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July 16, 2019

Matthew Hebert
Alberta Transportation
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Edmonton, Alberta T6B 2X3

Sent via email to: Matthew.Hebert@gov.ab.ca

SUBJECT: Outcome of the review of Alberta Transportation's responses to the federal information requests for the Springbank Off-Stream Reservoir Project

Dear Mr. Hebert:

On June 14, 2019, the Canadian Environmental Assessment Agency (the Agency) received Alberta Transportation's (the proponent) responses to the first round of information requests issued by the Agency for the Springbank Off-Stream Reservoir Project (the Project).

Upon review of the information request responses the Agency determined that not all of the information provided in response to our original requests are sufficient for the purpose of moving forward with the environmental assessment.

Advice on the sufficiency of the information was provided to the Agency by Fisheries and Oceans Canada, Environment and Climate Change Canada, Health Canada, Transport Canada, Natural Resources Canada, and Infrastructure Canada.

The Agency appreciates the need for an efficient and productive means of ensuring all information required is presented in a manner that supports timely decision-making. You will find below an outline indicating where the information request responses do not address the original requests and next steps. A detailed conformity review of the responses to Information Requests Round 1 Part 1 is attached (Annex I) to support timely and ongoing efforts. Detailed conformity reviews of Information Requests Round 1 Part 2 and Part 3 are forthcoming.

Overarching Issues

- 1) Certain information requests are incorrectly quoted and therefore not included in the submission. All information requests must be referenced and appropriately responded to.
- 2) Alberta Transportation includes the following in some of the Information Request responses: “Alberta Transportation emphasizes that the EIA conforms to CEAA 2012 and the CEA Agency Guidelines for the Project and reflects standard environmental assessment practice appropriate for the scope and nature of the Project.” As noted in our correspondence dated April 30, 2018, conformance with the EIS Guidelines does not imply that the information provided is adequate to support the completion of the environmental assessment. The Agency reiterates that it requires full responses to all of the previous information requests.
- 3) Many of the responses refer to information provided in the revised Environmental Impact Statement (EIS) submitted in March 29, 2018, with limited to no rationale as to why the requested additional information is not needed nor provided. The Agency undertook a detailed technical review of the EIS prior to issuing information requests and articulated its position on the technical deficiencies of the information provided. Should Alberta Transportation be of the opinion that the information provided is sufficient, include an explanation/rationale that discusses how the information previously provided responds to the information request.
- 4) As presented, many of Alberta Transportation’s responses do not demonstrate that the context and rationale or the referenced submissions were considered in the responses to the information requests. In the covering letter to the Agency’s previous information requests, the Agency indicated that Alberta Transportation is encouraged to review all of the comments submitted as they include detailed information and advice to support Alberta Transportation in responding to the information requests.
- 5) Currently, while data from submissions from engagement with Indigenous groups is presented as discrete pieces of information, the analysis of this information requested by the Agency is not included in the response. In the covering letter to the Agency’s previous information requests, the Agency requested that Alberta Transportation present the input obtained from Indigenous groups, including a description of how that input was integrated into the responses for all information request items relating to effects of changes to the environment on Indigenous peoples (CEAA 2012 section 5(1)(c)) and potential impacts to Aboriginal and treaty rights. Additionally, the Agency indicated that points of disagreement between the views of Alberta Transportation and Indigenous groups should be presented, along with a description of efforts undertaken to reconcile these differences and a rationale for conclusions.

Next Steps

Alberta Transportation is required to address the EIS deficiencies identified in the Agency's previous information requests, in accordance with the EIS Guidelines of August 10, 2016, before the federal environmental assessment can resume the detailed technical review. In addressing these deficiencies, the Agency expects that the context and rationale related to these requests and the referenced submissions are considered. Based on the nature of the deficiencies, the Agency has determined that a revised package of responses is required.

In accordance with subsections 27(6) and 23(2) of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012), the period taken by a proponent to comply with the information requirements, when there is not sufficient information available for the purposes of conducting the environmental assessment, will not be included in the calculation of the time limit within which the Minister must make a decision.

As there are outstanding information requests, the federal legal timeframe is paused at day 127 until the required information is provided. For more information on the approach to managing federal environmental assessment timelines, please consult the Agency's *"Operational Policy Statement: Information Requests and Timelines, February 2016"* at <https://www.canada.ca/en/environmental-assessment-agency/news/policyguidance/information-requests-timelines.html>. The Agency recognizes the importance of timely decision making based in science and Indigenous knowledge and will continue to work on the Project environmental assessment to understand the environmental effects of the Project.

The Agency welcomes the opportunity to discuss the outcome of this review with you and to provide further advice on how to best address the outstanding information required to move forward with the assessment process. To this end, the Agency proposes technical workshops with federal experts and your team to facilitate a better understanding of the expectations of the Agency and federal authorities, and to ensure complete responses to information requests. Please contact the Agency to confirm availability during the week of July 22-26 for a discussion or to suggest an alternative date. If you have any questions, please contact the undersigned at 780-495-2384 or via email at CEAA.Springbank.ACEE@canada.ca.

Sincerely,

<original signed by>

Jennifer Howe
Project Manager
Prairie and Northern Region

Attachment (1): Annex I – Gaps identified in Alberta Transportation’s Responses to IR Round 1,
SR1 CEAA IR Package 1

C.c.: Barbara Pullishy, Canadian Environmental Assessment Agency
Wayne Speller, Golder Associates Ltd.
Mark Svenson, Alberta Transportation

ANNEX 1 – Gaps identified in Alberta Transportation’s Responses to Agency Information Requests Round 1, SR1 CEEA IR Package 1
Springbank Off-Stream Reservoir Project

Contents

List of Acronyms and Short Forms..... 2

Gaps from IR1-01 3

 Topic: Accidents and Malfunctions – Worst Case Scenarios 3

Gap from IR1-02..... 6

 Topic: Surface Water Quality 6

Gaps from IR1-04 7

 Topic: Hydrology – Reservoir retention, drawdown, and suspended sediments 7

Gaps from IR1-05 8

 Topic: Surface Water Quality – Suspended Sediment 8

Gaps from IR1-06 10

 Topic: Surface Water Quality – Methylmercury..... 10

Gaps from IR1-07 11

 Topic: Migratory Birds and Species at Risk – Risks During Operations..... 11

Gaps from IR1-09 13

 Topic: Follow-up and Monitoring..... 13

List of Acronyms and Short Forms

Agency	Canadian Environmental Assessment Agency
CEAA 2012	<i>Canadian Environmental Assessment Act, 2012</i>
DFO	Fisheries and Oceans Canada
ECCE	Environment and Climate Change Canada
EIS	Environmental Impact Statement
EIS Guidelines	Environmental Impact Statement Guidelines
IR	Information Request
PMF	Probable Maximum Flood
TSS	Total Suspended Solids
VC	Valued Component

Gaps from IR1-01

Topic: Accidents and Malfunctions – Worst Case Scenarios

Sources:

EIS Guidelines Part 2, Section 6.6.1

EIS Volume 3D

CEAA Annex 2: A) Early Technical Issues, December 19, 2017

Alberta Transportation Responses to CEAA Annex 2: A) Early Technical Issues, May 11, 2018

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-01

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 1, June 14, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-01, the Agency required details on how the valued components would be affected by the worst case scenario for a diversion structure failure or breach, the associated environmental consequences (such as potential species affected), and the temporal and geographical extents of the effects. As noted in the information request, part 2, section 6.6.1 of the Environmental Impact Statement Guidelines (EIS Guidelines) require the proponent to identify the probability of potential accidents and malfunctions related to the project, including the plausible worst case scenarios.

In Alberta Transportation's response to IR1-01, Alberta Transportation provided a description of certain worst case scenarios and the potential effects associated with each scenario. The information request response does not appear to consider the full range of worst case scenarios associated with diversion structure failure or breach. For instance, the possibility of the diversion inlet gates failing to shut during flooding may pose a risk of causing adverse environmental effects and was not considered. Additional information is needed on potential worst case scenarios involving the diversion inlet gates.

In IR1-01, the Agency required details, such as volumes and locations, of the estimated worst case scenarios for a hazardous material spill and pipeline rupture. In Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 1, Alberta Transportation provided information on what each worst case scenario would involve and the potential effects from the proposed scenarios; however, certain details, such as the volumes of potential spills and extent of potential effects are not discussed.

The worst case scenario for a potential pipeline rupture is described as rupture of an oil pipeline within the northwest portion of the off-stream reservoir during the release of water from a design flood; however, the estimated volume of a spill is not provided. Although it is mentioned that should this rupture occur during the release of water, the low-level outlet gates would be closed to contain the contaminated water within the reservoir and allow spill cleanup, it is unclear whether the appropriate spill response capacity is available to stop the spill and close the low-level outlet gates prior to contaminants being released into the Elbow River. Additionally, it is important to understand the care and control of the pipeline rupture to ensure that the spill is stopped and contained.

The worst case hazardous material spill is described as a tanker truck containing 50,000 litres of fuel overturning on the Highway 22 bridge. As mentioned in the response, the spill would enter the river. Although the likelihood of this occurring is low, it is unclear the potential extent of environmental effects and the measures that Alberta Transportation would take to contain or clean up the spill.

In IR1-01, the Agency required an updated assessment of potential effects to groundwater from a hazardous material spill or pipeline rupture, considering the worst case scenarios and response plans. In Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 1, Alberta Transportation indicated that the assessment of potential effects to groundwater remains the same as presented in the EIS Volume 3D. Limited rationale is provided that describes how the information in the EIS responds to the information requirement. Additionally, the information provided in the EIS on the potential effects to groundwater from a hazardous material spill or pipeline rupture does not reflect the worst case scenarios as described in the response to IR1-01 part b. An assessment of potential effects to groundwater considering the worst-case scenarios for a hazardous material spill or pipeline rupture is still needed.

The *Canadian Environmental Assessment Act, 2012* (CEAA 2012) requires the consideration of accidents and malfunctions to support a complete understanding of the potential adverse environmental effects to areas of federal jurisdiction. To meet the information requirements, Alberta Transportation should systematically focus on each of the environmental effects listed in CEAA 2012 section 5 in responding to the information requests below.

Information Requests:

- a) Describe additional worst case scenarios in relation to the diversion inlet gates. Provide details on how the valued components would be affected by the additional worst case scenario(s), the associated environmental consequences (such as potential species affected), and the temporal and geographical extents of the effects.
- b) For the worst case scenario pipeline rupture, provide additional details including the estimated volume; care and control of the pipeline rupture; estimated timing required to stop and contain the spill; and extent of potential effects (including if the spill enters the Elbow River).
- c) For the worst case hazardous material spill, describe the geographical extent of potential effects, proposed clean up and response measures.
- d) Reassess the potential effects to groundwater considering the worst case scenarios for a hazardous material spill or pipeline rupture.

Gap from IR1-02

Topic: Surface Water Quality

Sources:

EIS Guidelines Part 2, Sections 6.2.2, Section 6.3.1, Section 8

EIS Volume 1, Attachment A: Water Management Plan, Section A5

EIS Volume 3C, Section 2.6

CEAA Annex 2: A) Early Technical Issues, December 19, 2017

Alberta Transportation Responses to CEAA Annex 2: A) Early Technical Issues, May 11, 2018

Environment and Climate Change Canada (ECCC) Technical Review, June 18, 2018

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-02

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 1, June 14, 2019

ECCC Round 1 IR Completeness Review, July 3, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-02, ECCC noted that best option for water quality sampling is from the reservoir prior to discharge above the control structure, i.e. at the inlet to the low level outlet. If sampling plans differ from ECCC's proposed approach, the Agency requested Alberta Transportation provide a rationale as to the different approach. The EIS Guidelines require the proponent to present information on changes to surface water and describe project components and operations, including a detailed water management plan.

Alberta Transportation's response to IR1-02 incorrectly quotes the request and therefore does not provide a response to IR1-02 part b.

Information Request:

- a) ECCC indicated that the best option is to sample from the reservoir above the control structure prior to discharge, i.e. at the inlet to the low level outlet. If sampling plans differ from ECCC's proposed approach, provide a rationale as to the different approach.

Gaps from IR1-04

Topic: Hydrology – Reservoir retention, drawdown, and suspended sediments

Sources:

EIS Guidelines Part 2, Section 6.3.1

EIS Volume 3B, Section 7.4.4

EIS Volume 3B, Section 6.4.3.3

EIS Volume 1, Section 3.2.4 Table 3-3

DFO ANNEX 2 Technical Review, June 19, 2018

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-04

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 1, June 14, 2019

DFO Round 1 IR Completeness Review Comments, June 28, 2019

ECCC Round 1 IR Completeness Review Comments, July 3, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-04, the Agency requested Alberta Transportation clarify and provide the minimum draw down time for each flood scenario (not considering the time it takes to settle sediment within the reservoir to meet relevant water quality guidelines). The EIS Guidelines require the proponent to describe multiple components of hydrology of the Elbow River watershed, and the effects of the environment on the Project.

In Alberta Transportation's response to IR1-04, Alberta Transportation indicated that the low-level outlet has the operational flexibility to release the retained water in the off-stream reservoir at a range of rates and the rate will be executed at the discretion of the AEP operator. It is expected that the minimum draw down time for each flooding scenario can still be estimated given the fastest release rate. Clarity and rationale for draw down times for each flood scenario are needed in order to inform minimum residence time in the reservoir, which could be used to potentially mitigate adverse effects to fish.

Information Request:

- a) Not considering other factors that may influence release rates, e.g. water quality, provide the minimum draw down time for each flood scenario.

Gap from IR1-05

Topic: Surface Water Quality – Suspended Sediment

Sources:

EIS Guidelines Part 2, Section 6.2.2; Section 6.3.1; and Section 6.4.4

EIS Volume 3B, Section 7

CEAA Annex 2: A) Early Technical Issues, December 19, 2017

Alberta Transportation Responses to CEAA Annex 2: A) Early Technical Issues, May 11, 2018

ECCC Technical Review, June 18, 2018

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-05

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 1, June 14, 2019

DFO Round 1 IR Completeness Review Comments, June 28, 2019

Context and Rationale

The EIS Guidelines require that any changes to total suspended solids (TSS), turbidity, oxygen levels, water temperature, pH, dissolved oxygen, ice regime, water quality including metals, methyl mercury, nutrients, dissolved/total organic carbon, biological oxygen demand, carbonaceous biochemical oxygen demand, pesticides, aquatic indicators, and sediment quality be included in the EIS.

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-05, in the context of potential effects to water quality and fish and fish habitat due to high levels of suspended sediments, the Agency requested Alberta Transportation assess residual effects to water quality after the application of mitigation measures, and describe the uncertainty of the effectiveness of these mitigation measures.

In Alberta Transportation's response to IR1-05, Alberta Transportation indicated that the off-stream reservoir would act as a settling pond to settle out suspended sediments, which is a widely used and proven mitigation method to reduce TSS levels prior to release into a natural waterbody. However, it is unclear the level of uncertainty of the effectiveness of this mitigation measure and the potential residual effects to water quality.

Information Request:

- a) In the context of potential effects to water quality and fish and fish habitat due to high levels of suspended sediments, provide an assessment of residual effects to water quality after the application of mitigation measures, and describe the uncertainty of the effectiveness of these mitigation measures.

Gap from IR1-06

Topic: Surface Water Quality – Methylmercury

Sources:

EIS Guidelines Part 2, Section 6.2.2; Section 6.3.1; and Section 6.4.4

EIS Volume 3B, Section 7

CEAA Annex 2: A) Early Technical Issues, December 19, 2017

Alberta Transportation Responses to CEAA Annex 2: A) Early Technical Issues, May 11, 2018

ECCC Technical Review, June 18, 2018

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-06

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 1, June 14, 2019

ECCC Round 1 IR Completeness Review Comments, July 3, 2019

Context and Rationale

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-06, the Agency requested Alberta Transportation provide data that supports the statement that mercury methylation currently occurs during floods on the Elbow River and to include number of samples and sampling locations. As noted in the information request, section 6.3.1 of the EIS Guidelines require the identification of any potential adverse effects to fish and fish habitat, including the potential risk of production, increase, interaction, and accumulation of contaminants, including methylmercury. In the EIS, Alberta Transportation states that after release of water into the Elbow River, the reservoir area would not contribute methylmercury; however, ECCC is of the view that the proponent has not demonstrated this with the data presented.

Alberta Transportation's response to IR1-06 incorrectly quotes the request and therefore does not provide a response to IR1-06 part e.

Information Requests:

- a) Provide data and information and methodology that supports the statement that mercury methylation currently occurs during floods on the Elbow River; include number of samples and sampling locations.

Gaps from IR1-07

Topic: Migratory Birds and Species at Risk – Risks During Operations

Sources:

EIS Guideline Part 2, Section 6.3.2; Section 6.3.3; Section 6.4

EIS Volume 3B, Section 11.3.4.1; Section 11.3.4.2

ECCC Technical Review, June 18, 2018

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-07

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 1, June 14, 2019

Context and Rationale:

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-07, the Agency required details on potential effects to migratory birds and to species at risk, including information on flood and post-flood mitigation for migratory birds and species at risk, and nesting areas of importance for migratory birds. As noted in the information request, section 6.3.2 of the EIS Guidelines requires the proponent to identify any potential direct and indirect adverse effects to migratory birds or their habitat, including staging and nesting areas, foraging grounds, and landing sites.

Alberta Transportation's response to IR1-07 describes the importance of riparian habitat for nesting and the effects a flood could have on this habitat in the absence of the Project and that no migratory bird mitigations are proposed during flood operations. Additionally, Volume 4, Appendix H is referenced, which summarizes habitat types within the off-stream reservoir area. Both the EIS and the information request responses acknowledge that flooding of the off-stream reservoir will result in direct habitat loss or alteration and increase mortality of ground-nesting birds. Neither the EIS nor the information request response include information regarding important nesting areas for migratory birds within the project area.

Given that nests present during flood operations will be disrupted, understanding the presence and importance of nesting areas in the project area is necessary to fully understand the potential adverse effects of the Project on migratory birds and the significance of these effects.

Information Request:

- a) Present the methods and results of advanced surveys to identify important areas for migratory bird nesting throughout the project area. Taking these results into account, present a revised assessment of potential effects to migratory birds. Information provided should take into account all migratory birds (not limited to migratory bird species at risk) that may be present in the area during their nesting and breeding periods.
 - Provide details on observed nesting areas and nests.
 - Correlate habitat types identified with preferred nesting habitat features and present a discussion of the likely presence and distribution of migratory bird nests in the off-stream reservoir area throughout all possible flood operation periods.

Gaps from IR1-09

Topic: Follow-up and Monitoring

Sources:

EIS Guidelines Part 2, Sections 8.0, 8.1, 8.2

EIS Volume 3C, Section 2.0

CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-09

Alberta Transportation Responses to IR Round 1, SR1 CEAA IR Package 1, June 14, 2019

Context and Rationale:

In CEAA Information Requests Related to the Environmental Impact Statement Round 1 Part 1, IR1-09, the Agency required site- and species- specific mitigation measures and associated follow-up and monitoring programs for certain valued components , as well as a description of how the effectiveness of these mitigation measures would be monitored and evaluated.

In Alberta Transportation’s response to IR1-09, Alberta Transportation references a Draft Wildlife Mitigation and Monitoring Plan (Appendix IR9-1) and states that following Project approval, the plan will be finalised in consultation with regulators. The majority of mitigation measures described in the Draft Wildlife Mitigation and Monitoring Plan are listed in Tables 6-1, 6-2, and 6-3 and not attributed to specific species nor do the tables provide information on where the mitigation measures would be applied. Additionally, the tables refer to large areas rather than specific sites. While the response provides information on how the proponent intends to monitor the effectiveness of mitigation designed to reduce predicted changes in wildlife habitat, wildlife movement, and mortality risk, site- and species-specific follow-up and monitoring programs are not described.

IR1-09 specified the need for information pertaining to:

- i. birds listed under the *Migratory Birds Convention Act*
- ii. birds listed under the *Species at Risk Act*
- iii. amphibian species at risk
- iv. wildlife species at risk

The Agency requires sufficient specific information to understand environmental effects as per CEAA 2012 section 5, in addition to the proponent’s more broad characterization of effects to wildlife and biodiversity. Information on mitigation, follow-up, and monitoring specific to wildlife under federal jurisdiction is required.

Information Request:

- a) Provide site- and species-specific mitigation measures, and information on the purpose, objectives, and actions of the Project follow-up and monitoring programs for the following valued components of the environment, and describe how the effectiveness of these mitigation measures will be monitored and evaluated:
 - v. birds listed under the *Migratory Birds Convention Act*
 - vi. birds listed under the *Species at Risk Act*
 - vii. amphibian species at risk
 - viii. wildlife species at risk