TO: Lieutenant General Todd. T. Semonite, Commanding General and Chief of USCAE

FROM: Sarah Rizk

DATE: 12/13/16

SUBJECT: Construction of Dakota Access Pipeline

**Briefing and Decision**

Since the beginning of September 2016, the Standing Rock Sioux Tribe have requested a temporary restraining order against the Dakota Access Pipeline (DAPL) to prevent further damage of sacred and culturally significant sites. Although the pipeline goes on federal land, it had previously belonged to the tribe and can cause significant damage to their cultural artifacts, primarily burial grounds of their ancestors. The Sioux Tribe is requesting this temporary restraining order because DAPL is destroying sites of historic and cultural significance to the tribe. DAPL originally claimed that they would take precautions to ensure that there would be limited disturbance to the tribe and the surrounding land. Some of these measures include pre-construction surveys and evaluation of and staking of the identified areas of possible disturbance. The Sioux Tribe never received notification of the imminent construction, nor did it receive the opportunity to monitor the site, as they were promised by DAPL. In fact, within hours of of being provided with detailed evidence of cultural artifacts, DAPL continued construction without additional survey on the weekend, skipping multiple miles of un-cleared land [1]. According to Document 30, the “Memorandum in Support of Emergency Motion for a Temporary Restraining Order”, it appears that DAPL “deliberately and knowingly in order to gain some perceived advantage. The public interest is harmed by this kind of subterfuge of the litigation process” [1].

Given that the purpose of the Dakota Access Pipeline is to give the United States energy dependence by providing access of crude oil to the public in a reliable way, we as the United States Army Corps of Engineers (USACE), should be addressing the pipeline with such in mind. In addition to the cultural significance of the land outlined by the Standing Rock Sioux Tribe, environmental/ecological, socioeconomic, and public safety impacts are of concern, specifically the consumption of drinking water and biodiversity to the Sioux Tribe and others downstream of the proposed route. Although all surface impacts to grasslands have been avoided due to route modifications or constructions methods and efforts were put forth to minimize impacts to wetland basins, it can still be seen that the resources within the affected environment can have significant repercussions. Construction activities can result in surface disturbance resulting in noxious weeds, four threatened species’ habits will be affected, and temporary disturbance of air quality during construction [2]. The Society for Conservation Biologists states that DAPL is of extreme danger to the tribe and millions of others who rely on the Missouri River for drinking water, could cause potential harm to the fauna of the area due to oil spills, and encourages the continued dependence of fossil fuel usage as energy instead of focusing efforts on renewable energy [3].

By using policy, ethics, and science regarding the Dakota Access Pipeline, it would be considered most suitable to halt construction. If construction can only be halted temporarily, then two options have been researched to be the most viable compromise. The first being a redistribution of artifacts, following an excavation and zonation of acceptable route for the pipeline as to not disrupt the artifacts. The second being a complete change of the route of the pipeline. The first decision would be to halt construction under the terms of ecological health, cultural importance, and uncertainty in the policies of the pipeline. If it is deemed that construction cannot be permanently halted for indeterminable reasoning, two options are presented as compromise in order to minimize the ecological, cultural, socioeconomic effects of the current pipeline route. The first outlines the option to temporarily halt construction and grant the Sioux Tribe to collect and redistribute the artifacts when possible or zonation using modern technology to avoid the sacred sites. The second outlines the option to consider redirecting the pipeline, whether on a different route or aboveground, to minimize the detrimental effects.

**Policy and Law: Spoliation/ Intentional Harm**

It is worth noting that under the law, DAPL is obligated as to not spoliate evidence that was known to have cultural significance to the Standing Rock Sioux Tribe. By evidence outlined in Document 30, the Sioux Tribe observed intention destruction of cultural sites. The historic preservation officer of the Sioux tribe had submitted detailed evidence of major archeological discoveries directly in and adjacent to the pipeline’s route, just hours previous to the construction work on that site. The site was worked on a Saturday of a holiday weekend, when construction had not been previously observed on the weekend. This suggests that the construction by DAPL was conducted knowingly and intentionally in order to gain advantage in the continuation of construction. Additionally, it was observed that DAPL skipped over many miles of land described as “uncleared” in order to clear the area that was described and submitted and was dug substantially lower than usually reaching berms of 8 to 10 feet. The destruction of these cultural site has been submitted as evidence of irreparable harm and can therefore be considered as spoliation of evidence. A party is obligated to not spoliate evidence that was destruction of sacred sites that prejudices the Sioux Tribe. This is clear spoliation shown by the many cultural artifacts destructed in the construction process and occurred as seemingly intentional, causing irreparable harm to the tribe. This becomes significantly more negligent with addition of the promises DAPL did not adhere to. DAPL had made claimed to give proper preconstruction surveys, preconstruction notification and staking to clearly identify areas of disturbance, and historic preservation, environmental, and archaeological monitors. As shown through the destruction of artifacts, DAPL clearly did not adhere to their perceived care for tribal culture. In order to prevent further destruction of property of the tribe, construction should halt [1].

**Policy and Law: Environmental Impact Assessment and Improper Segmentation**

The National Environmental Policy Act (NEPA) requires for all federal agencies to prepare environmental assessment and impact statements, outlining the potential environmental hazards. For NEPA, the obligation is to look at alternatives if the information proves to have potential harm. The USACE only had jurisdiction over small portions of the pipeline project—approximately 3 percent. The USACE has approved approximately 200 jurisdictional water crossings that required permission under the Clean Water Act and Rivers and Harbors Act and has not granted the easement of the pipeline to cross Lake Oahe. However, under NEPA, we have determined that, for the portions of the pipeline under the jurisdiction of the USACE, an environmental assessment is required. That being said, the only environmental assessment conducted comes directly from Dakota Access, LLC.

USACE not granted the easement of the pipeline to cross Lake Oahe at this point, however, construction has continued only about 2-4 miles away from the lake’s crossing site. During this construction sacred artifacts were destroyed, including an extraordinary concentration of graves, a constellation representation used for prayer, and other stone features directly in and adjacent to the pipeline’s route near Lake Oahe. Of course, we did not expect DAPL to work on our federal lands without the required easement, however as with any unauthorized work on USACE-managed federal lands, we should have determined an appropriate response when this work was discovered [4]. Taking into account the complaints of Sioux Tribe, construction should halt in order to stop additional disruption of their historical and cultural artifacts.

In the environmental assessment, Dakota Access, LLC provides material stating that the environmental impacts are not significant [2]. However, coming from the contractor themselves, this information seems to have biased undertones. The assessment outlines the potential hazards of the grassland and wetland crossings of the pipeline and the resources affected within those areas. It is doubtful that given the environmental changes occurring to insert a pipeline, that there are no negative ecological byproducts. The assessment does acknowledge the many potential ecological affects of the pipeline, however states that none of them are an issue. As with any disruption in nature, there is no guarantee that these cumulative effects of water quality, vegetation, and air quality will not occur. The assessment particularly states that it is not anticipated to disrupt any cultural resources and so the project would not contribute to any cumulative cultural impacts, however the Standing Rock Sioux Tribe is already experiencing cultural disturbance [2, 1, 4]. This shows reasonable doubt to the rest of the assessment. Because Dakota Access, LLC prepared the assessment, they obviously would not desire to have the assessment show negative correlations between the pipeline and environmental impacts. Considering this, to obtain complete information, a non-biased group should complete an environmental impact assessment.

 Additionally, according to the complaint filed for declaratory and injunctive relief by the Sioux Tribe, NEPA requires consideration of indirect effects of agency decision, yet we only looked narrowly at the impacts of the river crossing and we did not consider the other components of the pipeline thoroughly. NEPA also requires consideration of separate components of a “single project in a single NEPA review” [5]. Because the USACE permitting regulations also require rejection of plans that seek to address a single project in multiple segments, we should be adhering to this regulation, however that is not true in this case. It can be considered unlawful to consider the pipeline in segments rather than the whole. In these ways, construction should be halted in order to reconsider the pipeline as a whole and with concern of a reevaluated environmental assessment, in order to take the ecological affects into full consideration and stay true to the regulations we should be adhering to.

**Law and Policy: Effluent Limitation Guidelines/Standards for Oil and Gas Extraction**

The Environmental Protection Agency (EPA) is publishing a final Clean Water Act (CWA) regulation in which the health of humans, the environment, and publicly owned treatment works (POTWs) is protected by preventative pretreatment standards of wastewater due to oil extraction. Certain UOG extraction of wastewater and can be discharged as untreated water which can cause harmful byproducts. Although the pipeline does not produce oil, it is worth considering the positive attributes of having effluent limitation guidelines due to its construction and transport. As a pipeline, any discharge is prohibited and after installation there should be no leakage in order to be properly transported. However, the pipeline will be carrying the extracted oil and its processes are important in the consideration of the development of the pipeline. Direct discharges of oil and gas extraction wastewater pollutants have been regulated since 1979, however this final rule creates requirements for indirect discharges. The oil extraction contains constituent that are harmful to human health and the environment and therefore requires proper management. This final rule establishes the pretreatment standards for existing and new sources that require zero discharge of wastewater pollutants of unconventional extraction. However, the rule does not include pretreatment standards for the conventional oil extraction. Construction of the pipeline should be halted even in consideration of these protective guidelines due to the overwhelming amount of environmental impacts from the original extraction that the pipeline will be transporting. Particularly in regards to clean drinking water, these guidelines are beneficial. Congress passed the CWA in order to restore and maintain the integrity of the water and prohibits these point source discharges. By halting construction of the pipeline, clean water is being protected from the extraction process that directly affects the pipeline [6].

**Science: The Use of Science as Prevention and the Environmental Impact Assessment**

One of the most important things in scientific analysis is the basis of credibility and when studying the Environmental Impact Assessment produced by Dakota Access, LLC there appears to be loopholes in the credibility of the statement. Because science can be used to diagnose a problem, there is supposed to be significant monitoring and testing. Science is used as a check for the policies, however there should be sampling prior to the construction of the pipeline. Science could be used to help understand the cultural and historical significance of the area by way of seismic data, to predict environmental and human health impacts by way of tools like comparative methods and computer models, and to understand the pollutants possibly introduced in the process of construction. However, the Environmental Impact Assessment appeared to use science as a way to back up their plan, rather than considering the true long-term impacts. For example, science can determine wetland impacts by analyzing water tables. The impact assessment never mentions the analysis of water tables. There was rare use of statistics and data and rather there were permits grants to contaminate water, etc. Most impacts were deemed to be minimal, however even minimal impacts can still lead to the deterioration of the environment [2].

The pipeline is designed to transfer crude oil through North Dakota, South Dakota, Iowa, and Illinois. It is expected that the pipeline will transport approximately 450,000 barrels of oil per day, which could cause significant impacts on the environment, and has a capacity of approximately 570,000 barrels of oil per day. Once the crude oil arrives at the existing tank farms, located in Patoka, the shippers would be able to have access to and ability to distribute the crude oil to multiple markets. Again, having significant impacts on the environment including the risk of oil spills. The Environmental Assessment was developed in order to address the potential impacts to the wetland and grasslands affected by the pipeline construction and the resources held within those ecosystems. Dakota Access, LLC claims to have made significant efforts to address all the potential impacts, however it claims in the beginning that due to the length and vastness of the project, doing so was not entirely feasible. Dakota Access and the USACE has begun to treat this 1,150 mile project as multiple smaller projects. Several half-acre projects as parts of a whole project will obviously show less environmental impact than considering all parts in equity. USACE is using a Nationwide Permit 12, allowing them to do this with no climate, cultural, or oil spill criteria and guidelines. Dakota Access has submitted their Nationwide Permit 12 for authorization to discharge within the USACE jurisdictional wetlands and the water bodies [2]. This will undoubtedly contaminate and affect the water quality in the area and in turn, access to clean drinking water. Additionally, The Environmental Assessment states that, “in the unlikely event of a pipeline release, Dakota Access will initiate its FRP to contain and clean up the spill. To minimize impacts to aquatic resources, appropriate remedial measures will be implemented to meet federal and state standards designed to ensure protection of aquatic biota” [2]. However, this defends the decision to halt construction, as even though Dakota Access promises to contain and remedy an oil spill, prevention is the best way to keep the drinking water safe.

Again, the Environmental Assessment only discusses the portion of counties crossed by North Dakota and South Dakota because the easement crossings will only occur in those states. Therefore, the wildlife in the surrounding areas will be affected. The assessment only considers nine endangered species, leaving out all other species. Without any data to back up the argument, the assessment claims that there will be no disruption to the wildlife. However, we, as a community should be protecting endangered species in order to maintain crucial ecosystems. By building a pipeline through these communities, even affecting a limited amount of endangered wildlife could still have detrimental impacts that the assessment simply does not acknowledge.

**Science: Threatens Clean Water and Biodiversity**

 Having read the environmental impact assessment, according to the Society for Conservation Biology, more than 90 scientists say that DAPL threatens clean water and biodiversity of the areas affected. An oil spill contaminating this environment could devastate the ecosystem, negatively affecting not only the water available to humans but also to the animals whose ecosystems would be compromised. The construction of DAPL would occur under the Missouri River, at Lake Oahe, which located about a half a mile upstream of the Sioux Tribe’s reservation boundary. Lake Oahe, which is their primary source of water, faces risk of contamination with an oil pipeline running so close by. Not only would this impact the tribe, it could also affect millions of other people downstream who also rely on the river as a source of clean drinking water. In the case of an oil leak along the pipeline’s route, the fauna and other wildlife in the area could be directly affected. The Society for Conservation Biology particularly calls attention to an endangered species, the Pallid Sturgeon. The potential for an oil leak is enough to call for a halt to construction. They can have disastrous impacts on the water and biodiversity of the are that make up important ecosystems in the area. A scientist of the society, Stephanie Januchowski-Hartley, also has pointed out the excess amount of resources and indirect environmental impacts of cleaning up the potential spills and the rarity of complete restoration [3].

**Ethics and Science: Fossil Fuel Dependence**

 Keeping in mind the purpose of the pipeline, continuing with construction encourages the dependence of fossil fuels rather than encouraging the development of renewable resources. As the USACE, we should be looking towards a sustainable future for the United States. The scientifically proven negative impacts of fossil fuel emissions on climate gives us an ethical push to protect humans, wildlife, and the planet. In the production of the pipeline and the inevitable drilling that extracts the oil it will transport, only gives way to increase the amount of energy spent on oil. This is disappointing, particularly considering the Paris Climate Agreement, in which the United States has pledged to cut back on fossil fuel emissions in order to contribute to limit global warming to 1.5 degrees Celsius [7]. Science has allowed us to investigate greenhouse gas emissions, which primarily are caused through the burning of fossil fuels such as oil. These have warmed the earth by more than 1 degree Celsius since the beginning of the industrial revolution. The main drivers of climate change have come from developed countries, particularly the United States, however they are affecting underdeveloped countries the most—those who cannot afford to adapt the changing climate. There is an ethical commitment as humans to protect the earth and the people in it. The most efficient way of avoiding the worst of climate change is by keeping the carbon in the ground. According to the best science available, in order to limit global warming to under 2 degrees Celsius, 80% of the fossil fuels that the world has access to must stay in the ground. This should mean that no new fossil fuel projects should be created. Instead the public should be focusing on existing fossil fuel production should be phased out and replacing it with renewable energy should be the new focus [8].

**Ethics: Aldo Leopold and Gifford Pinchot**

 We must consider ethics as a tool of decision making as well. Two important ethical principles of conservation and preservation are explained by Aldo Leopold and Gifford Pinchot. Aldo Leopold’s Land Ethic asks the public to think about what is right and wrong. His standard states, “a thing is right when it tends to preserve the integrity, the stability, and the beauty of the biotic community. It is wrong if it does otherwise” [9]. The biotic community that he speaks of describes both life on earth and people and land. He believes that we should strive to preserve nature, leaving it as is because it is ethically and morally right to do so. In the Land Ethic he states that we should be reflecting an ecological conscious and by doing so we will reflect convection of individual responsibility for the health of the land. The health of the biotic community is of utmost importance and we should be maintaining it in its original state. Leopold also believes that to conserve based solely on economic self-interest is lopsided, tending to ignore and eliminate elements of the land that lack commercial value, however are necessary and essential for healthy functioning. We should be looking at the value of the land as more than its monetary value and this, again, should come from our ethical duties [9].

According to RBN Energy, Dakota Access, LLC would reduce the cost of shipping Bakken Oil from North Dakota by about $7 a barrel. This is a 47% reduction in shipping costs to the world’s biggest refining market and America’s main crude oil export point. This lower cost would not only boost profits and cash flow, but also can put that towards future investments to drill and produce more oil. While it is clear that the pipeline would make profit, it was primarily benefit the producers [10]. At what point do we take ethical responsibility for the destruction that extreme monetary value takes on the environment and human health? We should be. Leopold’s land ethic asks us to use a set of moral standards when faced with the difficult decisions of the land. The construction of the pipeline does not preserve the integrity or the stability of the biotic community, nor the people that live in the areas. According to Leopold, this makes it wrong because we, as individuals belonging to the earth, should be taking responsibility of the health of the biotic community. Currently we are placing the needs of the public and economic self interest before the needs of the biotic community, which according to the Land Ethic, is of the utmost importance [9]. By creating the pipeline, we are giving way to the continued overconsumption of energy, draining nature of its property and in this way we are not reflecting an ecological conscious, therefore it is ethically wrong. The earth, its land, and the biotic community it supports, along with the people in which it inhabits, have more value than the development of independent energy for the United States.

Gifford Pinchot’s standard of ethics is so that “where conflicting interests must be reconciled the question must always be answered from the standpoint of that it must always be for the greatest good of the greatest number of the long run” [11]. The most important part of his stance is that it must be for the greatest good for the greatest number of people—in the long run. In a sense, he is advocating for the modern day ideal of sustainability. When focusing on the most sustainable for the greatest amount of people, for the greatest mount of time, it forces the decision maker to consider all parties involved, including the future parties. He is trying to instill professional ethics into a way that benefits those who will get the most out of a situation—the good of thing is its use.

In terms of DAPL, the people most greatly affected then by the construction of the pipeline is the Standing Rock Sioux Tribe. Not only does it affect their past ancestors but also their current population as it has the potential to contaminate their drinking water and the ecology of the land. We should take the ethical route and acknowledges the indignities that have been imposed upon the tribe, especially when many others in Iowa have been able to turn down access of construction. This is not considering the greatest good of the people nor is it considering it for the longest time. The assistant secretary of the Army (Civil Works) even writes, “The Army is mindful of the history of the Great Sioux Nation’s repeated dispossessions, including those to support water resource projects” [12]. However, even with the acknowledgment of the distrust the tribe may feel towards the government, there is no remorse. This does not benefit the greatest good and it especially doesn’t benefit in the longest run, as it potentially ruins water resources and encourages the usage of fossil fuel emission and depletion.

The idea of preservation and conservation is extremely important in terms of how much of a resource it is ethical to take. When exploring the ethical components of conservation, Gifford Pinchot offers a good compromise. One can take resources, provided that it is the best solution benefitting the greatest amount of people for the longest amount of time. However, the pipeline is not benefitting the greatest amount of people, nor is it the best option, nor does it benefit those in the long run. In fact, while observing the fossil fuel consumption records, it will significantly harm those in the future by further depleting the ozone. Preservation is a topic explored by Aldo Leopold, who shows us the ethics of considering the land above the people and the economic benefits. In construction of the pipeline, it is clear that the consideration is towards economics and the benefit of encouraging consumption to the people. Neither preservation nor conservation, the two principles of ethics, are taken into consideration in the construction of the pipeline, therefore deeming it unethical. And what have we, if we do not have ethics?

**Conclusion and Briefing of Compromises**

 In conclusion, the disadvantages both ethically and scientifically of DAPL outweighs any hypothetical benefit of its’ completion. However, with 80% of the pipeline already constructed, perhaps it is worth considering the ethics of potential options and the science and policy used to make an informed decision. In option 1, we propose for the Sioux Tribe to have the access to scientific tools in order to excavate their sacred and cultural artifacts from any sites in way of construction and redistribute them in safe land. Some of the ways science can be benefit to the Tribe is through seismic processing tools that can locate the potential sites of interest. This would be the ethical way to give compromise to a less than ideal scenario, because at the very least the Sioux Tribe would have the opportunity to pay respect towards their ancestors and their land. If redistribution is not an option, using seismic data and GIS analysis to zone the construction of the pipeline in order to avoid the areas of sacred and cultural land, could prove to be ethical as well. In this way, policies such as spoliation would not be of issue. The second option we propose as compromise would be a redirection of route for the construction. While considerably more scientific testing should be conducted regardless, the alternatives required to be presented by NEPA laws should be considered and tested. While the environmental assessment did consider alternatives, none were determined to be fit nor did they consider a large change in redirection, especially in regards to the Sioux Tribe’s concerns. While this compromise improves on the current ethical dilemmas, it does not solve the ethical dilemma of fossil fuel dependence. Overall, the best solution is to use prevention rather than hypothetical fix to a potential complication. With respect to the earth and to the people this pipeline effects, policies should be utilized correctly to avert potential dangers than using policy to expedite the process of construction.

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