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September 29, 2016

Dear Members of the TMX Ministerial Panel,

Please find enclosed my written comments about the proposed Trans Mountain Expansion Project.

Thank you

Yours sincerely,

Elizabeth May, OC, MP
Saanich-Gulf Islands
Leader of the Green Party of Canada

Submission to Trans Mountain Pipeline Expansion Project (TMX) Ministerial Panel

Elizabeth May, O.C., M.P.

September 29, 2016

It is unfortunate that the additional supplemental work of this panel was so inadequate that, as a Member of Parliament, I had no opportunity to present in person, despite attempts to have such an additional hearing in Ottawa arranged. My constituents attended the hearing held in Victoria at which most of those in attendance were frustrated by the poor organization of the meeting and the inadequate physical hearing environment, shortage of time and deficiencies that precluded them speaking to you.

I note in particular the complaints of Vicky Husband, member of the Order of Canada and member of the Order of British Columbia, who registered in advance on line only to find that procedure had no impact on speaking order. She registered again on arrival and her number was past the cut-off. One of British Columbia's most respected conservationists never had a chance to explain the threat of the project to our natural world.

With all due respect to the panel members, the perception of conflict of interest related to Kim Baird's relationship with Kinder Morgan has contaminated this panel just as severely as that of the NEB commissioners who stepped down in the NEB Energy East hearing. With so much riding on the panel's credibility and capacity to remedy a wholly illegitimate NEB process on KM, a process entirely denounced by the Prime Minister in the 2015 election, the failures of this panel and the process of consultation undertaken is shockingly flawed.

This panel cannot in any way be seen to provide a remedy for the deficiencies of the NEB process.

My submission on the Kinder Morgan National Energy Board process:

As an intervenor in the National Energy Board (NEB) hearings on the Kinder Morgan (KM) Trans Mountain expansion project, I was the only MP to appear before the NEB to make a final argument. My constituents from Saanich-Gulf Islands are overwhelmingly opposed to the project. This is confirmed in feedback at dozens of town hall meetings and in a direct mailed survey to every household in my riding.

I printed out and worked through the 23,000 pages submitted by KM to the NEB. I believe I am the only person to have done so. Much of it was duplicative, with identical sections repeated verbatim multiple times. Much of it was descriptive of the current environment and socio-economic conditions of the area to be impacted by the project. Only approximately 2,000 pages were at all relevant. It was clear that the bulk of so-called evidence was compiled in order to discourage public scrutiny and create the impression that by physical weight, KM had provided evidentiary weight. Nothing could be farther from the truth.

I am also a lawyer who once practiced in regulatory law in the public interest. I first appeared before the National Energy Board as counsel in 1981. It is a quasi-judicial body and obliged to meet minimum standards of procedural fairness. This it utterly failed to do. As an MP, an intervenor and a Canadian citizen, I should have been allowed to attend any and all of the so-called public hearings. In fact, I was only allowed in the room for a limited period on one day – for final argument.

My final argument transcript is attached. In addition, I wish to make the following comments directly to you. Given the limitations of time as I work on the Special Parliamentary Committee on Electoral Reform, an honour but one that also precluded me being able to attend any of your hearings and one that makes an adequate submission now quite challenging, I am adding key points in bullet form. References are attached. I am available to your staff, or that of the Minister of Natural Resources, Environment and Climate Change, or the Prime Minister to verify every point I make below.

1) The KM project has not been reviewed by any regulatory body or agency to assess if it is in Canada's economic interest. There is no information from any credible source to claim the project is in our economic interest.
2) In response to a challenge by UNIFOR, the NEB refused to consider the economy, job creation or economic benefit stating it was beyond the scope of the hearing.
3) Had this review been under the pre-2012 Canadian Environmental Assessment Act, the review would have been by a federal-provincial panel, (not the NEB) the hearings would have invited public participation and the environmental review would have included an examination of alternatives and socio-economic impact. The process was flawed by the NEB not knowing how to conduct a hearing while working under a fatally flawed piece of legislation, CEAA2012.
4) UNIFOR intervened against the project as the KM project is a net job exporter. In fact, if it proceeds it is likely the Chevron Refinery in Burnaby will be forced to close as a result. The Chevron refinery has already reduced production and reduced its workforce by one third as a direct result of the existing NEB permissions for KM to export raw bitumen. Shipments of bitumen mixed with diluent have received preferential treatment by NEB licencing and shipments of syncrude have been reduced. That is why Chevron has difficulty obtaining crude it is capable of refining. Like other Canadian refineries, Chevron in Burnaby cannot process raw bitumen. See Unifor Written Argument to the NEB.
5) Bitumen for export costs Canadian jobs.
6) The government should conduct a review of the economic impact of processing bitumen in Alberta and prioritizing use of the refined product in Canada, while reducing imports of foreign oil. This should be placed in the context of an overall transition off fossil fuels. In the context of developing a climate plan that seeks to reduce, not expand emissions as under Alberta's current target, the study should assess the amount of carbon that needs to stay in the ground and the amount that

can be used as we eliminate coal from electricity, while estimating the remaining use of oil, gas, diesel and propane in Canada from refined bitumen within the carbon budget.

7) Environment Canada was incorrect in assessing that the KM pipeline will not cause an increase in GHG. The departmental review made a critical error, in contrast to the Keystone US Environmental Impact Statement (EIS) prepared from Secretary of State John Kerry. The US EIS found that the question of whether a new pipeline would stimulate increased investment in the oil sands, with expansion increasing GHG, to be price dependent.
8) As long as the price of a barrel of oil in world prices is below $80/barrel, any new pipeline infrastructure will create pressure to increase production. The building of a pipeline is irrelevant to expansion and growing GHG emissions concerns when the price is above $80/barrel. While it is not possible to know with certainty the price of a barrel of oil next year, we can state with certainty that building any pipelines for export of raw bitumen at current prices, or even at a price close to double the current price, will create pressure for additional oil sands production and an increase in GHG. (Again, review attached Keystone EIS).
9) The evidence produced by KM is not worth the paper it is written on as it was never tested in cross-examination.
10) The only evidence from KM about the fate and persistence of bitumen and diluent in the marine environment came from a one-time only, non-published, non-peer reviewed experiment over a 10 day period in Gainford Alberta. The researchers who conducted the experiment were not put forward for cross-examination, and neither did they respond in writing to interrogatories. (See my final argument for greater detail).
11) Published studies, peer-reviewed and conducted in conditions that replicate the marine environment demonstrate that the dilbit mixture separates and that small “oil balls” of bitumen are created and sink (DFO, Royal Society of Canada et all, as in my final argument.)
12) The tanker route is along the US border through the shared international boundary cutting through the Salish Sea. The southern Gulf Islands and the Washington State San Juan Islands are essentially one ecosystem. No satisfactory consultation has taken place with Washington State officials, or the US EPA. From personal knowledge of concerned residents on the US side of the border there is deep alarm about the KM project.
13) No approvals should take place without consideration of the Good Neighbour principle under international law.
14) First Nations impacted by the project have not been consulted in ways that come close to the constitutional requirements confirmed in numerous Supreme Court of Canada decisions. A number of First Nations have filed legal actions, but it is not said often enough that this is essentially an unfair situation. The failure of governments

to listen to the facts and separate themselves from the mindset that assumes these projects have benefit has created an unfair burden on some of our poorest communities to spend scarce resources on legal action. This time, over KM, the government should make a clear and unambiguous statement that consultations with indigenous peoples cannot be rushed and require a full and respectful nation-to-nation process.

15) The First Nations in SGI have a specific and different set of rights than many others opposing the project due to the Douglas Treaty. Each individual member of the Saanich First Nations has a right to commercial activity along the tankers' routes. This has not been addressed. (Attached final argument Adam Olsen, Tsartlip First Nation.)
16) The massive increase in tanker traffic through the port of Vancouver has been clearly established by the evidence of the City of Vancouver to represent an unacceptable risk.
17) It is not a question of the risk of a tanker accident, but the certainty of one. As TransMountain KM has no responsibility for the as yet unidentified tankers or their owners, the treatment of these risks has been cursory.

The only credible additional information that this panel is qualified to pass on to the federal decision-makers is that this project cannot be approved. The following commitments from the Liberal government will be violated should the project be approved:

1) A respectful nation to nation relationship with First Nations;
2) Evidence-based decision-making;
3) Science-based decision-making;
4) Action to reduce Greenhouse gases.

13869. With that, we thank you and we will take a short five-minute break and hear from Ms. Elizabeth May who will be next.

13870. Thank you.

--- Upon recessing at 10:17 a.m./L'audience est suspendue à 10h17
--- Upon resuming at 10:26 a.m./L'audience est reprise à 10h26

13871. **THE CHAIRMAN:** Sorry for being so tardy coming back. We would now like to hear from Elizabeth May, a Member of Parliament from my riding of Saanich-Gulf Islands.

13872. So with that, Ms. May, I think you understand the clock system and we are looking forward to hearing your oral summary argument. Thank you.

13873. **MS. MAY:** Thank you, and I was also aware that you're a resident of Sidney. So I represent you in Parliament among the other residents of Saanich-Gulf Islands. I also have in common with Ms. Scott. We went to the same law school. And I have yet to figure out what Mr. Davies and I have in common, but we'll find something.

13874. **THE CHAIRMAN:** I might challenge you in that later.

--- FINAL ARGUMENT BY/ARGUMENTATION FINALE PAR MS. ELIZABETH MAY:

13875. **MS. MAY:** Well, I want to start by acknowledging that we're on the traditional territory of the Coast Salish peoples of the Tsleil-Waututh, Musqueam, and Squamish First Nations.

13876. I am also honoured to take the podium right after the Squamish First Nation and Aaron Bruce and a very compelling final argument.

13877. My constituents form a number of the Intervenors before you in this Panel. As it happens, Dr. Andrew Weaver is a constituent and as is Adam Olsen, who spoke as a member of the Tsartlip First Nation. Dr. David Farmer, a very distinguished scientist, is also one of my constituents. And there are four First Nations within Saanich-Gulf Islands, three of which presented a significant final argument as well as evidence before you.

13878. So I have to explain that I'm here in my capacity as a Member of Parliament. I applied for Intervenor status nearly two years ago to represent the interests of my constituents. I'm here in that sense in a non-partisan way.

13879. By way of some background, I first appeared before the National Energy Board as counsel in 1981. I am very familiar with the National Energy Board and in its previous state, which we used to refer to as a quasi-judicial body. I know the nature of administrative law has moved apace and there is now the notion of a spectrum of different bodies between courts of law through administrative bodies.

13880. But it's very clear that much has changed in National Energy Board process, which has made this particular application enormously challenging; challenging for the intervenors, challenging for the public. And as you've heard in many of the final arguments already, the target of promised political changes from our new Prime Minister.

13881. The challenge to this process is also doubly difficult because of the changes that were made in the spring of 2012 in Omnibus Budget Bill C-38, which I vigorously opposed. And for the first time, the National Energy Board was put in charge, as were a number of other regulatory energy bodies, of environmental assessment.

13882. And with all due respect, I think the National Energy Board is completely unsuited and inexperienced and should never again be put in charge of environmental assessment. But that's obviously not your decision. It was a decision made by a Parliament that pushed it through under the previous Prime Minister.

13883. But as a result of those changes, there were timelines associated with this hearing and those timelines were used as the excuse to drive quite a few changes in terms of procedural rights for Intervenors. This has raised many issues throughout this hearing of procedural fairness, and I think those arguments are serious. Procedural fairness was not observed in denying oral cross-examination, for example.

13884. But in this final argument, what I want to try to do is, in a cross-cutting way, look at the issue of the lack of oral cross-examination not just as a matter of an offence to the rights of people like me as Intervenors but to the quality of the

evidence you have before you as decision-makers.

13885. Because the essence of cross-examination is not just an aspect of fairness to participants. It is for the adjudicators of facts an essential way that evidence is tested and facts can be determined. And I submit to you that there is a significant frailty to the evidence that would not be in place had cross-examination occurred.

13886. So I want to go through some of those issues with you and I will use it, as I said, in a cross-cutting way.

13887. Now, let me explain what I did as an intervenor, in approaching Trans Mountain's application. I can't really -- it must be an age thing, or a generational thing -- I can't cope with things that are just on Internet, or that I can access electronically, so I printed it out. I took it to the local print shop. It came to 23,000 pages.

13888. And then I sorted it. I actually dealt with it physically. I went through and removed all the duplicative bits, all of the repetitive descriptions of the project, all of the PowerPoint presentations that were identical, but for the name of the town where it was presented and the date. I took out all the repetitive, non-important, irrelevant material. That set aside several thousand pages.

13889. I went back and then sorted through the very useful description of the area as it now is, our healthy environment as it exists -- and of course recognizing, as the Squamish Nation just pointed out, clam beds have been lost, it's not entirely a pristine environment, but there's a good description and there's a description of the economic benefits of the various sectors that are risk here. I set that aside and I read everything else.

13890. Now, my conclusion is that Trans Mountain set out to make their application unnecessarily long with the intention of intimidating people from actually approaching it and doing what I did. Very few people will have read every section in the various parts of the application. And when Trans Mountain claims that they've been rigorous or that their eight volumes somehow connote some level of diligence, I submit to you that it was entirely aimed at discouraging public engagement.

13891. It's in reading the document in its entirety that it becomes clear that Trans Mountain applied, for instance, very different approaches to some risks

than to others. In the absence of cross-examination, I wasn't able to put this to them, but I would submit to you in final argument, that repeatedly Trans Mountain rejects certain scenarios as low probability, low likelihood, and particularly, plausible worst case scenarios, such as those put forward in the excellent analyses from the City of Vancouver, from Burnaby, from groups like Living Oceans, from the Tsleil-Waututh First Nation. They set those aside, and you can find a reference to their dismissal of those in page 331 of their final argument, a similar comment in response to my information requests at page 15 of my second IR. And Trans Mountain responded, an oil spill from a project related tanker is a low likelihood occurrence. You -- these are repetitive through -- they say a tank farm fire. Again, low likelihood occurrence.

13892. On the other hand, some very low probability events, and I'd say on the order of vanishingly small to nil, get a lot of attention. A highly fanciful low probability of answer described in detail in the Agriculture Assessment Technical Report, Volume A3S2K9, pages 7 and to 12, is the discussion of the risk of pipeline construction increasing avian flu.

13893. They put forward the hypothetical risk that a construction worker will blunder into a poultry barn and through viral material on their boots contaminate poultry. This is -- I can't find any record of this ever happening in real life, unlike a lot of low probability events, such as pipeline breaks and tanker leaks that do happen in real life. But they -- they'll put attention to this and they're going to make sure their construction workers wear booties and have foot baths available to avoid contaminating the poultry barns that I -- do you think, anyone here think there's any chance of a construction worker deciding to blunder into a poultry barn?

13894. Okay, another one is the threat to milk production in that same volume, A3S2K9 at page 2 to 7, where they, and I quote, Kinder Morgan has determined, quote:

"Milk cows are very curious." (As read)

13895. And they then conclude that there's a risk to milk production because the curious milk cows will become fascinated by the pipeline construction and it might diminish production.

13896. I mean -- well, if there had been cross-examination, I would have liked to put to them why are these fanciful low probability events treated as credible by

you, but a worst case scenario of an accident in Vancouver is not credible?

13897. The role of cross-examination is more than procedural fairness; it is about testing the quality of the evidence, and any book on evidence will tell you that it's particularly essential, when issues of credibility are at stake, but it's also generally of assistance in weighing competing expert reports. In a normal NEB hearing, I would have been here with experts able to cross-examine experts and ask questions that went to the heart of whether they knew what they were doing when they did certain studies.

13898. Now, the novel approach taken in this hearing -- and this is unprecedented to have no access to cross-examination. But it's not just a question of whether intervenors got oral cross-examination or written; that isn't the issue. And it hit me the other day when I was preparing this argument: we never got to question the witnesses at all.

13899. We were able to ask questions in writing of Kinder Morgan, and I suspect their legal counsel prepared the answers. We never got to ask any questions at all of the witnesses who prepared the evidence on which this application is based, and similarly, none of our expert witnesses who prepared reports -- and I speak of "our" in a collectivity of intervenors -- were subjected to cross-examination.

13900. So it's a really huge level of disconnect here between those who presented the evidence as experts and those who intervened to try to get to the truth of the matter, and what it does is it fundamentally undermines the reliability of the evidence that you must rely on in coming to your decision.

13901. It's an enormous flaw in a process, and it's not just about procedural fairness, although it is that; it is more fundamentally about a disconnect between those who prepared the evidence and their proxies, who prepared, as you've heard from many intervenors, completely unsatisfactory replies. In essence, the intervenors were never allowed to put any questions at all to those people in a position to answer the questions, and this leaves the National Energy Board with a pile of untested evidence.

13902. Now, I'm going to go in my next section of what I want to put to you, some specific examples of where cross-examination would have helped. A key focus that I looked at as an intervenor is the behaviour of bitumen and diluent in water, both marine and fresh water.

13903. Now, at page 333 of their final argument, Trans Mountain makes it clear that it again confirms that it primarily relied on its Gainford Study. Now, one thing about scientific evidence is that in a sense the scientific peer review process does something that in a legal context cross-examination also does. It verifies. So the Gainford Study, it must be noted, was not peer reviewed.

13904. Now, the Gainford Study was asked three questions, but it was not, for instance, within the scope of that study to ask can you recover bitumen once it sinks below the water. That was not included, and nor was it included to study what happens. How much of the diluent will volatilize? How much benzoin is going to get in the atmosphere? That was not part of the Gainford Study.

13905. Now, I asked questions about the Gainford Study repeatedly, and I never got satisfactory answers. Now, part of the reason was this disconnect of it being in writing, and the other part was I was asking essentially Trans Mountain lawyers and not the people who did the study.

13906. But Trans Mountain has focused all of their confidence that bitumen and diluent will behave the way crude will behave in a marine environment, on a one-time only 10-day study. So when I asked repeatedly if they didn't agree that it would be -- if this was not inadequate for large-scale conclusions, the response in the information reply was to point out that 10 days was enough because the cleanup crews will have arrived. The 10 days is enough to know that you're going to get your booms and you're going to start the cleanup effort within 10 days.

13907. But that wasn't the main point of my question. I tried again. I mean, this was a very inadequate test with inadequate tools. They had a small pail test, where it's reported in the evidence that they didn't have a ruler wide enough, the spill went a little bit wider than the ruler they had. The people who did the study report in their notes that it would have been a good idea to repeat the experiment with better equipment.

13908. So when I asked Kinder Morgan, wouldn't it be a good idea, since it's in a comment in the Gainford Study it would be a good idea to do it more than once, since the equipment wasn't all that good. And they -- basically, they took fresh water, they added salt, they're in Gainford, Alberta. They failed to meet the temperature or the pH parameters that were set in the study going in because it was an exceptionally hot time in Alberta. The temperature -- they said, well, maybe that’s like summer in the Burrard Inlet.

13909. I mean, they have obviously not been in the Burrard Inlet in summer. It was a completely non-responsive reply that I got from Kinder Morgan. But they did say, "Don't worry, other studies have corroborated what we found in the Gainford Study." But that's increasingly not the case.

13910. Increasingly -- and I submitted in my evidence one study done with much more sophisticated equipment at the Bedford Institute of Technology. Bedford Institute Study was led by King, lead author, et al, titled "Flume Tank Studies to Elucidate the Fate and Behaviour of Diluted Bitumen Spilled at Sea." Now, this study was peer reviewed. So that's one hint in terms of what evidence can be more reliable. And it is in the -- on the evidentiary record because I submitted it in the evidentiary period.

13911. Now, the King Study -- and this is also significant -- found that:

> *"...all [...] the product would likely sink in freshwater environments."*

13912. That's important. The question of how diluent and bitumen will behave at sea is of grave concern to the people of Saanich-Gulf Islands, but so too is the risk of pipeline spills all along the route. And in freshwater "all the product would likely sink."

13913. Now, what the King Study found about seawater -- and they had the advantage of using actual ocean water. They had the advantage of tanks that actually did a better job of simulating what an ocean natural weathering would be. They found:

> *"...after 7 days of natural weathering, some of the [what they refer to as] AWB,..."*

13914. Access western blend, but basically the bitumen material.

> *"...became dense [...] enough in the form of oil balls to sink in brackish water."*

13915. From the King Study, which is in my evidence.

13916. Now, a similar finding I've included in the evidence -- this is a joint

three federal department study of Environment Canada, as it was then called, the Department of Fisheries and Oceans and Natural Resources Canada. In my evidence it's submitted as what they had as a PowerPoint presentation of February 4, 2015. And they also confirmed oil balls form and sink.

13917. Now, in reply to my interrogatories and information requests, Trans Mountain said -- and this is in my second IR under letter (h) as a response. Trans Mountain says:

> *"Recently announced studies include those led by the Royal Society of Canada and the U.S. National Academy of Sciences."*

13918. It's at page 7 of 23.

13919. Now, this was in Kinder Morgan's effort to say, "Well, lots more studies are coming." But you'll note they didn't want to hear those studies when they were published. Having referenced the U.S. National Academy of Sciences report in their response to me, I think Trans Mountain should have been estopped from objecting to the introduction of that study in evidence here. It was rejected as unfair to Trans Mountain to accept a new study which doesn't corroborate their Gainford 10-day test.

13920. As Dr. Andrew Weaver has pointed out in his written evidence -- written -- rather written final argument, the Royal Society of Canada expert panel and the U.S. National Academy of Sciences report:

> *"...make it clear that we simply do not know enough to properly assess the risk and potential damages associated with a diluted bitumen spill in the Salish Sea."*

13921. Now, further, and this was just recently that you heard from Dr. David Farmer in person, as you've also heard from Dr. Weaver in person, but Dr. Farmer's evidence is quite compelling that the Trans Mountain model, which is private to them and was never submitted for peer review as a model, but the model was inadequate and utterly fails to consider the oil subduction caused by tidal fronts in the San Juan and Gulf Islands marine route.

13922. Now, Dr. Farmer, I have to say, is both a constituent, but I -- when I looked at his CV, he's a modest man. I hope you looked at his CV. To be a

fellow of the Royal Society of London and the Royal Society of Canada, I don't think any of the people who submitted any expert evidence for Trans Mountain have that distinguished a scientific career as Dr. Farmer.

13923. But what he proved -- and proved -- I would say he has proven that Trans Mountain misunderstood the physical processes involved and even of the literature they referenced in their own application. Dr. Farmer's written final argument notes that:

> *"Trans Mountain appears not to have reviewed the literature it references in its application."*

13924. This was the sort of thing that needed real cross-examination.

13925. Now, another place where we needed real cross-examination is the risk of pipeline accidents. While Trans Mountain repeatedly points out throughout its evidence, throughout its argument, that tankers leaving the Westridge Terminal are not their responsibility nor under their control, clearly pipelines are directly their business and directly in their control.

13926. With over 116 at least salmon-bearing crossings in B.C. alone, and that's admitted by Trans Mountain at page 305 of their final argument, and particularly the Fraser River and its critical importance for so many different salmon runs, any pipeline accident such as the one which actually occurred in Kalamazoo, Michigan under Enbridge's control could have devastating impacts.

13927. In this cross-examination of Trans Mountain's confidence in its own record, despite the numerous accidents that have been reported in which the City of Vancouver final argument makes very clear are relevant, but its reliance on its detection systems, early warnings, bells, whistles, alarms, technology will make sure the pipelines don't fail. Now that, by the way, is referred to at page 147 of Trans Mountain's final argument, how much they rely on the great technology to warn them that make it almost impossible to imagine a serious pipeline accident.

13928. So the reason why I submitted in my evidence the report of the U.S. -- and it's really the U.S. National -- the Transportation Safety Board accident report on the Kalamazoo, Michigan spill. I recommend it to you as individual Panel Commissioners to read this, to read -- it's not just one example of human error. It's a catalogue. When this was released, the press release and the comments from the U.S. agencies that reviewed this was -- were that Enbridge had a culture

of negligence.

13929. And part of a culture of negligence comes from extreme confidence in your technology and a kind of complacency that comes from that.

13930. So sure enough, I mean, when the pipeline broke in Michigan, the bells and whistles all worked. There were 20-minute alarms ringing in headquarters, in the control booth. And the technology people there, the engineers, the people running Enbridge's pipeline looked at the bells and the whistles and heard the alarms, and just like as if we were at home and we had a piece of toast stuck in the toaster and it set off the alarm in the house, they went around switching off the alarms because they concluded, well, there's a pressure drop because they were testing the pipeline, so there's nothing wrong here. Our equipment is malfunctioning.

13931. One shift went home. The next shift showed up. The first shift never told the second shift they'd had alarms. They start -- 81 percent of the bitumen and diluent that contaminates the Kalamazoo River to this day, 81 percent of that spill occurred after the alarms because they chose to ignore them. It's instructive to know what happens in real life. I would have liked to have asked them questions about that on cross-examination.

13932. Human error must not be discounted in probability of risks, particularly as Vancouver's evidence and final argument has confirmed, there are numerous other examples of human error. We don't have to go any farther, actually, than imagining how unlikely it was that Vancouver would be dealing with a spill from the Marathassa, a relatively small spill that lapped up on the shores of English Bay. We've had recent experiences with implausible spills.

13933. So Vancouver's argument makes it clear. But we know that across all of those salmon-bearing streams, freshwater, if bitumen and diluent leak it will sink. And it's almost impossible to clean up, as the Kalamazoo, Michigan spill has made it very clear.

13934. This should have been cross-examined in evidence. It's not clear that the industry in general nor Trans Mountain in particular have learned anything from the Kalamazoo accident. In fact, I was astonished to find this quote at page 286 of Trans Mountain's final argument in which they say:

"Evidence from actual case studies showed that freshwater

ecosystems recover from oil spills, often within relatively short periods of time."

13935. Well, they certainly can't be referring to bitumen and diluent because our experience with that is entirely to the contrary. I mean, I'm -- you know, the fuel truck that spilled into Goldstream, we remember that. That was horrific. But the damage was limited pretty much to one year. The salmon were back the following year. So I don't know what evidence from actual case studies Trans Mountain wants to cite. But we know when bitumen and diluent spill in freshwater there is not a quick recovery.

13936. So our last example for cross-examine was real -- cross-examination was essential and not allowed is the one issue I know on the record that really deals with credibility; the credibility of an expert report that used information that should never have been cited.

13937. Now, this issue was first identified by former intervenor Robyn Allan, and I think in the public interest and for all Canadians, a public thank you to Robyn Allan for diligent work. I understand her reasons for withdrawing from this process. You can see I want to give it the old college try and keep fighting to ask you to turn this project down in your recommendation.

13938. But Robyn Allan identified the use of an environmental protection agency document from the U.S. government in Dr. H.J. Ruitenbeek's study on estimating oil spill costs. Contrary to Trans Mountain's protestations, Ruitenbeek did cite a study by Dagmar Etkin. That study was cited in his expert report to this body as "Etkin, D.S. 2004. Modeling oil spill response and damage costs. US EPA".

13939. Now, if you seek that out on the US EPA Web site it appears as -- in capital letters, DRAFT, and it says: "Do not cite or quote." But, on the copy that was included in the evidence to this Panel, that disclaimer was not on the copy provided to the National Energy Board.

13940. Now, this is not a small matter. So the fact that a disputed and unethically sourced document is actually the only source cited by Ruitenbeek that dealt with terrestrial data. So any conclusions by Ruitenbeek on cost of a spill on land had to have included that information.

13941. Now, it's on the record, it's in the evidence, it's in many of the

motions and applications from Robyn Allan that when she contacted the US EPA they said, "No, that was a draft that was eliminated at the first stage of peer review because it's not a reliable approach."

13942. Now, Trans Mountain claims it's all inconsequential whether it was a draft or a final, but I think it contaminates the basis of the evidence. This is the strongest example because it goes to the issue of credibility where an expert should have been asked on the stand. Maybe there's a sound answer, but we were never able to ask either Ruitenbeek or Etkin how they decided to whiteout the words "DRAFT, do not cite."

13943. This is exactly where cross-examination is necessary or it undermines the integrity of the evidence. And if there is a valid explanation for this, neither Etkin nor Ruitenbeek were ever put forward to explain themselves.

13944. Additional points: As the Member of Parliament for Saanich-Gulf Islands I have an interesting role in relation to the First Nations communities in my riding. We have a nation-to-nation relationship, and yet I'm also their MP and work for them, they're my constituents, they're my boss, they're also First Nations. And as the Tsawout and Tsartlip briefs so strongly put it, they explain the Douglas Treaties.

13945. The Douglas Treaties are among the strongest, clearest treaties to protect, in perpetuity, rights of First Nations peoples and the Coast Salish peoples to use of and fishing rights and so on, it's very clear.

13946. So I do not stand here to speak for First Nations, that'd be completely inappropriate. My -- I raise my hands, I'm so grateful to Tsleil-Waututh, to Squamish, to all the First Nations that have come here to protect our home. As we heard from Aaron Bruce, we -- they speak of Squamish Nation as home, it's our home too.

13947. I have to say I find it disturbing that Trans Mountain refuses to use the words First Nations in its argumentation or evidence. They refer to First Nations as "Aboriginal groups", as if they're mere stakeholders. I think there's a profound -- potentially profound misunderstanding of the constitutionally protected rights and treaty rights to First Nations.

13948. Now, primarily it's the fiduciary responsibility of the Crown; I completely agree with the lawyer for Squamish Nation, it's the honour of the

Crown that's at stake here. But it needs to be noted that this project cannot be approved without offending our Constitution inherent rights of First Nations and treaty rights.

13949. Secondly, I wish to provide full support to all the intervenors who argued that it was inappropriate for the National Energy Board to exclude climate change as a key; in fact, the most vital, consideration.

13950. I'm updating slightly Vancouver's excellent final argument in which they spoke of the importance of avoiding 2 degree Celsius global average temperature increase. But under the recently concluded Paris Agreement of December 2015, it's 1.5 degree Celsius that we must strive to avoid. That translates into a very different energy future; that translates into moving away from fossil fuels as quickly as possible.

13951. As you've heard from numerous witnesses, this goes to many different levels of question. What kind of security and so-called need for the project? What's in the public interest for Canada? To exclude climate change is, I think, an egregious mistake that goes to the heart of this issue.

13952. In a similar context, in the United States when the State Department did an environmental impact statement on Keystone Pipeline, they made greenhouse gas implications the key question and they studied it. And it was on that basis that they turned down Keystone. So it's -- it remains -- as a Member of Parliament for me and I think most of constituents find it incomprehensible that climate considerations were excluded in this process.

13953. The next issue that needs to be mentioned is the threat to the Southern Resident Killer Whale populations. I know this troubles the Board. It troubled me that when the Department of Fisheries and Oceans made recommendations to Trans Mountain about steps they could take.

13954. Trans Mountain's approach is just to say, "Well, we're one of many out there who threaten the survival of the species." There's nothing specifically in the responsibility of Trans Mountain to take steps to protect the Southern Resident Killer Whale population from both the noise of the increased tanker traffic going from one a week to one a day; it's going to have a very significant impact. We're talking about a threat of accident that could really damage the entire marine ecosystem.

13955. So there's no specific responsibility felt at this point by Trans Mountain, and I think that's fatal to their application.

13956. I also want to support the evidence and the final argument of one of Canada's largest labour organizations, Unifor. Unifor's evidence is that the Trans Mountain expansion threatens existing jobs in Canada's refineries, particularly specifically here in Burnaby, the Chevron Refinery. It also threatens other value-added jobs because shipping out raw bitumen is all about not refining it in Canada. And it's a threat to many thousands of people who work in the commercial fisheries.

13957. Now, Unifor's final argument notes:

> *"This Panel determined that consideration of potential adverse impacts of the... [Trans Mountain expansion] on job creation, Canadian energy security, and diversification of the oil and gas sector was beyond its mandate."*

13958. Page 8, Unifor's final argument.

13959. I think that's also lamentable. Even on the economics this project fails. It can only get a green light under public interest if key risks are excluded, like climate change, and key benefits are overstated, like the economics of the project. This project is, as you've heard from many other intervenors, only in Kinder Morgan's interest.

13960. So I put it to you, in conclusion, that -- as other members of the public have tried to come here as intervenors, have tried to say; this process is broken, through no fault of your own. Bill C-38 took a hatchet to environmental assessment and mucked up the role of the NEB.

13961. On top of that, after two years -- is it really two years since I applied to be an intervenor? -- I find it astonishing that this is my first time to be allowed in the room with a little tag that says, "If I leave the room, I have to surrender the tag and have to apply to come back in the room." This level of security doesn't exist at the Supreme Court of Canada, nor in the Parliament of Canada.

13962. We're at a public hearing and as people can see as this is live-streamed, the room is mostly empty because unless you've applied ahead of time -- and I can bring one friend with me, I should have introduced her by now, Dr.

Lynne Quarmby is the Chair of the Biochemistry Department, Simon Fraser University. And when Kinder Morgan boasts of its stakeholder engagement, I suppose that includes filing a lawsuit against Dr. Lynne Quarmby for $5 million for what they call, "tortuous conspiracy," because she had the gall to protest their project and to write an op ed it. The lawsuit has since been removed.

13963. This is a broken process. On the science, Kinder Morgan has to get a failing grade. Real scientists have come before you, like Dr. Andrew Weaver. I recall for you his, "You can't make this stuff up" moment. Real scientists have come before you, like Dr. David Farmer, like Dr. Andrew Weaver. On the science Kinder Morgan gets a failing grade.

13964. So we must take -- and I submit that you must take careful stock of where governments stand on this project. The Government of British Columbia says its conditions have not been met. The municipalities of Vancouver, Burnaby, Victoria, North and West Vancouver, as well as First Nations have called on you to use your discretion as finders of fact and as makers of a recommendation to say we recommend this is not in the public interest.

13965. We must look at particularly the leading efforts of First Nations and recognize the constitutional implications, as I've already referenced.

13966. This project fails to meet the public interest test even when you exclude things that are off the list. It represents an unacceptable risk to ecosystems, endangered species, existing industries, economic activities, and livelihoods. It poses a threat to thousands and thousands of British Columbians, a risk for which there is no benefit to those same British Columbians. It fails a national test in the public interest.

13967. So I urge you as Commissioners and Members of the National Energy Board to review the evidence fairly. Look at the weight of the Intervenor evidence. Consider the frailty of evidence that has not been tested under cross-examination. And bear in mind that peer reviewed studies have at least had some real review whereas Kinder Morgan's evidence, for the most part, has had none.

13968. I acknowledge the foundation of any decision is evidence but you must have a foundation on which you can build something, and the evidence put before you by the Applicant isn't solid. It's shifting sands.

13969. I urge you; in fact I beg you, I implore you to recommend against this project, its application, any licence for it. It must die here.

13970. Thank you.

--- (Applause/Applaudissements)

13971. **THE CHAIRMAN:** Dr. May, the Panel have no questions for you. It is -- your statements -- we understand your position. We're very clear on it, and we will consider it with all the other evidence that we're still yet to hear on the oral summary argument while we consider this difficult decision for the Board on this matter.

13972. So with that -- and I do recognize Dr. Quamby as well, and so it's nice to see you here today.

13973. So with that. we will take a short break and we will then hear from the Stó:lō Collective.

13974. Thank you.

--- Upon recessing at 11:04 a.m./L'audience est suspendue à 11h04
--- Upon resuming at 11:17 a.m./L'audience est reprise à 11h17

13975. **THE CHAIRMAN:** Good morning again.

13976. And we would like to welcome the representatives of the Stó:lō Collective to present their oral summary argument on this case. And I understand we'll start with Chief Jimmie if I'm correct.

13977. Proceed. Thank you.

--- FINAL ARGUMENT BY/ARGUMENTATION FINALE PAR THE STÓ:LŌ COLLECTIVE:

13978. **CHIEF JIMMIE:** (Speaking in native language).

13979. My traditional name is Lenéx wi :ót. I'm the elected Chief of the Squiala First Nation, also the President of Stó:lō Nation and the President of the Ts'elxwéyeqw Tribe.

Trans Mountain Pipeline ULC on behalf of Trans Mountain Pipeline L.P.
(Trans Mountain)

Application dated 15 October 2013 pursuant to Part IV of the *National Energy Board Act* (the "Act") for approval of Tariff Amendments regarding Verification Procedures (the "Application")

Hearing Order RHW-001-2013

WRITTEN ARGUMENT OF UNIFOR

1. For some time now the Chevron refinery in Burnaby BC has been unable to access to sufficient capacity on the Trans Mountain Pipeline to meet the needs of the refinery. The problem isn't that Chevron is unwilling to pay the price for the pipeline services it needs, but is entirely a consequence of tariff rules that prevent it from bidding for those services on a competitive basis.

2. The tariff rules in questions tilt the playing field decidedly in favour of export markets, and the large refineries operating just over the U.S. border. This explains why the majority of Trans Mountain Pipeline flows are destined to foreign markets while the Burnaby refinery, which is the only refinery operating in the lower BC mainland, is starved for supply.

3. The result threatens the security of energy supplies to BC consumers that rely on the Burnaby refinery for refined products, including gasoline and home heating oil. It also puts the jobs of refinery workers in jeopardy.

4. In simple terms, the Trans Mountain Pipeline Tariff creates an artificial market for pipeline services that discriminates against Canadian consumers, and puts the Burnaby refinery at a distinct competitive advantage relative to larger US refineries. These tariff rules are entirely at odds with the Canadian public interest.

5. It is apparent from the proposals and final argument of Trans Mountain that it is essentially satisfied with the status quo. The band-aid 'solutions' it presents will not resolve the problems created by the Tariff because they would allow shippers to continue to game the system by bidding for much greater pipeline allocations than they require or expect to utilize.

6. Moreover, the problems caused by the fictitious bidding system allowed by the Tariff are seriously exacerbated by the manner in which it has been administered by Trans Mountain which allows US refiners to submit inflated bids for pipeline capacity that far exceed the capacity of the Puget Sound pipeline they rely on to supply them.

7. Much of the evidence presented in these proceedings has been subject to confidentiality rules that have precluded public access and the transparency that must attend NEB proceedings. For this reason Unifor has declined to enter into the confidentiality undertakings necessary for it to access evidence that it would not be entitled to share with its members.

8. The following argument does not, therefore, address the specific and often confidential particulars of proposals to amend the Tariff. Nor is it necessary for Unifor to do so to make the essential point that the Board must eliminate tariff rules that treat Canadian refiners in an unfair and discriminatory manner relative to their U.S competitors.

9. The other issue addressed below is the perverse argument by Tesoro - a U.S refiner that benefits under the current tariff regime - that removing these discriminatory measures would offend the requirements of North American Free Trade Agreement (NAFTA). NAFTA rules prohibit measures that discriminate against US companies, they do not require that Canada accord them preferential treatment, yet that is the precisely the effect of the current tariff rules and why they need to be removed.

10. The following submissions rely extensively on the un-contradicted evidence of Unifor.[1]

Unifor's Interests in these Proceedings

[1] C-14-03 - Unifor Evidence (A59817) and 14-08-21 Unifor - Evidence of Unifor (A62347)

11. Unifor has intervened in these proceedings because it has both a direct and public interest in the matter before the Board. Its direct interest arises from the fact that the jobs of its members depend upon western Canadian refineries having sufficient and secure access to the Trans Mountain Mainline System (the "Pipeline"). Its public interest concerns stem from its commitment to promoting energy security for individual, commercial and industrial consumers in Canada.

12. Unifor members are employed at three Canadian refineries that depend upon the Pipeline to ship oil or oil products: the Chevron Refinery in Burnaby BC, and the Suncor and Imperial refineries in Alberta.

13. The Chevron Burnaby refinery employs 250 people directly and provides employment for an additional 200 contract workers. The Burnaby refinery is the last remaining major oil refinery in British Columbia. For more than 50 years it has been dependent on the Pipeline as its major source of supply. Estimates are that the Burnaby refinery provides from 30% to 40% of refined petroleum products for the BC Lower Mainland.

14. Unifor also represents over 500 workers at the Suncor and Imperial Oil refineries in Alberta. An even greater number of indirect and induced jobs exist because of the refineries. Both refineries rely upon the Pipeline to ship refined products to British Columbia. These products represent another major source of supply for the residents, businesses and industries of Kamloops, and the Lower Mainland of BC. The Suncor and Imperial Oil refineries also serve prairie markets, but their business model is one that depends upon having reliable access to BC markets.

The Problem of Apportionment

15. These proceedings arise from problems caused by increased demand for discounted western Canadian crude oil, inadequate pipeline capacity to meet that demand, and a pipeline tariff that tilts the playing field decidedly in favour of larger refineries when demand for pipeline services exceeds supply and results in apportionment. It is common ground that apportionment on the Pipeline is now a constant condition, often running as high as 70%.

16. This high level of apportionment is largely a consequence of shippers over-nominating for pipeline volumes because they know they will get only a fraction of the quantities they claim to be seeking. Thus, if a company needs 25,000 bbl\day to operate its refinery, and apportionment is running at 75%, it may bid for 100,000 bbl/day with some confidence that, given the depressed price for western Canadian crude oil, it will be able to sell any surplus for a handsome profit should it be accorded more than the 25,000 bbl/day it actually intends to refine.

17. The problem for Chevron is that under the tariff it is constrained from bidding for sufficient pipeline capacity to meet its needs in the face of apportionment and over-bidding by its competitors.

18. The constraint arises under s. 6.1 of the Trans Mountain Pipeline Tariff: *Monthly Nominations,* provides:

> On or before the Monthly Nomination Date, the Shipper shall provide the Carrier with a Nomination on the Notice of Shipment indicating the volume of Petroleum to be transported for the following Month, the Receipt Point, the Delivery Point, the type(s) of Petroleum, and for Uncommitted Shipper Nominations to the Westridge Marine Terminal, the Bid Price. <u>The Shipper shall, upon notice from the Carrier, provide written third party verification of the availability of its supply of Petroleum to satisfy the Nominated Volume and of its capability to remove such Petroleum from the Delivery Point(s)</u> as may be required by the Carrier in support of such Shipper's Nomination. The Carrier shall not be obligated to accept the Shipper's Nomination where such verification is unacceptable to the Carrier acting reasonably. When the Shippers' Nominations have been apportioned pursuant to Rule 14, the Shipper shall be deemed to have submitted a Nomination equal to the Nomination specified in the Notice of Shipment reduced by the level of apportionment (the Allocated Volume). Except as expressly provided in a Contract, if a Shipper fails to Nominate any volume, the Shipper's monthly Nomination will be deemed to be zero.

19. Because of its relatively small size and limited storage capacity, Chevron has only a limited capacity to remove petroleum at the delivery point of its refinery. It cannot for that reason nominate for volumes sufficient to net the 57,000 bpd it needs to operate the refinery at capacity, in a highly apportioned market.

20. By comparison, Chevron's principal US competitors have much larger facilities:

The Phillips P66 refinery in Ferndale –	100,000 bbl/day
The Shell (Equilon) refinery in Puget Sound –	150,000 bbl/day
The Tesoro refinery -	120,000 bbl/day
The BP at Cherry Point –	235,000 bbl/day

21. As those facilities are considered by Trans Mountain to be the "delivery point" for the purpose of verifying nominations for deliveries on the Pipeline, and even putting aside storage capacity, each of these refineries has the ability to nominate for volumes far in excess of those permitted the Burnaby refinery. Thus in a period of abundant demand and limited pipeline capacity, the provisions of the tariff have created an artificial market that favours companies that have the largest take-away capacity. In terms of downstream refining, these companies are all U.S. based.

22. In other words, the present tariff, as it is being interpreted and applied, has given these U.S. refiners a considerable competitive advantage over the Burnaby refinery when it comes to securing scarce space on the Trans Mountain Pipeline. Moreover this advantage is not one that was earned by dint of innovation or efficiency, but one simply bestowed by a tariff regime that advantages larger companies.

23. Moreover, the problem of over-nominating is exacerbated because of the manner in which the Tariff is applied by Trans Mountain in verifying removal capacity by U.S. refiners. For this purpose, Trans Mountain calculates removal capacity at their respective refineries and related facilities, ignoring the capacity limits of the Puget Sound pipeline through which these nominated volumes must be delivered. Yet the "delivery point" as defined by the tariff, is "Sumas" (at the U.S. border) not the particular destinations of the U.S. refineries.

24. The result has lead to the verification of nominated shipments (of as much as 500,000 bbl/d), to Puget Sound refineries - more than twice the delivery capacity of the Puget Sound pipeline (241,000 bbl/day). In other words U.S. refineries are not only nominating

for volumes far in excess of those they actually expect to refine, but these volumes far exceed the delivery capacity of the pipeline upon which they rely.

25. The confluence of these factors explains why export markets claim the largest proportion of Pipeline output either through the Westridge Dock, or through Sumas. The four refineries in Puget Sound routinely consume 2/3rds[2] of Pipeline throughput even net of deliveries to the Westridge Dock. A fifth Washington State refinery is supplied by the Trans Mountain Pipeline via barge from the Westridge Dock.

26. For the Burnaby refinery, apportionment on the Pipeline, and limited means of alternative supply, have resulted in scaled back operations – at times - for extended periods.

The Public Interest

27. Only 19 Canadian refineries remain in operation today, a decline from over 40 oil refineries operating in Canada in the 1970s. Canadian refineries produce 400,000 fewer barrels of refined products per day than they did in the early 1980's and employ 10,000 fewer people than they did in 1989.

28. Thus, while the production of Western Canadian conventional and oil sands crude oil has been growing for many years and is projected to continue to do so, Canadians are actually losing ground in the labour intensive value-added processing sector, and apportionment on the Pipeline, driven almost entirely by export demand for discounted Western Canadian crude oil, is seriously exacerbating the problem.

29. It is even possible that BC's last refinery will fall victim to this growing export demand and tariff rules that favour large U.S. based refineries competing for scarce pipeline capacity. While the Suncor and Imperial Oil refineries are not similarly at risk, their future prospects depend upon being able to reliably ship refined products to BC markets.

30. The considerable number of jobs at these refineries have provided quality of life and economic security for generations of employees and their communities. These are jobs

[2] Chevron response to NEB 2.1 a) attachment 1, B12-03 NEB 2 1(a) - Attachment 1 (Public) - A3V7Z0

that are well-paying and provide incomes that are family and community sustaining. Their economic impact in the community extends well beyond the numbers of employees actually working on site.

31. The refineries are also an important part of the Canadian economy, spending hundreds of $millions a year on goods and services, investing very substantial sums in capital improvement and paying taxes to three levels of government.

32. In addition to these direct contributions to the Canadian employment and industrial economy, Western Canadian refineries play an essential role in meeting the energy needs of Western Canada. Any disruption in the supply of refined products from these refineries would certainly create market instability and raise consumer prices. There is no evidence that alternative means of supply exist to meet West Coast needs that would avert such adverse impacts.

33. The sustainability of a domestic energy economy, and the security of energy supply to Canadian consumers, are both vital public interest considerations that the Board should have foremost in mind. Tariff rules for service on the Pipeline must support, not jeopardize, the ability of Canadian refineries to create and maintain good jobs, while providing an essential service to Canadians. The current Trans Mountain Pipeline Tariffs fails these tests.

34. In addition, the Pipeline tariff must not continue to foster an artificial market in which shippers are compelled to overbid for pipeline capacity. It does nothing to inspire public confidence in the Canadian regulatory system, nor does it serve the public interest, to have the use of vital pipeline infrastructure allocated on the basis of fictitious bids for pipeline services.

Tesoro's NAFTA Argument

35. In the public version of its reply evidence,[3] Tesoro takes the position that it would be inconsistent with the North American Free Trade Agreement for Trans Mountain to

[3] Prepared Testimony of D. Schofied (A4A0A7), at pp. 7 and 10.

simply give effect to the tariff as currently written by taking the term "delivery point" to be Sumas, rather than the US refineries that are served by the Puget Sound pipeline. Tesoro's contention is fundamentally flawed for several reasons.

36. To begin with Tariff is not an export measure to which NAFTA rules apply. The Board's authority to regulate oil exports and imports is established under Part VI of the Act. The present application does not engage or call upon the Board to exercise that authority. Rather it concerns the provisions of a tariff authorized under Part IV of the Act. The Board's authority to regulate pipeline services, and to establish toll rules in regard thereto, is explicitly acknowledged as an exception under NAFTA rules.[4]

37. The simple answer to Tesoro's contention is that the regulation and administration of pipeline tariffs are not measures that impose quantitative restrictions on the export of energy. Rather, the measure in question is one regulating the *provision of service,* not the export of energy *goods,* and is explicitly exempt under Annex V to the trade in services provisions of NAFTA Chapter 12 concerning *Trade in Services*.

38. Moreover, as we know, the North American energy system is integrated with dozens of pipelines transporting oil and oil products across the Canada-US border every day, and in both directions. For example, eastern Canadian consumers access western Canadian oil through a complex network of pipelines travelling across Canada, then through the U.S. and back into Canada. The terms for pipeline service on this integrated pipeline network inevitably affect international pipeline flows.

39. To obviate the risk of pipeline regulation becoming embroiled in disruptive cross border trade disputes, the NAFTA Parties specifically provided for such measures to be exempt from the constraints on quantitative restrictions that would otherwise apply under NAFTA Article 1207 to such services. They did so with the clear intent that such tariffs be regarded as related to pipeline *services*, not trade in *goods*.

[4] NAFTA Annex V

40. Finally on this point, we note that in final argument[5] Trans Mountain mischaracterizes the notion of treating Sumas as a delivery point (as the Tariff clearly stipulates), as an "Export Destination Limit". For the reasons noted above, the measure in question does not, in either design or effect, seek to limit exports, and nothing in the reforms advocated by Chevron and other Canadian refiners, would preclude the Puget Sound pipeline from being utilized to full capacity.

Tesoro Is Not Being Treated in a Discriminatory Manner

41. There is also no merit to Tesoro's contention that it would be unfairly treated if Tariff nomination rules were amended to remove provisions that clearly accord it preferential treatment in relation to Canadian refiners.

42. We do not have the benefit of knowing how Tesoro will present its concern about unfair trade treatment in final argument which will only be filed at the same time as Unifor's. However, the simple answer to any such concern is that reforms advocated by Chevron and other Canadian refiners simply seek to have the Board address measures that clearly discriminate against Canadian refiners. There is absolutely nothing in NAFTA that requires Canada to establish or maintain such measures.

43. Furthermore, if Tesoro, contrary to the plain facts of this matter, believes that it has not been accorded fair (*National Treatment*) as a foreign investor, the remedy lies under NAFTA rules concerning foreign investment (Chapter 11), which provide dispute settlement procedures for resolving such disputes.

44. Even assuming that it could establish that treating Sumas as a delivery point is *de facto* discriminatory, which it is not, it would nevertheless fail in such a claim for reasons set out by the dispute Panel in the Pope and Talbot case[6].

---

[5] Public Written Argument by TransMountain Pipeline ULC (A62550), see for example pp. 4 and 5.

[6] Pope & Talbot Inc v. Canada, Award on the Merits of Phase 2 (UNCITRAL, 10 Apr. 2001), at paras 116
http://www.naftaclaims.com/Disputes/Canada/Pope/PopeInterimMeritsAward.pdf

45. That case involved a claim by Pope & Talbot for damages under Chapter 11 arising from what it regarded as an unfair allocation of export quotas for lumber it produced. The company operated sawmills in Canada and exported most of the softwood lumber it produced to the U.S. The dispute arose out of Canada's implementation of the Softwood Lumber Agreement ("SLA") it had negotiated with the U.S. The SLA established a limit on the free export of softwood lumber into the U.S. and required Canada to collect a fee for export of softwood lumber in excess of certain established quantities.

46. Each year Canada allocated export quotas among its softwood lumber producers in accordance with the developed procedures and criteria (Export Control Regime). Unsatisfied with allocations of quota to its investment, Pope and Talbot invoked NAFTA dispute procedures, and argued *inter alia* that its quota allocation represented discriminatory treatment and a breach of Canada's obligation to provide *National Treatment* to foreign investors. That contention is similar to the one Tesoro is apparently making in these proceedings.

47. The tribunal dismissed the claim and found that Pope and Talbot had not been treated in a discriminatory fashion. It found that there was nothing in Canada's approach that indicated an intention to discriminate against U.S exporters, and furthermore that "a reasonable nexus" existed between the export control measure and "rational government policies" belying any concern about discriminatory treatment. If Pope and Talbot couldn't succeed in respect of measures that explicitly concerned exports, Tesoro has no chance whatsoever when the measure in question concerns the allocation of domestic pipeline services.

48. While the Board has a statutory obligation to give effect to NAFTA, it is neither the obligation nor role of the Board to become the court of first instance with respect to the Tesoro's inventive and meritless trade arguments. That is the function and role of expert dispute bodies established under this trade agreement.

In Conclusion

49. Finally, Unifor encourages the Board to be mindful of the fact that the "N" in NEB stands for "National" not "North American". The first priority of the Board must be to ensure the security of energy supply to Canadian consumers. The current Trans Mountain Pipeline tariff confounds any such notion by actually putting the Burnaby refinery at a disadvantage relative to its U.S. competitors.

50. Therefore, whatever the particular details, the effect of amendments to the Tariff, as well as the manner in which reforms are implemented by Trans Mountain, must at the very least level the playing field for Canadian consumers of pipeline services, including the Burnaby refinery so that it may fairly bid for Trans Mountain Pipeline services.

Submitted on behalf of Unifor:

Steven Shrybman,
Sack Goldblatt Mitchell

Sept. 19, 2014

United States Department of State
Bureau of Oceans and International
Environmental and Scientific Affairs

Final Supplemental Environmental Impact Statement

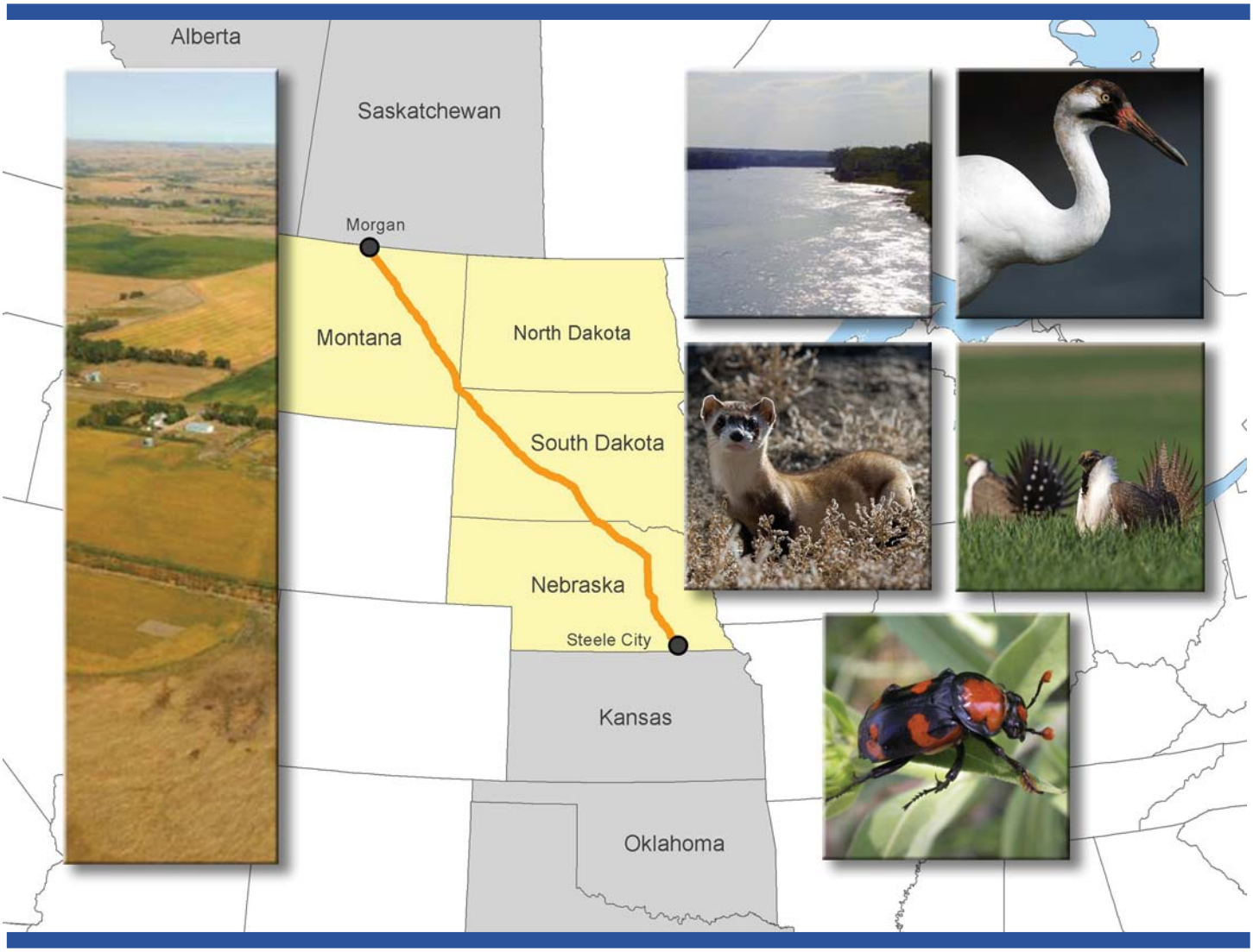
for the

Keystone XL Project

Executive Summary

January 2014

Applicant for Presidential Permit: TransCanada Keystone Pipeline, LP



Front cover photo sources in order of appearance top to bottom:

Whooping crane
Hagerty, Ryan. 2012. *Endangered Whooping Crane (Grus Americana).* Photograph. U.S. Fish and Wildlife Service. 23 February 2012. Website: http://www.flickr.com/photos/usfwshq/6777481034/.

Black-footed ferret
U.S. Fish & Wildlife Service. 2012. *Black-footed ferret.* Photograph. USFWS Headquarters. 3 July 2012. Website: http://www.flickr.com/photos/usfwshq/7013874797/in/photolist-9Z7MXd-bFMWBP-bsoAvk-9DoXKC-bZh2uu/.

Sage grouse
Rush, Kenneth. No Date. *Male Greater Sage Grouse Strutting at Hat Six Lek near Casper, Wyoming.* Photograph. Shutterstock, Image ID: 52631191. Website: http://www.shutterstock.com/pic-52631191/stock-photo-male-greater-sage-grouse-strutting-at-hat-six-lek-near-casper-wyoming.html.

American burying beetle
Backlund, Doug. No date. *Untitled [American Burying Beetle]*. Photograph. U.S Fish & Wildlife Service – South Dakota Field Office. Website: http://www.fws.gov/southdakotafieldoffice/BEETLE.HTM.

United States Department of State
Final Supplemental Environmental Impact Statement

For the

KEYSTONE XL PROJECT

Applicant for Presidential Permit:
TransCanada Keystone Pipeline, LP

Executive Summary

Genevieve Walker
Project Manager
United States Department of State
Bureau of Oceans and International Environmental and Scientific Affairs
2201 C Street NW, Room 2726
Washington, DC 20520

Cooperating Agencies

U.S. Army Corps of Engineers (USACE)
U.S. Department of Agriculture—Farm Service Agency (FSA)
U.S. Department of Agriculture—Natural Resource Conservation Service (NRCS)
U.S. Department of Agriculture—Rural Utilities Service (RUS)
U.S. Department of Energy (DOE)
U.S. Department of Interior—Bureau of Land Management (BLM)
U.S. Department of Interior—National Park Service (NPS)
U.S. Department of Interior—U.S. Fish and Wildlife Service (USFWS)
U.S. Department of Transportation—Pipeline and Hazardous Materials Safety Administration, Office of Pipeline Safety (PHMSA)
U.S. Environmental Protection Agency (USEPA)

Assisting Agencies

U.S. Department of the Interior, Bureau of Reclamation (BOR)
Nebraska Department of Environmental Quality (NDEQ)
Various State and Local Agencies in Montana, South Dakota, Nebraska, and Kansas

January 2014

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ES.1.0 OVERVIEW OF REVIEW PROCESS

The Keystone XL Pipeline (the proposed Project) is a proposed 875-mile pipeline project that would extend from Morgan, Montana, to Steele City, Nebraska. The pipeline would allow delivery of up to 830,000 barrels per day (bpd) of crude oil from the Western Canadian Sedimentary Basin (WCSB) in Canada and the Bakken Shale Formation in the United States to Steele City, Nebraska, for onward delivery to refineries in the Gulf Coast area (see Figure ES-1). TransCanada Keystone Pipeline, LP (Keystone) has applied for a Presidential Permit that, if granted, would authorize the proposed pipeline to cross the United States-Canadian border at Morgan, Montana.

The proposed route differs from the route analyzed in the 2011 Final Environmental Impact Statement (2011 Final EIS) in that it would avoid the environmentally sensitive Nebraska Department of Environmental Quality (NDEQ)-identified Sand Hills Region and no longer includes a southern segment from Cushing, Oklahoma, to the Gulf Coast area.

The U.S. Department of State (the Department) prepared this Final Supplemental Environmental Impact Statement (the Supplemental EIS) to assess the potential impacts associated with the proposed Project and its alternatives. The Supplemental EIS takes into consideration over 400,000 comments received during the scoping period and 1.5 million comments received on the Draft Supplemental EIS issued in March 2013. Notable changes since the Draft Supplemental EIS include:

- Expanded analysis of potential oil releases;
- Expanded climate change analysis;
- Updated oil market analysis incorporating new economic modeling; and
- Expanded analysis of rail transport as part of the No Action Alternative scenarios.

ES.1.1 Presidential Permit Process

For proposed petroleum pipelines that cross international borders of the United States, the President, through Executive Order (EO) 13337, directs the Secretary of State to decide whether a project serves the national interest before granting a Presidential Permit.

To make this decision (i.e., the National Interest Determination), the Secretary of State, through the Department, considers many factors, including energy security; environmental, cultural, and economic impacts; foreign policy; and compliance with relevant state and federal regulations. This Supplemental EIS was produced consistent with the National Environmental Policy Act (NEPA) and will help inform that determination. Before making such a decision, the Department also asks for the views of eight federal agencies identified in EO 13337: the Departments of Energy, Defense, Transportation, Homeland Security, Justice, Interior, and Commerce, as well as the U.S. Environmental Protection Agency (USEPA).

If the proposed Project is determined to serve the national interest, it will be granted a Presidential Permit that authorizes the construction, connection, operation, and maintenance of the facilities at the border between the United States and Canada. The applicant would be required to abide by certain conditions listed in this Supplemental EIS and the Presidential Permit. The Department's primary role is to make a National Interest Determination. Its jurisdiction does not include selection of specific pipeline routes within the United States.

In addition, the Department acts consistent with the National Historic Preservation Act (NHPA) and the Endangered Species Act (ESA) as part of its comprehensive NEPA consistent review.

ES.1.2 Background

Keystone's first application for the Keystone XL pipeline was submitted on September 19, 2008, and a Final EIS was published on August 26, 2011. The route proposed included the same U.S.-Canada border crossing as the currently proposed Project but a different pipeline route in the United States. The 2011 Final EIS route traversed a substantial portion of the Sand Hills Region of Nebraska, as identified by the NDEQ. Moreover, the 2011 Final EIS route went from Montana to Steele City, Nebraska, and then from Cushing, Oklahoma, to the Gulf Coast area.

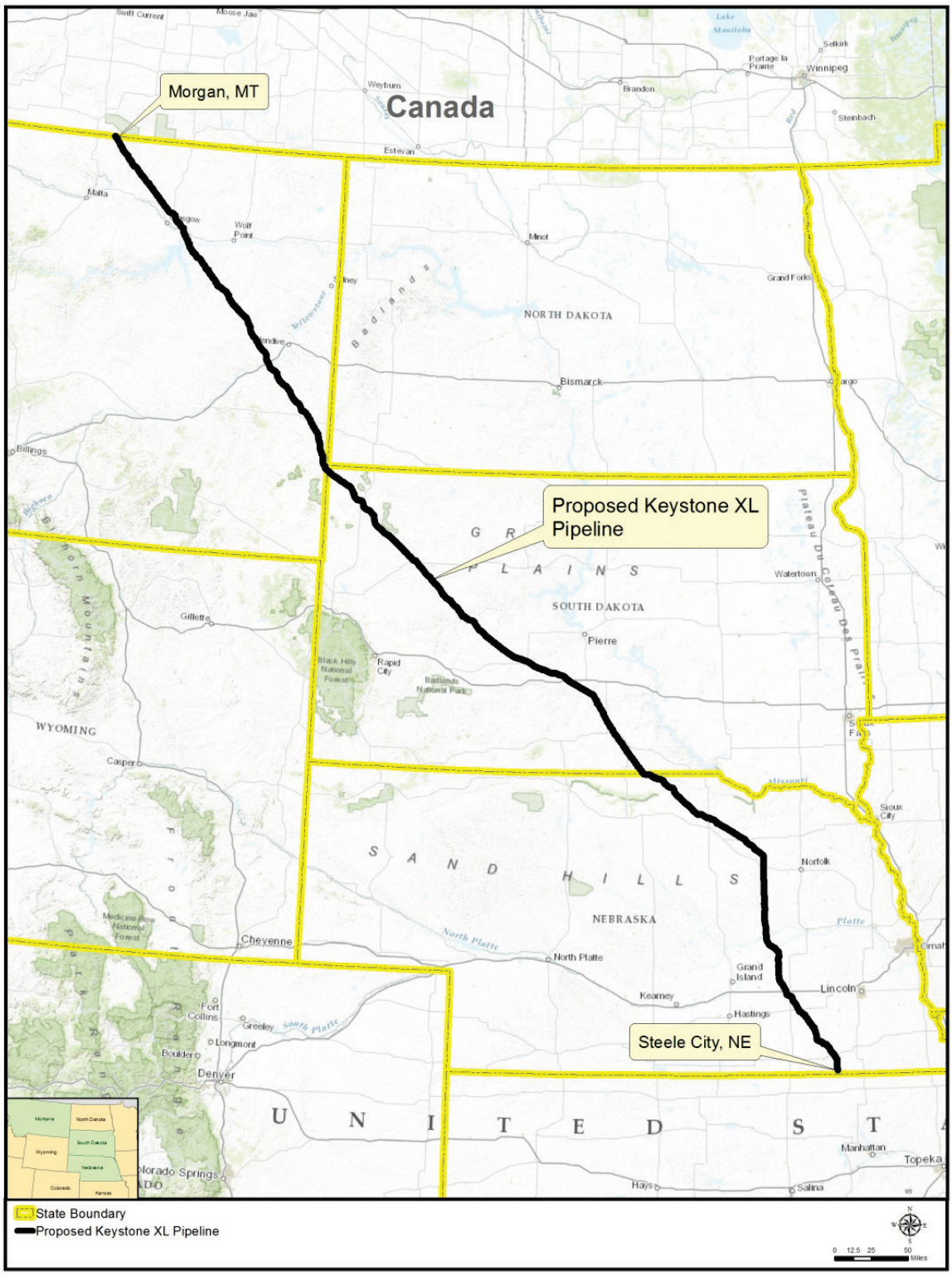


Figure ES-1 Proposed Keystone XL Project Route

In November 2011, the Department determined that additional information was needed to fully evaluate the application—in particular, information about alternative routes within Nebraska that would avoid the NDEQ-identified Sand Hills Region. In late December 2011, Congress adopted a provision of the Temporary Payroll Tax Cut Continuation Act that sought to require the President to make a decision on the Presidential Permit for the 2011 Final EIS route within 60 days. That deadline did not allow sufficient time to prepare a rigorous, transparent, and objective review of an alternative route through Nebraska. As such, the Presidential Permit was denied.

In February 2012, Keystone informed the Department that it considered the Gulf Coast portion of the originally proposed pipeline project (from Cushing, Oklahoma, to the Gulf Coast area) to have independent economic utility, and indicated that it intended to proceed with construction of that pipeline as a separate project, the Gulf Coast Project (see Figure ES-2). The Gulf Coast Project did not require a Presidential Permit because it does not cross an international border. Construction on the Gulf Coast Project was recently completed.

On May 4, 2012, Keystone filed a new Presidential Permit application for the Keystone XL Project. The proposed Project has a new route and a new stated purpose and need. The new proposed route differs from the 2011 Final EIS Route in two significant ways: 1) it would avoid the environmentally sensitive NDEQ-identified Sand Hills Region and 2) it would terminate at Steele City, Nebraska. From Steele City, existing pipelines would transport the crude oil to the Gulf Coast area. In other words, the proposed Project no longer includes a southern segment and instead runs from Montana to Steele City, Nebraska.

In addition to the NDEQ-identified Sand Hills Region, the proposed Project route would avoid other areas in Nebraska (including portions of Keya Paha County) that have been identified by the NDEQ as having soil and topographic characteristics similar to the Sand Hills Region. The proposed Project route would also avoid or move further away from water wellhead protection areas for the villages of Clarks and Western, Nebraska. Figure ES-3 compares the 2011 Final EIS route and the proposed Project route.

The proposed route in Montana and South Dakota is largely unchanged from the route analyzed in the 2011 Final EIS except for minor modifications that Keystone made to improve constructability and in response to landowner requests (see Figure ES-3).

The Department, after discussions with the USEPA and the Council on Environmental Quality (CEQ), determined consistent with NEPA that issuance of the new Presidential Permit would constitute a major federal action that may have significant environmental impact, and that it would prepare a supplement to the 2011 Final EIS for the new application. This Supplemental EIS provides a thorough analysis of the environmental impacts from the proposed Project; it has been revised, expanded, and updated to include a comprehensive review of the new route in Nebraska as well as any significant new circumstances or information that is now available and relevant to the overall proposed Project.

To assist in preparing this Supplemental EIS, the Department retained an environmental consulting firm, Environmental Resources Management (ERM). ERM was selected pursuant to the Department's interim guidance on the selection of independent third-party contractors. This guidance is designed to ensure that no conflicts of interest exist between the contractor and the applicant and that any perceived conflicts that would impair the public's confidence in the integrity of the work are mitigated or removed. ERM works at the sole and exclusive instruction of the Department and is not permitted to communicate with Keystone unless specifically directed to do so by Department officials.

On June 15, 2012, through a Notice of Intent, the Department solicited public comments for consideration in establishing the scope and content of this Supplemental EIS. The scoping period extended from June 15 to July 30, 2012. In total, an estimated 406,712 letters, cards, emails, e-comments, or telephone conversation records (henceforth referred to as submissions) were received from the public, agencies, and other interested groups and stakeholders during the scoping period. In March 2013, the Department issued a Draft Supplemental EIS that included new analysis and analysis built upon the work completed in the 2011 Final EIS, as well as the estimated 406,712 submissions mentioned above that were received during the 2012 scoping process.

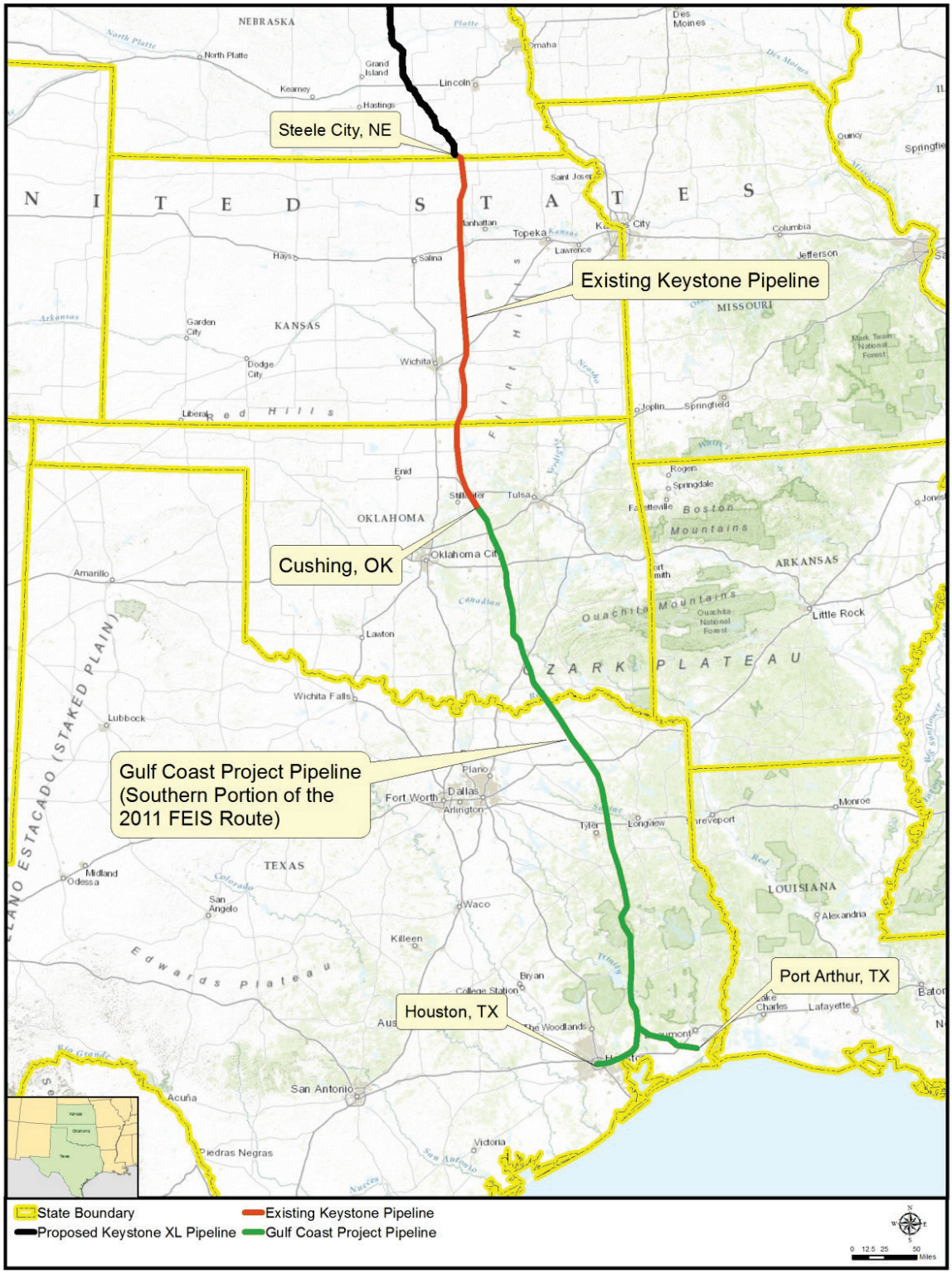
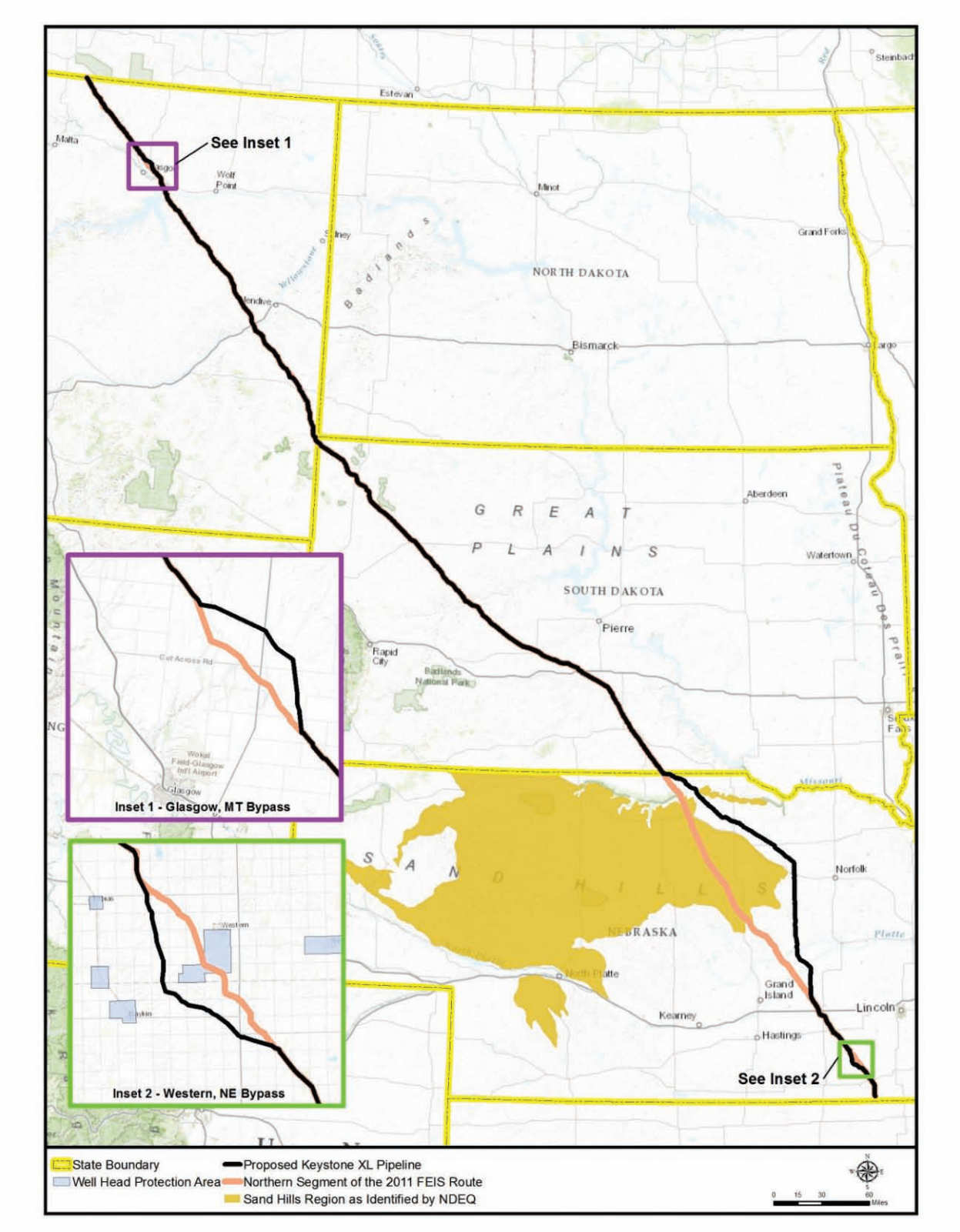


Figure ES-2 Gulf Coast Project Route



Note: The 2011 Final EIS route is also referred to in this Final Supplemental EIS as the 2011 Steele City Segment Alternative.

Figure ES-3 Comparison of Proposed Project to 2011 Final EIS Route

ES.1.3 Public Comments Received Regarding the Draft Supplemental EIS

Following publication of the 2013 Draft Supplemental EIS, the Department invited the public to comment on the document. Electronic versions were made available for download, and hard copies were made available in public libraries along the proposed pipeline route. Hard and electronic copies of the Draft Supplemental EIS were sent to interested Indian tribes, agencies, elected and appointed officials, non-governmental organizations (NGOs), and other parties. The Department also solicited input at a public meeting held on April 18, 2013 in Grand Island, Nebraska. In total, the Department received an estimated 1,513,249 submissions during the public comment period for the Draft Supplemental EIS. Submissions were made by federal, state, and local representatives, members of the public, government agencies, Indian tribes, NGOs, and other interested groups and stakeholders. Submissions made by the public on the Draft Supplemental EIS were posted on www.regulations.gov.

Of this total number of submissions, an estimated 1,496,396 submissions (99 percent of the total) were form letters sponsored by NGOs. The remaining 16,853 submissions were identified as unique submissions. All submissions were evaluated and addressed, as appropriate, in this Supplemental EIS. Some of the most frequent comment topics included:

- Concerns that the 2013 Draft Supplemental EIS did not adequately address the greenhouse gas (GHG) and climate change effects of the extraction, processing, and use of the crude oil that the proposed Project would carry;
- Concerns that potential releases from the proposed Project (i.e., spills) could pollute major groundwater resources such as the Ogallala Aquifer;
- Concerns that the 2013 Draft Supplemental EIS did not adequately address the impacts of bitumen extraction in Canada;
- Concerns about the contractor and subcontractor selection process for preparing this Supplemental EIS;
- Concerns that the crude oil transportation market was not adequately analyzed;
- Suggestions that the existing Keystone Pipeline right-of-way (ROW) be considered in lieu of the currently proposed pipeline route; and
- Questions about the accuracy of job creation estimates for construction and operation of the proposed Project, as well as the types, locations, and hiring preferences of those jobs.

ES.1.4 About the Final Supplemental EIS

This Supplemental EIS for the proposed Keystone XL pipeline project builds on the analysis provided in the 2011 Final EIS and the 2013 Draft Supplemental EIS and is now available for download by the public. Moreover, this Supplemental EIS has been distributed to participating federal and state agencies, elected officials, media organizations, Indian tribes, private landowners, and other interested parties. Printed copies have also been distributed to public libraries along the proposed pipeline route.

In completing this Supplemental EIS, the Department took into consideration the over 1.5 million submissions received. In response to these comments, the Department has revised the text from the 2013 Draft Supplemental EIS for the proposed Project. This Final Supplemental EIS includes the latest available information on the proposed Project resulting from ongoing discussions with federal, state, and local agencies. It also describes updated analysis of the potential effects (including direct, indirect, and cumulative effects) of the proposed Project and alternatives on various resources. The analysis reflects inputs from other U.S. government agencies and was reviewed through an interagency process.

ES.2.0 OVERVIEW OF PROPOSED PROJECT

ES.2.1 Proposed Project Purpose and Need

According to the application submitted by Keystone, the primary purpose of the proposed Project is to provide the infrastructure to transport crude oil from the border with Canada to delivery points in the United States (primarily to the Gulf Coast area) by connecting to existing pipeline facilities near Steele City, Nebraska. The proposed Project is meant to respond to the market demand of refineries for crude oil of the kind found in Western Canada (often called *heavy* crude oil). The proposed Project would also provide transportation for the kind of crude oil found within the Bakken formation of North Dakota and Montana (often called *light* crude oil).

The proposed Project would have the capacity to deliver up to 830,000 bpd, of which 730,000 bpd of capacity has been set aside for WCSB crude oil and the remaining 100,000 bpd of capacity set aside for Williston Basin (Bakken) crude oil. Keystone has

represented that it has firm commitments to transport approximately 555,000 bpd of heavy crude oil from producers in the WCSB, as well as 65,000 bpd of crude oil from the Bakken. The ultimate mixture and quantity of crude oils transported by the proposed Project over its lifetime would be determined by market demand.

There is existing demand for crude oil—particularly heavy crude oil—at refiners in the Gulf Coast area, but the ultimate disposition of crude oil that would be transported by the proposed Project, as well as any refined products produced from that crude oil, would also be determined by market demand and applicable law.

ES.2.2 Proposed Project Description

The proposed Project would consist of approximately 875 miles of new 36-inch-diameter pipeline and related facilities for transport of WCSB and Bakken crude oil, the latter from an oil terminal near Baker, Montana. Crude oil carried in the proposed Project would be delivered to existing pipeline facilities near Steele City, Nebraska, for onward delivery to refineries in the Gulf Coast area. The proposed Project would also include two pump stations (one new and one expanded) along the existing Keystone Pipeline in Kansas (see Figure ES-5).

Construction of the proposed Project would include the pipeline itself plus various aboveground ancillary facilities (e.g., access roads, pump stations, and construction camps) and connected actions. Figure ES-4 illustrates the construction sequence that would be followed for the proposed Project.

Construction of the proposed Project would generally require a 110-foot-wide temporary ROW and is expected to last 1 to 2 years. After construction, the proposed Project would generally maintain a 50-foot-wide permanent ROW easement over the pipeline in Montana (approximately 285 miles), South Dakota (approximately 316 miles), and Nebraska (approximately 274 miles).

Keystone would have access to property within the easement, but property owners would retain the ability to farm and conduct other limited activities within the easement. The permanent aboveground ancillary facilities would include electrically operated pump stations, mainline valves, and permanent access roads.

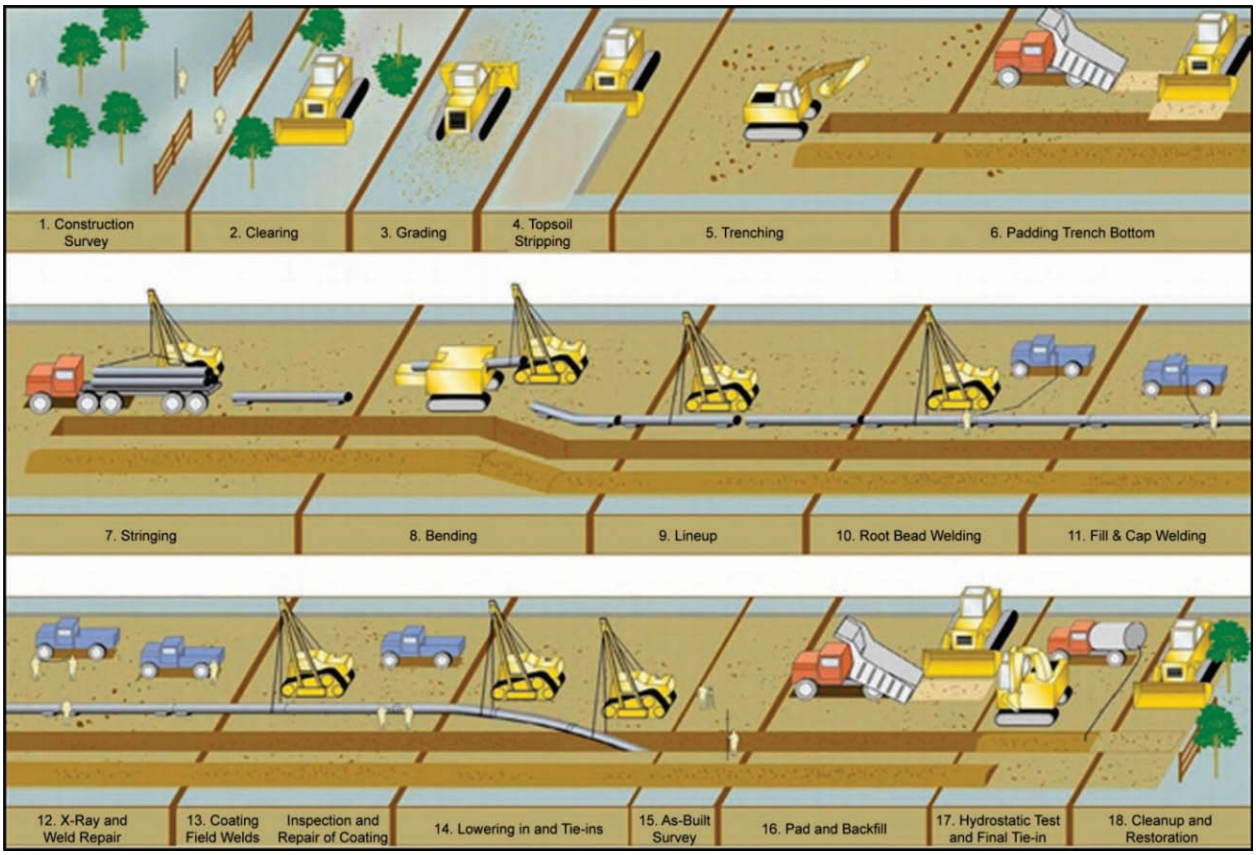


Figure ES-4 Keystone XL, Typical Pipeline Construction Sequence

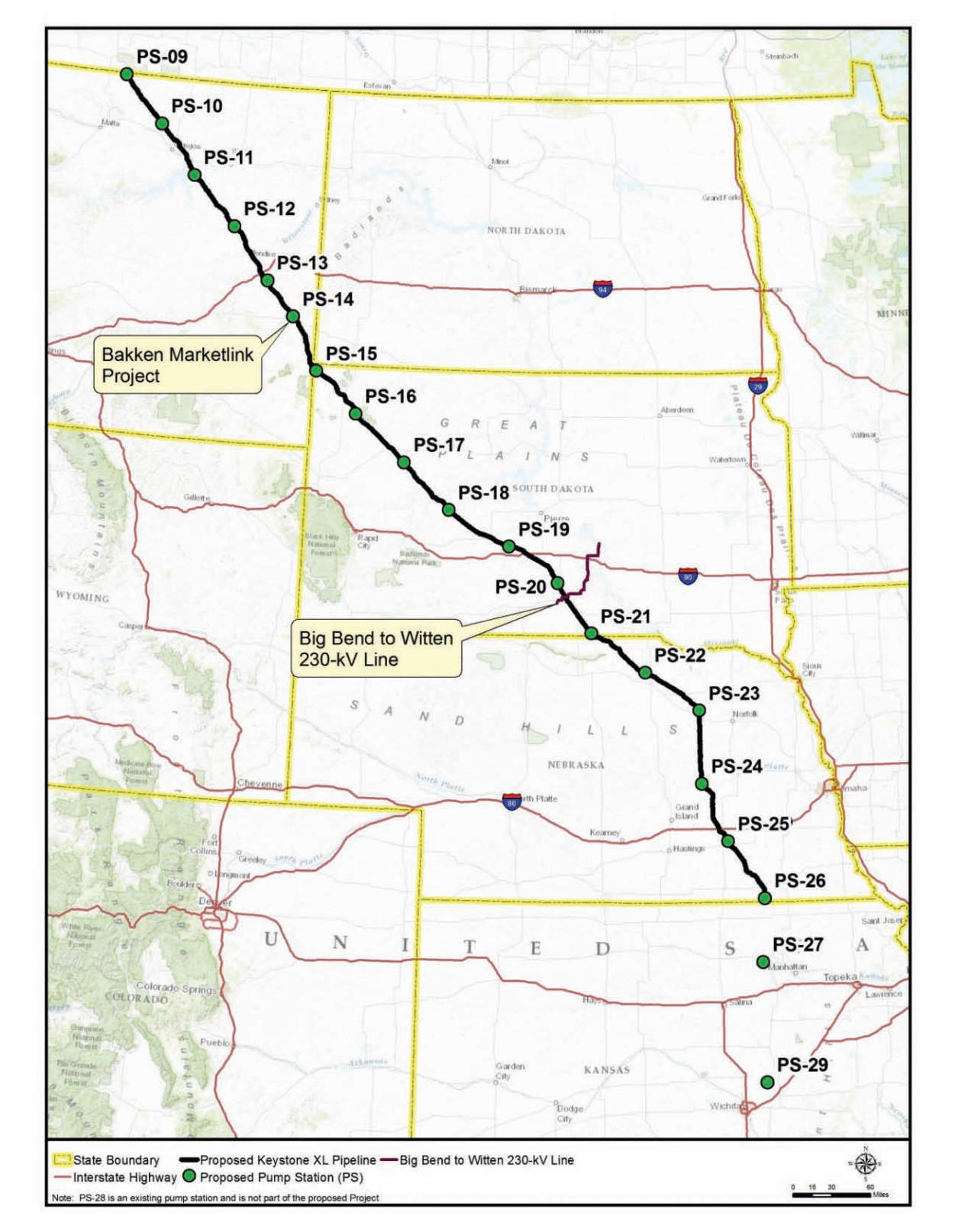


Figure ES-5 Proposed Project Overview

The U.S. portion of the proposed Project is estimated to cost approximately $3.3 billion, and would be paid for by Keystone. If permitted, the pipeline would begin operation approximately 2 years after final approvals were received, with the actual in-service date dependent on construction as well as obtaining any additional permits, approvals, and authorizations necessary before operations can commence.

ES.2.2.1 The Bakken Marketlink Project

Keystone Marketlink, LLC, a wholly owned subsidiary of TransCanada Pipelines Limited, would construct and operate the Bakken Marketlink Project. This project would include a 5-mile pipeline, pumps, meters, and storage tanks to supply Bakken crude oil to the proposed pipeline from the Bakken Marketlink pipeline system in North Dakota and Montana. Two crude oil storage tanks would be built near Baker, Montana, as part of this project. This project would be able to deliver up to 100,000 bpd of crude oil, and has commitments for approximately 65,000 bpd.

ES.2.2.2 Big Bend to Witten 230-kV Electrical Transmission Line

The Western Area Power Administration (Western) has determined that providing reliable electricity for operation of the proposed Project requires the construction of a new 230-kilovolt (kV) transmission line originating at the Fort Thompson/Big Bend Dam area in South Dakota and extending south to the existing Witten Substation, near Pump Stations 20 and 21. To meet these demands, Western would repurpose existing transmission infrastructure and construct new infrastructure between the Big Bend Dam and a proposed Big Bend Substation. The Basin Electric Power Cooperative would construct a new 76-mile, 230-kV transmission line from the Big Bend Substation to the existing Witten Substation, and would operate both the transmission line and the Big Bend Substation.

ES.2.2.3 Electrical Distribution Lines and Substations

Electrical power for the proposed Project would be obtained from local power providers. These power providers would construct the necessary substations and transformers, and would either use existing service lines or construct new service lines to deliver electrical power to the specified point of use (e.g., pump stations and mainline valves), which would be located at intervals along the proposed Project route.

ES.3.0 OVERVIEW OF PETROLEUM MARKETS

The scope and content of the market analysis in this Supplemental EIS were informed by public and interagency comments as well as new information that was not previously available. Among the notable updates to this analysis are revised modeling to incorporate evolving market conditions, more extensive information on the logistics and economics of crude by rail, and a more detailed analysis of supply costs to inform conclusions about production implications.

The updated market analysis in this Supplemental EIS—similar to the market analysis sections in the 2011 Final EIS and 2013 Draft Supplemental EIS—concludes that the proposed Project is unlikely to significantly affect the rate of extraction in oil sands areas (based on expected oil prices, oil-sands supply costs, transport costs, and supply-demand scenarios). The Department conducted this analysis, drawing on a wide variety of data and leveraging external expertise.

ES.3.1 Summary of Market Analysis

The 2011 Final EIS was developed contemporaneously with the start of strong growth in domestic light crude oil supply from so-called *tight* oil formations, such as those formations found in North Dakota's Bakken region. Domestic production of crude oil has increased significantly, from approximately 5.5 million bpd in 2010 to 6.5 million bpd in 2012 and 7.5 million bpd by mid-2013. Rising domestic crude production is predominantly light crude, and it has replaced foreign imports of light crude oil. However, demand persists for imported heavy crude by U.S. refineries that are optimized to process that kind of oil. Meanwhile, Canadian production of bitumen from the oil sands continues to grow, the vast majority of which is currently exported to the United States to be processed by U.S. refineries that want heavy crude oil. North American production growth and logistics constraints have contributed to significant discounts on the price of landlocked crude and have led to growing volumes of crude shipped by rail in the United States and, more recently, Canada.

Both the 2011 Final EIS and the Draft Supplemental EIS published in March 2013 discussed the transportation of Canadian crude by rail as a possibility. Due to market developments since then, this Supplemental EIS notes that the transportation of Canadian crude by rail is already occurring in substantial volumes. It is estimated that approximately 180,000 bpd of Canadian crude oil is already traveling by rail (see Figure ES-6).

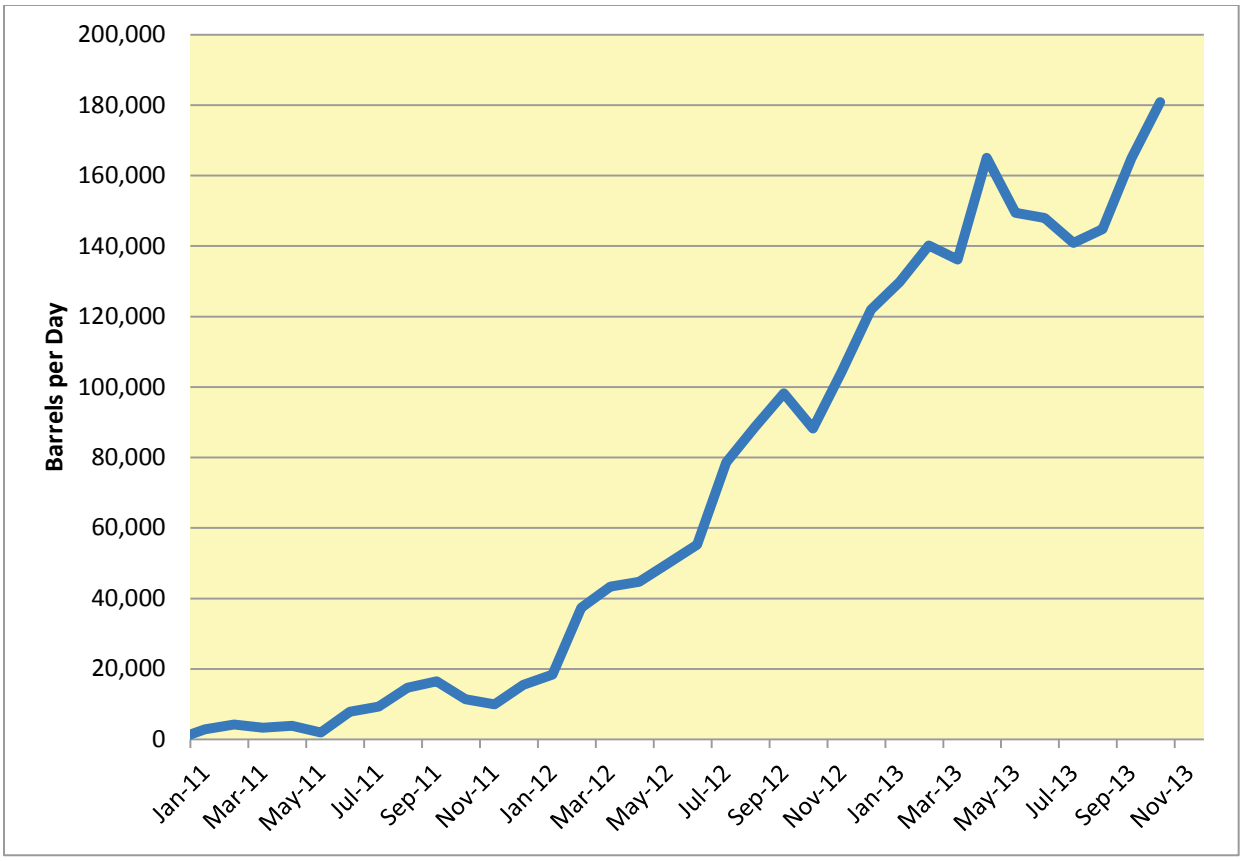
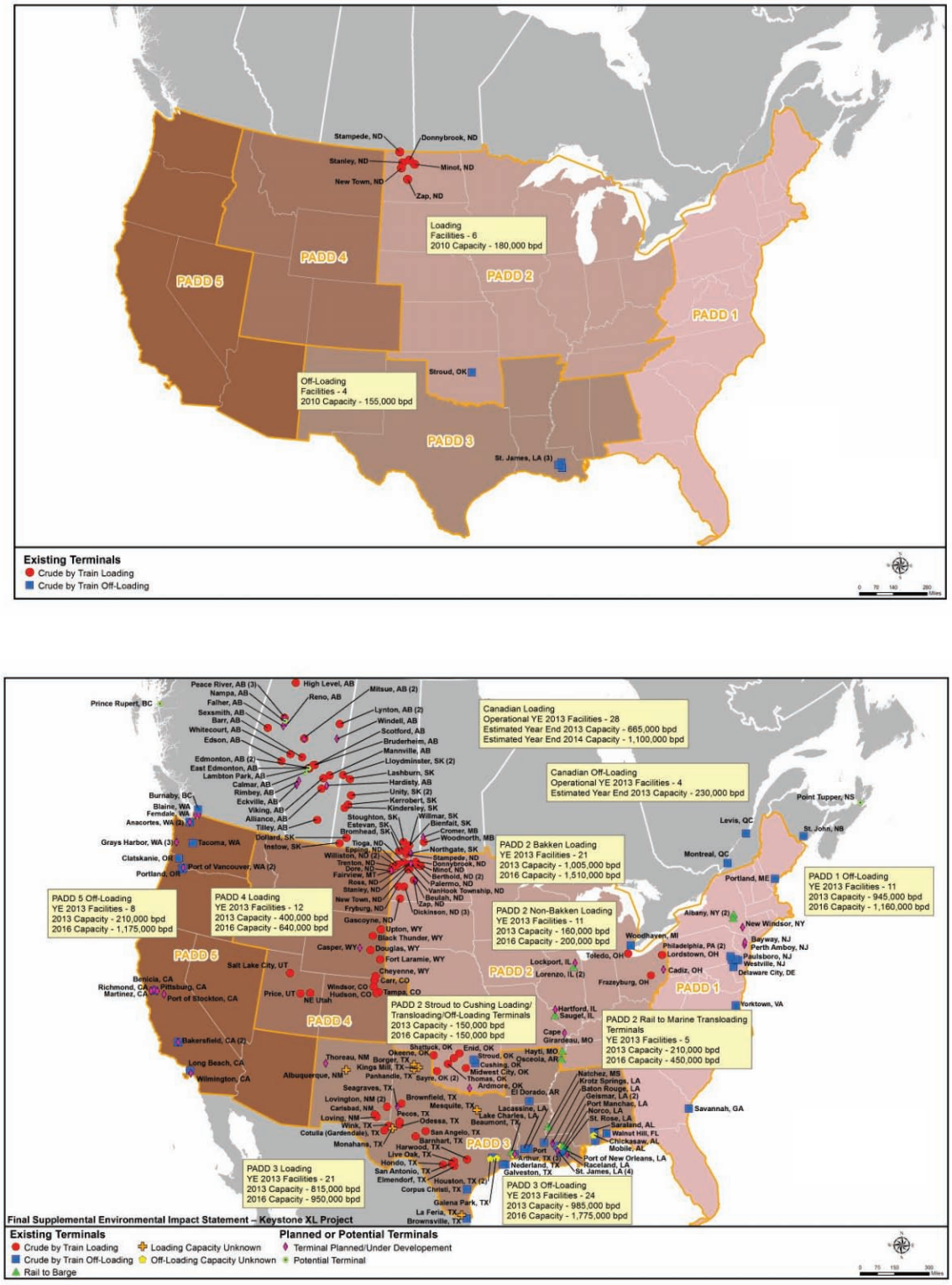


Figure ES-6 Estimated Crude Oil Transported by Rail from WCSB, bpd

The industry has been making significant investments in increasing rail transport capacity for crude oil out of the WCSB. Figure ES-7 illustrates the increase in rail loading and unloading terminals between 2010 and 2013. Rail loading facilities in the WCSB are estimated to have a capacity of approximately 700,000 bpd of crude oil, and by the end of 2014 this will likely increase to more than 1.1 million bpd. Most of this capacity (approximately 900,000 to 1 million bpd) is in areas that produce primarily heavy crude oil (both conventional and oil sands), or is being connected by pipelines to those oil production areas.

Various uncertainties underlie the projections upon which this Supplemental EIS partially relies. In recognition of the uncertainty of future market conditions, the analysis included updated modeling about the sensitivity of the market to some of these elements.

Updated information on rail transportation and oil market trends, particularly rising U.S. oil production, was incorporated in oil market modeling. This modeling was developed in response to comments received on the Draft Supplemental EIS. To help account for key uncertainties about oil production, consumption, and transportation, the modeling examined 16 different scenarios that combine various supply-demand assumptions and pipeline constraints. Modeled cases test supply and demand projections based on the official energy forecasts of independent U.S. Energy Information Administration's (EIA) 2013 Annual Energy Outlook that correspond to uncertainties raised in public comments, including potential higher-than-expected U.S. supply, lower-than-expected U.S. demand, and higher-than-expected oil production in Latin America.



Note: These estimates do not include a facility being constructed in Edmonton, Canada, with a design capacity of 250,000 bpd (100,000 bpd expected to be operational by the end of 2014) that was announced shortly before this Supplemental EIS was completed. In addition, Altex Energy has plans for a 55,000 bpd loading facility in Vermillion, Alberta.

Figure ES-7 Crude by Train Loading and Off-Loading Facilities in 2010 (top map) and 2013 (bottom map)

The supply-demand cases were paired with four pipeline configuration scenarios: an unconstrained scenario that allows pipelines to be built without restrictions; a scenario in which no new cross-border pipeline capacity to U.S. markets is permitted, but pipelines from the WSCB to Canada's east and west coasts are built; a scenario where new cross-border capacity between the United States and Canada is permitted, but Canadian authorities do not permit new east-west pipelines; and a constrained scenario that assumes no new or expanded pipelines carrying WCSB crude are built in any direction.

Updated model results indicated that cross-border pipeline constraints have a limited impact on crude flows and prices. If additional east-west pipelines were built to the Canadian coasts, such pipelines would be heavily utilized to export oil sands crude due to relatively low shipping costs to reach growing Asian markets. If new east-west and cross-border pipelines were both completely constrained, oil sands crude could reach U.S. and Canadian refineries by rail.

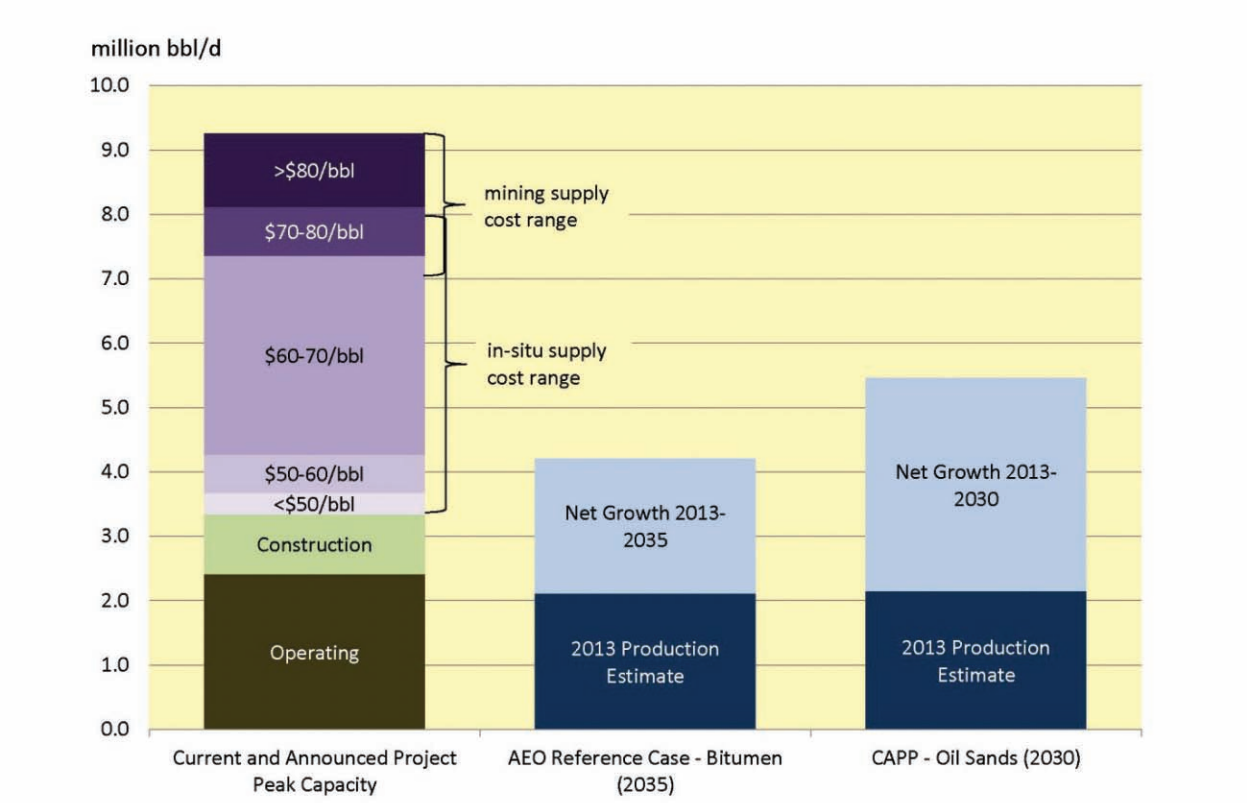
Varying pipeline availability has little impact on the prices that U.S. consumers pay for refined products such as gasoline or for heavy crude demand in the Gulf Coast. When this demand is not met by heavy Canadian supplies in the model results, it is met by heavy crude from Latin America and the Middle East.

Conclusions about the potential effects of pipeline constraints on production levels were informed by comparing modeled oil prices to the prices that would be required to support expected levels of oil sands capacity growth. Figure ES-8 illustrates existing oil sands capacity, the estimated supply costs of announced capacity, and the capacity growth that will be required to meet EIA and Canadian Association of Petroleum Producers production projections. Projected prices generally exceed supply costs for the projects responsible for future oil sands production growth. Modeling results indicate that severe pipeline constraints reduce the prices received by bitumen producers by up to $8/bbl, but not enough to curtail most oil sands growth plans or to shut-in existing production (based on expected oil prices, oil-sands supply costs, transport costs, and supply-demand scenarios). These conclusions are based on conservative assumptions about rail costs, which likely overstate the cost penalty producers pay for shipping by rail if more economic methods currently under consideration to ship bitumen by rail are utilized.

Several analysts and financial institutions have stated that denying the proposed Project would have significant impacts on oil sands production. To the extent that other assessments appear to differ from the analysis in this report, they typically do so because they have different focuses, near-term time scales, or production expectations, and/or include less detailed data and analysis about rail than this report. While short-term physical transportation constraints introduce uncertainty to industry outlooks over the next decade, new data and analysis in Section 1.4, Market Analysis, indicate that rail will likely be able to accommodate new production if new pipelines are delayed or not constructed.

Over the long term, lower-than-expected oil prices could affect the outlook for oil sands production, and in certain scenarios higher transportation costs resulting from pipeline constraints could exacerbate the impacts of low prices. The primary assumptions required to create conditions under which production growth would slow due to transportation constraints include: 1) that prices persist below current or most projected levels in the long run; and 2) that all new and expanded Canadian and cross-border pipeline capacity, beyond just the proposed Project, is not constructed.

Above approximately $75 per barrel for West Texas Intermediate (WTI)-equivalent oil, revenues to oil sands producers are likely to remain above the long-run supply costs of most projects responsible for expected levels of oil sands production growth. Transport penalties could reduce the returns to producers and, as with any increase in supply costs, potentially affect investment decisions about individual projects on the margins. However, at these prices, enough relatively low-cost *in situ* projects are under development that baseline production projections would likely be met even with constraints on new pipeline capacity. Oil sands production is expected to be most sensitive to increased transport costs in a range of prices around $65 to $75 per barrel. Assuming prices fell in this range, higher transportation costs could have a substantial impact on oil sands production levels—possibly in excess of the capacity of the proposed Project—because many *in situ* projects are estimated to break even around these levels. Prices below this range would challenge the supply costs of many projects, regardless of pipeline constraints, but higher transport costs could further curtail production.



Note: The green shaded areas in the *Current and Announced Project Peak Capacity* represent the capacity of projects that are operating or already under construction, which are expected to continue producing and/or remain under development as long as oil prices are above operating costs. The purple shaded areas represent the capacity of potential projects that would likely only go forward with oil prices above the stated ranges.

Figure ES-8 Oil Sands Supply Costs (West Texas Intermediate-Equivalent Dollars per Barrel), Project Capacity, and Production Projections

Oil prices are volatile, particularly over the short-term. In addition, long-term trends, which drive investment decisions, are difficult to predict. Specific supply cost thresholds, Canadian production growth forecasts, and the amount of new capacity needed to meet them are uncertain. As a result, the price threshold above which pipeline constraints are likely to have a limited impact on future production levels could change if supply costs or production expectations prove different than estimated in this analysis.

The dominant drivers of oil sands development are more global than any single infrastructure project. Oil sands production and investment could slow or accelerate depending on oil price trends, regulations, and technological developments, but the potential effects of those factors on the industry's rate of expansion should not be conflated with the more limited effects of individual pipelines.

ES.4.0 ENVIRONMENTAL ANALYSIS OF THE PROPOSED PROJECT

The Department evaluated the potential construction and operational impacts of the proposed Project and alternatives across a wide range of environmental resources. The analysis discusses public and agency interests and concerns as reflected in the submissions received during the scoping period and on the 2013 Draft Supplemental EIS, and includes:

- Climate change, including lifecycle (well-to-wheels [WTW]) GHG emissions associated with oil sands development, refining, and consumption;
- Potential releases or spills of oil;
- Socioeconomics, including the potential job and revenue benefits of the proposed Project, as well as concerns about environmental justice;
- Water resources, including potential effects on groundwater aquifers (e.g., Ogallala Aquifer) and surface waters;
- Wetlands;
- Threatened and endangered species;
- Potential effects on geology, soils, other biological resources (e.g., vegetation, fish, and wildlife), air quality, noise, land use, recreation, and visual resources; and
- Cultural resources, including tribal consultation.

ES.4.1 Climate Change

Changes to the Earth's climate have been observed over the past century with a global temperature increase of 1.5 degrees Fahrenheit between 1880 and 2012. This warming has coincided with increased levels of GHGs in the atmosphere. In order for the Earth's heat and energy to remain at a steady state, the solar energy that is incoming must equal the energy that is radiated into space (see Figure ES-9). GHGs contribute to trapping outbound radiation within the troposphere (the layer of the atmosphere closest to the Earth's surface), and this is called the greenhouse effect.

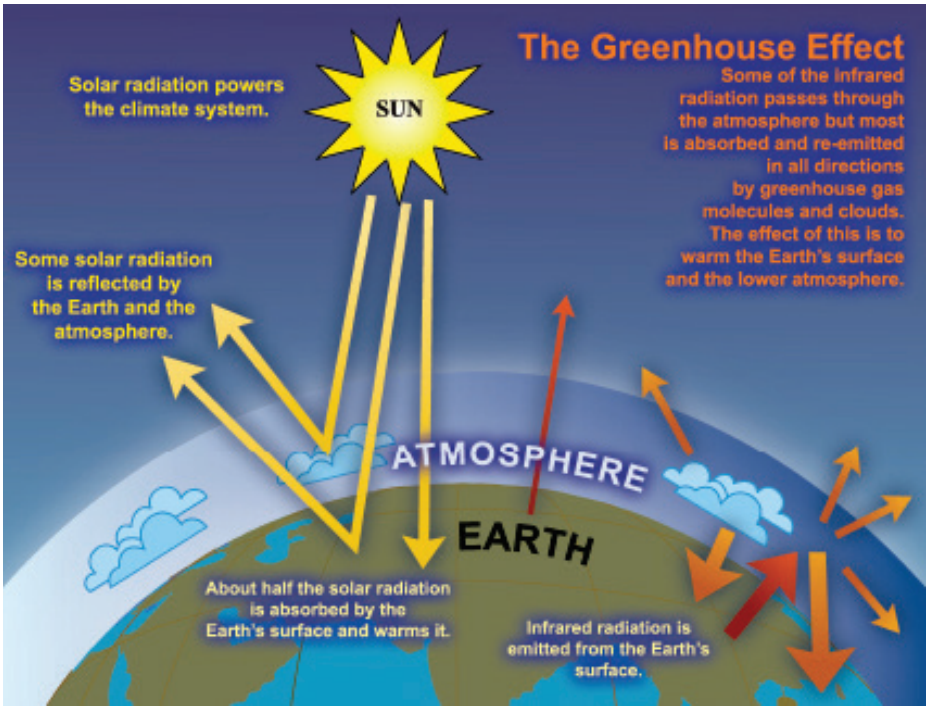


Figure ES-9 The Greenhouse Effect

Since the beginning of the Industrial Revolution, the rate and amount of GHGs have increased as a result of human activity. The additional GHGs intensify the greenhouse effect, resulting in a greater amount of heat being trapped within the atmosphere. The Intergovernmental Panel on Climate Change, a group of 1,300 independent scientific experts from countries around the world, in its Fifth Assessment Report concludes that global warming in the climate system is unequivocal based on measured increases in temperature, decrease in snow cover, and higher sea levels.

This Supplemental EIS evaluates the relationship between the proposed Project with respect to GHG emissions and climate change from the following perspectives:

- The GHG emissions associated with the construction and operation of the proposed Project and its connected actions;
- The potential increase in indirect lifecycle (wells-to-wheels) GHG emissions associated with the WCSB crude oil that would be transported by the proposed Project;
- How the GHG emissions associated with the proposed Project cumulatively contribute to climate change; and
- An assessment of the effects that future projected climate change could have in the proposed Project area and on the proposed Project.

ES.4.1.1 Greenhouse Gas Emissions from the Proposed Project

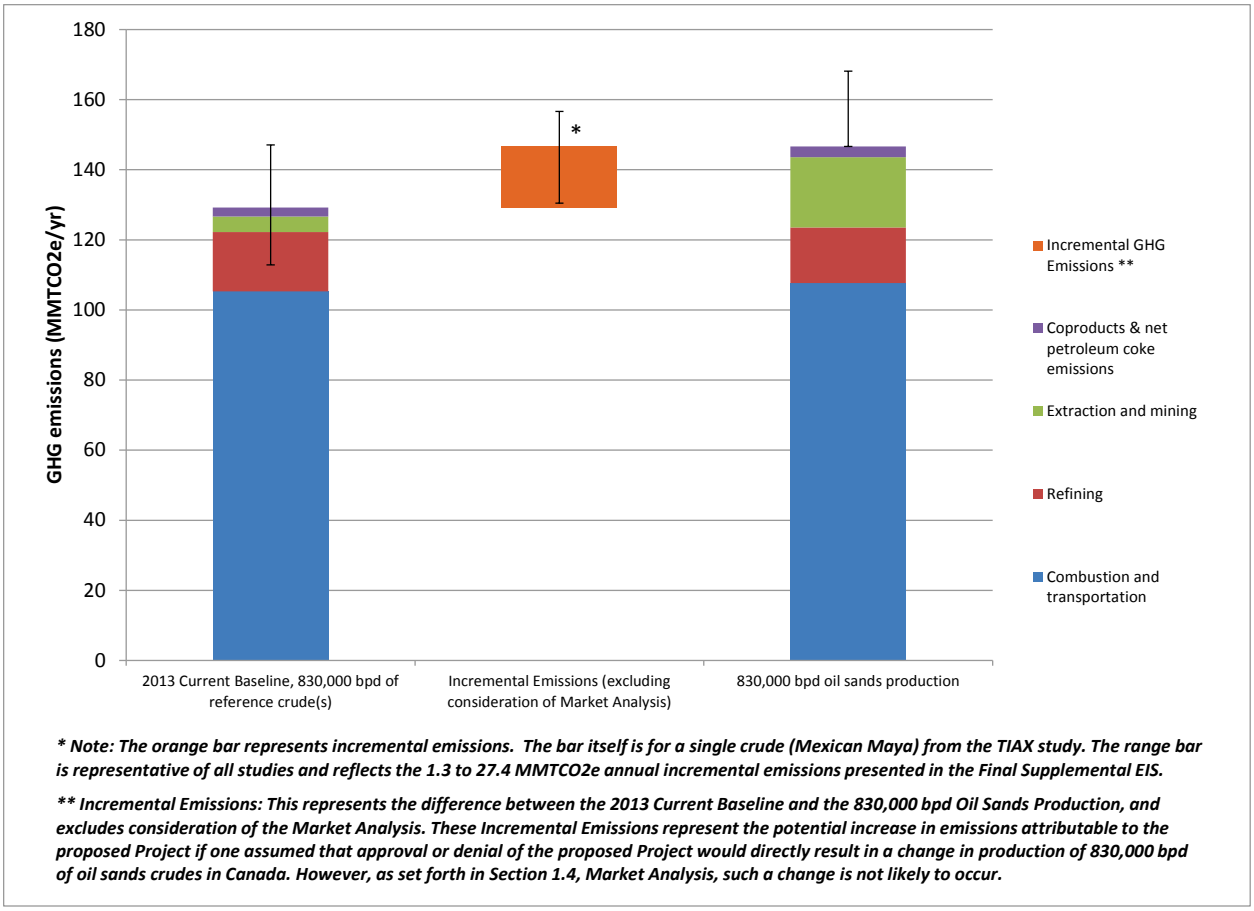
The proposed Project would emit approximately 0.24 million metric tons of carbon dioxide (CO_2) equivalents ($MMTCO_2e$) per year during the construction period. These emissions would be emitted directly through fuel use in construction vehicles and equipment, as well as, land clearing activities including open burning, and indirectly from electricity usage.

During operations, approximately 1.44 $MMTCO_2e$ would be emitted per year, largely attributable to electricity use for pump station power, fuel for vehicles and aircraft for maintenance and inspections, and fugitive methane emissions at connections. The 1.44 $MMTCO_2e$ emissions would be equivalent to GHG emissions from approximately 300,000 passenger vehicles operating for 1 year, or 71,928 homes using electricity for 1 year.

ES.4.1.2 Lifecycle Analysis

To enable a more comprehensive understanding of the potential indirect GHG impact of the proposed Project, it is important to also consider the wider GHG emissions associated with the crude oil being transported by the proposed Project. A lifecycle approach was used to evaluate the GHG implications of the WCSB crudes that would be transported by the proposed Project compared to other crude oils that would likely be replaced or displaced by those WCSB crudes in U.S. refineries. A lifecycle analysis is a technique used to evaluate the environmental aspects and impacts (in this case GHGs) that are associated with a product, process, or service from raw materials acquisition through production, use, and end-of-life. The lifecycle analysis considered wells-to-wheels GHG emissions, including extraction, processing, transportation, refining, and refined product use (such as combustion of gasoline in cars) of WCSB crudes compared to other reference heavy crudes. The lifecycle analysis also considered the implications associated with other generated products during the lifecycle stages (so-called *co-products*) such as petroleum coke. WCSB crudes are generally more GHG intensive than other heavy crudes they would replace or displace in U.S. refineries, and emit an estimated 17 percent more GHGs on a lifecycle basis than the average barrel of crude oil refined in the United States in 2005. The largest single source of GHG emissions in the lifecycle analysis is the finished-fuel combustion of refined petroleum fuel products, which is consistent for different crude oils, as shown in Figure ES-10.

The total lifecycle emissions associated with production, refining, and combustion of 830,000 bpd of oil sands crude oil transported through the proposed Project is approximately 147 to 168 $MMTCO_2e$ per year. The annual lifecycle GHG emissions from 830,000 bpd of the four reference crudes examined in this Supplemental EIS are estimated to be 124 to 159 $MMTCO_2e$. The range of incremental GHG emissions for crude oil that would be transported by the proposed Project is estimated to be 1.3 to 27.4 $MMTCO_2e$ annually. The estimated range of potential emissions is large because there are many variables such as which reference crude is used for the comparison and which study is used for the comparison.



Note: See Figure 4.14.3-7 in Section 4.14.3.5, Incremental GHG Emissions, for a full description of the information presented in this figure.

Figure ES-10 Incremental Well-to-Wheels GHG Emissions from WCSB Oil Sands Crudes Compared to Well-to-Wheels GHG Emissions from Displacing Reference Crudes

The above estimates represent the total incremental emissions associated with production and consumption of 830,000 bpd of oil sands crude compared to the reference crudes. These estimates represent the potential increase in emissions attributable to the proposed Project if one assumed that approval or denial of the proposed Project would directly result in a change in production of 830,000 bpd of oil sands crudes in Canada (See Section 4.14.4.2, Emissions and Impacts in Context, for additional information on emissions associated with increases in oil sands production). However, as set forth in Section 1.4, Market Analysis, such a change is not likely to occur under expected market conditions. Section 1.4 notes that approval or denial of any one crude oil transport project, including the proposed Project, is unlikely to significantly impact the rate of extraction in the oil sands or the continued demand for heavy crude oil at refineries in the United States based on expected oil prices, oil-sands supply costs, transport costs, and supply-demand scenarios.

The 2013 Draft Supplemental EIS estimated how oil sands production would be affected by long-term constraints on pipeline capacity (if such constraints resulted in higher transportation costs) if long-term WTI-equivalent oil prices were less than $100 per barrel. The Draft Supplemental EIS also estimated a change in GHG emissions associated with such changes in production. The additional data and analysis included in this Supplemental EIS provide greater insights into supply costs and the range of prices in which pipeline constraints would be most likely to impact production. If WTI-equivalent prices fell to around approximately $65 to $75 per barrel, if there were long-term constraints on any new pipeline capacity, and if such constraints resulted in higher transportation costs, then there could be a substantial impact on oil sands

production levels. As noted in E.S.3.1, Summary of Market Analysis, this estimated price threshold could change if supply costs or production expectations prove different than estimated in this analysis. This is discussed in Section 1.4.5.4, Implications for Production.

ES.4.1.3 Climate Change Effects

The total direct and indirect emissions associated with the proposed Project would contribute to cumulative global GHG emissions. However, emissions associated with the proposed Project are only one source of relevant GHG emissions. In that way, GHG emissions differ from other impact categories discussed in this Supplemental EIS in that all GHG emissions of the same magnitude contribute to global climate change equally, regardless of the source or geographic location where they are emitted.

As part of this Supplemental EIS, future climate change scenarios and projections developed by the Intergovernmental Panel on Climate Change and peer-reviewed downscaled models were used to evaluate the effects that climate change could have on the proposed Project, as well as the environmental consequences from the proposed Project.

Assuming construction of the proposed Project were to occur in the next few years, climate conditions during the construction period would not differ substantially from current conditions. However, during the subsequent operational time period, the following climate changes are anticipated to occur regardless of any potential effects from the proposed Project:

- Warmer winter temperatures;
- A shorter cool season;
- A longer duration of frost-free periods;
- More freeze-thaw cycles per year (which could lead to an increased number of episodes of soil contraction and expansion);
- Warmer summer temperatures;
- Increased number of hot days and consecutive hot days; and
- Longer summers (which could lead to impacts associated with heat stress and wildfire risks).

This Supplemental EIS assessed whether the projected changes in the climate could further influence the impacts and effects attributable to the proposed Project. Elevated effects due to projected climate change could occur to water resources, wetlands, terrestrial vegetation, fisheries, and endangered species, and could also contribute to air quality impacts. In addition, the statistical risk of a pipeline spill could be increased by secondary effects brought on by climatic change such as increased flooding and drought. However, this increased risk would still be much less than the risk of spills from other causes (such as third-party damage). Climate change could have an effect on the severity of a spill such that it could be reduced in drought conditions but increased during periods of increased precipitation and flooding.

ES.4.2 Potential Releases

The proposed Project would include processes, procedures, and systems to prevent, detect, and mitigate potential oil spills.

Many commenters raised concerns regarding the potential environmental effects of a pipeline release, leak, and/or spill. Impacts from potential releases from the proposed Project were evaluated by analyzing historical spill data. The analysis identified the types of pipeline system components that historically have been the source of spills, the sizes of those spills, and the distances those spills would likely travel. The resulting potential impacts to natural resources, such as surface waters and groundwater, were also evaluated as well as planned mitigation measures designed to prevent, minimize, and respond to spills.

ES.4.2.1 Historical Pipeline Performance

In response to numerous comments regarding pipeline performance, the Department analyzed historical incident data within the PHMSA and National Response Center incident databases to understand what has occurred with respect to crude oil pipelines and the existing Keystone Pipeline system.

Table ES-1 summarizes hazardous liquid pipeline incidents reported to the PHMSA across the United States from January 2002 through July 2012 and shows the breakdown of incidents by pipeline component. A total of 1,692 incidents occurred, of which 321 were pipe incidents and 1,027 were involving different equipment components such as tanks, valves, or pumps.

Table ES-1 Summary of PHMSA Database Incidents[a] (January 2002 to July 2012)

Incident Category	Incidents	Incident Sub-Category	Incidents
Crude oil pipeline	1,692	Crude oil mainline pipe incidents	321
		Crude oil pipeline, equipment incidents (not mainline pipe)	1,027
		Crude oil pipeline system, unspecified elements	344
Crude oil mainline pipe	321	16-inch or greater diameter	71
		8-inch or 15-inch diameter	154
		Less than 8-inch diameter	52
		Diameter not provided	44
Crude oil pipeline, equipment (not mainline pipe)	1,027	Tanks	93
		Valves	25
		Other discrete elements (pumps, fittings, etc.)	909

[a] *Incident* as used in the Final Supplemental EIS is in reference to a PHMSA and/or a National Response Center record of a reportable spill or accident found within their respective databases.

To assess the likelihood of releases from the proposed Project, risk assessments were conducted addressing both the potential frequency of releases and the potential crude oil spill volumes associated with the releases. The assessments used three hypothetical spill volumes (small, medium, and large scenarios) to represent the range of reported spills in the PHMSA's spills database. Table ES-2 shows these spill volumes and the probabilities of such volumes.

Most spills are small. Of the 1,692 incidents between 2002 and 2012 (shown in Table ES-1), 79 percent of the incidents were in the small (zero to 50 bbl) range, equivalent to a spill of up to 2,100 gallons (see Table ES-2). Four percent of the incidents were in the large (greater than 1,000 bbl) range.

ES.4.2.1.1 Small and Medium Spills

The potential impacts from small spills of oil would typically be confined to soil immediately surrounding the spill, and would have little effect on nearby natural resources. These types of spills would generally be detected by maintenance or operations personnel and addressed through repair of the leak and remediation of the impacted area by removal of impacted soil and cleaning of stained concrete or containment areas.

With medium spills, a release could occur as a subsurface or surface event depending upon the cause. Similar to a small spill, a slow subsurface leak could potentially reach a groundwater resource and, if the leak is faster than the soil can absorb the oil, could seep to the ground surface. Once the migrating oil leaves the release site, impacts to soil, vegetation, wildlife, and surface water along the flow path would occur. Depending on how quickly it is remediated, some of the oil might tend to pool in low areas and potentially infiltrate back into the soil and to groundwater depending on the depth to groundwater.

ES.4.2.1.2 Large Spills

With a large spill, the majority of the spill volume would migrate away from the release site. The potential impacts from a large spill would be similar to the impacts from the medium-sized spill, but on a much larger scale. More oil would seep into the soil over a larger area and could infiltrate deeper into the soil. Once the spill reaches the surface, the oil would flow following topographic gradient or lows (e.g., gullies, roadside drainage ditches, culverts, or storm sewers) and eventually to surface water features.

Table ES-2 Spill Scenarios Evaluated in Supplemental EIS

Spill Volume Scenario	Frequency[a]
Small: Less than 50 bbl (2,100 gallons)	79%
Medium: 50–1,000 bbl (2,100–42,000 gallons)	17%
Large: >1,000 bbl (>42,000 gallons)	4%

[a] Indicates the share of all releases reported in the PHMSA database that fit each spill volume scenario.

If the release enters flowing water or other surface water features, the extent of the release could become very large, potentially affecting soil, wildlife, and vegetation along miles of river and shoreline. As has been seen in recent large spills, sinking oil can be deposited in river or stream bottoms and become a continual source of oil release over time.

ES.4.2.2 Prevention and Mitigation

In order to reduce the risk of spills, if permitted Keystone has agreed to incorporate additional mitigation measures in the design, construction, and operation of the proposed Keystone XL Project, in some instances above what is normally required, including:

- 59 Special Conditions recommended by PHMSA;
- 25 mitigation measures recommended in the Battelle and E^{x}ponent risk reports; and
- 11 additional mitigation measures.

Many of these mitigation measures relate to reductions in the likelihood of a release occurring. Other measures provide mitigation that reduces the consequences and impact of a spill should such an event occur. Mitigation measures are compiled in Appendix Z, Compiled Mitigation Measures, of this Supplemental EIS. Mitigation measures are actions that, if the proposed Project is determined to be in the national interest, Keystone would comply with as conditions of a Presidential Permit.

If a spill occurred, the degree of impact to water, people, livestock, soil, and other natural resources would depend on the distance from the spill source. A large spill of 20,000 bbl, for example, could have a combined overland and groundwater spreading of up to 2,264 feet (or 0.42 miles) from a release point. Oil could spread on flat ground up to 1,214 feet from the proposed pipeline, depending on the volume spilled. If oil reached groundwater, components in the oil, such as benzene, could spread in groundwater up to an additional 1,050 feet downgradient (essentially, downhill underground and on land) of the spill point.

The proposed Project would, if permitted, include processes, procedures, and systems to prevent, detect, and mitigate potential oil spills that could occur during construction and operation of the pipeline. These would include a Spill Prevention, Control, and Countermeasure Plan as well as a Construction, Mitigation, and Reclamation Plan (CMRP). In the event of a large leak, Supervisory Control and Data Acquisition sensors would automatically detect noticeable changes in pipeline pressure and flow rates. Leaks and spills could also be identified during routine aerial surveillance along the pipeline ROW. In addition, Keystone would be required, if permitted, to prepare an Emergency Response Plan that would contain further detail on response procedures and would be reviewed by the PHMSA prior to granting permission to operate the proposed pipeline. Keystone would incorporate into these plans lessons learned from past spills such as the pipeline rupture in 2010 that affected the Kalamazoo River (Marshall, Michigan). For example, Keystone would, if permitted, procure equipment required to respond to sunken and submerged oil and ensure personnel are appropriately trained.

ES.4.3 Socioeconomics

ES.4.3.1 Economic Activity Overview

During construction, proposed Project spending would support approximately 42,100 jobs (direct, indirect, and induced), and approximately $2 billion in earnings throughout the United States. Of these jobs, approximately 3,900 would be direct construction jobs in the proposed Project area in Montana, South Dakota, Nebraska, and Kansas (3,900 over 1 year of construction, or 1,950 per year if construction took 2 years). Construction of the proposed Project would contribute approximately $3.4 billion (or 0.02 percent) to the U.S. gross domestic product (GDP). The proposed Project would generate approximately 50 jobs during operations. Property tax revenue during operations would be substantial for many counties, with an increase of 10 percent or more in 17 of the 27 counties with proposed Project facilities.

The jobs and earnings analysis recognizes three distinct components of economic activity and job creation: direct, indirect, and induced.

- Direct economic activity associated with construction includes all jobs and earnings at firms that are awarded contracts for goods and services, including construction, directly by Keystone.
- Indirect economic activity includes all goods and services purchased by these construction contractors in the conduct of their services to the proposed Project. Examples of these types of activities related to pipeline construction include the goods and services purchased to produce inputs such as concrete, fuel, surveying, welding materials, and earth-moving equipment.
- Induced economic activity includes the spending of earnings received by employees working for either the construction contractor or for any supplier of goods and services required in the construction process. Examples of induced activities include

spending by access road construction crews, welders, employees of pipe manufacturers, and ranchers providing beef for restaurants and construction camps.

ES.4.3.2 Pipeline Geography, Population

Of the land area near the proposed pipeline route, approximately 17 percent intersects areas with low-income or minority populations, including Indian tribes. Such populations could potentially be disproportionately affected by the proposed Project.

The proposed pipeline route would go through 27 counties: six in Montana, nine in South Dakota, and 12 in Nebraska. These counties are referred to as the *pipeline corridor counties* and would be expected to experience most of the direct socioeconomic effects of the proposed Project.

The 27 pipeline corridor counties are predominantly rural and sparsely populated, with a total population of approximately 263,300 (2010 Census). Population density (number of persons per square mile) is low.

ES.4.3.3 Economic Activity During Construction

Construction contracts, materials, and support purchased in the United States would total approximately $3.1 billion. Another approximately $233 million would be spent on construction camps for workers in remote locations of Montana, South Dakota, and northern Nebraska.

Construction of the proposed Project would contribute approximately $3.4 billion to the U.S. GDP. This figure includes not only earnings by workers, but all other income earned by businesses and individuals engaged in the production of goods and services demanded by the proposed Project, such as profits, rent, interest, and dividends. When compared with the GDP in 2012, the proposed Project's contribution represents approximately 0.02 percent of annual economic activity across the nation.

Construction spending would support a combined total of approximately 42,100 jobs throughout the United States for the up to 2-year construction period. A *job* consists of one position that is filled for one year. The term *support* means jobs ranging from new jobs (i.e., not previously existing) to the continuity of existing jobs in current or new locations. The specific number of jobs at any location would result from the individual decisions of employers across the country affected by the proposed Project based on their labor needs, work backlog, and local hiring conditions. Of these jobs, approximately 16,100 would be direct jobs at firms that are awarded contracts for goods and services, including construction, by Keystone. The other approximately 26,000 jobs would result from indirect and induced spending; this would consist of goods and services purchased by the construction contractors and spending by employees working for either the construction contractor or for any supplier of goods and services required in the construction process.

About 12,000 jobs, or 29 percent of the total 42,100 jobs, would be supported in Montana, South Dakota, Nebraska, and Kansas. Also, of the 42,100 jobs, approximately 3,900 (or 1,950 per year if construction took 2 years) would comprise a direct, temporary, construction workforce in the proposed Project area.

Employment supported by construction of the proposed Project would translate to approximately $2.05 billion in employee earnings. Of this, approximately 20 percent ($405 million in earnings) would be allocated to workers in the proposed Project area states. The remaining 80 percent, or $1.6 billion, would occur in other locations around the country.

ES.4.3.4 Economic Activity During Operations

Once the proposed Project enters service, operations would require approximately 50 total employees in the United States: 35 permanent employees and 15 temporary contractors. This small number would result in negligible impacts on population, housing, and public services in the proposed Project area.

The total estimated property tax from the proposed Project in the first full year of operations would be approximately $55.6 million spread across 27 counties in three states. This impact to local property tax revenue receipts would be substantial for many counties, constituting a property tax revenue benefit of 10 percent or more in 17 of these 27 counties. Operation of the proposed Project is not expected to have an impact on residential or agricultural property values.

ES.4.4 Environmental Justice

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* directs federal agencies to identify and address, as appropriate, disproportionately high and adverse health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. Environmental justice refers to the "fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" (USEPA 2007). The CEQ has provided guidance for addressing environmental justice.

Within the socioeconomic analysis area identified for the proposed Project, 16 census groupings contain minority populations that are meaningfully greater (equal or greater than 120 percent) than the share in the surrounding state, and five census tracts have larger shares of low-income populations. Four of these areas contain meaningfully greater populations of both minority and low income residents. Two minority populations are located on Indian lands: the Cheyenne River Indian Reservation and the Rosebud Indian Reservation.

Impacts during construction could include exposure to construction dust and noise, disruption to traffic patterns, and increased competition for medical or health services. Typical proposed Project operations are unlikely to disproportionately adversely impact the environmental justice populations present. Because the risk of a potential release is roughly equal at all points along the pipeline, the risks associated with such releases would not be disproportionately borne by minority or low-income populations. However, such populations could be more vulnerable should a release occur.

If permitted, Keystone has agreed to avoidance and mitigation measures to minimize negative impacts to all populations in the proposed Project area. Specific mitigation for environmental justice communities during construction would involve ensuring that adequate communication in the form of public awareness materials regarding the construction schedule and construction activities is provided.

ES.4.5 Water Resources

The proposed Project route would avoid surface water whenever possible, but would cross approximately 1,073 surface waterbodies including 56 perennial rivers and streams as well as approximately 24 miles of mapped floodplains. If permitted, Keystone would drill underneath major rivers to mitigate construction impacts as described below and in Section 4.3, Water Resources.

The proposed pipeline would cross important aquifers such as the Northern High Plains Aquifer (NHPAQ) (which includes the Ogallala Aquifer) and the Great Plains Aquifer (GPA). Modeling indicates that aquifer characteristics would inhibit the spread of released oil, and impacts from a release on water quality would be limited.

Nevertheless, within 1 mile of the proposed Project route are 2,537 wells, including 39 public water supply wells. Wells that are in the vicinity could be affected by a release from the proposed Project.

ES.4.5.1 Surface Water

ES.4.5.1.1 Construction

Construction of the proposed Project could result in temporary and permanent impacts such as:

- Stream sedimentation;
- Changes in stream channel morphology (shape) and stability;
- Temporary reduction in stream flow; and
- Potential for hazardous material spills.

Open-cut methods would be used at most waterbody crossings. However, impacts to surface waterbodies would be mitigated through various means. Horizontal directional drill (HDD) methods would be used at 14 major and sensitive waterbody crossings (see Figure ES-11). Waterbody banks would be restored to preconstruction contours or to a stable slope. Seeding, erosion control fabric, and other erosion control measures would be installed, as specified in the CMRP and permit documents.

ES.4.5.1.2 Operations

Surface water impacts associated with potential releases of crude oil and other hazardous liquid spills are addressed in detail in the Potential Releases section. Other potential impacts during the operations phase would include:

- Channel migration or streambed degradation that exposes the pipeline;
- Channel incision that increases bank heights to the point where slopes are destabilized, ultimately widening the stream; and
- Sedimentation within a channel that triggers lateral bank erosion.

Mitigation measures to address these impacts would include those specified in the CMRP. The proposed pipeline would be at least 5 feet below the bottom of waterbodies and at least 3 to 4 feet below the bottom of waterbodies in rocky areas, and that depth would be maintained at least 15 feet from either waterbody edge.

Where an HDD method is used, the crossing depth would be up to 55 feet below the stream bed. Potential bank protection measures could include installing rock, wood, or other materials keyed into the bank to provide protection from further erosion or regrading the banks to reduce the bank slope.

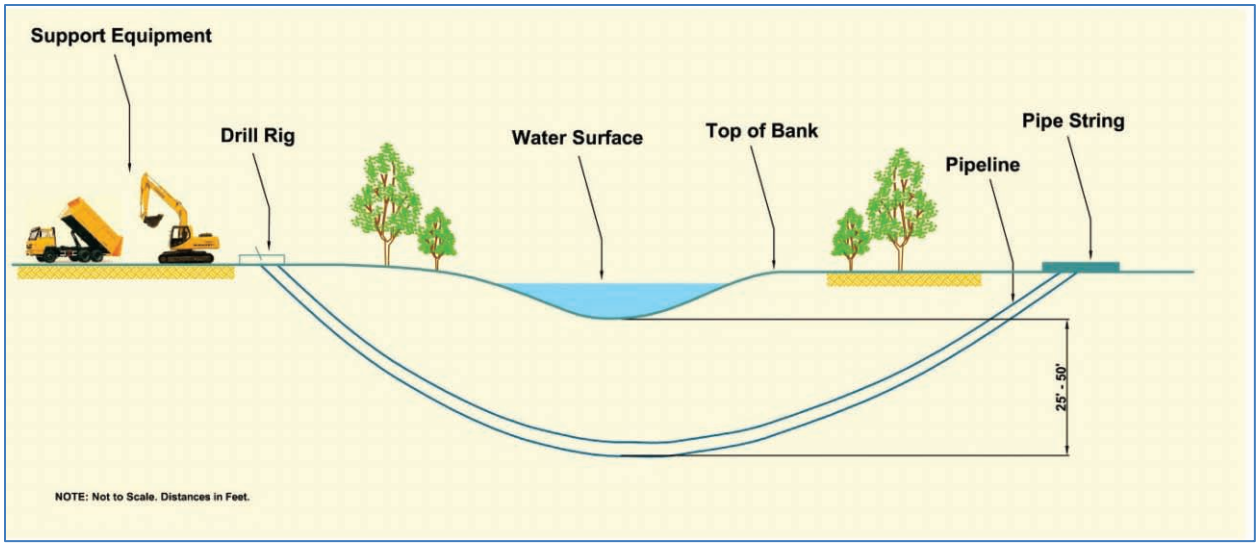


Figure ES-11 Cross Section of the Horizontal Directional Drilling Method

ES.4.5.2 Floodplains

The proposed pipeline would cross mapped and unmapped floodplains in Montana, South Dakota, and Nebraska. In floodplain areas adjacent to waterbody crossings, contours would be restored to as close to previously existing contours as practical, and the disturbed area would be revegetated during construction of the ROW in accordance with the CMRP. After construction, the proposed pipeline would not obstruct flows over designated floodplains, and any changes to topography would be minimal and thus would not affect local flood elevations.

ES.4.5.3 Groundwater

The primary source of groundwater impacts from the proposed Project would be potential releases of petroleum during pipeline operation and, to a lesser extent, from fuel spills from equipment. Any petroleum releases from construction or operation could potentially impact groundwater where the overlying soils are permeable and/or the depth to groundwater is shallow. Table ES-3 summarizes the anticipated effects of potential releases from the proposed Project on aquifers along the proposed Project route.

ES.4.6 Wetlands

The proposed Project would affect approximately 383 acres of wetlands. Potential impacts include:

- Impacts to wetland functions and values;
- Conversion from one wetland type to another; and
- Permanent loss of wetlands due to fill for permanent project-related facilities.

An estimated 2 acres of permanent wetland loss is anticipated. Remaining wetlands affected by the proposed Project would remain as functioning wetlands, provided that impact minimization and restoration efforts described in the CMRP are successful.

Wetlands are regulated primarily by Section 404 of the Clean Water Act, but other regulations could apply if, for example, a wetland area provides important habitat for federally listed species and species protected by the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act. Section 404 requires that wetland impacts are avoided, minimized, and mitigated to the greatest practicable extent possible. Keystone has made route modifications to avoid wetland areas (such as the NDEQ-identified Sand Hills Region) and has prepared a CMRP that summarizes the proposed wetland avoidance, minimization, and mitigation measures. In addition, various agencies, such as U.S. Army Corps of Engineers, could require additional mitigation in accordance with American Indian tribal, local, state, and federal permits and regulations.

Table ES-3 Effects of Potential Releases on Aquifers

Aquifer	Effects
Alluvial Aquifers and Northern High Plains Aquifer (NHPAQ), including the Ogallala Aquifer	Aquifer conditions in the NHPAQ in the proposed Project area indicate that shallow groundwater generally discharges to local surface waterbodies, and typically does not flow downward in significant amounts or flow horizontally over long distances. Analysis of historic spills and groundwater modeling indicate that contaminant plumes from a large-scale release that reaches groundwater in the NHPAQ and alluvial aquifers could be expected to affect groundwater quality up to approximately 1,000 feet downgradient of the source. This localized effect indicates that petroleum releases from the proposed Project is unlikely to extensively affect water quality in this aquifer group.
Great Plains Aquifer (GPA)	Across most of the proposed pipeline area where the GPA is present, it is very unlikely that any releases from the proposed pipeline would affect groundwater quality in the aquifer because the aquifer is typically deeply buried beneath younger, water-bearing sediments and/or aquitard units. The exception is in southern Nebraska, where the aquifer is closer to the surface. Water quality in the GPA could be affected by releases in this area, but groundwater flow patterns in the vicinity of the proposed Project route make such effects unlikely. Overall, it is very unlikely that the proposed pipeline area would affect water quality in the GPA due to weak downward gradients (downward groundwater flows) in the aquifers overlying the GPA.
Northern Great Plains Aquifer System (NGPAS)	As with the GPA, petroleum releases from the proposed Project would only affect water quality in portions of the NGPAS near the ground surface. In the case of a large-scale release, these impacts would typically be limited to within several hundred feet of the source, and would not affect groundwater within areas that provide groundwater recharge to large portions of the NGPAS.
Western Interior Plains Aquifer	The depth to this aquifer is several hundred feet below the ground surface in the proposed Project area; therefore, there is an extremely low probability that a petroleum release from the proposed Project would affect water quality in this aquifer.
Shallow Groundwater and Water Wells	There are 2,537 wells within 1 mile of the proposed Project, including 39 public water supply wells and 20 private wells within 100 feet of the pipeline ROW. The majority of these wells are in Nebraska. Those wells that are in the vicinity of a petroleum release from the proposed Project may be affected.

ES.4.7 Threatened and Endangered Species

Consultation and coordination with the U.S. Fish and Wildlife Service (USFWS) identified 14 federally protected, proposed, and candidate species that could be affected by the proposed Project: 11 federally-listed threatened or endangered species, as defined under the ESA, one proposed species for listing as endangered, and two candidate species for listing as threatened or endangered. Of the federally listed, proposed, and candidate species, the endangered American buying beetle (*Nicrophorus americanus*) is the only species that is likely to be adversely affected by the proposed Project (see Figure ES-12). Other species could potentially be affected by the proposed Project; among these are whooping cranes (*Grus americana*), greater sage-grouse (*Centrocercus urophasianus*), and Western prairie fringed orchids (*Platanthera praeclara*).

In consultation with the USFWS, the Department prepared a Biological Assessment to evaluate the proposed Project's potential impacts to federally listed and candidate species and designated critical habitat. In addition, USFWS has developed a Biological Opinion for the proposed Project, which includes recommended conservation measures and compensatory mitigation for unavoidable impacts that were assessed during the formal consultation process. The Biological Opinion is attached in Appendix H, 2012 Biological Assessment, 2013 USFWS Biological Opinion, and Associated Documents.

Figure ES-12 American Burying Beetle

Approximately 83 miles of the proposed Project Route in South Dakota and Nebraska would affect suitable American burying beetle habitat. Consultation between the Department and USFWS resulted in development of conservation measures and compensatory mitigation, such as trapping and relocating beetles, special lighting restrictions (the beetles are attracted to light), and establishment of a habitat conservation trust.

Even with these measures, the proposed Project would be likely to adversely affect the American burying beetle, resulting in incidental take (such as unintended death or harm of individual beetles) during construction or operation. The combination of Keystone's American burying beetle monitoring program and Reclamation Performance Bond would provide assurances that the acres disturbed by the proposed Project would be restored appropriately. The USFWS concluded in the 2013 USFWS Biological Opinion that the proposed Project is not likely to jeopardize the continued existence of the American burying beetle.

ES.4.8 Geology and Soils

The proposed route extends through relatively flat and stable areas, and the potential for seismic hazards (earthquakes), landslides, or subsidence (sink holes), is low. The pipeline would not cross any known active faults. During construction, land clearing could increase the risk of landslides and erosion. Keystone would, if permitted, construct temporary erosion control systems and restore the ROW after construction.

The proposed Project route would avoid the NDEQ-identified Sand Hills Region, where soils are particularly susceptible to damage from pipeline construction. Potential impacts to soils resources in other areas associated with construction or operation of the proposed Project and connected actions could include soil erosion, loss of topsoil, soil compaction, an increase in the proportion of large rocks in the topsoil, soil mixing, soil contamination, and related reductions in the productivity of desirable vegetation or crops. Construction also could result in damage to existing tile drainage systems (an agriculture practice that removes excess water from soil subsurface), irrigation systems, and shelterbelts.

To mitigate and minimize these impacts, Keystone would, if permitted, put in place procedures for construction and operation that are designed to reduce the likelihood and severity of proposed Project impacts to soils and sediments, including topsoil segregation methods, and to mitigate impacts to the extent practicable. After construction, areas of erosion or settling would be monitored.

ES.4.9 Terrestrial Vegetation

Potential construction- and operations-related impacts to general terrestrial vegetation resources associated with the proposed Project include impacts to cultivated crops, developed land, grassland/pasture, upland forest, open water, forested wetlands, emergent herbaceous wetlands, and shrub-scrub communities. In addition, the proposed Project route would result in impacts to biologically unique landscapes and vegetation communities of conservation concern.

Keystone would, if permitted, restore topsoil, slopes, contours, and drainage patterns to preconstruction conditions as practicable and to reseed disturbed areas to restore vegetation cover, prevent erosion, and control noxious weeds. Because disturbed prairie areas are difficult to restore to existing (pre-disturbance) conditions, Keystone would, if permitted, use specific best management practices and procedures to minimize and mitigate the potential impacts to native prairie areas and coordinate with appropriate agencies as necessary to monitor progress.

ES.4.10 Wildlife

Potential impacts to wildlife associated with construction of the proposed Project could include habitat loss, alteration, and fragmentation; direct mortality during construction and operation (e.g., vehicle collisions, power line/power pole collisions, etc.); indirect mortality because of stress or avoidance of feeding due to exposure to construction and operations noise, low-level helicopter or airplane monitoring overflights, and from increased human activity; reduced breeding success from exposure to construction and operations noise and from increased human activity; reduced survival or reproduction due to decreased availability of edible plants, reduced cover, and increased exotics and invasives; and increased predation (i.e., nest parasitism, creation of predator travel corridors, and poaching).

To reduce potential construction- and operations-related effects where habitat is crossed, Keystone would, if permitted, implement measures to minimize adverse effects to wildlife habitats, including shelterbelts, windbreaks, and living snow fences. Pipeline construction would be conducted in accordance with required permits.

ES.4.11 Fisheries

The proposed route would cross rivers and streams, including perennial streams that support recreational or commercial fisheries. Most potential impacts to fisheries resources would occur during construction and would be temporary or short term. Potential impacts from construction of stream crossings include siltation, sedimentation, bank erosion, sediment deposition, short-term delays in movements of fish, and transport and spread of aquatic invasive animals and plants. Keystone would, if permitted, minimize vehicle contact with surface waters and clean equipment to prevent transportation of aquatic invasive animals and plants. Impacts associated with potential releases of oil are described in Section 4.13, Potential Releases.

Most streams would be crossed using one of several open-cut (trenching) methods. Most stream crossings would be completed in less than 2 days, grading and disturbance to waterbody banks would be minimized, and crossings would be timed to avoid sensitive spawning periods, such that resulting steam bed disturbance and sediment impacts would be temporary and minimized.

Most large rivers would be crossed using HDD methods, which would install the pipeline well below the active river bed. As a result, direct disturbance to the river bed, fish, aquatic animals and plants, and river banks would be avoided. If permitted, Keystone has agreed to develop site-specific contingency plans to address unintended releases of drilling fluids that include preventative measures and a spill response plan.

ES.4.12 Land Use

Construction of the proposed Project would disturb approximately 15,427 acres of land. Approximately 90 percent of that land is privately owned while the remaining is owned by federal, state, or local governments. Rangeland (approximately 9,695 acres) and agriculture (approximately 4,975 acres) comprise the vast majority of land use types that would be affected by construction.

After construction, approximately 5,569 acres would be retained within permanent easements or acquired for operation of the proposed Project; this includes the pipeline ROW and aboveground facilities. Nearly all agricultural land and rangeland along the ROW would be allowed to return to production with little impact on production levels in the long term. However, there would be restrictions on growing woody vegetation and installing structures within the 50-foot-wide permanent ROW. Keystone has agreed to compensate landowners for crop losses on a case-by-case basis.

Keystone would if permitted use construction measures designed to reduce impacts to existing land uses such as topsoil protection, avoiding interference with irrigation systems, repairing or restoring drain tiles, assisting with livestock access and safety, and restoring disturbed areas with custom native seed mixes.

ES.4.13 Air Quality and Noise

Dust and emissions from construction equipment would impact air quality. Construction emissions typically would be localized, intermittent, and temporary since proposed pipeline construction would move through an area relatively quickly. Mitigation measures would be employed and enforced by an environmental inspector assigned to each construction spread.

All pump stations would be electrically powered by local utility providers. As a result, during normal operation there would be only minor emissions from valves and pumping equipment at the pump stations. The proposed Project would not be expected to cause or contribute to a violation of any federal, state, or local air quality standards, and it would not require a Clean Air Act Title V operating permit.

Construction activities would result in intermittent, temporary, and localized increases in noise levels. To reduce construction noise impacts, Keystone would, if permitted, limit the hours during which activities with high-decibel noise levels are conducted in residential areas, require noise mitigation procedures, monitor sound levels, and develop site-specific mitigation plans to comply with regulations.

ES.4.14 Cultural Resources

The proposed Project route would cross various private, state, and federal lands in Montana, South Dakota, and Nebraska where cultural resources would be encountered. Literature searches were conducted to locate previously identified cultural resources within the designated area of potential effects. Field studies were conducted between 2008 and 2013 to identify cultural resources and assess archaeological resources (i.e., sites), historic resources (i.e., buildings, structures, objects, and districts), and properties of religious and cultural significance, including traditional cultural properties.

As of December 2013, most of the proposed Project area has been surveyed for cultural resources. The proposed Project area of potential effects is approximately 39,500 acres, of which approximately 1,038 acres remain unsurveyed and are the subject of ongoing field studies. As part of this Supplemental EIS route evaluation process, consistent with the National Historic Preservation Act, the Programmatic Agreement (PA) that was signed in 2011 has been amended, finalized, and re-signed. Signatory parties to this agreement were the Department, Advisory Council on Historic Preservation, Bureau of Land Management, U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, National Park Service, Western, Rural Utilities Service, Natural Resources Conservation Service, Farm Service Agency, Bureau of Indian Affairs, and the State Historic Preservation Offices of Montana, South Dakota, Nebraska, and Kansas. Invited signatories included the Montana Department of Natural Resources and Conservation, Montana Department of Environmental Quality, and Keystone. Indian tribes that participated in consultation were asked in 2013 to sign as Concurring Parties, consistent with 36 Code of Federal Regulations §§ 800.2(c)(2) and 800.6(c)(3).

Pursuant to the stipulations outlined in the PA, Keystone is required to complete cultural resources surveys on all areas that would be potentially impacted by the proposed Project, make recommendations on National Register of Historic Places eligibility, provide information on potential effects of the proposed Project, and provide adequate mitigation in consultation with the Department, state and federal agencies, and Indian tribes. Construction would not be allowed to commence on any areas of the proposed Project until these stipulations are met. The PA, therefore, would ensure that appropriate consultation procedures are followed and that cultural resources surveys would be completed prior to construction. If unanticipated cultural materials or human remains were encountered during the construction phase of the proposed Project, Keystone would implement Unanticipated Discovery Plans pursuant to the PA.

ES.4.14.1 Tribal Consultation

Upon receiving a new application, the Department reached out directly to 84 Indian tribes throughout the United States with potential interest in the cultural resources potentially affected by the proposed Project (see Figure ES-13). Of the 84 Indian tribes, 67 tribes notified the Department that they would like to consult or were undecided as to whether they would become consulting parties. All Indian tribes that participated in consultation were asked in 2013 to sign the amended PA.

The Department has conducted a broad range of tribal consultations, ranging from group meetings involving many Indian tribes and discussion topics to individual discussions on specific topics via letter, phone, and email. In addition to communication by phone, email, and letter, high-level Department officials travelled to areas near the proposed Project route to hold four face-to-face consultations, to which all Indian tribes were invited and whose participation was funded by Keystone, and one teleconference. Tribal meetings were held in October 2012 (three meetings), May 2013 (one meeting), and July 2013 (teleconference). Face-to-face meetings were held in four locations: Billings, Montana; Pierre, South Dakota; Rapid City, South Dakota; and Lincoln, Nebraska.

The Department engaged in discussions with the tribes and Tribal Historic Preservation Officers on issues relating to cultural resources. Consultations included discussions of cultural resources, in general, as well as cultural resources surveys, Traditional Cultural Properties surveys, effects to cultural resources, and mitigation. The Department has continued government-to-government consultations to build on previous work, to ensure that tribal issues of concern are addressed in the consultation process, and to amend and incorporate comments and modifications to the PA, as appropriate, in consultation with the tribes to conclude the Section 106 consistent process for the proposed Project. Additionally, tribes were provided proposed Project cultural resources survey reports and opportunities to conduct Traditional Cultural Property surveys funded by Keystone.

ES.4.15 Cumulative Effects

The cumulative effects analysis evaluates the way that the proposed Project's impacts interact with the impact of other past, present, or reasonably foreseeable future actions or projects. The goal of the cumulative impacts analysis is to identify situations where sets of comparatively small individual impacts, taken together, constitute a larger collective impact.

Cumulative impacts associated with the proposed Project and connected actions vary among individual environmental resources and locations. Generally, where long-term or permanent impacts from the proposed Project are absent, the potential for additive cumulative effects with other past, present, and reasonably foreseeable future projects is negligible.

Keystone's CMRP and planned mitigation measures, individual federal and state agency permitting conditions, and/or existing laws and regulations would, if permitted, work to control potential impacts and reduce the proposed Project's contribution to cumulative effects.

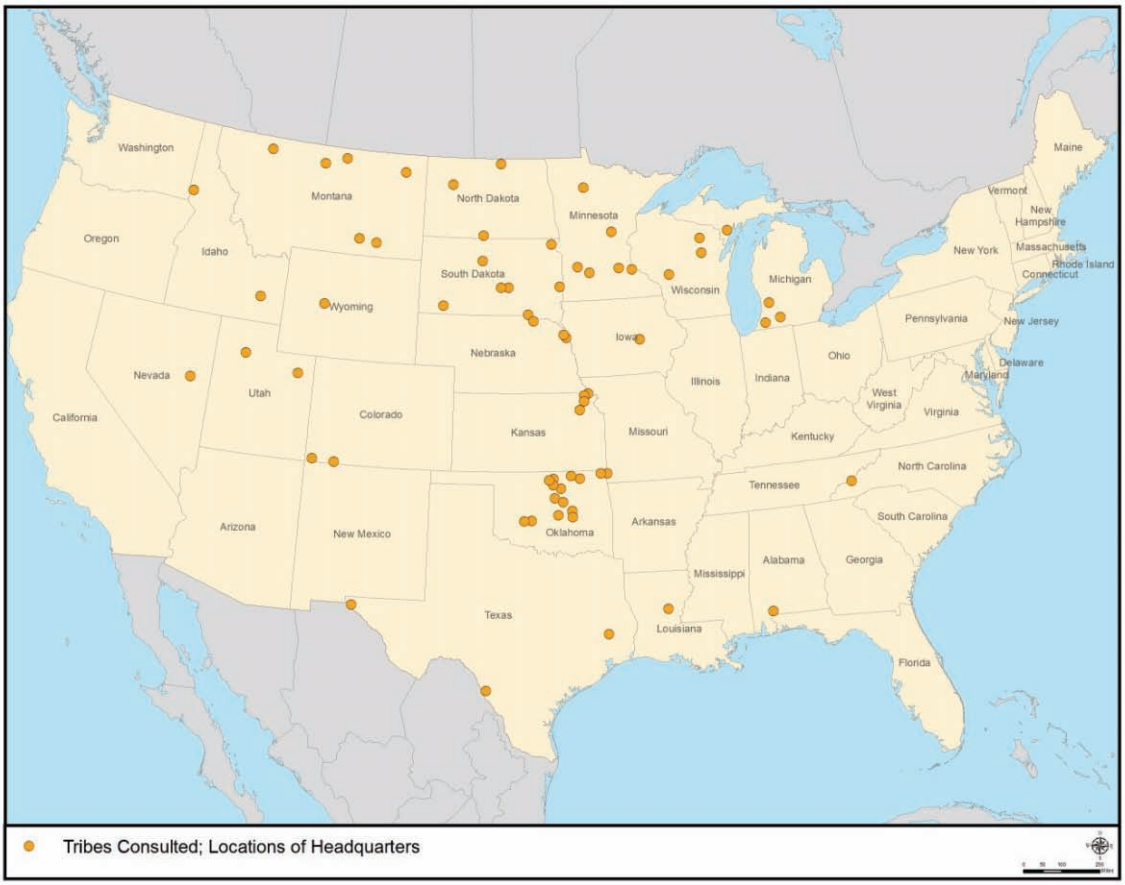


Figure ES-13 Indian Tribes Consulted

ES.4.16 Environmental Impacts in Canada

While the proposed Project analyzed in this Supplemental EIS begins at the international boundary where the pipeline would exit at Saskatchewan, Canada, and enter the United States through Montana, the origination point of the pipeline system would be in Alberta, Canada. In addition to the environmental analysis of the proposed Project in the United States, the Department monitored and obtained information from the environmental analysis of the Canadian portion of the proposed Project. The Canadian government, not the Department, conducted an environmental review of the portion of the proposed Project within Canada. However, the Department has included information from the Canadian government's assessment in this Supplemental EIS and has continued to monitor information from Canada as it becomes available.

On March 11, 2010, the Canadian National Energy Board issued its 168-page Reasons for Decision granting Keystone's application to build the Canadian portion of the proposed Project. This document provided a rationale for the approval of the pipeline by Canadian regulatory authorities and a description of the National Energy Board's analysis of the following topics: economic feasibility, commercial impacts, tolls and tariffs, engineering, land matters, public consultation, aboriginal consultation, and environmental and socioeconomic matters.

Moreover, analysis and mitigation of environmental impacts in Canada more generally are ongoing by Canadian officials. For example, on September 1, 2012, the Government of Alberta's development plan for the Lower Athabascan oil sands region became effective. The plan requires cancellation of about 10 oil sands leases, sets aside nearly 20,000 square kilometers (7,700 square miles) for conservation, and sets new environmental standards for the region in an effort to protect sensitive habitat, wildlife, and forest land.

ES.5.0 ALTERNATIVES

Detailed analysis was conducted on three broad categories of alternatives to the proposed Project, consistent with NEPA:

- No Action Alternative—which addresses potential market responses that could result if the Presidential Permit is denied or the proposed Project is not otherwise implemented;
- Major Route Alternatives—which includes other potential pipeline routes for transporting WCSB and Bakken crude oil to Steele City, Nebraska; and
- Other Alternatives—which include minor route variations, alternative pipeline designs, and alternative sites for aboveground facilities.

Several alternatives exist for the transport of WCSB and Bakken crude oil to Gulf Coast refineries, including many that were not carried forward for detailed analysis. This Supplemental EIS provides a detailed description of the categories of alternatives, the alternative screening process, and the detailed alternatives identified for further evaluation.

ES.5.1 No Action Alternative

The No Action Alternative analysis considers what would likely happen if the Presidential Permit is denied or the proposed Project is not otherwise implemented. It includes the Status Quo Baseline, which serves as a benchmark against which other alternatives are evaluated. Under the Status Quo Baseline, the proposed Project would not be constructed and the resulting direct, indirect, and cumulative impacts that are described in this Supplemental EIS would not occur. The Status Quo Baseline is a snapshot of the crude oil production and delivery systems at current levels – in other words, no change at all – irrespective of likely alternative transport scenarios to transport WCSB and Bakken crude.

The No Action Alternative includes analysis of three alternative transport scenarios that, based on the findings of the market analysis, are believed to meet the proposed Project's purpose (i.e., providing WCSB and Bakken crude oil to meet refinery demand in the Gulf Coast area) if the Presidential Permit for the proposed Project were denied, or if the pipeline were otherwise not constructed. Under the alternative transport scenarios, other environmental impacts would occur in lieu of the proposed Project. This Supplemental EIS includes analysis of various combinations of transportation modes for oil, including truck, barge, tanker, and rail. These scenarios are considered representative of the crude oil transport alternatives with which the market would respond in absence of the Keystone XL pipeline. These three alternative transport scenarios (i.e., the Rail and Pipeline Scenario, Rail and Tanker Scenario, and Rail Direct to the Gulf Coast Scenario) are described below and illustrated on Figure ES-14.

ES.5.1.1 Rail and Pipeline Scenario

Under this scenario, WCSB and Bakken crude oil (in the form of dilbit or synbit) would be shipped via rail from Lloydminster, Saskatchewan (the nearest rail terminal served by two Class I rail companies), to Stroud, Oklahoma, where it would be temporarily stored and then transported via existing and expanded pipelines approximately 17 miles to Cushing, Oklahoma, where the crude oil would interconnect with the interstate oil pipeline system.

This scenario would require the construction of two new or expanded rail loading terminals in Lloydminster, Saskatchewan (the possible loading point for WCSB crude oil), one new terminal in Epping, North Dakota (the representative loading point for Bakken crude oil), seven new terminals in Stroud, and up to 14 unit trains (consisting of approximately 100 cars carrying the same material and destined for the same delivery location) per day (12 from Lloydminster and two from Epping) to transport the equivalent volume of crude oil as would be transported by the proposed Project.

ES.5.1.2 Rail and Tanker Scenario

The second transportation scenario assumes crude oil (as dilbit or synbit) would be transported by rail from Lloydminster to a western Canada port (assumed to be Prince Rupert, British Columbia), where it would be loaded onto Suezmax tankers (capable of carrying approximately 986,000 barrels of WCSB crude oil) for transport to the U.S. Gulf Coast (Houston and/or Port Arthur) via the Panama Canal. Bakken crude would be shipped from Epping to Stroud via BNSF Railway or Union Pacific rail lines, similar to the method described under the Rail and Pipeline Scenario. This scenario would require up to 12 unit trains per day between Lloydminster and Prince Rupert, and up to two unit trains per day between Epping and Stroud. This scenario would require the construction of two new or expanded rail loading facilities in Lloydminster with other existing terminals in the area handling the majority of the WCSB for shipping to Prince Rupert. Facilities in Prince Rupert would include a new rail unloading and storage facility and a new marine terminal encompassing approximately 4,200 acres and capable of accommodating two Suezmax tankers. For the Bakken crude portion of this Scenario, one new rail terminal would be necessary in both Epping, North Dakota, and Stroud, Nebraska.

Figure ES-14 Representative No Action Alternative Scenarios

ES.5.1.3 Rail Direct to the Gulf Coast Scenario

The third transportation scenario assumes that WCSB and Bakken crude oil (as dilbit) would be shipped by rail from Lloydminster, Saskatchewan, and Epping, North Dakota, directly to existing rail facilities in the Gulf Coast region capable of off-loading up to 14 unit trains per day. These existing facilities would then either ship the crude oil by pipeline or barge the short distance to nearby refineries. It would largely rely on existing rail terminals in Lloydminster, but would likely require construction of up to two new or expanded terminals to accommodate the additional WCSB shipments out of Canada. One new rail loading terminal would be needed in Epping to ship Bakken crude oil. Sufficient off-loading rail facilities currently exist or are proposed in the Gulf Coast area such that no new terminals would need to be built under this scenario.

ES.5.2 Major Pipeline Route Alternatives

The Department considered potential alternative pipeline routes to assess whether or not route alternatives could avoid or reduce impacts to environmentally sensitive resources while also meeting the proposed Project's purpose. Consistent with NEPA, a two-phase screening process was used to evaluate prospective alternatives using a set of criteria to determine their technical, environmental, and economic viability. Alternatives that failed to meet the screening criteria were not brought forward for detailed analysis in this Supplemental EIS. The initial (Phase I) screening of other major route alternatives considered the following criteria:

- Meeting the proposed Project's purpose and need, including whether the alternative would require additional infrastructure such as a pipeline to access Bakken crude oil;
- Availability;
- Reliability;
- Length within the United States;
- Total length of the pipeline, including both the United States and Canada;
- Estimated number of aboveground facilities;
- Length co-located within an existing corridor;
- Acres of land directly affected during construction; and
- Acres of land directly affected permanently.

Pipeline length was used as an important screening criterion because it has a relatively direct relationship with:

- System reliability, in that the longer the pipeline the greater risk that some portion may become inoperable at some point, thereby delaying shipments.
- Environmental impacts, including:
  - Risk of spills and leaks, which represent the greatest potential threat to water and aquatic resources;
  - Temporary construction-related disturbance to natural habitat (e.g., wetlands, forests, native prairie); and
  - Permanent habitat fragmentation.
- Construction and operational costs, which generally increase in proportion to overall pipeline length.

All other factors being equal, longer pipelines are less desirable because they represent greater risks to system reliability, environmental impacts, and project costs.

As a result of this Phase I screening process, the following alternatives were eliminated because they would not meet the project purpose and/or were significantly longer than other viable options (see Figure ES-15):

- Western Alternative (to Cushing);
- Express Platte Alternative; and
- Existing Keystone Corridor
  - Option 1: Proposed Border Crossing (near Morgan, Montana)
  - Option 2: Existing Keystone Pipeline Border Crossing (at Pembina, North Dakota).

Several commenters recommended that the proposed Project parallel the existing Keystone Pipeline rather than the proposed route. The Department considered these comments, but ultimately concluded that the existing Keystone Pipeline Route was not a reasonable alternative because it would not meet the proposed Project's purpose and need (i.e., would not meet Keystone's contractual obligations to transport 100,000 bpd of Bakken crude oil). Further, the existing Keystone Pipeline Corridor would be longer (taking into consideration pipeline length in both Canada and the United States), which represents an increased spill risk. The 2011 Steele City Segment, the I-90 Corridor, and the Steele City Segment A1A alternatives, however, were retained for further screening.

The Phase II screening used a desktop data review of key environmental and other features (e.g., wetlands and waterbodies crossed, total acreage affected). After this Phase II screening, the Steele City Segment A1A Alternative was eliminated because this route would be longer with an associated increased risk for spills and leaks, would cross more miles of principal aquifer and wetlands, and would require a second major crossing of the Missouri River, relative to the proposed Project. For these reasons, the Steele City A1A Alternative would not offer any offsetting environmental advantages relative to the proposed Project to warrant further consideration. However, both the 2011 Steele City Segment and I-90 Corridor alternatives were considered reasonable alternatives and were retained for full evaluation in this Supplemental EIS. These two route alternatives are described below and depicted in Figure ES-15. Table ES-4 summarizes key aspects of the major pipeline route alternatives.

Table ES-4 Summary of Major Pipeline Route Alternatives

	Proposed Project	2011 Steele City Segment Alternative	I-90 Corridor Alternative
New Pipeline Length (miles)	875	854	927
Number of Aboveground Facilities[a]	73	71	77
Length Co-Located with Existing Keystone Pipeline (miles)	0	0	254
NDEQ-Identified Sand Hills Region Crossed (miles)	0	89	0
Highly Erodible Soil (Wind) Crossed (miles)	73	116	36
Perennial Waterbody Crossings	56	53	61
Wetlands Affected during Construction (acres)	262	544	223
Average Annual Employment During Construction	3,900	3,900	4,100
Property Tax Revenues (millions)	$55.6	$53.7	$59.3
Construction Land Area Affected (acres)	11,593	11,387	12,360
Operations (Permanent) Land Area Required (acres)	5,569	5,176	4,818

[a] Does not include 2 pump stations for the Cushing Extension in Kansas

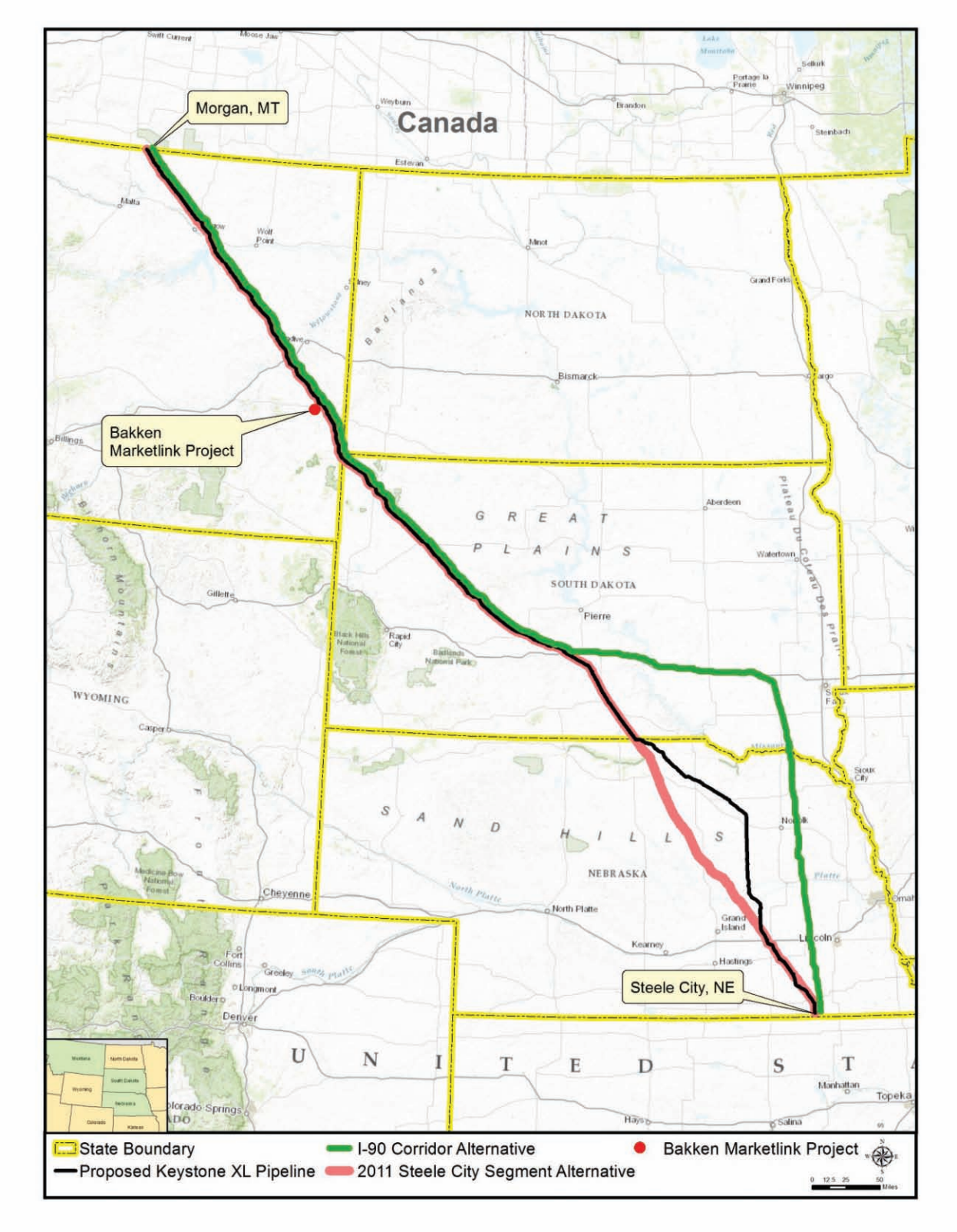


Figure ES-15 Preliminary Pipeline Route Alternatives

ES.5.2.1 Keystone XL 2011 Steele City Segment Alternative

The Keystone XL 2011 Steele City Segment Alternative evaluates the impacts of constructing the route proposed in the 2011 Final EIS as a comparison against which other route alternatives, including the proposed Project, can be made. This alternative would follow Keystone's proposed Project route from the Canadian border, designated Milepost (MP) 0, south to approximately MP 204, where it would connect with the Bakken Marketlink Project onramp at the same location as the proposed Project and continue to approximately MP 615 in northern Nebraska near the South Dakota state line. At that location, the Keystone XL 2011 Steele City Segment Alternative would divert from the current proposed Project and would continue southeasterly for another 240 miles to the southern terminus at Steele City, Nebraska. For approximately 89 miles, the Keystone XL 2011 Steele City Segment Alternative would cross the NDEQ-identified Sand Hills Region.

ES.5.2.2 I-90 Corridor Alternative

Keystone's proposed Project route starts at the Canadian Border (MP 0) and stretches south through Montana and into South Dakota to approximately MP 516, where the proposed pipeline route intersects Interstate 90 (I-90). From this point, this alternative pipeline route would diverge from the proposed Project route, following the ROW of I-90 and State Highway 262 for 157 miles, where it would then intersect and follow the ROW of the existing Keystone pipeline to Steele City, Nebraska.

The I-90 Corridor would avoid crossing the NDEQ-identified Sand Hills Region, and would reduce the length of pipeline crossing the NHPAQ system, which includes the Ogallala Aquifer.

ES.5.3 Other Alternatives Considered

In addition to the major route alternatives, the Department reviewed proposed variations—relatively short deviations—to the proposed route that were designed to avoid or minimize construction impacts to specific resources (e.g., cultural resource sites, wetlands, recreational lands, residences) or that minimize constructability issues (e.g., shallow bedrock, difficult waterbody crossings, steep terrain).

The Department also considered two alternative pipeline designs in response to public comments: an aboveground pipeline and an alternative using a smaller-diameter pipe. The Department determined that both alternative designs were not reasonable alternatives for the proposed Project because they would not meet the proposed Project purpose and need and/or because of safety and security reasons; therefore, they were not considered further in this Supplemental EIS.

This Supplemental EIS considered renewable energy sources and energy conservation as alternatives to the proposed Project. As noted in Section 1.4, Market Analysis, the crude oil would be used largely for transportation fuels and, therefore, any alternatives to the crude oil would need to fulfill the same purpose. The analysis found that even with renewable energy and conservation, there would still be a demand for oil sands-derived crude oil. Based on this evaluation, these alternatives were not carried forward for further analysis as alternatives to the proposed Project.

ES.5.4 Comparison of Alternatives

Consistent with NEPA and the CEQ regulations, the Department compared the proposed Project with the alternatives that met the proposed Project's purpose and need, and that were carried forward for detailed analysis in this Supplemental EIS. The alternatives carried forward for detailed analysis were: the 2011 Steele City Segment Alternative, the I-90 Corridor Alternative, and the three identified No Action Alternative scenarios (i.e., the Rail and Pipeline Scenario, the Rail and Tanker Scenario, and the Rail Direct to the Gulf Coast Scenario).

The two pipeline alternatives compare different routes that meet the purpose and need of the proposed Project, and the No Action Alternative scenarios describe the likely potential impacts associated with transport of crude oil from the WCSB and the Bakken formations if the Presidential Permit is denied or if the proposed Project is not otherwise implemented. The comparison focuses on three categories of impacts: physical disturbance, GHG emissions, and potential releases.

ES.5.4.1 Physical Disturbance Impacts Alternatives Comparison

The primary differences between the proposed Project and the alternatives related to physical disturbance are summarized in Table ES-5.

Table ES-5 Physical Disturbance Impacts Associated with New Construction and Operations for the Proposed Project and Alternatives

	Status Quo Baseline	Proposed Project	2011 Steele City Segment Alternative	I-90 Corridor Alternative	No Action Rail/Pipeline Scenario	No Action Rail/Tanker Scenario	No Action Rail Direct to the Gulf Coast Scenario
New Pipeline Length (miles)	0	875	854	927	17	32	0
Number of New Aboveground Facilities	0	73	71	77	33	33	19
Length Co-located with Existing Keystone Pipeline (miles)	0	0	0	254	NA	NA	NA
NDEQ-Identified Sand Hills Region Crossed (miles)	0	0	89	0	0	0	0
New Highly Erodible Soil (Wind) Crossed (miles)	0	73	116	36	0	0	0
Perennial Waterbody Crossings	0	56	53	61	1,216	330	711
Major Water Crossings[a]	0	62	60	61	42	14	40
Number of Shallow Wells in Proximity [b]	0	113	97	42	NA	NA	NA
New NHPAQ Crossed (miles)	0	294	247	145	NA	NA	NA
Wetland Affected during Construction (acres)	0	262	544	223	193	351	NQ[c]
Communities within 2 Miles	0	17	16	37	350	182	669
Construction (Temporary) Land Area Affected (acres)	0	11,599	11,387	12,360	5,227	6,427	1,500
Operations (Permanent) Land Area Required (acres)	0	5,309	5,176	4,818	5,103	6,303	1,500

Notes: This table does not include Canadian impacts for pipeline alternatives.
NA = not applicable
NQ = not quantified; insufficient design data
NDEQ = Nebraska Department of Environmental Quality
NHPAQ = Northern High Plains Aquifer
[a] This is defined as channel crossings of waterbodies that delineate U.S. Geological Survey National Hydrography Dataset Level 4 (HUC4) Hydrologic Unit watershed basins.
[b] A shallow well is defined as a well with a depth of 50 feet or less, but does not include wells with zero depth; proximity is defined as within ¼ mile of the centerline.
[c] Specific facility footprints for this scenario are not known at this time. However, impacts would be generally similar to the other rail scenarios.

ES.5.4.2 Greenhouse Gas Emissions Alternatives Comparison

To facilitate comparison of GHG emissions across all alternatives for operational GHG emissions, an assessment was made for all alternatives along the entire route from Hardisty, Alberta, to the Gulf Coast (including pipelines in Canada and from Steele City to the Gulf Coast). GHG emissions from the two pipeline route alternatives would be similar in scale to those of the proposed Project. The direct emissions during the operation phase of the 2011 Steele City Segment Alternative would be essentially the same as those generated by the proposed Project because they would have the same number of pump stations (20). The I-90 Corridor Alternative is expected to have similar but slightly higher GHG emissions because it would have one more pump station than the proposed Project and could generate slightly higher amounts of indirect GHG emissions from electricity consumption.

During operation of all No Action rail scenarios, the increased number of unit trains along the scenario routes would result in GHG emissions from both diesel fuel combustion and electricity generation to support rail terminal operations (as well as for pump station operations for the Rail/Pipeline Scenario). The total annual GHG emissions (direct and indirect) attributed to the No Action scenarios range from 28 to 42 percent greater than for the proposed Project (see Table ES-6).

The indirect GHG emissions over the lifecycle of oil sands crude oil production, transportation, refining, and product use are compared between the proposed Project and the evaluated alternatives in Section ES.4.1.2, Lifecycle Analysis.

Table ES-6 Annual Greenhouse Gas Emissions from Crude Transport (from Hardisty/Lloydminster, Alberta, to the Gulf Coast Area) Associated with the Proposed Project and Alternatives (per 100,000 bpd)

	Overall Proposed Project Route[a]	Overall 2011 Steele City Segment Alternative Route[b]	Overall I-90 Corridor Alternative Route[c]	No Action Rail/Pipeline Scenario	No Action Rail/Tanker Scenario	No Action Rail Direct to the Gulf Coast Scenario
Operation (direct and indirect)—Transportation, Not Extraction						
$MTCO_2e$/Year per 830,000 bpd	3,123,859	3,123,844	3,211,946	4,428,902	4,364,611	3,991,472
$MTCO_2e$/Year per 100,000 bpd	376,369	376,367	386,981	533,603	525,857	480,900
% Difference from Proposed Project	NA	0.0%	2.8%	41.8%	39.7%	27.8%

[a] Canadian, Proposed Project, and Gulf Coast
[b] Canadian, Steele City Segment, and Gulf Coast
[c] Canadian, I-90, and Gulf Coast
Notes: The emissions shown for the overall proposed Project differ from those shown for the proposed Project in Section ES.4.1.1, Greenhouse Gas Emissions from the Proposed Project, in order to present a full comparison of the overall proposed Project route to the other alternatives. All data include train emissions for return trips as well.
$MTCO_2e$ = metric tons of CO_2 equivalents
NA = not applicable
bpd = barrels per day

ES.5.4.3 Potential Spill Risk Alternatives Comparison

Similar to the GHG emissions comparison, potential spill risk was evaluated for alternatives along the entire route from Hardisty, Alberta, to the Gulf Coast (including portions of the route in Canada and including existing pipelines from Steele City to the Gulf Coast). Table ES-7 provides a summary of calculated potential release impacts for the various alternatives analyzed in terms of the number of potential releases per year and the potential volume of oil released per year.

Both of the major route alternatives would begin at the same border crossing as the proposed Project (near Morgan, Montana) and end at the same location as the proposed Project (near Steele City, Nebraska); as such, the pipelines in Canada north of the border crossing and the pipelines south of Steele City down to the Gulf Coast would be identical for all three overall pipeline routes. Compared to the proposed Project, the two major pipeline route alternatives would have similar potential spill risks (see Table ES-7). In addition, both of these major route alternatives would require aboveground facilities that are similar to those for the proposed Project; therefore, potential releases impact areas would be similar. Because the I-90 Corridor Alternative is slightly longer than the proposed Project, it would carry a slightly higher spill risk (with an estimated 533 bbl released per year compared to 518 annual bbl released for the proposed Project).

The three No Action Alternative scenarios differ from the proposed Project in that they would use alternative modes of transportation to deliver crude oil to refinery markets in the Gulf Coast rather than just a pipeline (although one of the three scenarios includes a pipeline as a significant part of its delivery system). Potential spill risks for these alternative modes differ from the proposed Project in terms of both average spill frequency and average spill size.

Volume of crude oil transportation by rail in the No Action Alternative scenarios would generally be limited to the volume contained within individual railcars. This volume constrains the total volume of crude oil that could potentially impact groundwater relative to the proposed Project in the event of a release. This constraint is offset by the increased statistical likelihood of spills associated with these alternative modes of crude oil transport relative to pipelines.

Historical rail incident data were analyzed to evaluate potential releases associated with rail transport in the United States. The results help provide insight into what could potentially occur with respect to spill volume, incident cause, and incident frequency for the No Action Alternative scenarios that involve rail transport. In addition, rail incident frequencies were compared to frequencies for other modes of transport (i.e., pipeline, marine tanker). Although the product to be transported by the proposed Project is crude oil, incidents for petroleum products were also analyzed to provide a comparison to a larger dataset. In order to make comparisons between the modes of transportation, the statistics regarding releases are expressed in terms of *ton-miles* (1 ton-mile is transporting 1 ton of product 1 mile; to calculate total ton-miles in a given year, one multiplies the total tons transported by the total number of miles transported).

The rates of releases and average size of releases vary between modes of transportation. For instance, rail transport has more reported releases of crude oil per ton-mile than pipeline or marine transport but, overall, pipeline transport has the highest number of barrels released per ton-mile. Comprehensive data from 2010 to 2013 are not yet available and therefore this analysis does not include incidents subsequent to 2009 such as the 2013 Lac-Mégantic rail tragedy or the Tesoro Logistics pipeline incident. The number of barrels released per year for the No Action scenarios is higher than what is projected for the proposed Project or the other pipeline alternatives (as detailed in Table ES-7) because of the alternate modes of transport in the No Action scenarios.

There is also a greater potential for injuries and fatalities associated with rail transport relative to pipelines. Adding 830,000 bpd to the yearly transport mode volume would result in an estimated 49 additional injuries and six additional fatalities for the No Action rail scenarios compared to one additional injury and no fatalities for the proposed Project on an annual basis.

Table ES-7 Potential Releases Impacts (Full Pathway) Associated with the Proposed Project and Alternatives

	Overall Proposed Project Route[a]	Overall 2011 Steele City Segment Alternative Route[b]	Overall I-90 Corridor Alternative Route[c]	No Action Rail/Pipeline Scenario	No Action Rail/Tanker Scenario	No Action Rail Direct to the Gulf Coast Scenario	
						Option 1[g]	Option 2[g]
Miles for Transport (Overall Route)	1,938	1,917	1,990	3,902	14,014	4,624	5,375
Releases per Year[d,e]	0.46	0.46	0.48	294	276	383	455
Barrels Released per Year [f]	518	513	533	1,227	4,633	1,335	1,606

[a] Canadian, Proposed Project, and Gulf Coast
[b] Canadian, Steele City Segment, and Gulf Coast
[c] Canadian, I-90, and Gulf Coast
[d] Releases per year frequency was calculated using databases from the U.S. Department of Transportation covering U.S. transportation in the years 2002 to 2009. The pipeline spill frequency was based on a 16-inch diameter crude oil pipeline.
[e] Releases per Year = (16-inch U.S. crude pipeline spill frequency * total pipeline ton-miles) + (U.S. rail spill frequency * total rail ton-miles) + (U.S. marine spill frequency * total rail ton-miles) + (U.S. truck spill frequency * total truck ton-miles).
[f] Barrels Released per Year = (average 16-inch U.S. crude pipeline barrels (bbl) released * total pipeline ton-miles) + (average rail bbl released * total rail ton-miles) + (average marine bbl) released * total rail ton-miles) + (average truck bbl released * total truck ton-miles).
[g] The Option 1 route goes through Lloydminster while Option 2 routes through Fort McMurray.

ES.6.0 GUIDE TO READING THE SUPPLEMENTAL EIS

The Supplemental EIS consists of 11 volumes and is available electronically for viewing or download at www.keystonepipeline-xl.state.gov. Various sections of this document contain bibliographies with full lists of references and citations. A list of where to find printed copies of the complete Supplemental EIS can be found at www.keystonepipeline-xl.state.gov or by mail inquiry to:

U.S. Department of State
Attn: Mary Hassell, NEPA Coordinator
2201 C Street NW
Room 2726
Washington D.C. 20520

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Elders from the First Nation being here today. Thank you for that.

14841. We'll take a short recess and then we'll hear from Mr. Olsen.

--- Upon recessing at 2:17 p.m./L'audience est suspendue à 14h17
--- Upon resuming at 2:29 p.m./L'audience est reprise à 14h29

14842. **THE CHAIRMAN:** Good afternoon, Mr. Olsen; nice to see you again.

14843. And I hope the weather's nice at home in Sydney. The sun's coming out now.

14844. Anyway, but you're welcome. We've read your submissions and we're now pleased to receive your oral summary argument.

--- FINAL ARGUMENT BY/ARGUMENTATION FINALE PAR MR. ADAM OLSEN:

14845. **MR. OLSEN:** Thank you.

14846. I'd like to thank my Coast Salish relatives here in this beautiful territory for opening their arms and at least welcoming this hearing, at the very least.

14847. Good afternoon. I'm happy to be here to deliver my summary presentation and my final written argument that I submitted to you last week.

14848. I'm here to articulate the reasons why I oppose this project and touch on just some of the reasons why I believe you should dismiss this application.

14849. I have argued that the First Nations consultation for this project is incomplete and that Trans Mountain has not shown respect or understanding of the Indigenous people of Alberta and British Columbia.

14850. I have raised significant questions regarding my constitutionally protected fishing rights that remain unresolved, shown that my fishing locations are directly adjacent to the proposed and current shipping lanes, and that I and other members of my family have raised questions about negative impacts to a commercial interest, that also remain unresolved.

14851. I argue that it would be reckless to recommend approval of this project before the Government of Canada has addressed these issues in much deeper consultation and relationship building.

14852. I strongly encourage you to dismiss Trans Mountain's application, recommending the federal government that they reject it as well.

14853. My name is Adam Olsen. My Coast Salish name is TSUNUP. I am a member of WJOŁEŁP. I am WSÁNEĆ. My family lives on both sides of the international border. It cut our territory into two parts, the American side and the Canadian side.

14854. I'd like to take this opportunity to introduce you to SUHENEP. Troy Olsen is from just a little south of here in Lummi. He is my brother, my relative, my cousin. We stand as one.

14855. Over the past two years we, along with many others, have been working to bring the swolle, or reef net, back to what you know as the Salish Sea, the place we inherited from our ancestors, to engage in a relationship with the sockeye salmon that has been renewed for every year for countless generations.

14856. Not only are we close relatives, but you'll note that Troy and I share a name. Last summer, we stood on the beach on Henry Island, in the San Juan's. I witnessed Troy receive two names, SUHENEP and HASMIN (ph). I have been SUHENEP for over 20 years. It's an honour to share this name with him.

14857. At the same time as receiving SUHENEP, my relative also received his NAHIAMIT (ph), his inheritance. His, and as an extension, our inheritance. Our relatives in Lummi recognize the connection to that beach that we stood on, the connection to our name, SUHENEP, the place where those we were named after exercised their relationship with our relatives of the ocean. This was their SWALET, a fishing location.

14858. We are both learning about what it means to carry this name, to carry this responsibility, the responsibility to our Sockeye relatives, the responsibility to protect our inheritance, the responsibility that we have to the SUHENEP's of the future to ensure our places have been protected, the responsibility we have to the Sockeye, whose lineage is as sacred as ours. That this place is going to be welcoming to their future generations as well.

14859. This is a relationship that we have nurtured for thousands of years. Forever. I'm just learning to understand this worldview myself, but I can assure this Panel that the more I have learned about it, the more beautiful it is to me.

14860. It is an understanding of how we can mutually benefit from each other, not just human to human. I'm talking about how human beings relate to every other species on our planet. Perhaps the members of this Panel will open their heart and their mind to allow themselves to also embrace this worldview as well.

14861. You see, when you sit in a canoe, in the very same place as countless generations of your ancestors, where they have sat, people whose experiences and wisdom is wrapped around you like a blanket. When you are quiet and the only sound is the cutting of paddles in the water and the muted sounds of voices directing the canoe as they attempt to set the first reef net in that location in more than a generation, you realize that you have a responsibility. That morning that we shared that experience is a fundamental part of who I am, and I have embraced that, I have embraced that responsibility.

14862. Just as this Panel has to -- has its place to sit, just as you, the members, have to cut through the noise of the legal arguments and the jargon to hear the paddles in the water, just as you have to determine which of these points are valid, embracing the responsibility to make this recommendation, you must acknowledge the blanket that is wrapped around you for the remaining days that you walk on this earth.

14863. SUHENEP and I are disconnected from our SWALET, not by choice but many decades of legislation, regulation and enforcement. Many decisions, like the one that are about to make have disconnected us from our many resource extraction locations on Henry Island, Mitchell Bay, Main Island, and numerous other locations through the Gulf and San Juan Islands, and those are just our inheritance; other families have theirs as well.

14864. So it is an honour to be here today with SUHENEP. I have the honour of voicing our concern about the Trans Mountain Pipeline Expansion Project and the associated shipments of diluted bitumen through our fishing areas. We take our responsibility to WSÁNEĆ and Lummi very seriously, and this proposed expansion and the current shipments of diluted bitumen directly adjacent to our resource areas deeply concern us and we do not support it.

14865. I applied, and you accepted me as an Intervenor on 3 or your 12 issues. No. 3, the potential commercial impacts of the proposed project; No. 5, the potential environmental and socioeconomic effects of marine shipping activities that would result from the proposed project, including the potential effects of accidents or malfunctions that may occur; and potential impacts of the project on Aboriginal interests.

14866. I thank you for acknowledging that I am directly affected by this proposal, and I thank you for acknowledging that my interests -- I have interests in all three of these areas. Interests and rights, actually, in all three of these areas.

14867. I have done my best to participate in this hearing process. It's not been easy and it has cost me and my young family considerably. We find ourselves once again unwillingly forced into a defensive position against the corporate interests of a rich, multinational entity, defending constitutional rights, the rights to fish as formerly as set out in the Douglas Treaty, without the resources to adequately argue the case. My dad has already defended his Douglas Treaty rights once. It took a decade of his life and ended in the Supreme Court of Canada, where he won.

14868. So I sit here today, and I am deeply saddened. As I've written in my final argument, had I received the participant funding, I would have been able to present a far more comprehensive argument with anthropological advice -- evidence, and proper case law research and legal argument. As it stands now, the evidence that I provided was only scratching the surface of the fishery and the research of the commercial activity of my ancestors. Therefore, I have been seriously disadvantaged compared to the Proponent and other Intervenors.

14869. What this inadequate NEB process has so far suggested to us is that just in the past an agreement, a treaty, is de facto not much of a treaty. The fact that my ancestors signed a treaty in 1852 with James Douglas, the representative of the Crown, doesn't appear to mean much, because it has been breached without compensation.

14870. If you recommend approval in spite of our treaty, you will be continuing this tradition and suggesting to us that our treaty is not enforceable. We know this isn't true, because Douglas Treaty people win every time. Is this the path you want to take us, more lawyers, more courts, more sadness? Reconciliation will never happen if we are always forced into the courts to defend ourselves; that is not reconciliation.

14871. I made a unique application to the National Energy Board to be able to effectively defend my rights protected in the Douglas Treaty, the right to fish as formerly, and it was assumed that because my community was also an Intervenor, and perhaps they had received participant funding, that we were all the same. The decision has me frustrated to no end.

14872. On one hand, the NEB agrees that my application was unique and that my arguments were valid, and yet when I asked to have a small amount of participant funding to defend my rights against this billion dollar multinational corporation, the response from the NEB is this -- quote:

> *"While the Funding Review Committee is generally interested in supporting collaboration, in this case it made the decision not to give special consideration to individuals who are already a PFP -- part of an already PFP-funded First Nation."* (As read)

14873. As I said in my final argument -- my written argument, I am an individual, presenting serious, legally and factually complex issues and challenges that the NEB and Government of Canada should be closely considering. It is important to consider that to understand Aboriginal rights only as group rights, is not correct in my case, and it does not align with the rights that my ancestors were promised. In order to protect our right to fish as formerly, you need to understand the laws that govern the fishery and the social and cultural structure that they existed in.

14874. From a modern legal perspective, perhaps Tsartlip is the most correct entity to represent those rights, but our right to fish as formerly was not negotiated under a modern legal perspective. Rather, my ancestors negotiated these terms from their understanding in the early 1850s, precisely why "as formerly" is such a critical consideration here.

14875. I understand that it is quicker and easier for foreign to our village corporations to lump us together into groups that were constructed by the Government of Canada, and to only negotiate with one representative per group. However, it is my position that best practice has evolved to the point that such an impoverished understanding can only -- cannot be accepted in the face of my evidence and similar evidence that does not support such a simplistic and unjust approach.

14876. The information this Panel has to make its recommendation is severely lacking, as pointed out by the Council for BC Nature, Elizabeth May yesterday, and others, and also in regards to impacts on my specific rights and interests. This process has intentionally designed it to make it significantly easier for you to make the same recommendation that the NEB made for Enbridge Northern Gateway to proceed with dozens of conditions without an adequate evidentiary record.

14877. Perhaps that is why you decided that oral cross-examination was not necessary, nor was it necessary to consider this application in the context of its upstream and downstream socio-enviro economic impacts.

14878. Frankly, this hearing has been such a circus, in my opinion. As you have heard, the past few days, this Panel has allowed for a shockingly low threshold for Trans Mountain to cross.

14879. They haven't undergone much of a challenge. Their information -- their information as others have so eloquently articulated has gone basically untested. Intervenors' questions have been answered, if you can call them answers, with circular references back to so-called information that really doesn't exist. Intervenors like me have been starved with the resources they needed to develop sound legal arguments in our own defense.

14880. On this side of the podium, to put it bluntly, it feels like this Panel decided at the very early stage of the process to just go through the motions. Punt the difficult decision to the federal government and force us to find our own resources to defend our constitutional rights again in court.

14881. May I remind you, Parliament has empowered you to engage, albeit in a limited way, the First Nations directly before making your eventual recommendation. And that includes making sure that you have all the information. Consultation must happen early on; it must happen right from the beginning.

14882. We learned recently through the *Coastal First Nations* case against B.C. that this NEB process does not fulfill the province's duty to consult. But even if it could, this process has barely been able to be a beginning of consultation with the federal Crown. The recent BCSC decision is one that I think you must explore further.

14883. Sure, Trans Mountain may be able to brag about 24,000 plus consultations, but what about this Panel in its rulings which reduced the ability to consult? What have you done other than go through the motions?

14884. First Nations remain underfunded and the evidence you are supposed to rely on about my constitutional rights remains untested as well by adequate cross-examination. Is this really good enough?

14885. Once your recommendation is made, it's off to another agency, the government to make the final decision. It's no longer your problem, but it's the problem of the federal government; it's the problem of the fish; it's the problem of my kids; and it's the problem for our future.

14886. A primary reason I implied to be an intervenor was because it's necessary to introduce my commercial interests, my commercial rights. The fact that your ancestors and my mother's ancestors initially survived on this coast because of the provisioning of my father's ancestors, and the two were engaged in commercial activities with each other now is conveniently overlooked by Trans Mountain in its argument, suggesting this project may be in the public interest.

14887. Let me be clear; if you recommend approval of this project, you will be allowing this corporation with no constitutional rights to my fishing areas, to our fishing areas, to trump my constitutional and treaty protected rights simply because they have more financial resources than I have.

14888. The fact that this proposal has even gotten this far without any problems -- any proper discussions involving me is incredibly frustrating. I come from a long line of successful entrepreneurs on both sides of my family. I come from people who developed the resources around them.

14889. May I remind you for a minute of the information that I shared from the Aboriginal oral testimony stage of this hearing? There is a whole sub-narrative that runs about First Nations and their fish. There are stringent rules that we can't sell our fish. We're allowed to fish if we're going to eat them. This sub-narrative is what hit a nerve with First Nations people in British Columbia when it was reported that Trans Mountain lawyers asked, "How many fish does a First Nation in B.C. really eat?"

14890. As a result of First Nations not being allowed to sell their fish, it turns

to a black market, we do it illegally, some of us. There are whisperer's stories that First Nations who don't eat their fish, they sell them.

14891. I recognized a lot of this is out of scope, but it is all important information and critical to this application because I have commercial rights; the Saanich people have commercial rights in the Salish Sea. We have had those rights forever, but they were affirmed by treaty in 1852 with the predecessor of the federal government.

14892. The shipping routes are in direct conflict with the fishing grounds. A spill would negatively impact all the fishing locations throughout the Salish Sea. I think there is a conflict in commercial interests here that needs to be resolved, especially considering these operations have been ongoing for 60 years and there has not been any consultation on that.

14893. I'm putting our commercial interests on the table because we have active -- always actively traded salmon for blankets, for food stuffs, for money. And as you have heard already, James Douglas was actively trading for salmon so that he could then trade it eastward. We were a vital part of that; we were a vital part of the provisioning of the first Europeans that were here.

14894. So now with the barrel -- I think it's under -- a barrel of oil under $30, and a barrel of sockeye worth thousands. Throw on top of that all the legal liabilities and risk we are accepting trying in vain to transport our heavy expensive oil across the Pacific Ocean.

14895. Why would we choose to threaten all of this? Especially considering we have this amazing renewable resource, salmon, that has been extracted here since forever. Extracted in an environmentally safe socially and economically beneficial way.

14896. In fact, I was just outside here and Reuben George from Tsleil-Waututh was talking about the amazing recovery that they have had by just spending a little bit of time in our streams. So to think that this is some kind of a dream world that I'm living in, that the fish are going to come back, if you spend a little bit of time there, if we spent a little bit of resources there, they do come back.

14897. Not only am I asking the NEB not to recommend approval of this project, I submit that the evidence before you would fully support an informal

recommendation from you of a moratorium on all transports of diluted bitumen on Canada's West Coast at least until Aboriginal and treaty rights are protected, and more information is known like the behaviour of dilbit in the Salish Sea.

14898. The other day you asked my colleague, Dr. Andrew Weaver, if he knew of any other governments that has moved to stop diluted bitumen transports. Yeah, our government said essentially that when Justin -- Prime Minister Justin Trudeau was elected, he said to his Minister of Transport, "Let's start putting that moratorium in place on the North Coast." So the answer -- you don't have to look too far, just look to the very own government that is running Canada.

14899. In my opinion, it's not so shocking that our B.C. Liberal Government has announced last week that they cannot support this application. It makes good politics. I believe that they want to support it; maybe they will, and maybe they won't. That said, they raised a very important concern about the safety of marine transportation of diluted bitumen, a concern that neither they, nor the federal government or its agencies have thought to act on in regards to the Southern Coast.

14900. The B.C. Environment Ministry's statement reads:

> *"During the course of the NEB review, the company has not provided enough information around its proposed spill prevention and response for the province to determine if it would use [...] world-leading spills regime. Because of this, the province in unable to support the project at this time based on the evidence submitted."*

14901. So, if the government of British Columbia is not convinced we have an adequate spill prevention and response, then why are they not taking a more active role in looking out for the best interest of British Columbia? You're probably not going to answer that question, but maybe they will.

14902. Nevertheless, I'm asking you to stop threatening our coast, you can do that. The NEB approved Northern -- Enbridge Northern Gateway with inadequate spill prevention and response. And now this Panel is being asked by Trans Mountain to make a similar recommendation on the south coast.

14903. It's an honour to live in WSÁNEĆ. Living in our territory comes with responsibility, though. I'd like to introduce my late grandmother into this final

argument, Laura Olsen. You were briefly introduced you to her back in 2014 when I spoke. I did not spend as much time with her as I wished I did, but the time I spent with her, particularly at the end of her life, changed many of my perspectives.

14904. I grew up on reserve. And as I have often said, I often felt like the Indian in a room full of White people and a White guy in a room full of Indians. I didn't have the easiest of decades in my twenties. But Grandma Laura gave me purpose. You're seeing the result of that today.

14905. She did not simply encourage me to share passionately my responsibility to WSÁNEĆ. She encouraged me to honour those that live in our territory, those that live there today, with the same responsibility that she gave me and that every grandmother in WSÁNEĆ gives their grandkids.

14906. Perhaps this makes some people uncomfortable, but for Grandma Laura, sharing this duty to everyone in this place, the duty to be vigorous stewards, to protect it against threats today and for generations yet to be borne, and to protect the sacred lineages of sockeye and every other species with the same amount of zeal that you would protect your own lineage, that did not make her feel uncomfortable at all. In fact, that's what she wanted me to do.

14907. For those such as Trans Mountain or the Government of Canada through the NEB who want to do business in WSÁNEĆ, you will not just have to create deeply trustful relationships with our Chiefs and Councils, you will have to make those relationships with people like me and like him, people who have this inheritance that exists out in a context that appears the modern legal framework simply has yet to fully understand. In this, Kinder Morgan, the Government of Canada, the Government of British Columbia have failed miserably.

14908. For those who live in WSÁNEĆ, the Saanich Peninsula, the Gulf in San Juan Islands, our duty is no different than the one that our Creator first charged the first people in WSÁNEĆ with. We cannot escape it. We won't escape it.

14909. Those that came before us want to know that the responsibility they conveyed to their children is continued. They want to know that, First Nation or not, we are sharing our collective duty with the generations that follow us. The duty cannot and will not be lost.

14910. Now this responsibility has been shared with you; it is a burden that you must carry.

14911. Although I have been critical about this process and cynical about the inevitable result of this hearing, I'm sitting here because there is a table and I make it a habit of sitting at as many tables as I can.

14912. I was invited to withdraw my participation from this hearing. Many valid arguments were put forward that I should join the many other intervenors, like the very effective and prolific intervenors like Robyn Allan and Marc Eliesen who I thank for their great work. And then last August 35 commenters and intervenors, including the Wilderness Committee, stepped out of this hearing. None of them went quietly. Loudly protesting the hearing and the -- and they were deeply critical of this process. Despite that, I remain at this table.

14913. The NEB has decided to proceed with this hearing and this is the only regulatory process concerning this pipeline expansion project. This is the only game in town.

14914. These are issues that we have inherited. No one in this room can be blamed for causing these challenges that confront us; the Douglas Treaty, the First Nations, non-First Nations, the history. But we are responsible for what we do with the information that we have and our ability to influence what we and others do in the future. Take hold of that opportunity.

14915. Please don't continue to narrow your scope in order to create the perfect conditions to recommend approval just as you did by choosing not to fund certain intervenors like me. Just as you did by removing oral cross-examination of the Applicant, the Proponents, the intervenors and their evidence, and just as you did by deciding to scope the upstream and downstream impacts out of this hearing.

14916. I ask you to broaden your scope, to send a message to the Proponent, the Government of Canada, the Canadian public, including Indigenous peoples, that the NEB is not captured by industry. You can send that message by dismissing this proposal and not rewarding Trans Mountain for an incomplete, and frankly offensive, application, and the federal government for stripping environmental protections and handing environmental assessments to the National Energy Board and enabling this process.

14917. By dismissing this application you'll take the power that has been vested in you and send a strong message to the public; a message that we may be able to trust our future -- your future recommendations and that you'll be further strengthened to take this opportunity to make the clear statement that you are not going to approve applications that fail to provide basic answers to important questions about pipeline and marine spill response capability and safety, and that the Crown must take full responsibility for treaty and Aboriginal rights.

14918. Thank you for this opportunity, for providing me this opportunity to share my personal experience, my story, and the information that has been shared with me. I hope I have been able to provide you an even greater challenge. This perhaps is the most difficult decision you might make in your life. And I'm proud that I stand here today nearing the end of this process just as I stood at the beginning of it.

14919. I'd like to thank all the other intervenors, like my colleague Dr. Andrew Weaver who was able to more aptly describe this critical scientific errors of Trans Mountain and uncover some of the many examples of Trans Mountain's box-ticking exercise found buried in their 15,000-page application.

14920. I'm thankful now that I know through Andrew's work how far someone floats when they fall off a ferry and how that information may be used unchallenged as data for spill modelling. Yet I remain confused as to how that will help us collect billions of little tar balls sinking to the bottom of the Salish Sea adjacent to our fishing areas.

14921. I'm thankful for the passionate and articulate Elizabeth May. She's my -- she's our Member of Parliament. And I openly muse about where the other elected officials of WSÁNEĆ are. In addition to all the work that she has on her plate, she stood here yesterday and explained in poignant detail the tremendous error this Panel made by removing oral cross-examination from this hearing.

14922. She used the word "frailty"; it's a brilliant word. And it's the -- and the fact that it explains perfectly the strength of evidence that you have to weigh in your deliberations is what scares me. I'm afraid this Panel will continue going about its business acting like the evidence, the science, the arguments of Trans Mountain and frankly the other participants of this hearing, maybe even including me, is something more than frail. That is the foundation and the framing of this hearing and the evidence submitted by Trans Mountain and perhaps some of the intervenors.

14923. What is really scary is how would this Panel even know? You have removed every tool that you have had available to you at this hearing that ensures the information you receive actually floats.

14924. While my evidence and arguments are not as technical and as legal as you have heard from the lawyers representing other intervenors like from Cheam and Chawathil and the intervenors before me, it served to remind you that there are millions of ordinary, legally unsophisted [sic] Canadians who have rights and interests that must be considered in your recommendation.

14925. I am a reminder that the hearing you have presided over is not accessible to the average person. This is a public hearing. Where are they?

14926. Certainly it is critical that scientific and technical aspects of Trans Mountain's application must be vigorously tested and this is usually accomplished through a more thorough cross-examination. The limited written information requests you made part of this hearing has not even come close to achieving this.

14927. Your challenge is to balance that with ensuring that these processes must be accessible by average citizens like myself. That is why you have a participant funding program. It is unfortunate that you chose not to use it in my case, a point that I continue to go back on because it adds to the frailty of the information that you have in front of you.

14928. We want to ask questions, provide input and we do not want to feel like we're marginalized because the hearing process that you have established requires legal training and research capacity that simply is out of reach for most Canadians.

14929. In summary, I strongly encourage you to deny Trans Mountain's proposal, recommending to the federal government that this project should not proceed. I also encourage you to clearly articulate the difficulties that you have no doubt in trying to fulfill your statutory and common law duties based solely on inadequately designed process that you have both inherited from the legislative framework you are operating under, with no fault of your own, and have failed to enhance adequately through some of your rulings including narrowing your scope of review and denying me funding.

14930. Trans Mountain has shown a shocking lack of understanding and

respect for Indigenous people of Alberta and British Columbia. The NEB on behalf of the Crown has failed to meet its duty to consult honourably. Furthermore with the recent BC Supreme Court decision, *Coastal First Nations vs. BC Environment* 2016 BSC BCSC 34, there are now legal questions that need to be answered about whether the Province of British Columbia also has a duty to consult that they have failed to meet.

14931. I have argued that I have an individual right that is separate from my First Nation and that the NEB erred in its decision to not properly fund my intervention. At the very least I stand here today with an unsophisticated but emotionally charged final argument that exposes some of the critical failing of this hearing. At most, you are missing critical information that will allow you to feel a mistaken sense of accomplishment and comfort, while throwing my life and the lives of thousands of others into chaos.

14932. I have argued that my right to fish as formerly includes a right to access my fishery and sell the proceeds of my fishery. I have argued that you must strongly consider my constitutionally protected rights to benefit from my fishery in the context of your decision as you weigh the commercial and economic benefit to this multi-billion dollar multinational corporation.

14933. I have asked that you consider the potential legal ramifications that a spill or a malfunction may have on my right and the right of others to fish as formally in our hereditary fishing locations directly adjacent to the current and proposed shipping routes. As it stands now there is no way for this panel to understand the scope of the potential liability as I have not been able to properly quantify this for you through research and expert testimony.

14934. I encourage you to dismiss this application at least until such time as you are comfortable that you and all Canadians understand the risk that you are accepting on their behalf. In my evidence I have shown you in the most visual way I possibly could hundreds of photos, the connection Indigenous people have with salmon. I could have repeated this a hundred times over by asking of photos of other seafood species. A spill or malfunction in the Salish Sea threatens this cultural connection, threatens our identity, and should be prevented.

14935. Many other Intervenors such as the Province of British Colombia have shown that Trans Mountain does not have the capacity to clean up a spill for their current operation, never mind this proposed expansion. Trans Mountain oil spill response capacity is recklessly inadequate and both the Government of British

Colombia and the Government of Canada must immediately place a moratorium on the shipments of diluted bitumen near my established fishing locations throughout the Salish Sea and as my other Douglas Treaty --and as my and other Douglas Treaty people's fishing rights are not limited to our inherited fishing locations.

14936. For all of these reasons and the substantial questions I raised that require more research and investigation that I offered to provide in this hearing but was denied the capacity to complete, you must recommend against this project.

14937. Initially I was not going to add conditions in my final argument. I don't support this project and I don't feel that it's appropriate to accept a project with so many technical flaws that has been pointed out by the many Intervenors in this hearing. Frankly I do not believe that any suite of conditions that you could come up with can address the lack of respect, attention to detail and willingness to cut corners that has been shown by Trans Mountain in this application. These hearings should be as much about the Applicant as it is about the application. This application is lacking in so many ways that I believe it speaks to the quality of Applicant and that needs to be considered.

14938. In the end I was convinced that I should add conditions because after all, despite what you might think of me I am a reasonable person. I acknowledge that even if you recommend against this project that you can attach conditions to the government to consider. I will highlight one of my conditions here; the others you will find laid out in my final written argument.

14939. No matter what you recommend there must be a condition for the Government of Canada to meet with WSÁNEĆ people on both sides of the border to begin a dialogue about these issues that I have raised and the many other issues that remain unresolved outside of this hearing process. Leaving them unaddressed for the next generation to deal with is unacceptable; frankly, it should never have been left to my generation.

14940. I am encouraged with the ripples in the water; perhaps our new federal government is in fact going to approach these critical relationships differently. You have an opportunity to encourage that. You have an opportunity by recommending against this project to ensure that we once again have access to our treaty protected resources, by recognizing the significance of the evidence that I and other intervenors have laid out as best as we could lay it out for you.

14941. As you have heard over and over again this process has been deeply flawed. As you have heard from the legal counsel of Squamish yesterday this recommendation lay at your feet. You have been bestowed the responsibility of the honour of the Crown. There is no reason for you to question me about whether or not consultation on these critical issues should be allowed to continue -- to be allowed to happen after this Panel makes recommendations as you ask them because my answer to that is the same answer as the legal counsel yesterday. The consultation at this point is too late; you will not be able to sidestep the responsibility you accepted when you agreed to join this Panel.

14942. I have two more paragraphs; may I?

14943. **THE CHAIRMAN**: I will give it to you, Mr. Olsen.

14944. **MR. OLSEN**: Has the NEB or Trans Mountain done enough? Have you properly discharged your duty to consult? My position is no, you have not. And that appears to be the position of many of the Aboriginal Intervenors who have spoken to this point.

14945. Thank you to the Panel for listening to our impassioned testimony -- my impassioned testimony, the evidence, the arguments and thank you in advance for your dismissal of this project. HÍSW̱ḴE.

--- (A short pause/Courte pause)

14946. **THE CHAIRMAN**: If you would indulge perhaps some questions, Mr. Olsen?

14947. First question, one question's coming from Ms. Scott.

14948. **MEMBER SCOTT**: Thank you Mr. Olsen. In your submission you made the point very strongly that it's a mistake to treat aboriginal rights as a collective right and to ignore individual rights in our process. And I was wondering if you could -- and I recognize you're not a lawyer but ---

14949. **MR. OLSEN**: --- No. Come on! Wasn't that -- anyway, sorry ---

14950. **MEMBER SCOTT**: Well, in any event, so I apologize in advance if I'm asking you something that you don't feel comfortable or is unfair; it isn't

meant to be that way. But I wonder what authority you have -- I am a lawyer; I have that handicap -- for making that assertion? Are you aware of any court or other precedent that has adopted that approach, particularly in relation to Crown consultation?

14951. **MR. OLSEN:** Yeah, so -- no, not that I'm going to be able to directly point you to. Perhaps the National Energy Board will be able to -- if that question is of a significant challenge -- dig some of that up.

14952. What I will say to that, though, is that if you take a look at the Douglas Treaty, which is in Exhibit 7 provided by the Tsartlip First Nation -- and I decided not to put exhibits up, it was too complex of an activity for my mind. But what you'll find is a series of names that are -- you know, it's not just the Chief of Tsartlip. This treaty was signed before there was an *Indian Act*. Chief of Tsartlip and Council of Tsartlip; this was signed by heads of families, our family, you know, the SUHENEP family. The Olsen family is represented in that. My grandmother's family, the Bartleman (ph) family is represented on that document. This was a series of families that signed those.

14953. And so to then say okay we're going to now from this modern legal perspective view every family that ended up in Tsartlip -- and I can tell you there was also -- you know, we could go and on about this, but there was also a practice of moving families around. So perhaps, you know, a family lineage that was part of that area had been moved to another part and actually is now outside of a Douglas Treaty community that, you know, they no longer live there but their family is signatory to this treaty.

14954. I'm saddened today that SUHENEP here was not his nihim (ph), his rock, that location, which is passed in an anchor stone, is not with us, it's outside. It's here on the site but it's not in the room here with us. And what it could show you is that, in fact, those fishing locations were not -- it's not like oh Tsartlip's got this big handful of -- you know, this big list of fishing locations that Tsartlip manages, the community that I'm from. No, that nihim (ph) it comes -- goes to SUHENEP HASMIN (ph). He carries that on our behalf.

14955. I live in Tsartlip. That came way after, 1950s or, you know, whenever it came. Whenever we became a reserve; whenever they put those boundaries around our community.

14956. So not a legal answer. Can't point you to any -- but it was an

important point for me that how can -- if those fishing locations and the right to fish as formerly refers back to a time before there was an *Indian Act* and before there was this -- you know, the boxes around us on the reserve, it's referring to previously to that.

14957. We need to look at these fishing rights in the context of the people who signed them, the negotiators of those rights, negotiated the right to fish as formerly because it was a fundamental part of who we are to be reef net people.

14958. And so, you know, perhaps back then it was not a difficult thing to give up some land. In fact, we spent most of the time, from my understanding, from the stories that I've been told, in our canoes fishing. So the land -- but those that came before us, and even on the American side they have the Stevens Treaty -- they have the Stevens Treaty over there. Same thing. Our ancestors fought for the right to fish because that's where our culture was at.

14959. **MR. KRINDLE:** It was our relationship with the salmon.

14960. **MR. OLSEN:** Yeah. Well -- and that's right, and I connected that. It's the relationship with those fish, the salmon.

14961. And John Elliot in previous times has told the story, STOLCEL. He's from my community. Told the story about how that relationship between the fish and the fishermen -- fisherperson evolved and how important it is.

14962. **MEMBER SCOTT:** Thank you, Mr. Olsen. Lawyer or not, you're very able, and you've really assisted me in understanding your position.

14963. Thank you.

14964. **THE CHAIRMAN:** And, Mr. Olsen, I'm not a lawyer either, and so that's -- we're brothers in that, if nothing else.

14965. I noted you added the words both sides of, you know, the border, and I think that wasn't in your submission but I noted that, that the Crown, the government, the federal government should -- government-to-government-to-government should consult with -- because the fish, the salmon, don't know a boundary. And we heard that this morning as well that they just don't get that. So I took a note that you had added that to your -- which I think is throughout your theme that there is -- we are one, and that's right.

14966. And I also recognize the challenges you had gone through to be part of this process and your criticism of it. I recognize that. We heard it. We're hearing it. And I also thank you for recognizing the burden that's on us to do and we will do what we can to bring that to fruition in some way in the end.

14967. So I thank you for the recognition of that and thank you for being here today. And I can assure you we will be considering all of the evidence, including yours, on this.

14968. With that we will be adjourned. We will reconvene at 9:00 a.m. tomorrow morning when we'll hear from the Salmon River Enhancement Society, the Graduate Student Society at Simon Fraser University and Mr. Ken Klakowich in the morning.

14969. We're adjourned until 9:00 a.m.

--- Upon adjourning at 3:18 p.m./L'audience est ajournée à 15h18