-5 (Fourth Declaration of John Eagle, Sr.), ¶ 13). The Court does not deny that shameful past. On the contrary, it fully acknowledges and appreciates the “tragic history of the Great Sioux Nation’s repeated dispossessions at the hands of a hungry and expanding early America,” along with the persistent “threat that new injury will compound old.” Standing

Rock I, 205 F. Supp. 3d at 33. Plaintiffs' argument based on ongoing, compounding historical trauma, however, does not qualify as irreparable harm within the context of this case.

The Tribes, critically, never explain how their asserted trauma—at least as it pertains to the pipeline—exists independent of the threat of an oil spill. In other words, the issue is not the mere existence of a buried pipe or the flow of oil within it. The culprits, rather, are the risk of a spill that inevitably accompanies the pipeline's operation and Plaintiffs' belief that the Government has forced them to bear that risk for the benefit of non-Tribal interests. See Pl. Reply at 17 (referencing “compounding impact of prioritizing non-Indians who privatize benefits but socialize risks on the backs of the Tribes”); Eagle 4th Decl., ¶ 13 (discussing, in context of “historic trauma,” pain caused by fact that pipeline “gets to keep operating, exposing us to risk and stress of catastrophe”). Once more, then, this variant of the Tribes' earlier trauma-based arguments cannot be meaningfully disentangled from the remote threat of an oil spill at Lake Oahe that does not independently constitute irreparable harm. Nor do Plaintiffs explain how shutting down the pipeline would remedy these “longstanding,” deep-rooted feelings stemming from the “continued refusal to respect the rights of the Tribes throughout the nation's history.” Pl. Reply at 17; see Standing Rock I, 205 F. Supp. 3d at 34 (finding no irreparable harm where harm was “destined to ensue whether or not the Court grants the injunction the Tribe desires”); Wis. Gas, 758 F.2d at 674 (explaining that party seeking injunction “must show that the alleged harm will directly

result from the action which [it] seeks to enjoin”) (emphasis added).

Plaintiffs’ second claimed harm founders for similar reasons as the first. According to the Tribes, “[T]he Corps’ NEPA violations have undermined [their] sovereign governmental role to protect their citizens, respond to disasters, and mitigate harm.” Pl. Mot. at 16-17. It soon becomes clear, however, that these governance-based harms are once again derivative of the same speculative spill-risk harms handled above. See Pl. Reply at 18 (“[A]ny mistake by the Corps or DAPL immediately would become the Tribe’s problem, impact its core functions, and threaten the citizens whom the Tribe is responsible for.”); id. (arguing that “a spill would immediately and indisputably interfere with the Tribe’s sovereignty over its land”); Pl. Mot. at 18 (referencing potential spill hindering ability of Tribe to protect “sacred and ceremonial sites that would be at risk”); id. (discussing challenges in “spill response planning” and guarding against “risks and impacts” of potential spill). To the extent the Tribes assert injury arising from the process of “planning for” a potential pipeline leak and the “scarce resources” they devote thereto, see Pl. Reply at 18, moreover, such “present costs and burdens” stemming from a course undertaken to guard against a “speculative threat” cannot form the basis for irreparable harm. See Clapper v. Amnesty Int’l USA, 568 U.S. 398, 416 (2013) (rejecting similar argument in Article III injury-in-fact context). Finally, DAPL itself does not implicate any “loss of sovereignty over Tribal land,” Pl. Mot. at 17, as the Lake Oahe segment traverses only federal property. Standing Rock III, 255 F. Supp. 3d at 114.

\* \* \*

As the Tribes have not carried their burden to demonstrate a likelihood of irreparable injury absent an injunction, the Court must deny them the relief they seek. It does not reach that conclusion lightly. Fully aware of the unshakable indignities visited upon the Tribes across generations, the Court, as it has throughout this litigation, scrutinizes the record with care. It likewise acknowledges the quandary in which Plaintiffs find themselves and the undeniable frustration that comes with it—namely, having achieved (and successfully defended on appeal) the vacatur of a key pipeline easement, they must now turn around and make an even steeper showing to obtain the injunctive relief necessary to stop the flow of oil. As the preceding discussion demonstrates, establishing the harm necessary to earn this relief in circumstances such as the present is a tall task indeed. Yet, where the Court of Appeals has required that the Tribes put forth a particular showing before securing any order shutting down the pipeline, this Court must hold them to that showing, no matter how lofty the bar.

The Court closes this analysis where it began: with the Corps. Plaintiffs, no doubt, will wish that the Court's Opinion today had come out differently. Simply by ruling, however, the Court has at least given them something the Corps has not: a decision. Notwithstanding repeated instruction from this Court and the D.C. Circuit to “decide promptly” and “in the first instance” how it “will enforce its property rights” *vis-a-vis* the pipeline's encroaching on federal land at Lake Oahe, the Corps has not yet issued any determination on the matter at all—more than ten months

since the invalidation of the underlying easement. Standing Rock IX, 985 F.3d at 1054. Much like the Circuit, this Court presently “ha[s] no occasion to consider” whether, by way of such inaction, the Corps has effectively granted “a *de facto* outgrant without engaging in the NEPA analysis that the Corps concedes such an action requires.” Id. For now, it suffices to note that by ducking the controversy surrounding the Oahe crossing, the Corps actively tolerates DAPL’s continued operation underneath a key federal waterway that it lacks the necessary authorization to traverse. That, of course, is a political decision outside this Court’s area of inquiry. Whether the Corps formally acknowledges such decision or not, this is the outcome it now owns.

### C. Section 408 Permit

One final issue merits mention. Although the majority of the Tribes’ opening brief concerns their bid for injunctive relief, a single paragraph requests something entirely different—to wit, “clarification” from the Court that its vacatur order from last July was not limited to the Mineral Leasing Act easement but also included the permit issued under Section 408 of the Rivers and Harbors Act. See Pl. Mot. at 6-7. As a reminder, Dakota Access was required to—and in July 2016 did—obtain such permit, which authorized it to lay the pipeline underneath Lake Oahe. See Standing Rock III, 255 F. Supp. 3d at 114,116; 33 U.S.C. § 408(a) (making it unlawful to alter or make use of certain public works absent determination that occupation will not impair their usefulness or be injurious to public interest); Section 408 Decision Package at ECF pp. 3-4,6-7. While the Court last year vacated the MLA easement pending the Corps’ completion of



an EIS, it said nothing in either its summary-judgment or vacatur Opinion about the status of the separate Section 408 permit (which the Tribes now maintain “indisputably relied on the invalidated environmental assessment” and thus cannot stand). See Pl. Mot. at 6-7.

It quickly becomes clear why Plaintiffs request this additional “clarification.” According to them, “[V]acatur of the § 408 regulatory authorization would mean the pipeline could not continue operations,” thus excusing them from the need to satisfy the traditional injunction criteria before obtaining such relief. Id. at 7. Nowhere across their briefing, however, do they begin to explain why vacatur of the Section 408 permit would yield that result. Indeed, the opposite appears true. As the Government clarifies, “[T]here is no federal permit required to operate a crude oil pipeline,” nor does the Corps regulate such operation. See Corps Opp. at 4; see also Federal Appellant’s Reply Brief at 15 & n.3 (D.C. Cir. Sept. 30, 2020) (explaining that Dakota Access “do[es] not need a permit or license from the Corps to operate [DAPL] because the Corps does not regulate the operation of oil pipelines” and contrasting natural-gas pipelines, operation of which is regulated by federal agency); DA Opp. at 24 (noting that “oil pipelines need no federal license to operate”). The Section 408 permit, rather—much like the MLA easement—simply denotes the Corps’ approval of Dakota Access’s plans to site the pipeline on federal property, thereby altering the prior federal design. See Section 408 Decision Package at ECF pp. 3-4,6-7. It follows that any potential vacatur of such permit—again like the easement—could not by itself bring about a shutdown in pipeline operations. See

Standing Rock IX, 985 F.3d at 1054 (holding that mere vacatur of DAPL's federal authorization to cross government property could not itself stop flow of oil absent independent findings necessary for injunctive relief).

As the Tribes have offered no grounds for concluding that vacatur of the Section 408 permit would put them in a different place from where they are now—*i.e.*, in need of an injunction to close the pipeline—the Court declines to entertain their alternative bid to expand its prior order. That course seems all the more prudent in the absence of more dedicated briefing exploring precisely how this Court's summary-judgment and vacatur Opinions bear on Plaintiffs' request.

### **III. Conclusion**

For the aforementioned reasons, the Court will deny Plaintiffs' Motion for Clarification and a Permanent Injunction. A separate Order so stating will issue this day.

/s/ James E. Boasberg  
JAMES E. BOASBERG  
United States District Judge

Date: May 21, 2021

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**APPENDIX K**

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**United States Court of Appeals  
for the District of Columbia Circuit**

**No. 20-5197**

**September Term, 2020**

**1:16-cv-01534-JEB**

**Filed on: April 23, 2021**

STANDING ROCK SIOUX TRIBE, ET AL.

*Appellees*

v.

UNITED STATES ARMY CORPS OF ENGINEERS,

*Appellee*

DAKOTA ACCESS LLC,

*Appellant*

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Consolidated with 20-5201

**BEFORE:** Srinivasan, Chief Judge; Henderson, Rogers, Tatel, Millett, Pillard\*, Wilkins, Katsas\*, Rao, and Walker, Circuit Judges; and Sentelle, Senior Circuit Judge

**ORDER**

Upon consideration of Dakota Access, LLC's petition for rehearing en banc, and the absence of a request by any member of the court for a vote, it is

**ORDERED** that the petition be denied.

896a

**PER CURIAM**

**FOR THE COURT:**

Mark J. Langer, Clerk

BY: /s/

Kathryn D. Lovett

Deputy Clerk

\* Circuit Judges Pillard and Katsas did not participate in this matter.

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**APPENDIX L**

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**STATUTORY PROVISIONS AND  
REGULATIONS INVOLVED****Administrative Procedure Act****5 U.S.C. § 702. Right of review**

A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof. An action in a court of the United States seeking relief other than money damages and stating a claim that an agency or an officer or employee thereof acted or failed to act in an official capacity or under color of legal authority shall not be dismissed nor relief therein be denied on the ground that it is against the United States or that the United States is an indispensable party. The United States may be named as a defendant in any such action, and a judgment or decree may be entered against the United States: *Provided*, That any mandatory or injunctive decree shall specify the Federal officer or officers (by name or by title), and their successors in office, personally responsible for compliance. Nothing herein (1) affects other limitations on judicial review or the power or duty of the court to dismiss any action or deny relief on any other appropriate legal or equitable ground; or (2) confers authority to grant relief if any other statute that grants consent to suit expressly or impliedly forbids the relief which is sought.

\* \* \*

**5 U.S.C. § 706. Scope of review**

To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

(1) compel agency action unlawfully withheld or unreasonably delayed; and

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

\* \* \*

**Mineral Leasing Act****30 U.S.C. § 185. Rights-of-way for pipelines through Federal lands****(a) Grant of authority**

Rights-of-way through any Federal lands may be granted by the Secretary of the Interior or appropriate agency head for pipeline purposes for the transportation of oil, natural gas, synthetic liquid or gaseous fuels, or any refined product produced therefrom to any applicant possessing the qualifications provided in section 181 of this title in accordance with the provisions of this section.

**(b) Definitions**

(1) For the purposes of this section “Federal lands” means all lands owned by the United States except lands in the National Park System, lands held in trust for an Indian or Indian tribe, and lands on the Outer Continental Shelf. A right-of-way through a Federal reservation shall not be granted if the Secretary or agency head determines that it would be inconsistent with the purposes of the reservation.

(2) “Secretary” means the Secretary of the Interior.

(3) “Agency head” means the head of any Federal department or independent Federal office or agency, other than the Secretary of the Interior, which has jurisdiction over Federal lands.

\* \* \*

**(f) Regulatory authority**

Rights-of-way or permits granted or renewed pursuant to this section shall be subject to regulations promulgated in accord with the provisions of this section and shall be subject to such terms and conditions as the Secretary or agency head may prescribe regarding extent, duration, survey, location, construction, operation, maintenance, use, and termination.

\* \* \*

**(h) Environmental protection**

(1) Nothing in this section shall be construed to amend, repeal, modify, or change in any way the requirements of section 102(2)(C) [42 U.S.C. 4332(2)(C)] or any other provision of the National Environmental Policy Act of 1969 [42 U.S.C. 4321 et seq.].

(2) The Secretary or agency head, prior to granting a right-of-way or permit pursuant to this section for a new project which may have a significant impact on the environment, shall require the applicant to submit a plan of construction, operation, and rehabilitation for such right-of-way or permit which shall comply with this section. The Secretary or agency head shall issue regulations or impose stipulations which shall include, but shall not be limited to: (A) requirements for restoration, revegetation, and curtailment of erosion of the surface of the land; (B) requirements to insure that activities in connection with the right-of-way or permit will not violate applicable air and water quality standards nor related facility siting standards established by or pursuant to law; (C) requirements designed to control or prevent (i) damage to the environment (including damage to fish and



wildlife habitat), (ii) damage to public or private property, and (iii) hazards to public health and safety; and (D) requirements to protect the interests of individuals living in the general area of the right-of-way or permit who rely on the fish, wildlife, and biotic resources of the area for subsistence purposes. Such regulations shall be applicable to every right-of-way or permit granted pursuant to this section, and may be made applicable by the Secretary or agency head to existing rights-of-way or permits, or rights-of-way or permits to be renewed pursuant to this section.

\* \* \*

**National Environmental Policy Act of 1969**

**42 U.S.C. § 4332. Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts**

The Congress authorizes and directs that, to the fullest extent possible:

\* \* \*

(2) all agencies of the Federal Government shall—

\* \* \*

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local shortterm uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5, and shall accompany the proposal through the existing agency review processes;

\* \* \*

**Council on Environmental Quality's  
National Environmental Policy Act  
Implementing Regulations**

**33 C.F.R. pt. 325, App. B (2019)—NEPA Implementation Procures for the Regulatory Program**

\* \* \*

7. *EA/FONSI Document.* (See 40 CFR 1508.9 and 1508.13 for definitions)—a. *Environmental Assessment (EA) and Findings of No Significant Impact (FONSI).* The EA should normally be combined with other required documents (EA/404(b)(1)/SOF/FONSI). “EA” as used throughout this Appendix normally refers to this combined document. The district engineer should complete an EA as soon as practicable after all relevant information is available (*i.e.*, after the comment period for the public notice of the permit application has expired) and when the EA is a separate document it must be completed prior to completion of the statement of finding (SOF). When the EA confirms that the impact of the applicant’s proposal is not significant and there are no “unresolved conflicts concerning alternative uses of available resources \* \* \*” (section 102(2)(E) of NEPA), and the proposed activity is a “water dependent” activity as defined in 40 CFR 230.10(a)(3), the EA need not include a discussion on alternatives. In all other cases where are unresolved conflicts concerning alternative uses of available resources, the EA shall include a discussion of the reasonable alternatives which are to be considered by the ultimate decision-maker. The decision options available to the Corps, which embrace all of the applicant’s

alternatives, are issue the permit, issue with modifications or deny the permit. Modifications are limited to those project modifications within the scope of established permit conditioning policy (See 33 CFR 325.4). The decision option to deny the permit results in the “no action” alternative (*i.e.*, no activity requiring a Corps permit). The combined document normally should not exceed 15 pages and shall conclude with a FONSI (See 40 CFR 1508.13) or a determination that an EIS is required. The district engineer may delegate the signing of the NEPA document. Should the EA demonstrate that an EIS is necessary, the district engineer shall follow the procedures outlined in paragraph 8 of this Appendix. In those cases where it is obvious an EIS is required, an EA is not required. However, the district engineer should document his reasons for requiring an EIS.

b. *Scope of Analysis.* (1) In some situations, a permit applicant may propose to conduct a specific activity requiring a Department of the Army (DA) permit (e.g., construction of a pier in a navigable water of the United States) which is merely one component of a larger project (e.g., construction of an oil refinery on an upland area). The district engineer should establish the scope of the NEPA document (e.g., the EA or EIS) to address the impacts of the specific activity requiring a DA permit and those portions of the entire project over which the district engineer has sufficient control and responsibility to warrant Federal review.

(2) The district engineer is considered to have control and responsibility for portions of the project beyond the limits of Corps jurisdiction where the Federal involvement is sufficient to turn an essentially private action into a Federal action. These are cases

where the environmental consequences of the larger project are essentially products of the Corps permit action.

Typical factors to be considered in determining whether sufficient “control and responsibility” exists include:

(i) Whether or not the regulated activity comprises “merely a link” in a corridor type project (e.g., a transportation or utility transmission project).

(ii) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity.

(iii) The extent to which the entire project will be within Corps jurisdiction.

(iv) The extent of cumulative Federal control and responsibility.

A. Federal control and responsibility will include the portions of the project beyond the limits of Corps jurisdiction where the cumulative Federal involvement of the Corps and other Federal agencies is sufficient to grant legal control over such additional portions of the project. These are cases where the environmental consequences of the additional portions of the projects are essentially products of Federal financing, assistance, direction, regulation, or approval (not including funding assistance solely in the form of general revenue sharing funds, with no Federal agency control over the subsequent use of such funds, and not including judicial or administrative civil or criminal enforcement actions).

B. In determining whether sufficient cumulative Federal involvement exists to expand the scope of Federal action the district engineer should consider whether other Federal agencies are required to take Federal action under the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*), the National Historic Preservation Act of 1966 (16 U.S.C. 470 *et seq.*), the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*), Executive Order 11990, Protection of Wetlands, (42 U.S.C. 4321 91977), and other environmental review laws and executive orders.

C. The district engineer should also refer to paragraphs 8(b) and 8(c) of this appendix for guidance on determining whether it should be the lead or a cooperating agency in these situations.

These factors will be added to or modified through guidance as additional field experience develops.

(3) *Examples:* If a non-Federal oil refinery, electric generating plant, or industrial facility is proposed to be built on an upland site and the only DA permit requirement relates to a connecting pipeline, supply loading terminal or fill road, that pipeline, terminal or fill road permit, in and of itself, normally would not constitute sufficient overall Federal involvement with the project to justify expanding the scope of a Corps NEPA document to cover upland portions of the facility beyond the structures in the immediate vicinity of the regulated activity that would effect the location and configuration of the regulated activity.

Similarly, if an applicant seeks a DA permit to fill waters or wetlands on which other construction or work is proposed, the control and responsibility of the Corps, as well as its overall Federal involvement

would extend to the portions of the project to be located on the permitted fill. However, the NEPA review would be extended to the entire project, including portions outside waters of the United States, only if sufficient Federal control and responsibility over the entire project is determined to exist; that is, if the regulated activities, and those activities involving regulation, funding, etc. by other Federal agencies, comprise a substantial portion of the overall project. In any case, once the scope of analysis has been defined, the NEPA analysis for that action should include direct, indirect and cumulative impacts on all Federal interests within the purview of the NEPA statute. The district engineer should, whenever practicable, incorporate by reference and rely upon the reviews of other Federal and State agencies.

For those regulated activities that comprise merely a link in a transportation or utility transmission project, the scope of analysis should address the Federal action, *i.e.*, the specific activity requiring a DA permit and any other portion of the project that is within the control or responsibility of the Corps of Engineers (or other Federal agencies).

For example, a 50-mile electrical transmission cable crossing a 1¼ mile wide river that is a navigable water of the United States requires a DA permit. Neither the origin and destination of the cable nor its route to and from the navigable water, except as the route applies to the location and configuration of the crossing, are within the control or responsibility of the Corps of Engineers. Those matters would not be included in the scope of analysis which, in this case, would address the impacts of the specific cable crossing.

Conversely, for those activities that require a DA permit for a major portion of a transportation or utility transmission project, so that the Corps permit bears upon the origin and destination as well as the route of the project outside the Corps regulatory boundaries, the scope of analysis should include those portions of the project outside the boundaries of the Corps section 10/404 regulatory jurisdiction. To use the same example, if 30 miles of the 50-mile transmission line crossed wetlands or other “waters of the United States,” the scope of analysis should reflect impacts of the whole 50-mile transmission line.

For those activities that require a DA permit for a major portion of a shoreside facility, the scope of analysis should extend to upland portions of the facility. For example, a shipping terminal normally requires dredging, wharves, bulkheads, berthing areas and disposal of dredged material in order to function. Permits for such activities are normally considered sufficient Federal control and responsibility to warrant extending the scope of analysis to include the upland portions of the facility.

In all cases, the scope of analysis used for analyzing both impacts and alternatives should be the same scope of analysis used for analyzing the benefits of a proposal.

\* \* \*

**40 C.F.R. § 1501.4 (2019). Whether to prepare an environmental impact statement.**

In determining whether to prepare an environmental impact statement the Federal agency shall:



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(a) Determine under its procedures supplementing these regulations (described in § 1507.3) whether the proposal is one which:

(1) Normally requires an environmental impact statement, or

(2) Normally does not require either an environmental impact statement or an environmental assessment (categorical exclusion).

(b) If the proposed action is not covered by paragraph (a) of this section, prepare an environmental assessment (§ 1508.9). The agency shall involve environmental agencies, applicants, and the public, to the extent practicable, in preparing assessments required by § 1508.9(a)(1).

(c) Based on the environmental assessment make its determination whether to prepare an environmental impact statement.

(d) Commence the scoping process (§ 1501.7), if the agency will prepare an environmental impact statement.

(e) Prepare a finding of no significant impact (§1508.13), if the agency determines on the basis of the environmental assessment not to prepare a statement.

(1) The agency shall make the finding of no significant impact available to the affected public as specified in § 1506.6.

(2) In certain limited circumstances, which the agency may cover in its procedures under §1507.3, the agency shall make the finding of no significant impact

available for public review (including State and area-wide clearinghouses) for 30 days before the agency makes its final determination whether to prepare an environmental impact statement and before the action may begin. The circumstances are:

(i) The proposed action is, or is closely similar to, one which normally requires the preparation of an environmental impact statement under the procedures adopted by the agency pursuant to § 1507.3, or

(ii) The nature of the proposed action is one without precedent.

\* \* \*

**40 C.F.R. § 1508.27 (2019). Significantly.**

*Significantly* as used in NEPA requires considerations of both context and intensity:

(a) *Context*. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) *Intensity*. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

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(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

(2) The degree to which the proposed action affects public health or safety.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

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(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.