UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB - 2 2015

OFFICE OF THE
EXECUTIVE SECRETARIAT

The Honorable Joseph E. Macmanus
Executive Secretary
United States Department of State
Washington, D.C. 20520

Dear Ambassador Macmanus:

In reply to your January 16, 2015, memorandum, enclosed is the U.S. Environmental Protection Agency's response to the application by TransCanada Keystone Pipeline, L.P. for a Presidential permit that would authorize construction, connection, operation and maintenance of pipeline facilities on the U.S. border with Canada in Phillips County, near Morgan, Mont., for the importing of crude oil.

I am pleased to provide this information, as you requested, and trust that the Department of State will find it helpful.

Sincerely,

Eric E. Wachter
Director

Enclosure

THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

FEB 2 - 2015

The Honorable John F. Kerry
Secretary of State
2201 C Street, N.W.
U.S. Department of State
Washington, DC 20520

Dear Mr. Secretary:

Thank you for the opportunity to comment on the National Interest Determination (NID) for the proposed Keystone XL Pipeline Project (Keystone XL or Project). The cross-boundary permitting process established by Executive Order 11423 in 1968 and amended in 2004 by Executive Order 13337 involves two stages of federal review. The first stage consists of environmental review as provided by the National Environmental Policy Act (NEPA), which helps to inform decision makers and the public about potential environmental impacts through careful evaluation of those impacts and a hard look at potential alternatives.

In accordance with our authorities under NEPA and Section 309 of the Clean Air Act, EPA has reviewed the draft NEPA documents and worked as a cooperating agency with the Department of State (Department) to strengthen the environmental analysis provided in the Final Supplemental Environmental Impact Statement (Final SEIS). I want to thank the Department for the way in which it effectively engaged EPA, the other cooperating agencies and the public during the NEPA process. EPA's most recent comments on the Final SEIS are enclosed and incorporated herein by reference.

The second phase of the permitting process considers whether the project serves the national interest. The NID process builds on the environmental review provided by the NEPA process but also involves the consideration of other factors. Our comments are limited to the environmental aspects of the project and how those may affect the United States and its national interests.

All of the potential environmental impacts in the Department's NEPA review merit consideration in the NID process, but EPA wants to draw attention in particular to the climate change implications of the Project.

Climate Change Impacts

The foundational fact from which all of the other analysis on Keystone XL proceeds is that oil sands crudes have significantly higher lifecycle greenhouse gas emissions than other crudes. The Final SEIS states that lifecycle greenhouse gas emissions from development and use of oil sands crude is about 17% greater than emissions from average crude oil refined in the United States on a well to wheels basis. On this subject there is no disagreement: oil sands crude is substantially more carbon intensive than reference crudes and its use will significantly contribute to carbon pollution. The Final SEIS acknowledges the impacts of oil sands development, but uses economic and

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financial analysis to predict continued growth of oil sands development regardless of the pipeline's construction. The Final SEIS concludes, based on market trends at the time of the document's preparation, that constructing Keystone XL likely would not have a significant impact on greenhouse gas emissions, mainly because market analysis predicts that the oils sands crude would find another way to market.

However, in recent months the global price of oil has fallen precipitously. In early 2014 when the Final SEIS was published, few predicted that oil then selling at over $100 per barrel would last week have been priced below $50 per barrel. These dramatic changes illustrate the volatility of the market and highlight uncertainty with regard to the assumption of higher oil prices on which the Final SEIS's conclusions are based.

The Final SEIS explains that shipment by rail, the major transport alternative, costs more per barrel than shipment by pipeline. Therefore, if the price of oil is very close to the cost of oil sands development, the additional cost of rail transport could make the difference in the economics of oil sands production. Below a $75 per barrel price of oil, that cost difference could be decisive: the Final SEIS concluded that at sustained oil prices of $65 to $75 per barrel, the higher transportation costs of shipment by rail "could have a substantial impact on oil sands production levels – possibly in excess of the capacity of the proposed project."[1] Below that price, many oil sands projects would not be economic, and the higher transportation costs of shipment by rail could further curtail production.[2]

In the short term, oil prices have fallen below that threshold. While long-term forecasts continue to project increasing oil prices, these recent changes underscore the uncertainty inherent in such projections; if global oil prices are lower than the Final SEIS assumed, construction of Keystone XL could end up causing more oil sands production than would have occurred without the pipeline.

In addition, other proposed oil pipelines in Canada and the U.S. face opposition from citizens, environmental groups, tribes, and local governments, for many of the same reasons that have made the Keystone XL pipeline proposal so controversial in the United States. The future of these other pipeline projects is uncertain, so in making the National Interest Determination the Department should not assume that these alternative pathways for getting oil sands crude to market will be constructed.

Given the potential impediments to oil sands growth that sustained lower oil price and constrained pipeline scenarios could present, the decision to permit the Keystone XL pipeline could increase oil sands development over what would otherwise occur, and thereby result in significant increases in greenhouse gas emissions. In addition, construction of a pipeline that lowers the supply costs of oil sands crude in the near term could result in increased development of oil sands sooner than would otherwise occur.

We all know that it is the aggregate of many decisions that will steadily turn the tide on climate change.[3] That is why the President has unveiled a Climate Action Plan and committed to an

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[1] Final SEIS Executive Summary, p. ES-12.

[2] Final SEIS Executive Summary, p. ES-12.

[3] *Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66496, at 66543 (Dec. 15, 2009): "As discussed in the Proposed Findings, no single greenhouse gas source category dominates on the global scale, and many (if not all) individual greenhouse gas source categories could

aggressive carbon pollution reduction goal in 2020. The President's more recent joint announcement with China commits us to significantly accelerating the pace of US carbon emissions reductions, as a way to strengthen our collective resolve to consider climate change in the broad range of choices that governments, companies and citizens make that impact carbon pollution in the US and beyond.

While the decision on this Project is just one of many choices we will confront as we work to reduce emissions to the level that scientists are telling us is necessary to prevent the worst damage from climate change, it will be viewed – for better or worse – as a significant signal this Administration is sending to states, tribes, businesses, the investment community, climate advocates and the international community.

Broader Climate Implications of the Keystone XL Decision

The United States has taken strong and decisive action to cut our greenhouse gas emissions. US actions include EPA's Clean Power Plan, the first-ever carbon pollution standards for existing power plants that will put our nation on the path towards a 30 percent reduction in carbon pollution from the power sector by 2030, and strengthened fuel economy standards for light and heavy duty vehicles that will double fuel efficiency and cut GHG emissions from vehicles in half by 2025, while saving Americans money at the pump. They also include the Administration's recently released Strategy to Reduce Methane Emissions, which lays out a number of cost-effective and reasonable actions the US is taking to drive down carbon emissions from our domestic oil and gas industry, as well as in other sectors.

These actions are designed to be aggressive in reducing carbon pollution but also represent reasonable, practical and affordable steps forward to encourage and expedite the transition to a low carbon economy. They are designed to send clear signals to the business community, investors and entrepreneurs about the need to consider the costs of carbon pollution, support the jobs of the future and economic growth, and spark innovation that will produce the new technologies and products that will sharpen this country's competitive edge. These actions are also about sending signals to the international community that will allow us to leverage international action on climate change.

A decision that the Project serves the national interest would need to find a way to resolve the one fact that seems most clear and compelling: oil sands crude is substantially more carbon intensive than reference crudes and over its lifetime, this Project could end up significantly contributing to carbon pollution. So while no one can predict with certainty what the global price of oil will be, whether oil sands development will be more economic in future years than it appears today, or whether other pipelines for oil sands crude will be built, this one thing is certain: approving this Project ties the US to a significantly more carbon intensive oil for the next 50 plus years.

The President made it clear in his the State of the Union address that no challenge poses a greater threat to future generations than climate change. His forceful leadership is mobilizing actions to meet that challenge through domestic policies to cut carbon pollution and international efforts to support global action. At this moment in time, when American leadership is driving strong domestic reductions in carbon pollution and reenergizing international action, we must be sensitive

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appear small in comparison to the total, when, in fact, they could be very important contributors in terms of both absolute emissions or in comparison to other source categories, globally or within the United States."

to the signal it will send if we choose to tie ourselves over the long term to high carbon intensity sources of crude oil.

I understand that the decision on whether this Project serves the national interest involves balancing many factors. While EPA's comments are focused on the environmental implications, I believe they should be a central consideration. The climate impacts of the decision – both the investment it represents in a high carbon intensity energy source and the potential that the pipeline could result in large increases in greenhouse gas emissions – and the message that approving it would send at a critical moment for international action on climate change, are at the heart of this country's national interest.

Thank you for this opportunity to comment on this very important decision for our nation's future.

Sincerely,

Gina McCarthy

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

Mr. Amos Hochstein
Special Envoy and Coordinator for International Energy Affairs
Bureau of Energy Resources
U.S. Department of State
Washington, DC 20520

Ms. Judith G. Garber
Acting Assistant Secretary
Oceans and International Environmental and Scientific Affairs
U.S. Department of State
Washington, DC 20520

Dear Mr. Hochstein and Ms. Garber:

In accordance with our authorities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, EPA has reviewed the Department of State's (Department) Final Supplemental Environmental Impact Statement (SEIS) for a Presidential Permit application by TransCanada Keystone Pipeline, LP (Keystone) to construct and operate the Keystone XL Project (Project). We are providing these comments now, rather than when the Final SEIS was published, because of the possibility that a decision of the Nebraska courts would have led to changes to the Final SEIS.

EPA recognizes that the Department has made a considerable effort to evaluate the potential environmental impacts associated with the proposed Project and reasonable alternatives, and to consider measures to mitigate potential harmful effects. The Final SEIS is comprehensive and provides responses to our April 2013 comments on the Draft SEIS. We would like to especially point out the usefulness of the new compilation of all of the proposed mitigation measures (Appendix Z).

The Department has also strengthened the analysis of oil spill prevention preparedness, response and mitigation and has committed to requiring numerous mitigation measures regarding leak prevention and detection, as well as spill cleanup measures. While risks of oil spills and adverse impacts remain, and spills of diluted bitumen can have different impacts than spills of conventional oil, the Department has included provisions to reduce those risks, including working with the state of Nebraska to develop an alternative route that avoids much of the Sand Hills region, and incorporating mitigation measures recommended by both the Pipeline Safety and Hazardous Materials Administration and the independent engineering analysis. We note as particularly important the commitment by Keystone to be responsible for clean-up and

restoration of groundwater as well as surface water in the event of a release or discharge of crude oil. These efforts will decrease the risk of spills and leaks, and provide for necessary remediation should spills occur. Nonetheless, the Final SEIS acknowledged that the proposed pipeline does present a risk of spills, which remains a concern for citizens and businesses relying on groundwater resources crossed by the route.

The analysis of climate change issues has also improved from the Draft SEIS. The Final SEIS makes clear that oil sands crude has significantly higher lifecycle greenhouse gas emissions than other crudes. The Final SEIS states that lifecycle greenhouse gas emissions from development and use of oil sands crude is about 17% greater than emissions from average crude oil refined in the United States on a wells-to-wheels basis.[1]

The Final SEIS also finds that the incremental greenhouse gas emissions from the extraction, transport, refining and use of the 830,000 barrels per day of oils sands crude that could be transported by the proposed Project at full capacity would result in an additional 1.3 to 27.4 million metric tons of carbon dioxide equivalents ($MMTCO_2$-e) per year compared to the reference crudes.[2] To put that in perspective, 27.4 $MMTCO_2$-e per year is equivalent to the annual greenhouse gas emissions from 5.7 million passenger vehicles or 7.8 coal fired power plants.[3] Over the 50-year lifetime of the pipeline, this could translate into releasing as much as 1.37 billion more tons of greenhouse gases into the atmosphere.[4]

Until ongoing efforts to reduce greenhouse gas emissions associated with the production of oil sands are more successful and widespread, the Final SEIS makes clear that, compared to reference crudes, development of oil sands crude represents a significant increase in greenhouse gas emissions.

The Final SEIS also provided a more robust market analysis, and examined how market dynamics may influence the levels of greenhouse gas emissions associated with the proposed Project. Based on that market analysis, the Final SEIS concluded, in January of 2014, that if the Project were not approved, oil sands crude would be likely to reach the market some other way, most likely by rail. The Final SEIS acknowledged that the alternative of shipment by rail is more expensive than shipment by pipeline, and would therefore increase the costs of getting oil sands crude to market.[5] However, the Final SEIS concluded that given global oil prices projected at that time this difference in shipment costs would not affect development of oil sands, which would remain profitable even with the higher transportation costs of shipment by rail. Therefore, the Final SEIS concluded that although development of oil sands would lead to significant additional releases of greenhouse gasses, a decision not to grant the requested permit would likely not change that outcome, i.e., those significant greenhouse gas emissions would likely happen regardless of the decision on the proposed Project. This conclusion was based in large part on projections of the global price of oil.

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[1] Final SEIS Executive Summary, p. ES-15.
[2] Final SEIS Executive Summary, p. ES-15.
[3] Final SEIS p. 4.14-46.
[4] Final SEIS p. 4.14-41.
[5] Final SEIS p. 1.4-90.

Given the recent variability in oil prices, it is important to revisit these conclusions. While the overall effect of the Project on oil sands production will be driven by long-term movements in the price of oil and not short term volatility, recent large declines in oil prices (oil was trading at below $50 per barrel last week) highlight the variability of oil prices. The Final SEIS concluded that at sustained oil prices of $65 to $75 per barrel, the higher transportation costs of shipment by rail "could have a substantial impact on oil sands production levels – possibly in excess of the capacity of the proposed project."[6] In other words, the Final SEIS found that at sustained oil prices within this range, construction of the pipeline is projected to change the economics of oil sands development and result in increased oil sands production, and the accompanying greenhouse gas emissions, over what would otherwise occur. Given recent large declines in oil prices and the uncertainty of oil price projections, the additional low price scenario included in the Final SEIS should be given additional weight during decision making, due to the potential implications of lower oil prices on project impacts, especially greenhouse gas emissions.

Finally, we note that the Final SEIS includes additional information on how the Department screened pipeline route alternatives, and determined what routes to analyze in detail in the SEIS. Through this process, the Department determined that the Keystone Corridor alternatives, which would parallel the entire existing Keystone pipeline route in the United States, are not reasonable alternatives for the purposes of NEPA. The additional information provided in the Final SEIS is useful, but we note that eliminating alternatives from a detailed analysis based on an abbreviated estimate of environmental impacts is not the preferred approach under NEPA's requirement to take a "hard look" at alternatives, which would provide a more detailed and comprehensive discussion of the issues associated with these route alternatives.

Please feel free to contact me or have your staff contact Susan Bromm, Director, Office of Federal Activities, at (202) 564-5400 if you have any questions or would like to discuss our comments.

Sincerely,

Cynthia Giles

[6] Final SEIS Executive Summary, p. ES-12.