UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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November 3, 2020

Regina Wright
Regional Director, Pacific and Yukon
Impact Assessment Agency of Canada
Via email:
regina.wright@canada.ca

Dear Ms. Wright:

This letter provides input from the U.S. Environmental Protection Agency (EPA) to the Impact Assessment Agency of Canada (IAAC) related to the Castle Project, an expansion of Teck Coal Limited's (Teck) Fording River Operations coal mine in British Columbia (BC). The Project is located approximately 130 kilometers north of the U.S. border. IACC specifically requested public comment and input on Teck's Initial Project Description (IPD) and IAAC's What We've Heard Summary of issues raised during the Castle Project federal designation process and BC's environmental assessment process.

EPA previously reviewed Teck's Castle Project IPD during the BC Environmental Assessment Office's (EAO) early engagement process. Comments that we submitted to EAO in June 2020 are enclosed with this letter. For this public comment period, we reviewed the new IPD materials developed by Teck for the federal impact assessment process, including the IPD Summary and the IPD Addendum. Our comments and recommendations related to these documents are enclosed. We request that our comments and recommendations be considered in development of the Detailed Project Description and in the impact assessment process.

We understand that the What We've Heard document summarizes the issues raised to date that will be used by IAAC for Teck to respond to in the next step of the federal impact assessment process. We appreciate that the What We've Heard document reflects most of the concerns that we have raised to BC during early engagement and to IAAC in our June 23, 2020 letter regarding federal designation. There are several areas where we offer additional input and clarification on issues related to cumulative effects, fish and fish habitat, reclamation, and transboundary effects.

We greatly appreciate IAACs decision to designate the project for federal impact assessment under the *Impact Assessment Act* and that the federal impact assessment processes will evaluate effects to U.S. waters, including Lake Koocanusa and the Kootenai River. EPA looks forward to participating in the federal process and continuing our involvement in the provincial process. EPA's primary point of contact for the Castle Project will be Patty McGrath, Mining

Advisor, EPA Region 10, and secondary point of contact Carolyn Gleason, National Environmental Policy Act (NEPA) Branch, Region 8.

Patty McGrath
Mining Advisor, EPA Region 10
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Please include both Patty and Carolyn on future correspondence related to the Castle Project. Feel free to contact myself at schmit.ayn@epa.gov or 303-312-6220 or Patty McGrath with questions regarding this letter.

Sincerely, <Original signed by>

Ayn Schmit
Water Policy Advisor

Enclosure

Enclosure to EPA November 3, 2020 Letter to IAAC
EPA Input and Recommendations on Castle Project Initial Project Description and What We've Heard Documents

Castle Project, Initial Project Description (IPD) Summary, Teck, October 2020

Project timeline and duration of potential impacts: The project mine life includes approximately two years of construction and "several decades" of operations, including reclamation and closure (IPD Summary, Section 6). This timeline does not appear to consider the likelihood of long-term post-closure water treatment and monitoring. We recommend that the Detailed Project Description include a more exact estimate of the duration (number of years) for each: operations, reclamation and closure, and long-term post-closure activities. This will enable a clear understanding of the duration of potential impacts from this project and timeframes over which mitigation would be required.

Level of detail associated with waste and water management plans and reclamation and closure plan: The IPD Summary (Section 11) states that the scope and methods for the assessment will include consideration of "mitigation measures to eliminate, reduce, control, or offset any potential adverse effects of the Project…" However, only general information is provided in the IPD documents regarding how wastes and mine impacted water would be managed during operations, reclamation, and post-closure to minimize potential effects of the Project. We recommend that the Detailed Project Description of waste and water management mitigation measures and plans be developed with a sufficient level of detail for all phases of the Project (operations, reclamation and closure, post-closure) in order to meaningfully evaluate the effectiveness of the plans and mitigation measures to eliminate, reduce, or control potential adverse effects.

Castle Project. Initial Project Description in accordance with Schedule 1 of the *Impact Assessment Act* Information and Management of Time Limits Regulations, Teck, October 2020

Provincial IPD published in April 2020: EPA's comments (dated June 10, 2020) submitted to the BC EAO on Teck's IPD are attached.

IPD Addendum, BC regional processes for evaluating water quality effects: The IPD Addendum (Part E, Section 11) states that potential water quality effects of the project will be evaluated by linking the project "…into regional initiatives, including the 2020 Regional Water Quality Model Update and the regional mitigation planning process (e.g., the process that lead to the development of the 2019 Implementation Plan Adjustment…)" The IPD Addendum goes on to state that these regional processes include participation from technical experts in the U.S. We have two concerns related to these statements.

First, we are concerned with relying solely on regional processes such as the Implementation Plan Adjustment (IPA) and the Regional Water Quality Model to determine potential water quality effects of the Castle Project. The IPA delayed timelines for construction of planned water treatment and the IPA does not appear to represent Teck's current plans for water management and treatment via implementation of both active water treatment and saturated rockfill (SRF). We agree with IAAC's Analysis Report (August 19, 2020) which noted uncertain effectiveness of Teck's Elk Valley Water Quality Plan due to lack of compliance with certain water quality parameters and difficulties in implementing effective water treatment mitigation measures. If the water quality effects analysis relies on regional processes, plans, and models, then we recommend that these be updated to be representative of current Project plans and environmental conditions. In addition, we recommend that the impact assessment include independent technical review of environmental modeling that provides the basis for water quality predictions used to evaluate potential effects to transboundary waters.

Second, we are concerned with the statement that regional processes include participation from U.S. technical experts. EPA was allowed the opportunity to provide comments on the original Elk Valley Water Quality Plan (2014) and the initial water quality modeling efforts, but was not afforded the opportunity to meaningfully participate in or comment on updates to the model or Plan. We have expressed concerns about this to BC. We recommend that the statement in the IPD Addendum regarding participation of U.S. technical experts be adjusted for accuracy.

Geographic extent of effects: The IPD Addendum (Part F, Section 12) states that the geographic extent of potential impacts to water quality is not anticipated to extend beyond the boundaries of BC because appropriate mitigation will be included as part of the Project or within the regional mitigation planning process to manage impacts to water quality. The IPD has not provided sufficient detail to support this conclusion and we recommend that the federal impact assessment evaluate the effectiveness of Project mitigation measures and regional processes in order to determine the geographic extent of potential effects. We agree with IAAC's Analysis Report that the Project may cause adverse direct and cumulative effects to the U.S. We recommend that the federal impact assessment include Lake Koocanusa and the Kootenai River in Montana and Idaho. EPA notes that the State of Idaho recently listed (and EPA approved) the Kootenai River as impaired due to selenium on its Clean Water Act section 303(d) list.

Indigenous Peoples: We appreciate that the IPD Addendum (Part E, Section 13) recognizes the Confederated Salish and Kootenai Tribes (CSKT) and Kootenai Tribe of Idaho (KTOI). However, the IPD does not describe engagement undertaken to date or how potential effects to these tribes and tribal resources will directly or indirectly be assessed. We recommend that the federal impact assessment process include meaningful engagement with CSKT and KTOI and evaluation of impacts to tribal resources.

What We've Heard: Issues Raised to Date on the Castle Project, IAAC, October 14, 2020

The issues summarized in this document reflect most of the input submitted by EPA to the BC EAO during early engagement and to IAAC in our letter regarding federal designation. We have

the following additional comments and clarifications on the "Issues Previously Raised" table and we request that IAAC consider and evaluate this input in the federal impact assessment.

Cumulative Effects: In addition to the potential for long-term and cumulative effects to fish and fish habitat listed in the issue summary table, EPA is concerned about cumulative effects on water quality in Lake Koocanusa and the Kootenai River.

Fish and Fish Habitat: The second bullet under the Fish and Fish Habitat issues summary mentions US EPA thresholds. We recommend that State of Montana and State of Idaho thresholds also be considered in comparing predicted Project effects to water quality and fish in these states.

Reclamation: We offer three recommendations related to the reclamation issues summary. First, the length of time for reclamation and long-term post-closure should be clearly described. Second, the reclamation plans, including any need for long-term water treatment should be described in sufficient detail to allow a meaningful analysis of its effectiveness at preventing impacts to U.S. waters. Finally, the estimated cost of financial assurance required by BC for the Castle Project should be disclosed along with an evaluation of its sufficiency to cover reclamation and long-term water treatment costs.

Transboundary Effects: The issue summary states, "Transboundary effects in the United States (U.S.) and traditional Tribal territory of U.S. Tribes including elevated selenium and impacts to aquatic resources in the Elk River, Koocanusa Reservoir, the Kootenai River, and the Kootenai watershed in Idaho and Montana." We appreciate that IAAC is considering a broad geographic scope for evaluation of potential effects in the U.S., including territories of U.S. tribes and states of Montan and Idaho. In addition to selenium, we request that the potential for elevated nitrates and assessment of effects also be included in the issue summary. We also recommend that both concentration changes and loading changes be evaluated.

McGrath, Patricia

From: Gildea, Jason
Sent: Friday, June 26, 2020 8:35 AM
To: Rodgers, Matthew EAO:EX
Cc: Schmit, Ayn; McGrath, Patricia; McLaughlin, Julianne; Todd.Goodsell@gov.bc.ca; Alex.Denis@gov.bc.ca
Subject: RE: Castle Project EA: next steps for technical advisors
Attachments: 20200610 Castle IPD Comment Tracker_EPA.xlsx

Hi Matt,
Please find attached EPA's comments on the Castle IPD. Thank you,
Jason

Jason Gildea
Hydrologist, EPA Region 8
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Helena, MT 59626
(406)457-5028
Gildea.Jason@epa.gov

From: Rodgers, Matthew EAO:EX <Matthew.Rodgers@gov.bc.ca>
Sent: Wednesday, June 10, 2020 11:29 AM
To: Al.Hodaly@canada.ca; Denis, Alex EAO:EX <Alex.Denis@gov.bc.ca>; Kalischuk, Andrea FLNR:EX <Andrea.Kalischuk@gov.bc.ca>; Craig, Andrew EMPR:EX <Andrew.Craig@gov.bc.ca>; Schmit, Ayn <Schmit.Ayn@epa.gov>; Bailey, Brenda EMPR:EX <Brenda.Bailey@gov.bc.ca>; Heron-Herbert, Brian ENV:EX <Brian.HeronHerbert@gov.bc.ca>; Chelsey.Cameron@canada.ca; christie.spry@canada.ca; erin.sexton@umontana.edu; gordon.moseley@interiorhealth.ca; hc.ia-ei.sc@canada.ca; Narynski, Heather M EMPR:EX <Heather.Narynski@gov.bc.ca>; HBE@interiorhealth.ca; Teske, Irene FLNR:EX <Irene.Teske@gov.bc.ca>; Gildea, Jason <Gildea.Jason@epa.gov>; Carmody-Fallows, Jeanien ENV:EX <Jeanien.CarmodyFallows@gov.bc.ca>; Andrews, Jennifer L FLNR:EX <Jennifer.L.Andrews@gov.bc.ca>; jjohnston@elkford.ca; Zavediuk, Jillian EAO:EX <Jillian.Zavediuk@gov.bc.ca>; Fairweather, Karen ENV:EX <Karen.Fairweather@gov.bc.ca>; kmorris@ktunaxa.org; Kenneth.law@canada.ca; Murphy, Kristen E FLNR:EX <Kristen.Murphy@gov.bc.ca>; kyle.terry@gov.bc.ca; Benson, Landon EMPR:EX <Landon.Benson@gov.bc.ca>; Murphy, Liz B EMPR:EX <Liz.Murphy@gov.bc.ca>; Saigeon, Lyle FLNR:EX <Lyle.Saigeon@gov.bc.ca>; Rodgers, Matthew EAO:EX <Matthew.Rodgers@gov.bc.ca>; michael.boronowski@fernie.ca; Williston, Patrick ENV:EX <Patrick.Williston@gov.bc.ca>; McGrath, Patricia <mcgrath.patricia@epa.gov>; Paula.smith2@canada.ca; Richard.Janssen@cskt.org; Alloisio, Sarah ENV:EX <Sarah.Alloisio@gov.bc.ca>; sgoodeve@sparwood.ca; stomlin@rdek.bc.ca; tmelcer@elkford.ca; Goodsell, Todd EAO:EX <Todd.Goodsell@gov.bc.ca>
Subject: Castle Project EA: next steps for technical advisors

Good morning Castle Project technical advisors,

Thank you to those who attended the June 4th Castle technical advisor meeting. As outlined in the presentation from the meeting (attached), technical advisors play a vital role in the environmental assessment (EA) review process by providing technical expertise and advice in their area of expertise. During the Castle EA, technical advisors are responsible for providing input on key issues and interests, baseline studies and modeling plans, and key EA documents.

During the current Early Engagement phase of the Castle EA, technical advisors are responsible for reviewing and providing input on Teck Coal Limited's Initial Project Description (IPD) to help inform development of their Detailed Project Description (DPD). To that end the EAO is requesting your input on the Castle IPD, which was approved by the EAO on April 8, 2020 and is available on the EAO's website at: Castle IPD.

Thanks to those who have confirmed their organization's technical advisor representative for the Castle EA. The EAO has compiled a list of technical advisors (attached) with those who have confirmed they will be participating in the Castle EA review.

ACTIONS REQUESTED

1) **Please review the following sections of the Castle IPD per your/your organization's area of expertise and provide your comments to me by Thursday, June 25, 2020**. Comments can be submitted in a memo, in the body of an email or in the attached comment tracking table.

   We are seeking your input on the following items:

   - **Project Design**
     - Please review Section 3.4.2 (pages 14-35) of the IPD.
     - Many components and activities remain flexible as described by Teck in the IPD. This is your opportunity to review the preliminary project design and provide input to Teck for consideration as the project design progresses. We are especially interested in your identification of opportunities for "mitigation by design" to reduce or eliminate potential interactions or impacts to biophysical, socio-economic or cultural values.
     - Please comment on any additional design considerations Teck should be aware of (e.g. sensitive areas, etc.) and include questions that should be contemplated for the DPD.
   - **Key Issues**
     - For Indigenous Nations: please review the Indigenous Interests Section of the IPD (Table 17 on pages 49-50) and identify if you have additional interests that you wish to have considered.
     - Please review the Regional Environmental Challenges (Section 6.1.3) to identify additional challenges not listed.
     - Please identify any additional issues you wish to have considered and listed in the DPD to inform Process Planning, which will include the Application Information Requirements.
   - **Project–Environment Interactions**
     - Please review Table 24 (pages 76-79) of the IPD.
     - Inform the EAO if there are any additional interactions not currently listed.
   - **List of Permits and Land Use Plans**
     - Please review Table 15 (page 31) and Table 23 (page 74) of the IPD, respectively.
     - Inform the EAO if there are additional permitting requirements.
     - Inform if there are additional land use plans or regional initiatives that should be considered.

2) **Please review the attached list of Technical Advisors and advise the EAO of any changes or additions by June 25, 2020**.

Lastly, the EAO will issue draft summary meeting notes from the June 4th technical advisor meeting to attendees early next for your review comment. Once finalized, the summary meeting notes will be posted to the EAO's website.

As always, please get in touch with anyone from the EAO Castle team (myself, Todd Goodsell – Todd.Goodsell@gov.bc.ca, or Alex Denis – Alex.Denis@gov.bc.ca) if you have any questions or require additional information or clarification.

Thanks,

Matt.

MATT RODGERS
Project Assessment Officer
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The EAO respectfully acknowledges that it carries out its work on the traditional territories of Indigenous nations throughout British Columbia.

Date: June 10, 2020

Castle Project

Item	Date	Name	Organization	Section of IPD	Comment
		P. McGrath	US EPA	3.4.2.2, Table 3	The post-closure duration is not specified in the table, but instead is stated as being dependent upon requirements for future monitoring, water treatment, and land-use. Based on other similar operations in the Elk Valley that are expected to require water treatment and monitoring into perpetuity, we recommend that the IPD be more transparent in this regard and the likely need for long-term post-closure water treatment.
		P. McGrath	US EPA	3.4.2.6	In order to fully consider waste rock storage options, please provide the rate at which waste rock would be mined on an annual basis and the total amount of waste rock that would be produced. We understand that these are estimates since the pit shell design has not been developed, but estimates are provided for the amount of coal that would be mined and the quantity estimates are essential to the evaluation of waste rock storage location options and configurations.
		P. McGrath	US EPA	3.4.2.6	The IPD identifies and evaluates location options for waste rock storage (Table 7), but does not consider options for waste rock management or waste rock storage facility design. We recommend that the IPD identify options for waste rock management that evaluates the possibility for segregating waste rock susceptible to selenium leaching from non-metal leaching waste rock and evaluates more protective storage options for the leachable waste rock (liners, caps, covers).

P. McGrath	US EPA	3.4.2.7	The IPD identifies water that comes into contact with waste rock and pit walls as mine-influenced water. Water that comes into contact with tailings is also mine-influenced water and since the Castle Project includes new tailings slurry ponds, we recommend that tailings be included in the list of sources of mine-influenced water.
P. McGrath	US EPA	3.4.2.7, Table 8	Table 8 identifies the water quality source control measures being considered for selenium and nitrates. An additional measure that should be considered is the use of clean water diversions to divert clean surface water and precipitation from surrounding areas around the open pit and waste rock storage areas. Surface water diversions are commonly used at mining operations to minimize the amount of water that comes into contact with mined material, which subsequently reduces the amount of contaminated water requiring collection and treatment.
P. McGrath	US EPA	3.4.2.7, Table 9	Table 9 describes some of the considerations associated with saturated rock fill (SRF) technology. An additional consideration is that SRF has not been implemented and shown to be successful at a full-scale operation. We recommend that this consideration be included in Table 9 and we agree with the table identifying that active water treatment is also being evaluated.
P. McGrath	US EPA	3.4.2.8	This section describes the volume percentages of the tailings. We recommend that the annual and total volume be provided since this information will assist with evaluation of tailings storage options.

P. McGrath	US EPA	3.4.2	The Project Description section focusses on project design options during mining operations. We recommend that reclamation and closure options also be developed. Development of a reclamation and closure plan and consideration of alternative closure techniques upfront can be critical factor in operational project design if the "design for closure" approach is followed. In addition, it is not clear whether concurrent reclamation is an aspect of the Project. Recommend that options for reclamation and closure and options for concurrent reclamation during mining be developed to minimize areas where water can come into contact with waste rock.
P. McGrath	US EPA	10, Table 24	One of the issues/potential effects under "Hydrology and Water Quality" is "Changes in water quality in streams and rivers resulting from release of selenium and other water quality constituents…" This issue/potential effect should be expanded to include potential changes in Lake Koocanusa and Kootenai River
P. McGrath	US EPA	10, Table 24	One of the potential mitigations for changes in water quality is to "integrate water management into reclamation and closure planning." We agree that this is important. In addition, we recommend that the IPD recognize that financial assurance that is adequate to fully cover reclamation and closure, including water managment, is a critical aspect to ensure that mitigations are implemented.