

DRAFT

ENVIRONMENTAL ASSESSMENT

Dakota Access Pipeline Project
Crossings of Flowage Easements
and Federal Lands

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2.1.2 Alternative 2 – Rail Transportation Alternative

Reliance on rail as a transportation method in the Williston Basin has drastically increased in recent years, carrying a negligible percentage of the overall market share as recently as 2010 to nearly 60% of the overall market share by mid-2014 (Nixon, 2014). The rise in the use of rail as a primary transportation method has been driven in large part by the rapid increase in production of crude oil coupled with a lack of pipeline capacity to account for additional supplies.

Negative impacts from the growth in popularity of rail as a method of long-distance transportation of crude oil include delays that disrupt the agricultural sector, reductions in coal-fired power plant inventories, and significant production issues in the food production industry. In August 2014, reports filed with the federal government indicated that the Burlington Northern Santa Fe Railway had a backlog of 1,336 rail cars waiting to ship grain and other products, while Canadian Pacific Railway had a backlog of nearly 1,000 cars (Nixon, 2014). For industries, such as those listed, in which the use of pipelines is not an option, the only viable alternative would be increased reliance on trucking, which would exacerbate some of the issues listed in the section above.

Assuming a carrying capacity of 600 barrels per car, a total of 750 rail cars would be required to depart the tank terminal daily to transport 450,000 barrels of crude oil to its final destination. Loading and offloading 750 rail cars in a day would require servicing more than 31 rail cars per hour. With an assumption of 125 rail cars per train, six trains would have to depart the tank terminal every day. With 10 to 12 trains currently leaving the state per day carrying Bakken crude, the DAPL Project would represent a 50 to 60% increase in the number of trains transporting crude oil out of the state, likely exacerbating issues with delays (Horwath and Owings, 2014).

Rail operations on the scale of the DAPL Project do not exist in the U.S. An oil-by-rail facility designed to handle an average of 360,000 bpd has been proposed in the Port of Vancouver, Washington. Known as the Vancouver Energy proposal, the project would be the largest rail terminal in the country (Florip, 2014). A rail transportation alternative to handle the volumes of the DAPL Project would require the design and construction of 125 to 158% of that of the Vancouver Energy proposal.

From a safety standpoint, railroad transport consistently reports a substantially higher number of transportation accidents than pipelines (DOT, 2005). A series of major accidents taking place in 2013 to 2014 in Canada and the U.S. has heightened concern about the risks involved in shipping crude by rail (Fritelli, 2014).

While rail tanker cars are a vital part of the short-haul distribution network for crude oil, pipelines are a more reliable, safer, and more economical alternative for the large volumes transported and long distances covered by the DAPL Project. As such, rail transportation is not considered a viable alternative.

2.1.3 Alternative 3 – Route Alternatives

Major route alternatives were evaluated for the pipeline route as a whole. During the Project fatal flaw analysis and early routing process, Dakota Access utilized a sophisticated and proprietary Geographic Information System (GIS)-based routing program to determine the pipeline route based on multiple publicly available and purchased datasets. Datasets utilized during the Project routing analysis included