



***Coal Conservation Act Application Nos. 1844520, 1902073,
Environmental Protection and Enhancement Act Application No. 001-00403427, and
Water Act Application Nos. 001-00403428, 001-00403429, 001-00403430, 001-00403431,
Public Lands Act Application Nos. MSL160757, MSL160758, LOC160841, LOC160842,
and LOC970943***

**Joint Review Panel
Impact Assessment Agency of Canada Reference No. 80101
Final Argument**

Benga Mining Limited
Grassy Mountain Coal Project

December 11, 2020

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1.0 COMMON TERMS

Short Form	Full Term
ACO	Aboriginal Consultation Office
ACWS	Alberta Chapter of the Wildlife Society
AEP	Alberta Environment and Parks
AER	Alberta Energy Regulator
Agency	Canadian Environmental Assessment Agency or Impact Assessment Agency of Canada
AWA	Alberta Wilderness Association
bcm	Bank cubic metres
C&R Plan	Conservation and Reclamation Plan
CAC	Coal Association of Canada
CBA	Cost-Benefit Analysis
CCS	Crowsnest Conservation Society
CEAA 2012	Canadian Environmental Assessment Act, 2012
CIAR	Canadian Impact Assessment Registry
CMT	Clean metric tonnes
Coalition	Coalition of Alberta Wilderness Association and Grassy Mountain Group
COPC	Contaminant of Potential Concern
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CPAWS	Canadian Parks and Wilderness Society – Southern Alberta Chapter
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
ECCC	Environment and Climate Change Canada
EIA	Environment Impact Assessment
EIS	Environmental Impact Statement
ESAs	Environmentally Significant Areas
EPEA	Environmental Protection and Enhancement Act
FSI	Fish Sustainability Index
FOP	Fisheries Offsetting Plan

Short Form	Full Term
GHG	Greenhouse Gas
GMR	Grassy Mountain Road
Guidelines	Agency's Guidelines for the Preparation of an Environmental Impact Statement
HRIA	Historic Resource Impact Assessment
IPCC	Intergovernmental Panel on Climate Change
JOP	Joint Operating Procedures for First Nations Consultation on Energy Resources Activities
JRP or Panel	Joint Review Panel
JRP Agreement	Agreement to Establish a Joint Review Panel
KNC	Ktunaxa Nation Council
Kootenay	Kootenay Wood Preservers Ltd.
LLG	Livingstone Landowners Group
Local Study Area	LSA
MFSP	Mine Financial Security Program
MNA	Métis Nation of Alberta, Region 3
MCNP	Municipality of Crowsnest Pass
NR Can	Natural Resources Canada
OWC	Oldman Watershed Council
Project or Grassy Mountain Project	Grassy Mountain Coal Project
Ranchland	Municipal District of Ranchland No. 66
RDA	Rock Disposal Area
REDA	Responsible Energy Development Act
RCP	Representative Concentration Pathway
RSA	Regional Study Area
SARA	Species at Risk Act
SBZ	Saturated Backfill Zone
SEIA	Socio Economic Impact Assessment
SNN	Stoney Nakoda Nation

Short Form	Full Term
SSRP	South Saskatchewan Regional Plan
SSWQO	Site-Specific Water Quality Objective
TEK	Traditional Ecological Knowledge
ToR	Terms of Reference
Timberwolf	Timberwolf Wilderness Society
USEPA	United States Environmental Protection Agency
VCs	Valued Components
WSCT	Westslope Cutthroat Trout

2.0 INTRODUCTION

1. The applications before the Joint Review Panel (“JRP” or “Panel”) are with respect to the Grassy Mountain Coal Project (“Project” or “Grassy Mountain Project”). The Project is a metallurgical coal mine operation proposed for the Crowsnest Pass, approximately 7 kilometers north of Blairmore, Alberta.
2. As Mr. Gary Houston said in his opening statement for Benga Mining Limited (“Benga”) on October 27, 2020, the Project will produce 4.5 million clean metric tonnes per year over the scheduled mine life of 23 years. This will translate into GDP growth of \$210 million in Alberta and British Columbia (“BC”), during the construction phase alone. During operations, there will be approximately 400 workers employed directly on the Project, creating total employment effect of about 850 person years in Alberta and BC for each year of the Project’s 23-year life.¹
3. The development and ongoing operation of the Project will contribute a total of \$1.5 million annually in property taxes to the Municipal District of Ranchland No. 66 (“Ranchland”) and the Municipality of Crowsnest Pass (“MCNP”). Royalties and income taxes payable to the provincial and federal governments are expected to total \$1.7 billion over the life of the Project.²
4. The Project has received the express support of the MCNP, the Town of Pincher Creek, and a number of local residents. Benga has engaged in extensive consultation with all potentially affected Indigenous groups and, to date, all Treaty 7 First Nations, as well as the Métis Nation of Alberta, Region 3 (“MNA”), have submitted letters stating that they do not oppose the Project. The Aboriginal Consultation Office (“ACO”) has issued its Hearing Reports, in which it concluded that consultation with all Treaty 7 First Nations has been adequate.³

3.0 THE PUBLIC INTEREST

5. Development of Alberta’s metallurgical coal resources to benefit all Albertans and Canadians requires technical expertise, financial resources, and vision. Benga has all these things. Benga has proposed a project that will deliver economic development at the local, regional, and national levels, while safeguarding environmental values. Through Benga’s local hiring practices, implementation of modern mining technologies, and plans for progressive reclamation and the restoration of previously disturbed land, the Grassy Mountain Project serves the public interest.
6. The robust review that has taken place over the last four years has shown that the Project will not cause significant adverse environmental effects, taking into account Benga’s proposed mitigations.

¹ CIAR #740 at 48.

² CIAR #740 at 48.

³ CIAR #950 and CIAR #951 – #955.

7. The Grassy Mountain Project has satisfied the legal framework established by the provincial and federal governments for a new resource development project.

4.0 FRAMEWORK FOR THE REVIEW

8. It is important at this stage to review the legal framework the Panel is operating under, and the dual roles and responsibilities of the Panel.

4.1 Joint Process

9. On July 16, 2015, the Federal Minister of the Environment referred the environmental assessment (“EA”) of the Project to an independent review panel.⁴ On August 16, 2018, the Minister of the Environment entered into an agreement (“JRP Agreement”) with the Alberta Energy Regulator (“AER”) to allow a joint review of the Project.⁵ The JRP Agreement was established in accordance with the “Canada-Alberta Agreement for Environmental Assessment Cooperation (2005)” and sets out the mandate, authority, and composition of the Panel.
10. The scope and content of the EA for the Project are governed by the Terms of Reference (“ToR”) developed by the AER on March 19, 2015 (“AER ToR”)⁶ and the Canadian Environmental Assessment Agency’s (“Agency’s”)⁷ Guidelines for the Preparation of an Environmental Impact Statement (the “Guidelines”).⁸ The Panel’s own ToR (“JRP ToR”),⁹ appended to the JRP Agreement, establish the JRP’s mandate and the factors the JRP must consider in its review of the EA for the Project. The AER ToR, the Agency’s Guidelines, and the JRP ToR were all established following public consultation processes.
11. This joint review must satisfy the requirements of both the *Canadian Environmental Assessment Act, 2012* (“CEAA 2012”)¹⁰ and Alberta’s *Responsible Energy Development Act* (“REDA”).¹¹ The Panel has distinct obligations under each of these Acts.

⁴ CIAR #12.

⁵ CIAR #80.

⁶ Terms of Reference for Environmental Impact Assessment Report for Benga Mining Limited Grassy Mountain Coal Project, online: <open.alberta.ca/dataset/12ab5b0c-c74d-4936-8fe7-2d550a2fa69e/resource/cd64e6d3-d7c9-4553-acf2-2b43e5b2cbc2/download/ftor-grassy-mtn-coal-project_19mar2015_final-np.pdf>.

⁷ In this document, we will use “Agency” to refer to both the Impact Assessment Agency of Canada and its predecessor, the Canadian Environmental Assessment Agency.

⁸ CIAR #11.

⁹ CIAR #80.

¹⁰ SC 2012, c 19, s 52.

¹¹ SA 2012, c R-17.3.

4.2 Alberta Energy Regulator Terms of Reference

12. Benga submitted its Project Description to the AER on September 29, 2014, and the AER advised on November 21, 2014 that an environmental impact assessment (“EIA”) report would be required.¹² The AER invited public comments on proposed ToR between December of 2014 and January of 2015, and then finalized the ToR on March 19, 2015.¹³ These ToR identify the information required by government agencies for an EIA report prepared for the Project under the *Environmental Protection and Enhancement Act* (“EPEA”).¹⁴
13. With the Project’s EIA and subsequent addenda, Benga has satisfied the information requirements in the AER ToR.
14. Where hearing participants now ask that Benga be required to provide additional information, those comments and requests were properly made and addressed through public consultation leading up to the finalized AER ToR, and through the Information Requests (“IRs”) process. Below, we briefly set out the extensive history of IRs on this Project.

4.3 Canadian Environmental Assessment Agency Guidelines

15. Under the joint review process, the AER ToR are supplemented by the Agency’s Guidelines. On March 26, 2015, Benga submitted its Project Description to the Agency. On May 14, 2015, the Agency determined that a federal EA was required and commenced the EA review for the Project. The Agency released a draft version of its Guidelines that same day.¹⁵
16. On June 13, 2015, the Agency finalized the Guidelines, which are posted to the Agency’s registry at CIAR #11. The Guidelines were finalized only after the Agency invited initial public comments on the proposed Project,¹⁶ sought public comments on the Project Description,¹⁷ and invited public comments on the draft Guidelines.¹⁸

¹² Government of Alberta, Letter from AER to Riversdale Resources Limited, online: <<https://open.alberta.ca/dataset/12ab5b0c-c74d-4936-8fe7-2d550a2fa69e/resource/b9ff6691-8a3a-4149-aa00-f0181ec1e16e/download/eia-reqd-letter-nov-2014.pdf>>.

¹³ Government of Alberta, “Environmental Assessment - Benga Mining Limited Grassy Mountain Coal Project”, online: <open.alberta.ca/publications/environmental-assessment-benga-mining-limited-grassy-mountain-coal-project>.

¹⁴ RSA 2000, c E-12.

¹⁵ CIAR #9.

¹⁶ CIAR #1, CIAR #2.

¹⁷ CIAR #5.

¹⁸ CIAR #9, CIAR #10.

17. The Guidelines' purpose is to identify the information requirements for the preparation of an Environmental Impact Statement ("EIS") for a designated project to be assessed under the *CEAA 2012*. For the purpose of the Project's EA, the EIA (using the provincial terminology under the *EPEA*) is therefore also expected to fulfill the information requirements set out by the Guidelines for an EIS (using the federal terminology under the *CEAA 2012*).
18. This framework intends that the Panel will use the EIS and other information received during the EA process to prepare an EA Report that will inform the Federal Minister of the Environment's decision statement. The Guidelines specify the nature, scope, and extent of information required from Benga.¹⁹ The Guidelines incorporate considerations from the *CEAA 2012* and supplement the AER's requirements with instructions to provide information relevant to areas of federal jurisdiction.
19. The Guidelines required that the EIS include a justification for the Project and a description of the Project, alternatives considered, public consultation, and Indigenous engagement and concerns. The Guidelines further required that the EIS include an effects assessment that presents the Project's baseline conditions and the predicted changes the Project could cause to the physical environment, as well as predicted effects on valued components ("VCs"). The Guidelines directed Benga to assess the Project's effects on VCs identified as fish and fish habitat, migratory birds, species at risk, Indigenous peoples, and other VCs that may be affected as a result of a federal decision.
20. Below, in relation to the vegetation topic block covered at the hearing, we discuss the Guidelines' criteria for conducting a cumulative effects assessment for the Project. Benga has satisfied those criteria.

4.4 Joint Review Panel Terms of Reference

21. In addition to the AER ToR and the Agency's Guidelines, the JRP ToR sets out further information requirements for the Panel's review of the Project.²⁰ The finalized JRP ToR were issued August 16, 2018 after the Agency invited public comments on the draft JRP Agreement and ToR.²¹
22. Under the JRP ToR, the Panel must take into account all incremental air pollutant and greenhouse gas ("GHG") emissions directly attributable to the Project, including rail to the west coast of British Columbia, and marine emissions within Canadian territorial waters.²² In fulfilling the JRP's obligation to

¹⁹ Agency's Guidelines at PDF 6.

²⁰ The JRP ToR are appended to the JRP Agreement at CIAR #80.

²¹ CIAR #57, CIAR #58.

²² JRP Agreement at PDF 6.

consider any changes to the Project that may be caused by the environment under *CEAA 2012*,²³ the JRP ToR require that it consider environmental changes and hazards that may occur and affect the Project.

23. With respect to species at risk, the JRP ToR state that the Panel shall consider the effects of the Project on *SARA* listed wildlife species and their critical habitat, and identify measures that could be taken to avoid or lessen those effects and to monitor them.²⁴
24. As in the case with the Agency's Guidelines, the JRP ToR also provide guidance on the required scope of the Project's cumulative effects assessment. We discuss that guidance in further detail below, in relation to the vegetation topic block covered at the hearing. Benga's cumulative effects assessment satisfies the Guidelines' directions.

4.5 Information Request Process

25. Between filing the Project's original EIA on November 10, 2015 and the JRP's appointment on August 16, 2018, Benga put extensive work into responding to IRs from the Agency and the AER. In that period, Benga received five packages of IRs from the Agency,²⁵ and two packages of supplemental information requests ("SIRs") from the AER,²⁶ all of which are posted to the Agency's registry. The AER issued its SIRs after posting a notice of Benga's applications for the Project on October 31, 2017 and inviting statements of concern until December 8, 2017.²⁷
26. On November 5, 2018, the JRP invited public comments and recommendations for IRs regarding Benga's EIA and addenda filed to date.²⁸ This invitation for public comments was issued along with a *Resource Document for Proposed Information Requests on the Sufficiency and Technical Merit of the Environmental Assessment Information*,²⁹ to assist participants' review of the Project's EIA. The Agency accepted public comments from November 5, 2018 to January 21, 2019.
27. After determining that further information was required for the EIA, the JRP allowed for public review and comment on all additional information that Benga had provided to date. Benga then received and

²³ *CEAA 2012*, s 19(1)(h).

²⁴ JRP agreement at PDF 9.

²⁵ CIAR #33, #34, #52, #60, and #77.

²⁶ CIAR #56 and #78.

²⁷ AER, "Notice of Application", online: <<https://www.aer.ca/regulating-development/project-application/notices/application-1902073>>.

²⁸ CIAR #93, CIAR #94. The Panel considered and granted Tsuut'ina Nation's request for extension of this comment period CIAR #131.

²⁹ CIAR #95.

responded to six packages of IRs from the Panel.³⁰ The Panel posted each IR package to the Agency's registry and provided the email distribution list with notices of each IR, and of the additional information Benga submitted in response.³¹

28. Concerns and questions were properly raised, and addressed, in the extensive IR process. Interested stakeholders have had numerous opportunities to raise their concerns and request additional information throughout that process.
29. Some participants appear to have waited until the hearing to express their comments and ideas on information requirements. The public consultation periods for the Project's ToR and the IR processes were undertaken for a purpose, and that purpose has been satisfied. The hearing stage of an EA is not intended to act as a springboard for participants to re-open the earlier stages of the EA process.

4.6 The Joint Review Panel's Role as the AER

30. As the AER, the JRP's mandate, pursuant to s. 2 of the *REDA*, is:
 - a. To provide for the efficient, safe, orderly and environmentally responsible development of energy resources in Alberta through the AER's regulatory activities; and,
 - b. To regulate the disposition and management of public lands, the protection of the environment, and the conservation and management of water, including the wise allocation and use of water.
31. Under this broad mandate, the Panel must consider the interests not only of the applicant and intervenors, but also the interests of all Albertans who own the resources and have leased the right to, and imposed the obligation on, Benga to recover those resources.
32. The Panel is also required, pursuant to s. 20 of the *REDA*, to act in accordance with the South Saskatchewan Regional Plan, 2014-2024 ("SSRP").³² The SSRP identifies strategic directions for the region over the next 10 years and sets the stage for robust growth, vibrant communities, and a healthy environment within the region for the next 50 years.³³ The SSRP expressly recognizes the potential for development of metallurgical coal within the region:

Given the current and anticipated future global demand for coal, particularly from Asian markets, maintaining opportunities for responsible development of coal resources is

³⁰ CIAR #195, #202, #205, #212, #215, and #295.

³¹ CIAR #188, CIAR #198, CIAR #203, CIAR #206, CIAR #213, CIAR #216, CIAR #256, CIAR #264, CIAR #296, CIAR #310, CIAR #317, CIAR #328, CIAR #353, CIAR #361, CIAR #364, and CIAR #389.

³² Amended May 2018.

³³ CIAR #42, Consultant Report 10, PDF 18; SSRP at PDF 1.

important to the region and the province. The mountains and foothills in the western part of the region, as well as the plains in the east, have significant coal fields with good potential for development.

The metallurgical coal potential in the region is of significance in that the coal can be used in the steel-making process. For many developing or expanding countries, steel will be an essential component for infrastructure and Alberta's metallurgical coal could help meet those demands. Exploration and investment for coal near the Municipality of the Crownsnest Pass in the eastern portion of the region has increased over the past five years and demonstrates the future potential for coal development in the region. Ensuring opportunities for coal exploration and development in the region will create economic diversification opportunities and export markets for Alberta coal and mineral resources and will result in increased employment in the region.³⁴

33. The evidence in this proceeding is that approval of the Grassy Mountain Project is in accordance with the SSRP.
34. While performing its AER function, the JRP must also have regard to its mandates under the *EPEA*, the *Coal Conservation Act* (“CCA”),³⁵ the *Water Act*³⁶ and the *Public Lands Act* (“PLA”).³⁷ The Panel, acting as the AER, is empowered to grant the approvals, permits, and licenses sought by Benga to:
- Construct, operate, and reclaim the Project, pursuant to the *EPEA*;
 - Develop a mine under s. 10(1)(b) of the *CCA*,³⁸
 - Construct, operate, and reclaim the associated open mine pit, a north rock disposal area, a central rock disposal area, and a south rock disposal area, pursuant to s. 11(b) of the *CCA*;
 - Construct and operate a new coal processing plant, pursuant to s. 23(1)(a) of the *CCA*;³⁹
 - Capture, collect, treat, and manage surface runoff and groundwater as part of the water management program including development of an end-pit lake, pursuant to the *Water Act*;
 - Transfer surface water licences required for the Project and to divert surface and groundwater for use in the Project, pursuant to the *Water Act*; and,

³⁴ SSRP at PDF 14; CIAR #503 at PDF 7.

³⁵ RSA 2000, c C-17 [*CCA*].

³⁶ RSA 2000, c W-3 [*Water Act*].

³⁷ RSA 2000, c P-40. 1 [*PLA*].

³⁸ Pursuant to s 21 of the *CCA*, issuance of this permit must first be authorized by the Lieutenant Governor in Council.

³⁹ Pursuant to s 24 of the *CCA*, issuance of this permit must first be authorized by the Lieutenant Governor in Council.

- Hold mineral surface leases (and LOCs) to use Crown lands within the Project’s mine permit boundary (“MPB”) for the mine, corridor (access, conveyor, and powerline), and railway loop and access, pursuant to the *PLA*.⁴⁰
35. *EPEA*’s express purposes clearly convey Alberta’s objective to support and promote the protection, enhancement, and wise use of the environment. At the same time, the *EPEA*’s stated purposes recognize the necessary balance between protecting the environment and pursuing Alberta’s economic growth and prosperity.⁴¹
36. One of the *CCA*’s key stated purposes is to ensure the orderly, efficient, and economic development of Alberta’s coal resources in the public interest.⁴² The *CCA* further directs that the Panel may grant permits, licenses, or approvals under the Act if it is in the public interest to do so.⁴³
37. In deciding whether to grant licenses and approvals under the *Water Act*, the Panel may consider any existing, potential, or cumulative effects on the aquatic environment, hydraulic, hydrological, and hydrogeological effects, and potential effects on other users.⁴⁴ The Panel may also take into account effects on public safety,⁴⁵ whether approval is in the public interest, any other relevant matters applicable to the approval.⁴⁶ Additionally, the Panel must account for the factors specified in the *Approved Water Management Plan for the South Saskatchewan River Basin (Alberta)*.⁴⁷
38. In determining whether the Grassy Mountain Project is in the public interest, the Panel is charged with balancing the proponent’s rights in its coal leases, the public’s legitimate expectation to receive value from the resources it owns, the economic impacts of the proposed Project, including jobs, taxes, and royalties, and the Project’s social and environmental impacts.

⁴⁰ CIAR #42, Appendix 1b – 1f; EIA, Section A at PDF 21 – 23.

⁴¹ *EPEA*, s 2.

⁴² *CCA*, s 4(c)

⁴³ *CCA*, s 8.1(1).

⁴⁴ *Water Act*, s 38(2)(b).

⁴⁵ *Water Act*, s 38(2)(c)

⁴⁶ *Water Act*, ss 34(1)(c) and 38(2)(c).

⁴⁷ *Water Act*, s 38(2)(a). These factors are: a) Existing, potential and cumulative effects on the aquatic environment; b) Existing, potential and cumulative effects on any applicable instream objective and/or Water Conservation Objective; c) Efficiency of use; d) Existing, potential and cumulative hydraulic, hydrological and hydrogeological effects; e) With respect to irrigation, the suitability of the land for irrigated agriculture; f) Existing, potential, and cumulative effects on the operation of reservoirs or other water infrastructure; and, f) First Nation Rights and Traditional Uses.

39. The evidence before the Panel demonstrates that the Project aligns with the purposes of the applicable provincial legislation, and that approving the Project is in the public interest.

4.7 The Joint Review Panel’s Role under the *CEAA 2012*

40. Turning to the federal regime, under the *CEAA 2012*⁴⁸ and the JRP Agreement,⁴⁹ the Panel must conduct an EA of the Project by collecting and considering the evidence it considers necessary to make its recommendations to the Minister of Environment and Climate Change Canada (“ECCC”). The Minister’s primary task will be to consider whether the Project is likely to cause any significant adverse environmental effects, taking into account Benga’s proposed mitigations.⁵⁰ It is this Panel’s job to assist the Minister in making that determination.

41. The Panel’s task is to advise whether the Project EA presents any Project-induced environmental effect that is significant, adverse, and likely to occur. The Panel must consider the Project’s environmental effects, the likelihood and significance of those effects within temporal and spatial boundaries, public comments, mitigation measures, and the need for the Project.

42. It is important to note that EAs are planning tools that serve both information-gathering and decision-making functions. The fundamental purposes, or basic concepts, of an EA are:

- a. Early identification and evaluation of all potential environmental consequences of a proposed undertaking; and,
- b. Decision making that both guarantees the adequacy of the process and reconciles, to the greatest extent possible, the proponent’s development desires with environmental protection and preservation.⁵¹

43. The EA process cannot eliminate uncertainty and is not intended to provide finality. The Federal Court of Appeal has stated: “By its nature the panel’s exercise is predictive and it is not surprising that the statute specifically envisages the possibility of ‘follow up’ programmes. Indeed, given the nature of the task we suspect that finality and certainty in environmental assessment can never be achieved.”⁵²

⁴⁸ The Project is being assessed under *CEAA 2012*, per the Agency’s letter at CIAR #231.

⁴⁹ CIAR #80.

⁵⁰ If the Minister concludes that the Project is likely to cause significant adverse environmental effects, the Governor-in-Council must determine whether those effects are justified in the circumstances (*CEAA 2012*, s 52).

⁵¹ *Friends of the Oldman River Society v Canada (Minister of Transport)*, [1992] 1 SCR 3 at para 95, citing R Cotton and DP Emond “Environmental Impact Assessment” in J Swaigen, ed, *Environmental Rights in Canada* (1981) at 247.

⁵² *Alberta Wilderness Assn v Express Pipelines Ltd* (1996), 137 DLR (4th) 177 (FCA) at para 13 [*Express Pipelines*].

44. The Panel’s assessment is not a final determination, and the statutory regime recognizes that not all relevant information will be available at this stage of the Project’s development. Considering an assessment conducted by the National Energy Board, the Federal Court of Appeal noted in 2018 that: “Given the ongoing and dynamic nature of large projects and the early phase of the process at which such assessments are made, it is obviously reasonable to recommend further studies, in order to gather more information.”⁵³ Indeed, s. 43 of the *CEAA 2012* explicitly contemplates follow-up by requiring the Panel to set out its “rationale, conclusions and recommendations, including any mitigation measures and follow-up program in its report.”⁵⁴
45. These comments from the Federal Court of Appeal show clearly that there is no expectation in the EA process for the proponent to have iron-clad, final detailed plans in place at this stage. That would be putting the cart before the horse, so to speak, and would be unfair to the proponent because of the level of investment that would be required, with no guarantee of a return. Requiring final detailed plans before a public hearing would usurp the role of the Panel in making its recommendations, and the role of the regulatory bodies who will be involved in finalizing plans necessary to secure permits under other legislation, such as the *SARA* and the *Fisheries Act*.⁵⁵
- 4.7.1 *Federal Permits and Considerations*
46. Should the Project be approved, Benga will then be required to apply to the appropriate federal regulators for permits and authorizations under the *SARA*, the *Fisheries Act*, and the *Explosives Act*.⁵⁶
- 4.7.1.1 *Fisheries Act*
47. Should the Project receive approval, Benga will seek an authorization from Fisheries and Oceans Canada (“DFO”) under s. 35(2) of the federal *Fisheries Act*, due to predicted impacts to some of the tributaries of Gold Creek and Blairmore Creek. Section 35(2) provides an exception to the general prohibition in s. 35(1) that “No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat.” A s. 35(2) authorization would contain conditions to ensure mitigation measures finalized by Benga and DFO are implemented to protect fish and fish habitat. An authorization would also contain conditions for finalized monitoring and follow-up programs to validate and verify predictions that impacts to fish and fish habitat will be adequately offset.
48. The *CEAA 2012* requires the EA to consider the Project’s effects on fish and fish habitat. That consideration is assessed in the EIA for this Project, and is properly before this Panel. However,

⁵³ *Bigstone Cree Nation v Nova Gas Transmission Ltd*, 2018 FCA 89 at para 57 [*Bigstone Cree*].

⁵⁴ *CEAA 2012*, s 43(d)(i).

⁵⁵ RSC 1985, c F-14.

⁵⁶ RSC 1985, c E-17.

Benga has not yet applied for an authorization under the *Fisheries Act*, and that application is not before the Panel.

4.7.1.2 *Species at Risk*

49. In its role under the *CEAA 2012*, the Panel must consider the Project's effects on wildlife species listed in the *SARA*, and their critical habitat, to the extent a species' critical habitat has been identified in a recovery strategy or action plan. The Panel must also identify measures that could be taken to monitor, and to avoid or lessen those effects. These measures must be consistent with applicable recovery strategies and action plans.⁵⁷ The Panel will also consider the information the Guidelines require with respect to the description of proposed additional mitigation or offsetting measures that would serve to compensate for adverse effects to any critical habitat.⁵⁸
50. *SARA* states that no person shall kill, harm, harass, capture, or take an individual of a wildlife species listed as extirpated, endangered, or threatened under the Act.⁵⁹ Additionally, no person shall damage or destroy the residence of one or more individuals of a listed wildlife species,⁶⁰ and no person shall destroy any part of the identified critical habitat of any listed endangered or threatened species.⁶¹
51. The above *SARA* prohibitions apply on both federal and provincial lands for aquatic species at risk and species of migratory birds protected by the *Migratory Birds Convention Act, 1994*.⁶² For other species, the *SARA* prohibitions apply only on federal lands.⁶³
52. A proponent may engage in activities that would otherwise be prohibited under the *SARA* if the competent minister issues a permit pursuant to s. 73 of the *SARA*. Section 74 of the *SARA* allows for the competent minister under another federal Act (such as the *Fisheries Act*) to issue an authorization with the same effect as a *SARA* s. 73 permit, provided that the requirements of *SARA* ss. 73(2) to 73(7) are satisfied.
53. Pursuant to the *SARA*, permits may be granted under s. 73 where effects on species at risk are "incidental" to the activity in question.⁶⁴ As DFO witness Laura Phalen stated at the hearing, ECCC's "*Species at Risk*

⁵⁷ See JRP Agreement at PDF 9; Guidelines at PDF 27, 30, 32, 34.

⁵⁸ Guidelines at PDF 34.

⁵⁹ *SARA*, s 32(1).

⁶⁰ *SARA*, s 33.

⁶¹ *SARA*, s 58(1).

⁶² SC 1994, c 22.

⁶³ This is subject to *SARA* provisions that allow for the Governor-in-Council to issue an order for expanded protections for a listed wildlife species that is not an aquatic species or a species of migratory birds protected by the *Migratory Birds Convention Act, 1994*. No such order has been issued that would pertain to the Grassy Mountain Project.

⁶⁴ *SARA*, s 73(2)(c); CIAR #891 at 4631, as stated by DFO witness, Stephanie Martens.

Act Permitting Policy [Proposed] (2016) (“SARA Permitting Policy”) interprets “incidental” to mean: “the effect that carrying out the activity has upon the species must not be the purpose of the activity.”⁶⁵ Another DFO witness, the manager of the Species-at-Risk program, Melanie Toyne, correctly noted at the hearing:

incidental in -- in this regard is not related to the size of the impact of the activity. So that's not taken into consideration.... industrial development projects usually are satisfied under that as they are not usually directed at a species itself.⁶⁶

54. The competent minister may only issue a s. 73 permit if the minister is satisfied that (1) all reasonable alternatives have been considered; (2) all feasible measures will be taken to minimize the impact; and, (3) the activity will not jeopardize the survival or recovery of the species.⁶⁷ Therefore, the legislation explicitly allows for a proponent to disturb SARA-listed species and critical habitat provided that, among other things, the activity will not jeopardize the survival or recovery of the species.
55. SARA permits under ss. 73 or 74 have previously been issued for activities related to Alberta coal mines, pipelines, hydroelectric generations facilities, electricity transmission projects, and stream alterations. The following examples demonstrate the standard on which these SARA permits are regularly issued, pursuant to the SARA Permitting Policy:
- a. In 2015, Parks Canada issued a SARA s. 74 permit to allow for the replacement of 1500 metres of an electrical supply line to serve a gondola within Banff National Park. Vegetation clearing for the project involved the removal or significant damage of up to 188 immature Whitebark pine and several mature Whitebark pine.⁶⁸ The activity required direct removal and damage to individuals of a SARA-listed species within a National Park.
 - b. In 2018, Parks Canada issued a permit for the construction and operation of a 45 kilometre transmission line and new substation within Jasper National Park, resulting in the clearing of 27,000 trees and up to 74 hectares of critical habitat for the Jasper/Banff local population unit of caribou, with 46 hectares of the disturbance not being reforested. Parks Canada determined this project would not cause significant adverse environmental effects.⁶⁹ The loss of critical habitat and impact on the Jasper/Banff population unit of caribou was not merely possible or likely – it was certain.

⁶⁵ CIAR #891 at 4700:8-22.

⁶⁶ CIAR #891 at 4697:5-19.

⁶⁷ SARA, s 73(3).

⁶⁸ CIAR #571 at PDF 22, citing Species at risk public registry, “Explanation for issuing permit (BNP-840) pursuant to the provisions of section 74 of SARA - Whitebark Pine” (issued 2015), online: <species-registry.canada.ca/index-en.html#/permits/1757-1>.

⁶⁹ CIAR #838.

- c. In 2020, DFO issued a s. 35(2)(b) *Fisheries Act* authorization, also acting as a SARA permit (per SARA, s. 74), to allow for the clearing of riparian vegetation in an area of approximately 1000 square meters of critical habitat identified for the Nooksack dace. The Nooksack dace is listed as endangered under the SARA. The clearing took place along the Brunette River in New Westminister, BC as part of a project to construct a trenchless pipeline crossing under two tributaries.⁷⁰ A condition of the authorization was that the proponent implement planned offsetting measures that included the creation of a total of 1,020 square meters of Nooksack dace instream riffle habitat (an offsetting ratio of a little more than 1:1).
- d. In 2019, DFO issued a SARA s. 73 permit relating to the proposed works of the Coal Valley Mine, Mercoal West Development, and the diversion of a Mercoal Creek tributary to facilitate coal mining. The specific activity authorized by the permit included various measurement and monitoring methods to help with future management decisions. The activity had the potential to result in the incidental harm, harassment, or death of Rainbow Trout (Athabasca River populations), which is listed as endangered under the SARA.⁷¹
- e. In 2020, DFO issued a permit under s. 74 of the SARA for the infill of 522 square meters of critical habitat for the stabilization of the banks of Lee Creek, Alberta, with potential to directly or indirectly impact SARA-listed Bull Trout and Rocky Mountain Sculpin.⁷²
- f. DFO has also issued permits over the last several years for the permanent shoreline infilling of approximately 100 square meters of Westslope Cutthroat Trout (“WSCT”) critical habitat in Goat Creek, Alberta, remedial works on bridges located on Savanna Creek and the Livingstone River, Alberta, with the potential for direct or indirect impacts on WSCT, and stream bank restoration activities along Lynx Creek and Hidden Creek with the potential for negative short-term impacts on WSCT.⁷³

56. In all the above examples, permits were granted because the proposed activities would not jeopardize the survival or recovery of the species. This is despite the fact that for most of the above projects, it was not just a possibility that they might have some negative effects on a SARA-listed species or their habitat, it was a certainty. This is something the Panel must consider in its review of the Project’s potential impacts and proposed mitigations, including substantial offsetting measures, for wildlife species at risk. However, the matter of issuing a permit under s. 73 of the SARA is not before this Panel.

⁷⁰ CIAR #886.

⁷¹ CIAR #887.

⁷² CIAR #571 at PDF 22, citing Species at risk public registry, “Explanation for issuing other similar documents (19-HCAA-00815) pursuant to the provisions of section 74 of SARA - Bull Trout, Rocky Mountain Sculpin” (issued 2020), online: <speciesregistry.canada.ca/index-en.html#/permits/3017-1>.

⁷³ CIAR #571 at PDF 22 – 23.

5.0 THE ENVIRONMENTAL ASSESSMENT

57. In carrying out its mandate as the AER and under the *CEAA 2012*, it is important for the Panel to put the application for this Project into the appropriate context. This is something that is easy to lose sight of after four years of IRs and a public hearing that lasted over a month.
58. The EA process for the Grassy Mountain Project has been rigorous, comprehensive, transparent, and complete. It is the culmination of over six years of work, which has included:
- Years of data collection on the Project area, particularly with respect to topics of special concern, such as Whitebark pine on the Project footprint and the WSCT in Gold and Blairmore Creeks;
 - The development of the AER ToR and the Agency’s Guidelines through public consultation;
 - The establishment of the JRP ToR, instructed by stakeholder and regulator input, including that of ECCC, Health Canada, and DFO;
 - The development of the EIA, which evolved over several rounds of comments and questions from stakeholders and Indigenous communities through an extensive consultation process, creating a meaningful and helpful dialogue for the design and planning of the Project;
 - Agreements or protocols entered into with all Treaty 7 First Nations and the MNA, and with recent commitments extended to the Ktunaxa Nation Council (“KNC”) and the Shuswap Indian Band;⁷⁴
 - Commitments to continued collaboration with the MCNP and Ranchland;
 - Responses to IR packages from the AER, the Agency, and for the last two years, this JRP; and,
 - Extensive reviews of Benga’s EIA and 12 addenda by various groups and interested stakeholders.
59. On June 25, 2020, the JRP determined that Benga’s application record was sufficient to proceed to the public hearing stage, in accordance with the JRP’s ToR. The JRP further determined that the Project EIA and addenda has met the requirements outlined in the Agency’s Guidelines and the AER ToR, and the EIA report is complete, pursuant to s. 53 of the *EPEA*.⁷⁵
60. On June 29, 2020, the Panel announced that its review of the Project would proceed to a public hearing,⁷⁶ and the hearing began on October 27, 2020.

⁷⁴ CIAR #571 at PDF 10 – 11.

⁷⁵ CIAR #362 and #363.

⁷⁶ CIAR #365 and #389.

5.1 Opening Statements at the Public Hearing

61. At the outset of the hearing, the Panel heard opening statements from fifteen full participants, and from twelve partial participants.⁷⁷ The content of those statements are a testament to the rigour of this assessment and the extent of engagement by Indigenous communities, federal authorities, municipalities, advocacy organizations, and not-for profits, as well as individual members of the public.

5.1.1 *Stoney Nakoda Nations (“SNN”)*

62. Bill Snow gave opening remarks on behalf of the SNN. In these remarks, Mr. Snow expressed that, as a result of its work with Benga, the SNN supports the development of the Project.⁷⁸ Mr. Snow spoke of Project “conditions” that SNN and Benga are working on cooperatively, pursuant to their long-term relationship agreement.

63. Mr. Snow later clarified in a letter to the Panel that the SNN is not seeking that the Panel implement these conditions.⁷⁹ Mr. Snow advised the Panel that, should the Project be approved, SNN will continue to engage with Benga to ensure the Project is built to the highest environmental and safety standards while maximizing benefits to the SNN.⁸⁰

5.1.2 *Ktunaxa Nation Council (“KNC”)*

64. Raymond Warden spoke on behalf of the KNC. He described KNC’s governance and its historical and continued connections to the Crowsnest Pass.⁸¹ Mr. Warden expressed that KNC’s engagement with Benga is going well, and that this engagement has helped KNC to better understand the scope, scale, and duration of the Project.⁸²

5.1.3 *Métis Nation of Alberta Region 3 (“MNA”)*

65. On behalf of the MNA, Kirk Poitras expressed full support for the Grassy Mountain Project, and the MNA’s desire to see the Project move forward.⁸³

⁷⁷ CIAR #695, Grassy Mountain Project Preliminary Daily Hearing Schedule, Week 1 – revised on October 28, 2020 at PDF 1. These numbers include Benga as a full participant.

⁷⁸ CIAR #740 at 59.

⁷⁹ CIAR #746.

⁸⁰ CIAR #740 at 61.

⁸¹ CIAR #740 at 85 – 90.

⁸² CIAR #740 at 90.

⁸³ CIAR #740 at 96.

5.1.4 *Shuswap Indian Band*

66. Chief Barbara Cote of the Shuswap Indian Band described the Band's connection to the Project location,⁸⁴ and its recent engagement with Benga concerning the Project.⁸⁵ Chief Cote acknowledged that the Band has identified some areas of concern with respect to the Project and cannot recommend the approval unless consultation continues – something Benga has committed to do.

5.1.5 *Municipality of Crownsnest Pass ("MCNP")*

67. Ms. Alifeyah Gulamhusein, legal counsel for the MCNP, advised the JRP that the Municipality supports the Project and is satisfied that the proposed mitigations qualify the Project for approval.⁸⁶ Ms. Gulamhusein provided the Panel with the MCNP's recommendations for Project conditions.⁸⁷
68. After the hearing began, the MCNP advised the JRP that its written submission, filed on the registry as CIAR #545, sufficiently represents the Municipality's position. The MCNP decided it would give no further evidence in the hearing, stating that this decision was buttressed by Benga's October 27, 2020 submission, in which Benga addressed a number of the MCNP's remaining concerns.⁸⁸

5.1.6 *Environment and Climate Change Canada ("ECCC")*

69. Margaret Fairbairn provided opening remarks for ECCC and adopted the Department's written submissions.⁸⁹ Ms. Fairbairn described ECCC's role in the Project review, and its legislative responsibilities under *CEAA 2012*, the *Fisheries Act*, the *Migratory Birds Convention Act, 1994*, the *SARA*, and the *Canadian Environmental Protection Act*.⁹⁰
70. ECCC's recommendations focus on preventing negative effects of selenium entering the environment, minimizing effects on migratory birds and species at risk, reducing effects on regional air quality and Canada's GHG emissions, and enabling the Project to withstand the effects of future climate change.⁹¹

⁸⁴ CIAR #740 at 99.

⁸⁵ CIAR #740 at 101.

⁸⁶ CIAR #740 at 105, 107.

⁸⁷ CIAR #740 at 108 – 111.

⁸⁸ CIAR #794.

⁸⁹ CIAR #740 at 119-120.

⁹⁰ CIAR #740 at 125 – 129.

⁹¹ CIAR #740 at 129.

Ms. Fairbairn outlined ECCC's remaining concerns regarding Banga's assessment of selenium speciation.⁹²

5.1.7 *Fisheries and Oceans Canada ("DFO")*

71. Stephanie Martens of the DFO adopted the Department's written submissions and described the DFO's role in providing information to the Panel concerning fish, fish habitat, and aquatic species at risk.⁹³

5.1.8 *Natural Resources Canada ("NR Can")*

72. Jessica Coulson of Natural Resources Canada ("NR Can") adopted NR Can's written submissions.⁹⁴ Ms. Coulson confirmed that NR Can is satisfied with Banga's conclusion that seismic conditions are not expected to adversely affect the Project and result in impacts to the environment.⁹⁵ The measures Banga has adopted to address landslide potential are appropriate in NR Can's view.⁹⁶ NR Can confirmed its position that any uncertainties regarding groundwater modelling may be addressed through adaptive management and groundwater monitoring,⁹⁷ and that Banga's proposed measures for seepage collection appear reasonable and feasible.⁹⁸

5.1.9 *Health Canada*

73. Brenda Woo of Health Canada adopted the Department's written submissions,⁹⁹ and presented Health Canada's recommendations concerning air quality, water quality, and noise mitigation measures.¹⁰⁰

5.1.10 *Impact Assessment Agency of Canada ("Agency")*

74. Phoebe Miles presented opening statements for the Agency in its role as Crown consultation coordinator, and adopted the Agency's written submissions.¹⁰¹ Ms. Miles explained the Agency's responsibility for

⁹² CIAR #740 at 131 – 133.

⁹³ CIAR #740 at 120 – 121, 137.

⁹⁴ CIAR #740 at 121.

⁹⁵ CIAR #740 at 141.

⁹⁶ CIAR #740 at 142.

⁹⁷ CIAR #740 at 143.

⁹⁸ CIAR #740 at 144.

⁹⁹ CIAR #740 at 121 – 122.

¹⁰⁰ CIAR #740 at 148 – 151.

¹⁰¹ CIAR #740 at 122 – 123.

consulting with Indigenous peoples during the Project's EA and for providing information to inform the Panel's recommendations concerning the Project's impacts on Aboriginal and treaty rights.¹⁰²

5.1.11 *Coalition of Alberta Wilderness Association and Grassy Mountain Group ("Coalition")*

75. Richard Secord, counsel for the Coalition of Alberta Wilderness Association and Grassy Mountain Group (the "Coalition"), presented an opening statement on behalf of the group. Mr. Secord introduced the Coalition's members and their concerns regarding Project impacts on adjacent landowners,¹⁰³ and the Coalition's outstanding concerns regarding Benga's EIA modeling and assumptions.¹⁰⁴ Mr. Secord identified pollution, the WSCT and Bull Trout populations, human health, and property access as key issues for Coalition members.¹⁰⁵

5.1.12 *Timberwolf Wilderness Society ("Timberwolf")*

76. Mr. Mike Sawyer provided an opening statement on behalf of the Timberwolf Wilderness Society ("Timberwolf"). Timberwolf expressed its concerns for species at risk and critical habitat protection, modelling for projected climate change, and GHG emissions.¹⁰⁶

5.1.13 *Livingstone Landowners Group ("LLG")*

77. Mr. Gavin Fitch provided an opening statement for the Livingstone Landowners Group ("LLG"). Mr. Fitch introduced the LLG's membership and its connection to the Grassy Mountain Project site. The LLG's opening statement identified concerns regarding land use and landscape impacts, air quality, effects on WSCT and Whitebark pine, and Benga's socioeconomic impact assessment ("SEIA").¹⁰⁷

78. Mr. Fitch drew a comparison between the Project's plan to harvest Whitebark pine and replant disease-resistant stems at a ratio of three replanted stems to every single stem harvested, to the illegal cutting of Whitebark pine within Banff National Park.¹⁰⁸ Of course, it is worth noting that in the illegal harvesting case Mr. Fitch referred to, the Lake Louise Ski Resort removed Whitebark pine in a National Park without a permit under the *National Parks General Regulations*, and the Ski Resort did not have a SARA s. 73 permit and a plan for replanting the harvested Whitebark pine.

¹⁰² CIAR #740 at 152 – 155.

¹⁰³ CIAR #740 at 156 – 159

¹⁰⁴ CIAR #740 at 162.

¹⁰⁵ CIAR #740 at 162 – 165.

¹⁰⁶ CIAR #740 at 165 – 167.

¹⁰⁷ CIAR #740 at 168 – 179.

¹⁰⁸ CIAR #740 at 171.

79. As noted above, there are several examples of companies that have legally harvested Whitebark pine and other species, both within and outside of National Parks, and within identified critical habitats for species at risk. Mr. Fitch unfortunately failed to note those more apt examples for the Panel in the LLG's opening statement.

5.1.14 *Canadian Parks and Wilderness Society ("CPAWS")*

80. Mr. Drew Yewchuk gave an opening statement on behalf of the Canadian Parks and Wilderness Society, Southern Alberta Chapter ("CPAWS"). This statement highlighted CPAWS' concerns regarding the cumulative effects of coal development in the region, the Project's financial viability and security for remediation, species at risk and critical habitat, selenium mitigation, and Benga's proposed plans for adaptive management.¹⁰⁹

5.1.15 *Crowsnest Conservation Society ("CCS")*

81. Rick Cooke of the Crowsnest Conservation Society ("CCS") introduced his group as the principal active environmental non-governmental organization in the area, devoted to the promotion and enhancement of the natural environment.¹¹⁰ The CCS acknowledged that Benga has made extensive efforts to inform the community.¹¹¹

82. Mr. Cooke commented that the flexibility required to maximize economic viability of the Project is "somewhat in conflict" with the public interest, and noted that this hearing may be the principal opportunity for external stakeholders to advance their interests.¹¹² Mr. Cooke said that the community has evolved into a lifestyle and recreation-based community, and told the Panel that a key issue should be the question of whether re-introduction of the resource economy is compatible with the community's current economic development.¹¹³

5.1.16 *Barbara Janusz*

83. Barbara Janusz gave an opening statement outlining her primary concern that the socioeconomic benefits of the Project are outweighed by risks to the tourism economy.¹¹⁴ Ms. Janusz asserted that

¹⁰⁹ CIAR #740 at 181 – 183.

¹¹⁰ CIAR #740 at 186.

¹¹¹ CIAR #740 at 189.

¹¹² CIAR #740 at 189 – 190.

¹¹³ CIAR #740 at 192.

¹¹⁴ CIAR #740 at 194 – 196.

“incompatibility of coal mining, from a socioeconomic point of view, with tourism is a given”,¹¹⁵ and identified her additional concerns relating to water quality and GHG emissions.¹¹⁶

5.1.17 *Municipal District of Ranchland No. 66 (“Ranchland”)*

84. Michael Niven, Councilor Cam Gardner, and Reeve Ron Davis provided opening statements on behalf of Ranchland. Mr. Niven told the Panel that Ranchland has a duty to protect the “pristine and largely untouched” area of the Municipal District.¹¹⁷ He presented Ranchland’s concerns regarding socioeconomic effects, visual impacts, land use, water, impacts on wildlife, noxious weeds, invasive species, and reclamation.¹¹⁸
85. Reeve Davis expressed his constituents’ concerns for water quality and invasive species, as these factors might impact ranching in the area.¹¹⁹ Mr. Davis asked that reclamation be “strictly regulated and enforced”.¹²⁰ In concluding his opening comments, Mr. Davis stated that Ranchland residents “do not want a coal mine in their backyard”.¹²¹
86. Also on behalf of Ranchland, Councilor Gardener expressed his view that “total reclamation” of the Project site is “impossible”.¹²² He stated further his general opposition to the visual impact of land disturbance, as well as industrial buildings, equipment, vehicles, fencing, conveyors, and coal storage facilities.¹²³ Mr. Gardener acknowledged that Benga has made efforts in the past to allow passage on the Grassy Mountain Road (“GMR”), and alleged that Benga’s decision to close the private road to public use “put landowners in an undue position of having to sell without access to their trapped lands.”¹²⁴ Mr. Gardener stated his position that the Project is “incongruous with the land stewardship ethic” which guides

¹¹⁵ CIAR #740 at 197.

¹¹⁶ CIAR #740 at 197 – 199.

¹¹⁷ CIAR #750 at 224.

¹¹⁸ CIAR #750 at 225.

¹¹⁹ CIAR #750 at 230.

¹²⁰ CIAR #750 at 230.

¹²¹ CIAR #750 at 230 – 231.

¹²² CIAR #750 at 233.

¹²³ CIAR #750 at 233 – 234.

¹²⁴ CIAR #750 at 234.

Ranchland, and expressed concerns regarding light and noise pollution,¹²⁵ as well as socioeconomic impacts to the local ranching and tourism industries.¹²⁶

87. Mr. Gardener advised the Panel that Ranchland has put in place and enforces “the most strict land use bylaws allowable by the Alberta Government”¹²⁷ and has “historically not pursued development and diversification into other industries”.¹²⁸ This allows Ranchland to retain stable finances by providing few services.¹²⁹
88. In sum, Ranchland’s representatives in their opening statements acknowledged that their Municipal District is unique.¹³⁰ Its population of approximately one hundred people, or 15 families, has remained static over decades and is spread over a large geographic area of 2,500 square kilometers. Ranchland’s mission statement is to “protect and enhance the community and unique ranching heritage and to promote activities that are sustainable and compatible with the environment”.¹³¹
89. Ranchland has placed severe restrictions on any type of development. This includes a prohibition on subdivision of quarter sections into 80-acre lots or into undeveloped country residential parcels. This prevents acreage-living as much as possible within Ranchland.¹³² Ranchland has clearly stated its opposition to any development or change in land-use, whatsoever, within its 2,500 square kilometers. Of course, Ranchland’s restrictive view is somewhat untenable in a province and region where public lands and resources belong to all Albertans, for the range of uses stipulated in the SSRP, which include industrial development and economic diversification.

5.1.18 *Alberta Chapter of the Wildlife Society (“ACWS”)*

90. Dr. Sarah Elmeligi, Dr. Andrea Morehouse, Dr. Mark Boyce, and Sarah Milligan presented opening comments on behalf of the Alberta Chapter of the Wildlife Society (“ACWS”). ACWS Executive Director, Dr. Elmeligi, explained the organization’s purpose to “inspire and empower wildlife

¹²⁵ CIAR #750 at 237 – 238.

¹²⁶ CIAR #750 at 240 – 242.

¹²⁷ CIAR #750 at 243.

¹²⁸ CIAR #750 at 247.

¹²⁹ CIAR #750 at 247.

¹³⁰ CIAR #750 at 261.

¹³¹ CIAR #750 at 262.

¹³² CIAR #750 at 264 – 265.

management professionals to engage in science-based management and conservation of wild animals and their habitats across Alberta.”¹³³

91. Dr. Elmeligi provided a review of the Project’s EIA on behalf of her organization. In her critique, Dr. Elmeligi asserted that the EIA does not employ “current robust science ... to define the potential environmental impacts of this development”.¹³⁴ Dr. Elmeligi stated the ACWS “are unclear as to why [they] are being asked to review an EIA that is essentially incomplete”.¹³⁵ Concerns enumerated by Dr. Elmeligi include that the timeline for cumulative effects assessment did not reach beyond the mine’s operational lifetime and allegedly did not consider forestry and recreation impacts.¹³⁶ Dr. Elmeligi stated further that there is a lack of information regarding linear disturbances from roads and trails, traffic volumes, and impacts on migratory birds outside of breeding season.¹³⁷
92. When asked by AER counsel Ms. Kapel Holden whether the ACWS’ review of the EIA included Benga’s Wildlife Mitigation and Monitoring Plan available in CIAR #251, Addendum 10, Package 5, Dr. Elmeligi paused, and then said “yes, it was”. She was unable to provide any further comments regarding the wildlife mitigation and monitoring strategies provided in the plan.¹³⁸ She gave no indication that she was aware of its contents.
93. Respectfully, most if not all the deficiencies Dr. Elmeligi alleged are addressed in the Wildlife Mitigation and Monitoring Plan. The content of the ACWS’ written submission at CIAR #557 suggests the ACWS did not review any of the addenda on the registry, including Benga’s conceptual Conservation and Reclamation Plan (“C&R Plan”) or Wildlife Mitigation and Monitoring Plan located in Addendum 10. Their submissions should be weighted accordingly.
94. Ms. Milligan presented a cumulative effects assessment completed for the ACWS. The study area for this assessment included Banff National Park and extended south along the Alberta-BC border to the Canada – US border, west to Highway 2, and north beyond the City of Calgary, encompassing 30,000 square kilometers.¹³⁹ As Ms. Milligan acknowledged, this study area is “regional-level”¹⁴⁰ and outside the scope of the Panel’s review. Ms. Milligan focused her presentation on modeling of trout sustainability and

¹³³ CIAR #750 at 277.

¹³⁴ CIAR #750 at 278.

¹³⁵ CIAR #750 at 279.

¹³⁶ CIAR #750 at 280 – 282.

¹³⁷ CIAR #750 at 283.

¹³⁸ CIAR #750 at 315:17-26, 316:1-7.

¹³⁹ CIAR #750 at 286 – 287.

¹⁴⁰ CIAR #750 at 309 – 311.

recovery scenarios within this broad region.¹⁴¹ The ACWS did not present any analysis specific to the Project.

95. Dr. Morehouse provided a statement on the ACWS' concerns regarding carnivores, claiming that peer-reviewed literature does not support the EIA's conclusion that there are negligible or positive impacts to carnivores.¹⁴² Dr. Morehouse advised the Panel of concerns regarding locations for road crossing structures, impacts on Grizzly Bear habitat, connectivity of habitat, zones of influence, and movement patterns.¹⁴³ Dr. Morehouse's analysis relied on findings of other assessments and was not specific to the Project area.¹⁴⁴ When asked by Ms. Kapel Holden what area the ACWS was referring to in its assertion that the "area's ecological functionality is already highly impacted", Dr. Morehouse admitted they did not mean the wildlife LSA, the RSA, or the Grizzly Bear RSA, which are the study areas relevant to this Project.¹⁴⁵

5.1.19 *Eco-Elders for Climate Action ("Eco-Elders")*

96. Janet Gourlay-Vallance delivered an opening statement on behalf of the Eco-Elders for Climate Action ("Eco-Elders"). Ms. Gourlay-Vallance's submissions emphasized the need to consider the interests of future generations and to protect water resources.¹⁴⁶ The Eco-Elders expressed concerns regarding methane emissions, human health, the market demand for steel-making coal, and reclamation costs.¹⁴⁷

5.1.20 *Oldman Watershed Council ("OWC")*

97. Speaking on behalf of the Oldman Watershed Council ("OWC"), Shannon Frank gave an opening statement in which she told the Panel that the OWC's first priority is headwater management. She advised that the OWC remains neutral on the Project's approval, but that the OWC has several concerns with respect to the Project.¹⁴⁸ Ms. Frank stated that the Project is located in a headwaters area that is already

¹⁴¹ CIAR #750 at 292 – 299.

¹⁴² CIAR #750 at 300 – 301.

¹⁴³ CIAR #750 at 301 – 306.

¹⁴⁴ CIAR #750 at 313 – 315.

¹⁴⁵ CIAR #750 at 314.

¹⁴⁶ CIAR #750 at 330 – 333.

¹⁴⁷ CIAR #750 at 333 – 339.

¹⁴⁸ CIAR #750 at 349, 351.

under multiple pressures, and that the Project would add to those pressures.¹⁴⁹ She expressed that the OWC's top concern for the Project is with respect to selenium.¹⁵⁰

5.1.21 *Trout Unlimited Canada*

98. Lesley Peterson spoke to the Panel on behalf of Trout Unlimited Canada. Ms. Peterson expressed the organization's concern for potential effects on water quality, fish habitat, and fish populations. Ms. Peterson's submissions emphasized that the Grassy Mountain Project will add to cumulative effects in the region.¹⁵¹

5.1.22 *Coal Association of Canada ("CAC")*

99. Robin Campbell provided opening remarks that conveyed the Coal Association of Canada's ("CAC's") support for the Project.¹⁵² Mr. Campbell noted the important role coal mines can play in economic recovery following the Covid-19 pandemic,¹⁵³ and the Grassy Mountain Project's contribution to the local economy and community.¹⁵⁴ Mr. Campbell highlighted the Project's considerable benefits in terms of direct and indirect employment and tax revenues.¹⁵⁵ Mr. Campbell also spoke of the opportunities that mining presents for partnership with Indigenous communities in the spirit of reconciliation, and the principles established in the United Nations Declaration on the Rights of Indigenous Peoples. He also noted the letters of support and non-objection received for this Project from all Treaty 7 First Nations and from the MNA.¹⁵⁶

100. The CAC identified Canada's environmental, labour, and health and safety standards for coal mines as the best in the world. In a global economy that has a high demand for steel-making coal, this makes Canada's coal mines an important, ethical source.¹⁵⁷ Mr. Campbell also provided examples of successful mine reclamation in Alberta on sites that now provide rich agricultural lands and habitat for trout, grizzly, ungulates, canids, and other wildlife.¹⁵⁸

¹⁴⁹ CIAR #750 at 354.

¹⁵⁰ CIAR #750 at 372.

¹⁵¹ CIAR #750 at 406 – 411.

¹⁵² CIAR #750 at 413.

¹⁵³ CIAR #750 at 414 – 415.

¹⁵⁴ CIAR #750 at 415 – 416.

¹⁵⁵ CIAR #750, at 417 – 419.

¹⁵⁶ CIAR #750 at 419 – 421.

¹⁵⁷ CIAR #750 at 421 – 422.

¹⁵⁸ CIAR #750 at 424 – 428.

5.1.23 *Monica Field*

101. Crowsnest Pass resident Monica Field began her opening statement to the Panel with a song of her composition entitled “Beautiful Lies”. Ms. Field urged the Panel not to approve the Project’s application on the basis that the coal mine industry is unstable and will have a negative effect on tourism and retiree economies.¹⁵⁹ Ms. Field also expressed concern about geological stability and slide risks regarding Turtle Mountain, dust, and noise.¹⁶⁰

5.1.24 *Gail Des Moulins and Alistair Des Moulins*

102. Coleman residents Gail and Alistair Des Moulins each presented opening statements to the Panel. Ms. Des Moulins, in her statement, expressed her worry that the site will not be reclaimed.¹⁶¹ Mr. Des Moulins spoke as a private resident and as a representative of the Alberta Hiking Association on the Alberta Environment and Parks, Castle, Livingstone-Porcupine Hills, Bob Creek, Black Creek Recreation Advisory Group. Mr. Des Moulins’ presentation to the Panel focused on the Project’s impacts on hiking, outdoor recreation, and tourism in the mine’s vicinity.¹⁶²

5.1.25 *David McIntyre*

103. In his opening statement, local resident David McIntyre told the Panel that the Project is located near his home and threatens his “enjoyment, appreciation, and recreational use of the area.” Mr. McIntyre expressed concern for the Project’s potential environmental and economic effects, and frustration with the Government of Alberta’s approach to lands, water, and resource regulation.¹⁶³

5.1.26 *Fred Bradley*

104. Crowsnest Pass resident and former Alberta Minister of the Environment, Fred Bradley, expressed his support for the Grassy Mountain Project in his opening statement to the Panel. Mr. Bradley advised that as a “longtime advocate [for] the environment”¹⁶⁴ he “support[s] responsible coal development in this province, and [he] support[s] the Grassy Mountain Coal Project for the economic opportunities it brings to the region, provided the appropriate environmental conditions, regulations, and mitigation strategies as

¹⁵⁹ CIAR #756 at 455 – 458.

¹⁶⁰ CIAR #756 at 459 – 464.

¹⁶¹ CIAR #756 at 467 – 474.

¹⁶² CIAR #756 at 476 – 486.

¹⁶³ CIAR #756 at 490 – 536.

¹⁶⁴ CIAR #756 at 563.

outlined in the application and other conditions applied by the regulators are met in its construction, operation, and reclamation”.¹⁶⁵

5.1.27 *Ken Allred*

105. Blairmore resident Ken Allred, who lives within 3 kilometers of the Project site, gave an opening statement to the Panel¹⁶⁶ in which he said: “There must always be a balance between economic concerns and environmental concerns. It is my opinion that development of Grassy Mountain Coal Mine is vital to the continued economic viability to the Crowsnest Pass. It is further my opinion, based on the extensive studies and consultations and the adoption of the most up-to-date mining technology, that the proposed development has addressed all of the potential environmental concerns that have been raised.”¹⁶⁷

5.1.28 *Mike Judd*

106. Mike Judd, a Director of Timberwolf, gave an opening statement to the Panel in his capacity as a local resident living approximately 15 kilometers south of the Crowsnest Pass.¹⁶⁸ Mr. Judd expressed concern regarding the Project’s cumulative effects, and impacts on the Grizzly Bear and other wildlife species.¹⁶⁹

5.1.29 *Views Expressed*

107. Through these opening statements, the Panel heard the breath of experience and viewpoints which have informed the development of the Project’s EIA. Benga is grateful for the input of all the hearing participants, and will continue to take into account and incorporate these views and concerns into its work on the Grassy Mountain Project.

¹⁶⁵ CIAR #756 at 565.

¹⁶⁶ CIAR #756 at 608.

¹⁶⁷ CIAR #756 at 616.

¹⁶⁸ CIAR #756 at 621 – 622.

¹⁶⁹ CIAR #756 at 622 – 626.

5.2 Purpose of the project, visual aesthetics, alternative means, land and resource use, socioeconomic effects, and historic resources

5.2.1 Project Need and Purpose

108. Work on the proposed Grassy Mountain Project commenced in October 2015 when Benga completed an engineering feasibility study for the Project. Benga remains fully committed to bringing the Project into the production phase. The Project has been designed to ensure its economic sustainability, such that employees and other stakeholders, including the local community and nearby Indigenous groups, can be confident that the Project will continue to operate and benefit the region throughout its 23-year life.¹⁷⁰
109. As Mr. Houston said in his opening statement at the hearing on October 27, 2020, the future strong growth of steel-making coal demand is expected to be led by India and China. Other Asian, South American, and African nations are expected to increasingly contribute to global growth in steel demand over the coming decade, and as the steel intensity per capita of these countries increases, demand for infrastructure, automobiles, machinery, buildings, and other steel-consuming industries will grow in-step. As such, the ability to source high quality steel-making coal from countries that can provide reliable supply, like Canada, is of vital importance. Canada is also strategically positioned from a freight point of view to serve the strong overseas demand for steel-making coal. The Project is located adjacent to major rail infrastructure providing access to an existing port in BC.¹⁷¹
110. Benga has secured all critical contracts in respect of Canadian west coast export hubs for its coal product and remains in discussion with a number of potential customers in North Asia and South America. Other markets that are likely to purchase the product include Europe, China, and India. The steel-making coal product from the Project is low in impurities and Benga remains confident that the Project and its product will be well received into the market.¹⁷²
111. The Project will produce up to 4.5 million clean metric tonnes (“CMT”) per year over the scheduled mine life of 23 years. Over the active mine life, a total of 167.6 million raw metric tonnes of coal will be produced at an average in-situ stripping ratio of 5.1 bank cubic metres (“bcm”). The average yield or recovery in the coal preparation plant is expected to be 55%, which will result in a total recoverable coal volume of approximately 92.6 million CMT.¹⁷³
112. The Grassy Mountain Project’s high quality steel-making coal product will produce considerable overall positive economic effects at the provincial and regional scale. The initial capital expenditure for the Project is estimated to be \$730 million. The Project will stimulate direct and indirect employment effects as well as induced employment effects in the regional and provincial economy through direct

¹⁷⁰ CIAR #503 at PDF 7.

¹⁷¹ CIAR #503 at PDF 7; CIAR #740 at 48 – 49.

¹⁷² CIAR #740 at 48 – 49.

¹⁷³ CIAR #503 at PDF 7 – 8.

employment, the contracting of suppliers for the Project, and the spending by workers on goods and services in the Project area, which will support the consumer goods and service sectors.¹⁷⁴ The Project will drive economic growth in the Crowsnest Pass and will create skilled, well paid, full-time jobs.¹⁷⁵

113. Mr. Houston cited in his opening statement to this topic block statistics recently published by the Alberta Government showing that unemployment in the province currently sits near 12%, up from 6.6% in September of last year.¹⁷⁶ The region needs investment in its natural resources, and in its people.
114. The construction phase of the Grassy Mountain Project will create over 1,500 person years of total employment in Alberta and BC, with approximately 190 people employed on site.¹⁷⁷ In addition, the construction phase of the Project is expected to support GDP growth of \$210 million in Alberta and BC. During operations, there will be approximately 400 workers employed directly on the Project, creating total employment effect of about 850 person years in Alberta and BC for each year of the Project's 23-year life.¹⁷⁸
115. The development and ongoing operation of the Project will contribute a total of \$1.5 million annually in property taxes to Ranchland and the MCNP. Coal royalties and income taxes payable to the provincial and federal governments are expected to total \$1.7 billion dollars over the life of the Project.¹⁷⁹ At the same time, Benga has given its commitment to responsible resource development and preserving the social and ecological values derived from the Crowsnest Pass.
116. In response to concerns raised with respect to recreation and tourism, Benga considers economic development of the kind proposed for the Project to be compatible and mutually supportive with those interests. Mr. Houston highlighted in his direct evidence at the hearing Benga's position that:
- Diversification of the local economy beyond one industry, whether tourism or mining, provides stability to the community that supports local infrastructure and investment by the MCNP;

¹⁷⁴ CIAR #503 at PDF 8.

¹⁷⁵ CIAR #756 at 446.

¹⁷⁶ CIAR #756 at 534:20-25, citing Government of Alberta, online:
<<https://economicdashboard.alberta.ca/Unemployment#:~:text=In%20September%202020%2C%20Alberta's%20seasonally,the%20same%20period%20in%202019>>.

¹⁷⁷ CIAR #756 at 635:1-2; CIAR #762 at 820:6-9.

¹⁷⁸ CIAR #756 at 635.

¹⁷⁹ CIAR #756 at 635:10-16.

- A larger local economy creates more opportunities for the service sector and supports more local businesses like restaurants and hotels. These service businesses in turn make the region a more attractive tourist destination; and,
- Crowsnest Pass is already a desirable community but improving its standing as a tourist destination also helps Benga to attract talented employees to the region, and that is good business.¹⁸⁰

117. Benga’s position in this regard aligns with the opinions expressed in a community survey conducted by the MCNP and filed during the hearing by the CCS. This survey is available on the Agency’s registry as CIAR #765. In that survey, the highest number of recorded responses (146 responses) to a question regarding whether the MCNP should seek to balance a resource extraction industry with a tourism industry were: “comments that balance is possible, that both resource extraction and tourism industries are needed and should be maximized”.¹⁸¹ Survey respondents were also asked to complete the sentence “Crowsnest Pass in 2040 is a municipality where...” and the highest number of recorded responses (184 responses) were: “comments anticipating a thriving economy, including a booming private sector and a rich variety of employment and entrepreneurial opportunities”.¹⁸²
118. Benga has policies in place to hire locally first and to use regionally based contractors as often as possible. The Project will also offer increased contracting opportunities for local Indigenous businesses and employment opportunities for local Indigenous workers. Benga further anticipates that the development of the Project will attract new residents to the region, and this new population will create opportunity for residential construction and will support the growth of local businesses.¹⁸³
119. Benga recognizes that the region’s landscape and recreation opportunities contribute to the tourism economy, and are part of what attracts long term residents to the region. Benga’s plan for progressive reclamation, which will see reclamation begin as early as year 2 of Project operations, will minimize the magnitude and duration of impacts on visual aesthetics. Additionally, the plan to reclaim 185 hectares of previously disturbed land within the Project footprint that was never properly reclaimed is a unique opportunity to leave the Project site in an improved state from what currently exists.¹⁸⁴

¹⁸⁰ CIAR #756 at 635:17-26, 636:1-5; CIAR #503 at PDF 16.

¹⁸¹ CIAR #765 at PDF 5.

¹⁸² CIAR #765 at PDF 9.

¹⁸³ CIAR #756 at 636; CIAR #42, Consultant Report 11 at PDF 20.

¹⁸⁴ CIAR #756 at 636 – 637.

120. Benga will use modern, proven reclamation techniques to return the land to a condition that supports a full range of outdoor recreational activities for local residents and visitors, as soon as possible following mine closure.¹⁸⁵

5.2.2 *Coal Quality*

121. CPAWS retained mining engineer Cornelius Koliijn to prepare a report concerning coal quality and metallurgical coal markets.¹⁸⁶ Benga can acknowledge that Mr. Koliijn is an expert in, and is extremely passionate about, the characteristics of coal and the steel-making process.¹⁸⁷ However, his evidence is not relevant to the JRP's mandate.

122. While Mr. Koliijn spoke extensively about coal characteristics, he acknowledged that factors he did not consider, such as exchange rates, global supply and demand, transportation, volume commitments, and exclusivity, are all relevant to coal prices in a very competitive market.¹⁸⁸ Mr. Koliijn also admitted that different steelmakers may have different blend requirements,¹⁸⁹ suggesting the iterative process that results in final coal contracts and prices.

123. Mr. Koliijn recognized the competitiveness of the coal industry and the confidential nature of determining appropriate coal blends for each individual coal mine project. As such, he was also quick to admit that he did not have for the purposes of his critiques the information that Benga has collected and assessed over several years on the Project's coal quality, and which Benga would not be at liberty to disclose to the public.¹⁹⁰

124. In any event, as it pertains to the financial viability of the Project, and whether the potential returns are worth the investment risk, this is ultimately a decision to be made by Benga's shareholders after reviewing the regulatory requirements imposed by this Panel and other regulators.

¹⁸⁵ CIAR #756 at 637:7-13.

¹⁸⁶ CIAR #555 at PDF 547 – 573.

¹⁸⁷ CIAR #555 at PDF 554.

¹⁸⁸ CIAR #782 at 1445 – 1446; CIAR #555 at PDF 554.

¹⁸⁹ CIAR #782 at 1419 – 1420.

¹⁹⁰ CIAR #782 at 1440:12-26, 1441:1-18.

5.2.3 Socioeconomics

125. On the topic of socioeconomics, Benga completed a SEIA¹⁹¹ in compliance with the terms set out in the AER ToR and the Agency’s Guidelines, and provided updates to the SEIA as requested in the Panel’s IRs.¹⁹²
126. As Mr. Houston highlighted for the Panel, Benga expects that the Project’s construction will create 1,500 person years of total employment and support GDP growth of \$210 million in Alberta and BC. During operations, Benga anticipates it will employ 400 workers directly on the Project, creating total employment of about 850 person years in Alberta and BC for each year of the Project’s 23-year life.¹⁹³ Property tax revenues will contribute \$1.5 million annually to Ranchland and the MCNP, and coal royalties and income taxes over the Project’s life will total \$1.7 billion dollars.¹⁹⁴
127. During the hearing, the Panel heard from experts retained by the LLG and the Coalition. None of these experts seriously dispute that the Project will result in the above noted positive effects. They did, however, allege uncertainty regarding exact numbers.
128. Benga acknowledges that no one can predict what will happen in the future with perfect certainty. In fact, as noted above, the Federal Court of Appeal has established that the EA process cannot, and is not intended, to eliminate uncertainty.¹⁹⁵ The SEIA, as part of the Project’s EIA, is predictive in nature, and actual outcomes are dependent on various factors outside Benga’s control.
129. Benga cannot say exactly where workers will choose to reside or how much they will pay for their accommodations. Benga has made logical and informed assumptions, and provided reasonable estimates, based on the best information available. The reality is that payments and so forth might be different than Benga has set out, higher or lower. The SEIA for this Project provides the Panel with best estimates, and while some level of uncertainty remains, this is to be expected.

5.2.3.1 Evidence of Pearce Shewchuk

130. In oral evidence at the hearing, Benga witness Pearce Shewchuk explained the assumptions made in Benga’s SEIA regarding where in-migrant workers will choose to live. The assumptions are based on “the Teck study,” which Mr. Thompson likewise referred to in his evidence, as well as the Project’s location “and the ambition of the Crowsnest municipality to capture additional residential population so that it can

¹⁹¹ CIAR # 42, Consultant Report 11.

¹⁹² See e.g. CIAR #42, Addendum 5, Addendum 8, Addendum 10, Package 3, and Addendum 11.

¹⁹³ CIAR #756 at 634 – 635.

¹⁹⁴ CIAR #756 at 635.

¹⁹⁵ *Express Pipelines* at para 13; *Bigstone Cree* at para 57.

grow and flourish.”¹⁹⁶ The SEIA notes that population distribution is subject to uncertainty, as individuals react to multiple factors that cannot be predicted with absolute accuracy.¹⁹⁷

131. Mr. Shewchuk also told the Panel that Benga’s proposed committee for socioeconomic issues will provide accountability and create working relationships with local government, service providers, and citizens. This will ensure that Benga is held accountable for its commitments to regional socioeconomic development.¹⁹⁸

132. Mr. Shewchuk noted that socioeconomic effects of the mine’s eventual closure are not within the scope of the Project’s EIA. He aptly pointed out that an assessment of that nature that looks more than 25 years into the future would be subject to such speculative uncertainty that it would be of little use to anyone.¹⁹⁹

133. Mr. Shewchuk explained the usefulness of a SEIA and of a cost-benefit analysis (“CBA”) as follows:

An ... impact assessment aims to articulate levels of economic activity and the subsequent impacts on communities that identifies these impacts so that mitigations can be developed and impacts can be managed.

A cost-benefit analysis [is] much more of an accounting exercise, Mr. Chair, as I believe you’ll recall, as you were also the chair at the Teck hearing. It’s very much focused on the calculation of net benefits, so ascribing a dollar value to all the costs and benefits that may flow from an ... activity and subtracting one from the other.... at a high level.²⁰⁰

[T]he relative merits of cost-benefit analysis and impact assessment depend very much on the intended audience and the aim of the analysis. And in cases where we want to understand levels of economic activity and associated impacts on communities, I believe impact assessment is a very useful tool.

As ... Dr. Joseph, pardon me, has indicated, you know, in a case where we may seek to perform more of a social accounting exercise to identify a net benefit, a cost-benefit framework would be more appropriate.²⁰¹

¹⁹⁶ CIAR #762 at 826.

¹⁹⁷ CIAR #42, Consultant Report 11 at PDF 29 - 30.

¹⁹⁸ CIAR #762 at 835.

¹⁹⁹ CIAR #762 at 836 – 837.

²⁰⁰ CIAR #771 at 1054 – 1055.

²⁰¹ CIAR #771 at 1090 – 1091.

This process is focused on identifying impacts, mitigating and managing them, and enhancing positive elements where possible. An impact assessment allows for the articulation of economic activity, which can be used to infer population change, and that's the mechanism through which communities experience change. And so I believe that the impact assessment does have value in a process like this insofar as we can understand impacts to communities.²⁰²

5.2.3.2 Evidence of Dr. Joseph – LLG

134. The LLG retained Dr. Chris Joseph to undertake a critique of Benga's SEIA in August or September of this year, with one month or less to prepare and submit his report.²⁰³
135. With all due respect to Dr. Joseph, his evidence should not be given any weight. Dr. Joseph's review of the Project EIA was rushed and incomplete. He failed to account for the present unemployment rate. His oral testimony demonstrated confusion regarding the simplest concepts required to undertake an economic analysis. Finally, Dr. Joseph provided his own high-level CBA to produce several possible scenario results, many of which showed the Project will have a significant net benefit.
136. Dr. Joseph's report made strong assertions: Benga's methodology is faulty; there are gaps in Benga's assessment; Benga's assessment cannot be validated; and, Benga's conclusions are not supported by their evidence. All of these statements are simply unfounded. They are based on a cursory and glaringly incomplete review of the EIA.
137. Dr. Joseph did not even finish reading the Project's 70-page SEIA.²⁰⁴ He told the Panel "I read the introduction and then focused on the economic section. The latter section focuses on housing and population and whatnot." He could not recall reviewing, and seemed completely unaware of, Addendum 5 to the EIA, which contains information on population estimates and capacity for social and public services in the area of the Project.²⁰⁵ Additionally, Dr. Joseph said he was aware of, but did not review, the cumulative effects assessment related to socioeconomics in Addendum 8 of the EIA.²⁰⁶ Nonetheless, Dr. Joseph told the Panel that Benga did not perform a cumulative effects assessment.²⁰⁷
138. Dr. Joseph advised this Panel that Benga's analysis is flawed because it does not account for what he says is a "tight labour market".²⁰⁸ Dr. Joseph believes current labour forecasts "suggest that labour will simply

²⁰² CIAR #771 at 1093.

²⁰³ CIAR #786 at 1712.

²⁰⁴ CIAR # 42, Consultant Report 11; CIAR #786 at 1712 – 1713.

²⁰⁵ CIAR #69; CIAR #786 at 1713 – 1714.

²⁰⁶ CIAR #89; CIAR #786 at 1714 – 1715.

²⁰⁷ CIAR #89; CIAR #786 at 1674 – 1675.

²⁰⁸ CIAR #786 at 1673.

move between jobs”.²⁰⁹ This critique is simply not credible, and is lacking any justification. Alberta’s unemployment rate was 11% in October, and 12% in September this year. This is not a “tight labour market”.

139. Dr. Joseph provided a slide in his PowerPoint presentation which he said showed coal demand declining over time.²¹⁰ Later, in cross-examination, Dr. Joseph confirmed that this decline forecast by the International Energy Agency (“IEA”) actually reflected coal production, not demand.²¹¹ It is easy to understand that production correlates to supply and not to demand. Although Dr. Joseph asserts that coal prices will decrease in step with production, he showed no basis for that conclusion. All else being equal, the IEA’s prediction that coking coal production will decline from 936 million tonnes in 2019 to 704 million tonnes by 2040 actually suggests that coal prices will increase. Dr. Joseph never actually gave any evidence that steel demand will decrease – no one tendered any such evidence.
140. More troubling than Dr. Joseph’s faulty logic is that when asked a basic question by Panel member Dean O’Gorman, Dr. Joseph revealed that he has a limited, if any, understanding of the IEA report he was so eager to reference.²¹² Panel member Mr. O’Gorman asked Dr. Joseph if he could “clarify whether the IEA suggests any rationale for why they are showing that decline in coking coal production,”²¹³ to which Dr. Joseph responded: “I’m not sure why they’re forecasting that.”²¹⁴
141. Finally, Dr. Joseph’s own limited-scope CBA of the Project produced 16 different scenarios. Of these, 10 resulted in positive net present values or “NPVs”.²¹⁵ Notably, of the six scenarios that produced a negative NPV, two thirds involved the application of dual-discounting (i.e. Dr. Joseph applied one discount rate of 10.7% to total revenue and project capital operational costs, and a lower discount rate of 3% to the social cost of carbon (“SCC”).²¹⁶ Applying the much lower discount rate to SCC means, as the Chair clarified through his questions to Dr. Joseph, that future impacts to the atmosphere end up having greater weight in the CBA than all other costs and revenue.²¹⁷ Furthermore, this dual-discount approach is not consistent

²⁰⁹ CIAR #786 at 1673, 1728 - 1730. See also CIAR #775.

²¹⁰ CIAR #786 at 1677 - 1678.

²¹¹ CIAR #786 at 1721 – 1722.

²¹² CIAR #786 at 1736 – 1737.

²¹³ CIAR #786 at 1736 – 1737.

²¹⁴ CIAR #786 at 1737.

²¹⁵ CIAR #786 at 1718 – 1719.

²¹⁶ CIAR #552 at PDF 143 – 145.

²¹⁷ CIAR #786 at 1738:21-26, 1739:1-3.

with best practice guidance provided by the Treasury Board of Canada Secretariat's "Canadian Cost-Benefit Analysis Guide: Regulatory Proposals".²¹⁸

142. It is also important to note that for all but one of the six negative NPV scenarios in Dr. Joseph's CBA, Dr. Joseph used an extremely high input for the SCC (being the 95th percentile value of \$215 – \$351 per tonne).²¹⁹ The SCC in Dr. Joseph's CBA represents the damages of the Project's GHG emission.²²⁰ Using this high SCC input value essentially guaranteed a low or negative NPV outcome. If you remove the scenarios from Dr. Joseph's CBA that apply dual discounting or the extremely high SCC input, you are left entirely with positive NPV scenarios with outcomes ranging from \$449 million to \$2,152 million.

5.2.3.3 Evidence of Mr. Thompson – The Coalition

143. The Coalition's witness, Mr. John Thompson, correctly identified an error in Table 4.1 of the SEIA.²²¹ However, the identification of the error in Table 4.1 does not alter the SEIA's overall conclusions regarding jobs and payments arising from the Project. We would also note that Mr. Thompson's report contained several errors, which he did not realize until they were pointed out to him in the hearing.²²²
144. Mr. Thompson raised concerns about the accuracy of royalty payment projections in the EIA but was not able to demonstrate any specific calculation error.²²³ With regard to the distribution of operational workforce between Alberta and BC, Mr. Thompson appeared to agree that certainty is not possible.²²⁴
145. Mr. Thompson spoke at length about CBA and the distinction between impacts and benefits.²²⁵ We understand that as an economist Mr. Thompson has a view that regulators should use CBA. His views in this regard might be relevant when discussing the ToR that should be used for a project's review. However, they are not relevant now at the penultimate stage of the regulatory process.
146. For this Project, the AER ToR state clearly that Benga must describe the "socioeconomic impacts of project construction and operation," including the socioeconomic impacts on things such as local

²¹⁸ CIAR #786 at 1720:20-26, 1721:1-10.

²¹⁹ CIAR #552 at PDF 144 – 145.

²²⁰ CIAR #552 at PDF 143.

²²¹ CIAR #786 at 1708 – 1709.

²²² CIAR #786 at 1723 – 1726; CIAR #553 at PDF 354, 357.

²²³ CIAR #786 at 1676.

²²⁴ CIAR #786 at 1702 – 1703.

²²⁵ CIAR #786 at 1691 – 1701 and 1732 – 1733.

employment, the regional and provincial economies, and housing, among other factors.²²⁶ This is precisely what Benga did in its SEIA.

5.2.4 *Community, Landowner, and Land use Concerns*

147. A few local residents living in close vicinity to the Project site have expressed concerns about the potential impacts the Project will have on their ability to access and enjoy their properties. Benga is fully aware of these concerns, as it has engaged the public early, often, and constructively since initiating its public engagement program in early 2013.²²⁷ Benga has worked hard since 2013 to mitigate and avoid potential impacts on local residents and adjacent landowners. As recently as early October, 2020, Benga modified its plans in response to recommendations made by local communities in their submissions to the JRP.

148. As Benga indicated in its October 5, 2020 submission, Benga will, in consultation with the MCNP and others, develop a community committee for the purposes of regular reporting of Project news and performance, solicitation of input on upcoming developments, and providing a forum to discuss community complaints and concerns.²²⁸ This committee will address issues of common concern such as visual impacts, traffic, noise, and socioeconomic impacts, with a goal of finding mutually beneficial solutions.²²⁹

5.2.4.1 *Grassy Mountain Road (“GMR”)*

149. Over the course of the hearing, the Panel heard from participants who own lands near the Project. Some of these adjacent landowners have expressed concern that the development of the Project may result in reduced land values and loss of convenience in accessing their lands. These concerns relating to access are with respect to use of the GMR – Benga’s privately owned road. Several adjacent landowners, referred to in Benga’s October 5th submission as the “Adjacent Landowners”,²³⁰ allege that they benefit from a contiguous easement granting them a right to access and use the GMR. These Adjacent Landowners²³¹ are part of the “Grassy Mountain Group”, who form part of the Coalition.

150. The issue of access relating to the GMR is an important one to clarify. First, the GMR is a private road, owned by Benga. Secondly, the easements identified by the Adjacent Landowners do not relate to the GMR, and do not provide a contiguous route to a public roadway. Furthermore, the Adjacent Landowners

²²⁶ AER ToR at PDF 29.

²²⁷ CIAR #756 at 637.

²²⁸ CIAR #571 at PDF 12.

²²⁹ CIAR #756 at 637.

²³⁰ CIAR #571 at PDF 7.

²³¹ The Adjacent Landowners include four landowner groups who own lands east of the Project: 1) Fran Gilmar, Mitch and Rose Bonertz; 2) Larry and Barb Donkersgoed, Donkersgoed Feeders Ltd., and Ed and Shannon Donkersgoed, Berdina Farms Ltd.; 3) Norman and Connie Watmough, Tyler Watmough, Sun Cured Alfalfa Cubes Inc.; and, 4) Vern Emard.

cannot claim a right to use the GMR grounded in their past use and benefit of the road. Lastly, with respect to the Panel, this review is not the correct forum in which to interpret private agreements between parties. These easements should not in any way fetter the Panel's assessment of the Project.

5.2.4.1.1 Private Road

151. None of the Adjacent Landowners or other local residents have demonstrated that they had a legitimate reason to believe the GMR was a public road which would never close. When Benga purchased the land and the GMR in 2013, and posted signs clearly signaling that it is a private road through private property.²³² Evidence in this hearing has demonstrated that the Adjacent Landowners have always known that they have access issues and that the GMR, previously owned by Devon, is a private road.
152. When Ed and Shannon Donkersgoed, and their corporation, Berdina Farms Ltd., and Larry and Barb Donkersgoed, and their corporate entity, Donkersgoed Feeder Limited (collectively the "Donkersgoeds") bought their lands east of the Project,²³³ they were explicitly warned the GMR is a private road which could be closed on 120 days notice.²³⁴ Benga has provided much more than 120 days notice, and has accommodated landowners' use of the GMR while it remains safe.
153. On October 28, 2020, counsel for the Coalition provided Benga with an agreement between Devon and the Donkersgoeds concerning road use (the "Devon Agreement").²³⁵ This was the first time, after five years of open consultation, that the Donkersgoeds brought this agreement to Benga's attention.²³⁶ Benga is not aware, and the JRP has not shown any evidence of, land use agreements in favour of the Watmoughs,²³⁷ Vern Emard, Fran Gilmar, or any others.
154. The Devon Agreement was never registered on any of the relevant land titles registrations and Benga did not assume the agreement when Benga purchased the assets from Devon. Furthermore, the Devon Agreement and road use rights granted thereunder were subject to termination by Devon upon 120 days notice.
155. Although Benga understands that neighboring landowners have found the GMR convenient for accessing their lands, the fact is that the GMR runs 7 kilometers across Benga's private land. That the road would

²³² CIAR #756 at 678; CIAR #571 at PDF 9.

²³³ SW19-8-3-W5M.

²³⁴ CIAR #782 at 1368 – 1369; CIAR #772.

²³⁵ CIAR #772.

²³⁶ CIAR #756 at 690 – 691; CIAR #762 at 266 – 277; CIAR #782 at 1368 – 1369.

²³⁷ CIAR #782 at 1369.

eventually close has been clearly communicated to the Adjacent Landowners since 2015 by way of letters and numerous signs along the road itself.²³⁸

156. While the Benga-owned GMR has been the most convenient access route to adjacent lands to the east of the Project, there are two other viable trails into the area. Benga described these alternate access routes, one from the north and one from the south, in its October 5, 2020 submission.²³⁹ These routes may be less convenient, but they are nonetheless reasonable alternatives.²⁴⁰ Benga does not hold rights to these alternate access routes and cannot comment on the feasibility of developing them to a standard desired or required by the Adjacent Landowners. Nor is Benga responsible for obtaining the necessary permissions or for expending the funds required to access and upgrade these potential alternate routes.

5.2.4.1.2 Easements

157. The registered easements on lands comprising the Project site and adjacent lands originated with the original property developer, Kootenay Wood Preservers Ltd. (“Kootenay”). Kootenay previously owned certain contiguous sections of land in the area, including those now owned by the Adjacent Landowners.²⁴¹ Prior to selling the lands, Kootenay registered access easements across each property owned by Kootenay, in favour of neighbouring titles, presumably to secure access to the lands over those neighbouring properties. These easements are unrelated to the GMR and do not in any way refer to the GMR. To allege that they do is misleading and incorrect.

158. While Benga acknowledges these easements exist on the Adjacent Landowners’ land titles, and on Benga land titles where Benga has purchased lands previously owned by Kootenay, the collective easements do not provide a contiguous pathway to a public roadway. Consequently, the Adjacent Landowners have been using the Benga-owned GMR and a combination of other private and public lands to access their lands.²⁴²

5.2.4.1.3 No Rights by Prescription

159. Benga recognizes that the Adjacent Landowners have used the GMR to access their properties and in some instances have cleared snow from the GMR.²⁴³ However, the Adjacent Landowners’ historical use of the GMR cannot ground any right to its continued use.

²³⁸ CIAR #571 at PDF 9.

²³⁹ CIAR #571 at PDF 8.

²⁴⁰ CIAR #756 at 638.

²⁴¹ See CIAR #553 at PDF 410 – 416 for a copy of the original Kootenay easement agreement.

²⁴² CIAR #571 at PDF 8.

²⁴³ CIAR #756 at 681 – 682.

160. In *Koziey Estate (Re)*, 2019 ABCA 43, a majority of the Alberta Court of Appeal stated that, in Alberta, s. 69(3) of the *Law of Property Act*²⁴⁴ prevents the “establishment of a right to cross over the property of another where that right is not exclusive, or does not exclude the owner ... For example, a right to use an access road also in use by the registered owner cannot be obtained by prescription. A right to cross the land of another cannot be obtained by prescription if the owner still has use of the right of way land for other purposes.”²⁴⁵
161. It is clear that the Adjacent Landowners, who have benefitted from past use of the GMR, cannot enforce a right to use this road. The registered owner – Benga – was not excluded from the road for all purposes. Section 69(3) of the *Law of Property Act* provides that no right to the access and use of any easement shall be acquired by a person by prescription in Alberta.
- 5.2.4.1.4 Proper Forum
162. Finally, outstanding concerns regarding rights to use the GMR must find their proper forum in the courts. Regulators have declined to allow their discretion to be fettered by private agreements between parties, particularly agreements formed between parties other the project proponent.
163. For example, in detailed route hearings for the Trans Mountain Expansion Project, the National Energy Board (“NEB”) held that its role was not to determine or enforce private rights between hearing participants. In its determination on Trans Mountain’s routing through the Shellmont Section, which was opposed by the City of Burnaby on the basis of a restrictive covenant, the NEB “recognize[d] that the restrictive covenant between Shell Canada and Burnaby is not for the Board to enforce or interpret.”²⁴⁶ The Board gave little weight to Burnaby’s argument that the covenant should determine its routing decision.
164. The Adjacent Landowners have asked this Panel to make its determination on the basis of private agreements established with Kootenay. Kootenay is a previous landowner, and is not a participant in this EA review.
165. Benga has expressed its intention to restrict use of the GMR early and often to the Adjacent Landowners. Benga is the owner of the GMR and its position is that the registered easements relied on by the Adjacent Landowner do not provide contiguous access to a public roadway, and do not relate to the GMR. This

²⁴⁴ RSA 2000, c. L-7. This provision states: “No right to the access and use of light or any other easement, right in gross or profit a prendre shall be acquired by a person by prescription, and no such right is deemed to have ever been so acquired.”

²⁴⁵ At para 9.

²⁴⁶ NEB Decision – Detailed Route Hearing MH-033-2017, online: <<https://apps.cer-rec.gc.ca/REGDOCS/Item/Filing/A91505>> at PDF 43; see also NEB Decision – Detailed Route Hearings MH-049-2017, MH-050-2017, MH-051-2017, MH-052-2017, MH-057-2017 and MH-058-2017 at PDF 12, online: <<https://apps.cer-rec.gc.ca/REGDOCS/Item/Filing/A91504>>.

concern regarding easements is properly dealt with in the Alberta courts, and must not fetter the Panel's decision-making in this review.

5.2.4.2 *Land Value and Voluntary Purchase Program*

166. Benga recognizes the potential impacts the Project could have on nearby landowners. Accordingly, in addition to extensive consultation and mitigations incorporated into the Project to minimize impacts, Benga implemented a voluntary purchase program to acquire properties both within and near the Project footprint.²⁴⁷
167. Benga has made formal written offers to property owners to acquire their lands at significant premiums, and many property owners have sold their properties to Benga at those premiums. Benga engaged in property acquisition negotiations in good faith and with a view to resolving landowners' concerns. Benga has, once again, over the last several months, advised the Adjacent Landowners that it is prepared to re-open property acquisition discussions on a reasonable basis.²⁴⁸
168. The record makes clear that Benga has engaged the Adjacent Landowners through open dialogue and direct negotiation. Benga has offered the Adjacent Landowners reasonable opportunities to sell their lands at more than reasonable compensation. In any event, however, the reasonableness of these offers is not in the AER's jurisdiction to decide.
169. Appraiser Brian Gettel gave evidence regarding the Project's impact on property values within the MCNP.²⁴⁹ Mr. Gettel stated that when assessing a property with access concerns, the access issues would be taken into account.²⁵⁰ He said that sharing a road with the mine "is something that could have a [...] strong impact on value".²⁵¹ It should be noted by the Panel that the Adjacent Landowners' properties all had existing and challenging access issues before Benga ever purchased the assets from Devon, as evidenced by the Devon Agreement.
170. Mr. Norman Watmough, one of the owners of SE19-8-3-W5M to the east of the Project,²⁵² described his access troubles to the Panel. He told the Panel that the road from the north is not suitable and that the route through Lille requires creek crossings, some of which can only be made on an ATV.²⁵³ Mr.

²⁴⁷ CIAR #571 at PDF 10.

²⁴⁸ CIAR #571 at PDF 10; CIAR #756 at 639 – 640.

²⁴⁹ CIAR #553.

²⁵⁰ CIAR #782 at 1219.

²⁵¹ CIAR #782 at 1221.

²⁵² See CIAR #571 at PDF 7, 38.

²⁵³ CIAR #782 at 1256.

Watmough acknowledged that this access issue significantly impacts his current property value.²⁵⁴ However, both Mr. Watmough and his son, Mr. Tyler Watmough, also said at the hearing that their property is worth more than what Benga has offered to purchase it for, regardless that its current accessibility is limited.²⁵⁵ These two assertions are inconsistent.

171. Similar to Mr. Watmough,²⁵⁶ Ed and Larry Donkersgoed said in their direct evidence to this Panel that they had never heard of Benga's voluntary purchase program:²⁵⁷

Q I take it you've never seen anything relating to a voluntary purchase program in writing in terms of how the program is constructed, what it consists of? You've received nothing in writing from Benga?

A No.

A MR. E. DONKERSGOED: That's correct.²⁵⁸

172. On cross-examination later the same day, Ed and Larry Donkersgoed admitted this was incorrect:

Q ... You've seen this letter before? [Letter to Ed and Larry Donkersgoed dated August 16, 2018, CIAR #780 at PDF 3]

A MR. E. DONKERSGOED: Yes.

Q Okay. And if I go down below the property description, it's underlined in this version, I don't think it was in the one you received, but it is in this one. So that refers to a voluntary purchase program. Do you see that?

A MR. L. DONKERSGOED: I see it underlined there, yes.²⁵⁹

173. Benga provided similar offer letters to Ms. Gilmar, Vern Emard, and the Watmoughs, and has continued to negotiate with all the Adjacent Landowners in good faith. This is clearly evident through the offers, counter offers, and communications found on the record.²⁶⁰

174. Additionally, while the Coalition's witnesses expressed concerns about how the Project might negatively impact their property values, they failed to acknowledge how the Project may in fact positively impact

²⁵⁴ CIAR #782 at 1257.

²⁵⁵ CIAR #782 at 1257 – 1261.

²⁵⁶ CIAR #782 at 1257:21-25.

²⁵⁷ CIAR #782 at 1276 – 1277.

²⁵⁸ CIAR #782 at 1277:5-10.

²⁵⁹ CIAR #782 at 1370:6-14.

²⁶⁰ CIAR #780; CIAR #782 at 1369 – 1373.

their property values. On cross-examination, Mr. Gettel confirmed that in general, where the population of an area decreases over time (as in the case with the Crowsnest Pass), real estate prices will decrease. He confirmed for the Panel that increased employment, job opportunities, and population, all of which is expected to occur with the Project, would tend to increase property values.²⁶¹

5.2.4.3 Landowner Effects and Mine Permit Boundary (“MPB”)

175. The MPB and the extent of the Project’s footprint disturbance was clearly a point of concern and confusion for some hearing participants.
176. In the Coalition’s opening statement, Mr. Secord stated that two groups of landowners in the Coalition, those being 1) Fran Gilmar and Mitch and Rose Bonertz,²⁶² and, 2) the Donkersgoeds, own lands that are “remarkably” within the proposed MPB.²⁶³ With all due respect, there is nothing remarkable about this fact.
177. The MPB as defined in Benga’s 2016 EIA is shown in a map in CIAR #42, Section A at PDF 159. As Mr. Houston explained in his testimony, the MPB has significance under the CCA, but also as an envelope drawn around the Project area to scope environmental field studies.²⁶⁴ For this reason, the 2015 application, now superseded, drew a more generous MPB. As planning advanced, the Project footprint was re-defined to better depict the proposed Project disturbance. On October 29, 2020, Mr. Houston explained that the MPB has become more precise:

The idea, Mr. Chair, of the mine permit boundary is to have [...] an envelope around the project such that when we conduct our environmental studies, which [...] can run over several seasons or even years, that we’re gathering information that absolutely covers the eventual project footprint. So that’s the purpose of drawing the mine permit boundary larger than we expect the project footprint. And, of course, between 2015 and 2016, a lot more was known about the project footprint, so we were able to draw a more precise envelope. ... The mine [...] permit boundary simply illustrates where we have focused our environmental assessments, and [...] that’s all.²⁶⁵

178. None of Mr. Secord’s clients own lands within or immediately adjacent to the Project footprint, and Benga has determined that their lands are not required for the safe execution of the Project.²⁶⁶ Benga does not need those lands to proceed with the Project, and the Project as proposed will not have significant adverse

²⁶¹ CIAR #782 at 1218.

²⁶² Owners of SW30-8-3-W5M.

²⁶³ CIAR #740 at 157 – 158.

²⁶⁴ CIAR #771 at 938 – 939.

²⁶⁵ CIAR #756 at 645.

²⁶⁶ CIAR #756 at 639.

impacts on those lands. Benga does not hold surface rights to lands owned by Ms. Gilmar and the Donkersgoeds, and the Project will not be impacted if those lands are excluded from the MPB.²⁶⁷

5.2.4.3.1 Nuisance and Enforcement

179. The Adjacent Landowners and other local residents have expressed concerns about human health, dust, and noise. The technical evidence on these topics will be discussed in further detail in their relevant topic blocks below.

180. At this juncture, we point out that the following recourses are available to the Adjacent Landowners and other local residents if they experience negative and unreasonable Project effects:

- Local landowners may raise their concerns regarding noise and dust with the community committee that Benga will create to find mutually beneficial solutions to such problems.²⁶⁸
- The AER can take enforcement action against Benga if the Project produces effects on the landowners that are not in accordance with the relevant air quality and noise standards enacted in Alberta. With respect to noise, Benga has specifically committed to conduct a comprehensive sound level survey in accordance with the requirements of AER Directive 038 should a noise complaint be received.²⁶⁹
- The law of nuisance adds an additional recourse. Private nuisance occurs where a defendant's use of its land substantially and unreasonably interferes with a plaintiff's use and enjoyment of their lands.²⁷⁰ The landowners may pursue this action in court.

181. Benga's EIA indicates that the Project will not have significant effects on human health, dust, air quality, or noise levels. We note the above recourse mechanisms simply to show that Benga will be accountable to ensure these concerns do not materialize.

5.2.4.4 Consultative Notations and Protective Notations

182. During the public hearing, Benga provided the consent it obtained for Consultation Notation CNT 190002.²⁷¹ Consent letters have already been obtained and provided to the JRP for all other land reservations within the proposed disposition boundaries,²⁷² with the exception of:

²⁶⁷ CIAR #771 at 1147 – 1148.

²⁶⁸ CIAR #756 at 637; CIAR #571 at PDF 12.

²⁶⁹ CIAR #42, Addendum 12, Table 2-2 at PDF 87.

²⁷⁰ *Antrim Truck Centre Ltd v Ontario (Minister of Transportation)*, 2013 SCC 13.

²⁷¹ CIAR #785.

²⁷² See Table 3.4-1 for the consent and notification status for the land reservations within the proposed disposition boundaries provided in Addendum 10, Package 3.

- PNT 090084 (Protective Notation - potential fescue grass land);
- PNT 090087 (Protective Notation - potential fescue grass land);
- PNT 900426 and DHR 000001 (Protective Notation – Registered Historic Resource); and,
- PNT 900430.²⁷³

183. While Benga has endeavoured to provide consents for these reservations, this is an internal administrative issue within the control of Alberta Environment and Parks (“AEP”). The issuance of these outstanding consents is not within Benga’s control.
184. If the JRP recommends that the Project proceed, and the Governor-in-Council authorizes the issuance of an authorization under the CCA, it is fair to assume AEP will issue the outstanding consents to the extent the AEP public lands group or the AER require them.
185. It is also critical to note that the legislative regime does not require Benga to obtain all consents prior to a public interest determination.²⁷⁴ This fact is long known to be standard practice for mining development in Alberta and it is enshrined in the *Surface Rights Act*.²⁷⁵
186. If the Project is approved, and in the unlikely event Benga is unable to obtain consent for access to lands, private or Crown-owned, the Surface Rights Board may grant a Right of Entry Order pursuant to ss. 12 and 15 of the *Surface Rights Act*. The Right of Entry Order would provide Benga with all rights to the surface that are required except for an outright certificate of title or rights to surface substances themselves.²⁷⁶ This expressly includes vacant Crown land or Crown lands held under a disposition.²⁷⁷
187. In the unlikely event that matters of compensation were the cause for Benga not obtaining consent for access to lands, private or Crown-owned, the Surface Rights Board is the appropriate authority to resolve the dispute, not this Panel.

²⁷³ Protective Notation – Water Disposal/ Reclamation. Currently, Alberta Environment and Parks (“AEP”) holds a Protective Notation (PNT) for this drainage management system.

²⁷⁴ As set out in CIAR #300 at PDF 3 – 4.

²⁷⁵ RSA 2000, c S-24.

²⁷⁶ *Surface Rights Act*, s 16.

²⁷⁷ *Surface Rights Act*, s 17.

5.2.5 *Visual Aesthetics and Recreation*

188. Members of the CCS spoke about lifestyle, recreation, and tourism as the primary economic drivers in the Crowsnest Pass.²⁷⁸
189. Rick Cooke expressed concern that “visual industrialization” will cause a decline in these sectors and stop people from wanting to visit the region.²⁷⁹ Stephanie Duarte-Pedrosa said that in Blairmore “the defining piece is our connection to the public lands”.²⁸⁰ Ms. Duarte-Pedrosa said she is concerned for the effects of mining development on the community’s “collective identity” and said “we don’t want to see mining ... face to face ... We want the oasis and the wilderness”.²⁸¹ Heather Davis described mountain biking, trail running, and hiking’s importance to the local economy.²⁸² Ms. Davis said that the Project will be visible from popular hiking locations and from Pass Powderkeg, the local ski hill.²⁸³
190. LLG members also expressed concern for the Project’s potential impacts on visual aesthetics and recreation. LLG member John Lawson summarized the group’s concerns as including, among others, “retention of the natural beauty and international claim of the Crown of the Continent landscape; protection of sensitive and fragile plant species; proximity of the mine to recognized environmentally sensitive areas and irreplaceable ecosystems; impacts on health and well-being of the local population”²⁸⁴ and losses for “nature-based tourism”.²⁸⁵ Bobbi Lambright of the LLG also expressed concern for native grassland reclamation and for recreation,²⁸⁶ and Sid Marty noted concerns related to dust, noise, and light pollution.²⁸⁷
191. Benga acknowledges that for many of these witnesses, their first preference is not to see a mine site. However, their concerns must be considered in context.
192. First of all, Benga has proposed progressive reclamation in its C&R Plan that will see reclamation of some areas beginning as early as year 2 of operations, with one-third of the total disturbed area reclaimed by

²⁷⁸ CIAR #786 at 1469.

²⁷⁹ CIAR #786 at 1469, 1503 – 1504, 1507.

²⁸⁰ CIAR #786 at 1476.

²⁸¹ CIAR #786 at 1477, 1481.

²⁸² CIAR #786 at 1485 – 1489.

²⁸³ CIAR #786 at 1488, 1491.

²⁸⁴ CIAR #786 at 1583 – 1584.

²⁸⁵ CIAR #786 at 1591 – 1592.

²⁸⁶ CIAR #786 at 1609 – 1612.

²⁸⁷ CIAR #786 at 1639 – 1640.

year 15, two-thirds reclaimed by the end of the mine life, and the vast majority of the remainder reclaimed within three years of the completion of mining.²⁸⁸ This means that the visual impacts participants have cited as concerns will be temporary.

193. Second, in terms of access to public lands, the Project footprint is comprised of approximately 50% Benga-owed private land. The public does not have access to these lands in any event.
194. Third, the Project area is already partially disturbed and has not been properly reclaimed. Benga will be reclaiming this area as part of its C&R Plan, thereby leaving the lands in an improved condition compared to what currently exists.
195. Finally, the Project's footprint totals approximately 15.2 square kilometers (1,520.7 hectares).²⁸⁹ This temporary disturbance must be considered in the context of the MD of Ranchland (2,500 square kilometers), the MCNP (371 square kilometers), and the existing historic mine footprint that has remained un-reclaimed since the 1960s (1.85 square kilometers or 185 hectares).²⁹⁰ Additionally, as noted by Ms. Duarte-Pedrosa for the CCS, the Crowsnest Pass is well placed for access to Crown lands and protected areas north along Highway 40, including Bob Creek Wildland (approximately 21,000 square kilometers), or south to Castle Provincial Park (approximately 25,500 square kilometers) and Castle Wildland Provincial Park (approximately 80,000 square kilometers).
196. Given this expansive landscape, Benga's view is that the Project will not impede recreation. There is ample space for mountain biking, trail running, hiking, and other pursuits to continue to support Crowsnest Pass as an outdoor destination.
197. Benga has also taken substantive measures to address concerns related to visual impacts, and to promote co-existence between the Project and the developing recreation and tourism economy. These measures include Benga's commitment to establish the socio-community economics advisory committee and adopting the International Dark Sky Association's Dark Sky Lighting Principles, in addition to Benga's plans for progressive reclamation.
198. It is also noteworthy that some witnesses who presented evidence in this topic block expressed a view which in context is hypocritical and inconsistent. For instance, Mr. Trafford expressed to the Panel that the LLG is content to work with oil and gas and logging development in the region, and that indeed many

²⁸⁸ CIAR #830 at 2571.

²⁸⁹ CIAR #42, Section A at PDF 159.

²⁹⁰ Statistics Canada, "Population and dwelling counts, for Canada, provinces and territories, and census subdivisions (municipalities), 2016 and 2011 censuses – 100% data (Alberta)". Statistics Canada. (February 8, 2017) <<https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hltfst/pd-pl/Table.cfm?Lang=Eng&T=302&SR=1&S=86&O=A&RPP=9999&PR=48>>.

LLG members are employed by oil and gas companies.²⁹¹ Ms. Lambright is herself a former senior executive in the energy industry.²⁹² During her career, Ms. Lambright held multiple positions with the ATCO group of companies including Managing Director and CEO of ATCO Australia and President of ATCO Electric Distribution in Alberta.²⁹³

199. The LLG landowner witnesses are essentially asking the Panel to apply a double standard to development in the region. In their view, electrical generation projects and oil and gas exploration and production is fine, but coal mining is not.

²⁹¹ CIAR #786 at 1573, 1575.

²⁹² CIAR #786 at 1608.

²⁹³ CIAR #905 at PDF 1.

5.3 Geology, geotechnical (including dam safety) and mining, accidents and malfunctions, industrial waste and waste management, effects of the environment on the project (including climate change), and other issues

5.3.1 Geology and Geotechnical Issues, and Accidents and Malfunctions

200. Benga has assessed and described in the EIA the regional and project-area geology, and the risks and potential environmental effects of mining accidents and malfunctions that could possibly occur through all phases of the Project. Benga has further described the safeguards that will be established to protect against such occurrences, as well as the contingency and emergency response procedures that are in place in case such events do occur, as required by the Agency's Guidelines.
201. Benga has also addressed in the EIA the characterization, management, storage, and disposal of the various forms of waste and chemical products on the mine site, as required by the AER ToR. Benga has taken into account and provided details for the planning, design, and construction strategies intended to minimize the potential effects of the environment on the Project.
202. Benga assessed the risks associated with seismicity, surficial geology and terrain hazards, and the stability of Turtle Mountain. NR Can reviewed and provided advice on those topics over several rounds of IRs. Benga confirmed there is no evidence for active faulting in the vicinity of the project and no nearby hydraulic fracturing operations, and seismic conditions are not expected to adversely affect the Project or impact the environment. NR Can confirmed in its written submission and opening statement at the hearing that it is satisfied with that characterization.²⁹⁴
203. Benga mapped the Project area for landslide susceptibility in 2018, and has committed to mitigations including a foot survey to identify diagnostic features in areas of potential concern, a field-mapping exercise, annual ground condition inspections, and a ground-monitoring program. NR Can has concluded that Benga's measures are appropriate for addressing landslide potential in the Project area.²⁹⁵
204. As for the stability of Turtle Mountain, the mountain is currently considered to be in a low-risk state for large rock block displacement, and that risk has remained consistently low since 2005. The Alberta Geological Survey, in conjunction with independent world class experts, has conducted continuous seismic monitoring and observations of Turtle Mountain since 2003. NR Can further noted in its opening statement that it responded in 2020 to a request from the Alberta Geological Survey to provide satellite-based monitoring to support the Alberta Geological Survey's monitoring system.²⁹⁶ Benga has committed to measures that will prevent any possible Project-triggered stability concerns at Turtle Mountain, including adopting the latest blasting equipment, products, and technology appropriate to construction

²⁹⁴ CIAR #740 at 141.

²⁹⁵ CIAR #740 at 142.

²⁹⁶ CIAR #740 at 143.

and operation requirements, and working with local agencies to ensure all blast related vibration and monitoring data is captured.²⁹⁷

205. On cross-examination, NR Can's witness, Dr. Alain Plouffe, clarified that NR Can is satisfied with Benga's proposed mitigations with respect to seismicity concerns:

Q MR. SAWYER: Dr. Plouffe, in your presentation – I believe it was Slide 16 – you indicated NRCan was satisfied with the mitigation measures that Benga has proposed. Was that my understanding?

A MR. PLOUFFE: Yes, it is.²⁹⁸

206. Benga assessed in its EIA the risks and appropriate safety measures associated with water management dams planned for the Project. Benga has proposed the use of four sedimentation ponds to capture water for treatment and removal of suspended solids. Benga has also proposed the use of four surge ponds which will capture water that has the potential to be selenium enriched, and require on-site attenuation. These ponds are central to Benga's plans for safe and effective water management on the Project. Engineering design and site selection will be the primary method for ensuring the secure containment of these ponds with water management dams.²⁹⁹

207. As Mr. Houston pointed out in his opening statement in this topic block, counsel for Timberwolf and the Coalition were incorrect in referring to Benga's ponds as "tailing ponds".³⁰⁰ Benga assessed in the Project's EIA the options available for managing coal processing fines (often also referred to as coal tailings). Benga has decided to mechanically dewater its process fines rather than send them to a tailing pond. This option was chosen because for this Project site, it will provide immediate and better water conservation, it is safer, and it carries less risk of any environmental or community impacts.³⁰¹

208. Mr. Houston correctly highlighted in his oral evidence that the AER has developed and implemented a robust Dam Safety Program over the last several years. The Dam Safety Program was created to ensure all dams used in the development of Alberta's energy resources are designed, constructed, operated, maintained, and decommissioned safely. That Program includes regular field inspections and technical reviews of annual performance and dam safety. The Grassy Mountain Project will be subject to that Program.³⁰²

²⁹⁷ CIAR #42, Addendum 10, Package 5 at PDF 165 – 167.

²⁹⁸ CIAR #804 at 2223:8-13.

²⁹⁹ CIAR #42, EIA, Section C at PDF 171 – 172.

³⁰⁰ CIAR #793 at 1797:14-26, 1798:1-5.

³⁰¹ CIAR #42, EIA, Section A at PDF 56 – 58.

³⁰² CIAR #793 at 1799.

209. The Project will also be subject to the Alberta Dam and Canal Safety Directive, which came into effect in 2018.³⁰³ The Directive provides requirements for things such as the use of risk assessments; design, construction, and operation; submission of detailed dam designs for approval or authorization; dam safety reporting; and dam safety and emergency management.³⁰⁴ The Project's dams must be in compliance with these requirements. Additionally, Benga will be constructing its dams according to the current Canadian Dam Association Guidelines. Benga has further committed to carrying out Project construction and operations, with respect to dams and all other structures and designs, in accordance with all applicable legislation and to the highest standards of safety, operation, security, and health.³⁰⁵
210. Before constructing the proposed dams on the Project site, Benga will be submitting dam safety applications to the AER, and detailed designs will be submitted as part of those applications.³⁰⁶
- 5.3.2 *Effects of the Environment on the Project*
211. Benga has considered the potential effects the environment could have on the Project, including parameters of extreme temperatures, precipitation events, wind, and climate change. As Mr. Houston said in this topic block: the Project "as proposed has a 23-year lifetime, and this is something to be mindful of when considering the applicability of long-term climate change projections around [and] beyond 2050."³⁰⁷ That being said, Benga has nevertheless planned and designed the Project based on worst-case scenarios and conservative assumptions that ensure Benga does not underestimate the potential effects of climate change in its project design, mitigations, and contingencies.³⁰⁸
212. Counsel for the Coalition, Mr. Secord, cross-examined the Benga witness panel about the number of days that temperatures are projected to reach 30 degrees Celsius or greater in the future. Mr. Secord asked the Benga panel whether they agree with the Climate Atlas of Canada model's depiction of an increase to 15 days above 30 degrees Celsius by 2095 in the mean scenario produced by the Representative Concentration Pathway ("RCP") 8.5 model, and an increase under the RCP 8.5 worst-case scenario to 44 days above 30 degrees Celsius by 2091. In response, Benga witness Mr. Randy Rudolph noted that under the RCP 8.5 mean scenario, the number of days above 30 degrees Celsius increases to only two or three

³⁰³ CIAR #793 at 1799, referring to the Alberta Dam and Canal Safety Directive, available at: <<https://open.alberta.ca/dataset/93b2bded-f107-48e3-9eda-28acf2951822/resource/d01922c3-9464-4a6f-b2ca-4fbca510864/download/directivedamcanalsafety-dec11-2018.pdf>>.

³⁰⁴ CIAR #793 at 1799, referring to the summary provided at: <<https://www.aer.ca/providing-information/by-topic/dams>>.

³⁰⁵ CIAR #42, EIA, Section C at PDF 164 – 179.

³⁰⁶ CIAR #793 at 1799.

³⁰⁷ CIAR #793 at 1801:25-26, 1802:1-2.

³⁰⁸ CIAR #793 at 1802:3-7.

days in 2050, after the mine life has already ended.³⁰⁹ Mr. Rudolph further noted the very limited applicability of the RCP 8.5 model, given its outdated assumptions:

... I can, perhaps, comment on your use of the RCP8.5 scenario.... this scenario has been developed based on certain assumptions. And it was developed, you know, about 20 years ago or so based on predictions at the time. And some of those predictions included a large increase in, for example, the use of -- of coal for generating power. And we know that a fair number of changes in policy, changes in direction have occurred in the last 20 years that I think would make this scenario unlikely. So while it's here, I mean, the information is here, but it is not -- it is no longer, I don't think, a likely scenario, given the fact that the world has changed since these scenarios were developed, and the assumptions that went into it are probably no longer valid.³¹⁰

213. Mr. Rudolph's remarks are consistent with the Intergovernmental Panel on Climate Change's ("IPCC's") statement that it is the RCP 2.6 scenario that represents aims to keep global warming below 2 degrees Celsius above pre-industrial temperatures. As the IPCC states, it is only "Scenarios without additional efforts to constrain emissions ('baseline scenarios') [which] lead to pathways ranging between RCP6.0 and RCP8.5".³¹¹
214. In cross-examination, ECCC witness Margaret Fairbairn agreed that the Governments of Canada and of Alberta have expended several additional efforts to constrain emissions. These statements provide additional support for Mr. Rudolph's evidence:

Q MR. IGNASIAK: ... So, Ms. Fairbairn, I guess I'd just start: The ECCC submission makes references to the international -- or, sorry, Intergovernmental Panel on Climate Change, so IPCC, and some other initiatives, including the commitment to get to net-zero emissions by 2050. I take it ECCC would agree that the Government of Canada has made significant -- taken significant steps in recent years aimed at mitigating the impacts of climate change?

A MS. FAIRBAIRN: Yes, Mr. -- Mr. Chairman, yes, Environment Canada -- or the Government of Canada has made a -- a positive move to the reduction of greenhouse gases through a number of initiatives from -- since the Paris Agreement, Canada has -- the Pan-Canadian Framework for Climate Change has pushed Canada into looking at various options through regulations, working with provinces and territories, to help ensure, achieve net zero...³¹²

....

³⁰⁹ CIAR #793 at 1926.

³¹⁰ CIAR #793 at 1926:15-26, 1927:1-8.

³¹¹ CIAR #800 at PDF 8, 24.

³¹² CIAR #804 at 2225:13-26, 2226:1-7.

Q Yeah. And then despite those federal regulations, Alberta -- I take it ECCC's aware that Alberta has accelerated that and determined that those coal plants will shut down no later than 2030 now; is that correct?

A I'm aware of that, yes.

Q Okay. And so you'd --

A They'll --

Q You would agree that that -- that would represent, from a climate-change perspective, some significant progress, right, shutting those plants down 20 years earlier than originally intended?

A Yes, I believe so. I believe TransAlta's already made a commitment to convert one of their units from coal to natural gas. Yes.³¹³

215. Benga's cross-examination of Ms. Fairbairn further clarified the limited applicability of the RCP 8.5 model scenario as shown in the following exchange:

Q And then it [the "IPCC report"]³¹⁴ talks about the representative concentration pathways which are used for making projections based on these factors, and it talks about four different pathways of -- of emissions. And the RCPs include a stringent mitigation scenario referred to as "RCP 2.6". You see that?

A Yes.

Q And then there's two intermediate scenarios, RCP 4.5 and 6.0; correct?

A I see that, yes.

Q And then there's what they call the "very high GHG emissions", which is RCP 8.5; is that right?

A I see that, yes, written.

Q And then it says at the end: (as read) "RCP 2.6 is representative of a scenario that aims to keep global warming likely below 2 degrees above pre-industrial temperatures." Is that right?

A Well, it says that, yes. It states that, yes.³¹⁵

216. The evidence given at the hearing made clear just how unlikely it is that the worst-case RCP 8.5 scenario will transpire. This worst-case scenario was developed decades ago, and does not account for the

³¹³ CIAR #804 at 2232:1-14.

³¹⁴ CIAR #800.

³¹⁵ CIAR #804 at 2227:14-26, 2229:1-6, referring to CIAR #800 at PDF 8.

provincial, national, and global policy actions which have implemented the Paris Agreement and other international instruments under the United Nations Framework Convention on Climate Change.

217. References by Mr. Secord, the Coalition’s witnesses, and Timberwolf witnesses to the RCP 8.5 model is not convincing criticism of Benga’s EIA. Benga utilized the much more likely and more reasonable model scenarios to assess the potential future effects of climate change and extreme weather events on the Project.

5.3.3 *Evidence of the Timberwolf Witnesses*

218. Timberwolf witness Dr. Ann-Lise Norman spoke in her written report and testimony of her view that Benga has underestimated future precipitation in the Project area and overlooked GHG emissions from the Project.

219. Dr. Norman admitted in cross-examination that her report misrepresented future increases in precipitation based on the literature she cited.³¹⁶ Dr. Norman further acknowledged that she has no experience in dam design.

220. Dr. Norman provided new evidence in her testimony at the hearing, and in that new evidence, provided her un-reviewed calculations for GHG emissions from a 1,980 hectare lake that she believed was the size of the end-pit lake planned for the Project.³¹⁷ This is 420 hectares bigger than the entire Project footprint. The end-pit lake for the Project is approximately 18.4 hectares.³¹⁸ Dr. Norman further demonstrated her lack of awareness of water management designs common to coal mining, which undermines her assumptions and conclusions, as shown in the following excerpt from the hearing transcript:

Q Right. And do you know how the pit lake is constructed?

...

A So there is a containment system built up over time that will eventually fill to the reservoir size. So you have the south pit and the north pit that will be eventually merged into an end-pit lake.³¹⁹

...

A Molasses has been suggested to be added or ethanol has suggested to be added

³¹⁶ CIAR #804 at 2269 – 2271.

³¹⁷ CIAR #804 at 2273:10-25.

³¹⁸ CIAR #251, Addendum 10, Package 2 at PDF 157.

³¹⁹ CIAR #804 at 2275:18-26, 2276:1-4.

Q Dr. Norman, I'm talking about the end-pit lake. You know there's no molasses in the end-pit lake?

A I do know that the end-pit lake will be – apparently that the attempt with the end-pit lake is to maintain the conditions so that there will be conditions that are appropriate for reducing the contaminants that are produced in the water that is delivered to the streams.³²⁰

221. With all due respect to Dr. Norman, her evidence deserves absolutely no weight as it demonstrates numerous gross errors and a basic lack of understanding related to mining.
222. Dr. Kabir Rasouli, another Timberwolf witness, stated in his written report and oral evidence that he is also concerned Benga has underestimated future precipitation in the Project area. As such, he expressed doubts as to “whether the mine tailing pond proposed will be resistant or fail, similar to what happened in 2014 in the Mount Polley copper and gold mine in British Columbia”.³²¹
223. On cross-examination, Dr. Rasouli admitted he had no idea what caused the failure at the Mount Polley mine.³²² He had never even read the independent investigation and review panel report on the Mount Polley tailings breach.³²³
224. Dr. Rasouli stated that incidences of damn failures in oilsands wastewater sites have increased over recent decades, without providing any basis for the statement.³²⁴ He undertook to provide a paper that he said substantiated this claim, but failed to ever fulfill this undertaking. The evidence before the Panel suggests that Dr. Rasouli’s statement was false.
225. Dr. Rasouli additionally claimed that a dam failure at an oilsands site spilled wastewater into the Athabasca River in 2013, but was unable to provide the name of the oilsands site or the location of the spill, or even the source of information on which he based this claim.³²⁵ Dr. Rasouli acknowledged that his opinion that Benga underestimated future increases in annual precipitation relies on a study based on an area of clear cut forest harvesting, and climate change projections produced by the RCP 8.5 model for a time period 40 to 50 years beyond the Project’s lifetime.³²⁶

³²⁰ CIAR #804 at 2278:11-19.

³²¹ CIAR #558 at PDF 110 – 111.

³²² CIAR #804 at 2279:17-26, 2280:1-2.

³²³ CIAR #804 at 2280:10-14.

³²⁴ CIAR #804 at 2281:10-26, 2282:1-12.

³²⁵ CIAR #804 at 2283:19-26, 2284:1-8.

³²⁶ CIAR #804 at 2284:11-26, 2285:1-18.

226. With all due respect, Dr. Rasouli's evidence was inconsistent, baseless, and not credible in the least. It should be weighted accordingly.

5.3.4 *Waste Management*

227. In terms of waste management, Benga is responsible under the Alberta User Guide for Waste Managers for classifying and determining the proper disposal procedure for all waste produced on the Project site.³²⁷ Benga has provided estimates of the types and quantities of waste expected to be generated on-site in its responses to IRs, and will be developing and implementing a comprehensive Waste Management Plan before commencing construction and operation. Contractors and employees working on-site will receive training in the application of the plan and it will be a condition of employment that the plan is to be complied with.³²⁸

5.3.5 *Questions of Future Expansion*

228. In this topic block, some participants asked the Benga witness panel about the potential for future expansion of the Project. To be clear, Benga is not applying for a project other than what is detailed and described in the application before the JRP. In the event there were a future project expansion, it would be subject to appropriate regulatory applications and reviews. It would be inappropriate to speculate about possible future expansions in the context of the present EA.

³²⁷ CIAR #42, EIA, Section C at PDF 155.

³²⁸ CIAR #42, Addendum 5 at PDF 67.

5.4 Indigenous current use of land and resources, rights, culture, and other Indigenous topics

229. Benga began its extensive consultation and engagement with potentially affected Indigenous communities in June of 2013. As Mr. Houston noted in his opening statement on the Indigenous topic block, Benga’s objective from the beginning was to better understand the potential effects of the Project on Indigenous interests.³²⁹
230. The Project is located on Treaty 7 lands in Alberta, and on the traditional lands of the Métis, represented by the MNA. Based on information gathered from communities, and guidance from the AER and the Agency, it was determined that the Indigenous communities potentially affected by the Project include the KNC, the MNA, and the Treaty 7 First Nations, comprised of the Kainai Nation, the Piikani Nation, the Siksika Nation, the Tsuut’ina Nation, and the SNN (made up of the Bearspaw Nation, the Chiniki Nation, and the Wesley Nation). To date, all of these Indigenous communities have completed TEK reports, which have been thoroughly reviewed, considered, and factored into project planning.³³⁰
231. Other Indigenous communities Benga has engaged to varying degrees include the Samson Cree Nation, the Ermineskin Cree Nation, the Louis Bull Tribe, the Montana First Nation, the Foothills Ojibway First Nation, the Shuswap Indian Band, and the Métis Nation of British Columbia Region 4.³³¹
232. Activities undertaken to date include the sharing of Project information, facilitating discussions around site-specific information, site tours, field work, TEK studies, Traditional Use studies, workshops, and open houses.³³² Benga has worked in collaboration with Indigenous communities to develop its work plans and mitigations for the Project. Mr. Houston expressly stated at the hearing that Benga recognizes consultation is not something that ends with Project approval. Rather, “Benga will continue its consultation and engagement with Indigenous communities through the life of the project.”³³³
233. Benga’s extensive consultation and engagement efforts are well-evidenced by the provision of letters of non-objection or support from all Treaty 7 First Nations, as well as the MNA. These letters are on the Agency’s registry as records CIAR #200, #207, #263, #299, #324, and #358.
234. Additionally, following the SNN’s opening statement on October 27, 2020, the SNN wrote to the Panel to clarify that the conditions referred to in SNN’s opening statement are conditions that the SNN is

³²⁹ CIAR #814 at 2308.

³³⁰ CIAR #503 at PDF 9; Addendum 9 at PDF 8 – 9; CIAR #814 at 2309.

³³¹ CIAR #503 at PDF 9; Addendum 9 at PDF 8 – 9.

³³² CIAR #503 at PDF 8.

³³³ CIAR #814 at 2310:4-6.

working on cooperatively with Benga, pursuant to the parties' long-term relationship agreement. SNN confirmed it does not object to the Project and is not asking the Panel to implement these conditions.³³⁴

235. Nonetheless, the JRP must fulfill its mandate by reviewing all information put before it in respect of the potential adverse environmental effects of the Project and how this may affect Indigenous rights and interests. As such, in addition to Benga's extensive and ongoing consultation and engagement, Benga assessed the potential Project-related effects on Indigenous communities. This assessment was developed and updated to reflect Indigenous views and perspectives, including the assessment of specific Indigenous VCs.³³⁵
236. Benga has committed to fulfilling the terms, commitments, and mitigations outlined in the agreements it has reached with Indigenous groups. As Mr. Houston highlighted in his oral evidence, Benga has made a number of Basic Indigenous Commitments central to these agreements, including that:
- Benga will consult with the Indigenous communities in the development of final monitoring and mitigation plans;
 - Benga will work with Indigenous communities to finalize reclamation plans that reflect traditional knowledge; and,
 - Benga will implement a community-based monitoring program that is directed by Indigenous communities and implemented through Indigenous monitors.³³⁶

5.4.1 *Ktunaxa Nation Council ("KNC")*

237. In direct evidence at the hearing, KNC raised their outstanding concerns with respect the Project. KNC provided a panel of witnesses who spoke to potential affects they believe the Project could have on environmental and cultural-spiritual values, trails and access, preferred habitation (camp) areas and subsistence harvest areas, impacts on ecological values, and impacts on KNC governance, stewardship, and relationships with neighbouring Indigenous communities. KNC also recommended the use of terrestrial offsetting for potential Project-related effects.
238. With respect to KNC's criticisms of Benga's EIA on the topics of water quality, aquatic resources, wildlife, and vegetation, it is important to note that KNC's witnesses did not participate in the topic blocks specific to those issues. They did not file technical evidence and their written submission to the Panel revealed that KNC's consultants merely did a desktop review of the EIA, without conducting any in-depth, Project-specific analysis. They presented a substantial amount of new material in direct evidence

³³⁴ CIAR #746.

³³⁵ CIAR #814 at 2310; CIAR #42, Addendum 10, Package 4 at Appendix 4.1-1.

³³⁶ CIAR #814 at 2312; CIAR #571 at PDF 10 – 11.

that was unsupported by any verifiable data, analysis, or technical reports. The matters raised in these regards were more appropriately addressed and tested in their relevant topic blocks.

239. When questioned about the KNC's recommendations for terrestrial offsetting, environmental monitoring, and potential effects, KNC's witnesses referred to their experience with Teck Coal Limited ("Teck") in the Elk Valley in BC.³³⁷ Questions from Mr. Kirk Lambrecht, QC, JRP Secretariat Counsel, shined light on the fact that KNC and its members are positioned very differently relative to the Grassy Mountain Project than they are positioned relative to the Teck coal mines in the Elk Valley.
240. Mr. Lambrecht directed the KNC witnesses to the map of site-specific KNC values in relation to the Project, included at PDF 23 of the KNC's hearing submission at CIAR 564, and pointed out he did "not necessarily see areas more proximate to the project footprint" than Crowsnest Mountain and an area named as "Bellevue".³³⁸ On that map, only two points of KNC significance are marked as falling within 5 kilometers of the Project.
241. The Project area is clearly important to the KNC and Benga does not deny this. However, KNC cannot expect the same effects from the Project on its rights and interests, and cannot expect the same mitigations specifically crafted to KNC's preferences, as it can expect with respect to the Teck coal mines located in much closer proximity to KNC's members and regular land use activities.
242. Additionally, when asked whether there are basic points in common between Benga's proposed environmental monitoring plans and KNC's recommendations, KNC's witness, Ms. Nicole Kapell, stated that there are in fact both "common points and objectives".³³⁹ Benga continues to work closely with KNC to resolve final issues and to solidify mutually agreeable commitments to the parties' common points.³⁴⁰ Benga stated in its October 5, 2020 submission that the Basic Indigenous Commitments it has made in agreements or protocols with other Indigenous communities will apply equally to KNC until bi-lateral agreements are made that complement or supersede these commitments.³⁴¹

5.4.2 *Shuswap Indian Band*

243. Chief Barbara Cote gave evidence on behalf of the Shuswap Indian Band at the hearing. She outlined some of the main concerns the Band raised in its written submission, located on the registry as CIAR #543. Those concerns include the potential for effects on traditional land use and cultural heritage, including effects on habitation, subsistence, travel and trade, sacred places and spirituality, named and

³³⁷ CIAR #814 at 2452, 2455, 2459.

³³⁸ CIAR #814 at 2476.

³³⁹ CIAR #814 at 2460:1-6.

³⁴⁰ CIAR #503 at PDF 9.

³⁴¹ CIAR #571 at PDF 11.

storied places, community well-being, and ecological knowledge.³⁴² Chief Cote acknowledged in her evidence that the Band did not respond to Benga's earlier attempts at engagement, but that the Band is now ready to fully engage, and they "look forward to learning more about this project through engagement efforts".³⁴³

244. Benga has said it will continue to consult and engage with the Shuswap Indian Band through Project updates and discussions moving forward.³⁴⁴ Benga stated in its October 5th submission that the Basic Indigenous Commitments it has made in agreements or protocols with other Indigenous communities will also apply to the Shuswap Indian Band until bi-lateral agreements are made that complement or supersede these commitments.³⁴⁵

5.4.3 *The Aboriginal Consultation Office ("ACO")*

245. In tandem with the JRP process, the ACO ensures that Indigenous groups are adequately consulted. The ACO process is separate but concurrent to the Panel's review of the EIA.

246. The ACO conducts its approvals pursuant to the *Joint Operating Procedures for First Nations Consultation on Energy Resources Activities ("JOP")*.³⁴⁶ The governing process for ACO is the "extensive consultation" process³⁴⁷ or "process 4," set out in the *JOP*.³⁴⁸ The pre-hearing ACO reports and the ACO's Hearing Reports inform the JRP of its consultation adequacy decision and of whether actions may be required to address potential adverse impacts on treaty rights and traditional uses. The ACO was required to provide its Hearing Reports to the JRP and to participants at the close of the evidentiary portion of the hearing and before final submissions.³⁴⁹

247. On October 23, 2020, the ACO provided its pre-hearing reports to the JRP and to AER authorization branches.³⁵⁰ These reports concluded that consultation with the SNN (representing the Bearspaw Band,

³⁴² CIAR #816 at 2502.

³⁴³ CIAR #816 at 2515:5-11.

³⁴⁴ CIAR #503 at PDF 9.

³⁴⁵ CIAR #571 at PDF 11.

³⁴⁶ As referenced by the Panel in CIAR #530: online:

<<https://www.aer.ca/documents/actregs/JointOperatingProcedures.pdf?0.276972591644153>>.

³⁴⁷ *JOP* at PDF 11.

³⁴⁸ *JOP* at PDF 21.

³⁴⁹ *JOP* at PDF 21.

³⁵⁰ CIAR #659 and CIAR #663 – #669.

Chiniki Band, and Wesley Band), Kainai Nation (Blood Tribe), Piikani Nation, Siksika Nation, and Tsuut'ina Nation has been adequate, pending the outcome of the AER's process.

248. On December 3, 2020 the ACO provided its Hearing Reports to the JRP.³⁵¹ The Hearing Reports confirmed that consultation with the SNN, Kainai Nation (Blood Tribe), Piikani Nation, Siksika Nation, and Tsuut'ina Nation has been adequate.

³⁵¹ CIAR #950 and CIAR #951 – #955.

5.5 Vegetation, including species at risk, terrain and soils, including reclamation, conservation, closure, and biodiversity

5.5.1 Conservation and Reclamation

5.5.1.1 Overview

249. Mr. Houston summed up the current state of lands within the Project footprint in his direct evidence in the vegetation topic block. The Project area is characterized by substantial existing disturbances from historical mining and other anthropogenic activities such as off-road vehicle use, a 500 kV powerline bisecting the Project site, roads, and cattle grazing.³⁵² The legacy mining disturbance, in particular, has an ongoing negative impact on local hydrology and receiving waters due to erosion and migration of coal fines.³⁵³
250. By reclaiming the entire Project footprint, including the legacy mining disturbance, the Project will result in net positive improvement over existing conditions for Grassy Mountain.³⁵⁴ Benga's C&R Plan creates the conceptual framework for the achievement of a land capability equivalent or improved to what currently exists, as required by Alberta's *Conservation and Reclamation Regulation*.³⁵⁵
251. The updated C&R Plan is developed with the end goal of leaving the lands in a state that is maintenance free and self-sustaining. The Project footprint, once revegetated, will evolve through stages of initial revegetation to self-sustaining ecosystems consisting of mature vegetation communities typical of the subalpine and montane subregions of the Rocky Mountain natural region.³⁵⁶
252. The C&R Plan will be finalized under the oversight of the AER and will continue to be informed through consultation with Indigenous communities and other local stakeholders. Benga has further committed to updating the C&R plan every three to five years to ensure the plan remains current, reflective of on-the-ground results, and to provide opportunities for continued Indigenous and stakeholder input.³⁵⁷
253. The progressive reclamation strategy proposed in the C&R Plan will see:

³⁵² CIAR #830 at 2569; CIAR #42, Addendum 8 at PDF 465.

³⁵³ CIAR #42, Addendum 10, Package 2 at PDF 58, 60; see also CIAR #897 for the AER's *Investigation Summary Report – 2015-020: Benga Mining Limited, operating as Riversdale Resources* (March 8, 2017).

³⁵⁴ CIAR #830 at 2570.

³⁵⁵ Alta Reg 115/1993.

³⁵⁶ CIAR #42, Addendum 10, Package 2 at PDF 41; CIAR #830 at 2570 – 2571.

³⁵⁷ CIAR #830 at 2571.

- Reclamation begin on the waste rock disposal areas and some parts of the mine in year 2 of Project operations;
- Approximately 500 hectares, or one-third of the total disturbed area, reclaimed by year 15;
- Close to 1,000 hectares, or two-thirds of the mine footprint, reclaimed by the end of the mine life; and,
- The remaining lands to be reclaimed within three years of completion of mining, with only the infrastructure required for the water management program to be reclaimed at a later date, after water quality objectives are met.³⁵⁸

254. As Mr. Houston outlined in his oral evidence, Benga has incorporated several mechanisms into its C&R Plan to return and maintain biodiversity on the reclaimed landscape, including things such as:

- Direct placement of salvaged soil (with propagules) from new mining areas;
- Establishing self-sustaining drainage patterns;
- Re-establishing native species by planting various native trees, native shrub species, and native grasses;
- Development of seed mixes in line with the *Native Plant Revegetation Guidelines for Alberta* (Native Plant Work Group, 2000);³⁵⁹
- Creating a micro-hummocky surface that enhances moisture and protection from the wind, by using rough soil replacement techniques; and,
- Managing for introduced and invasive species, including weed management and control conducted in accordance with Alberta's *Weed Control Act*.³⁶⁰

255. In response to the doubts raised by several participants as to Benga's ability to reclaim a coal mine, Benga provided examples of successfully reclaimed sites at five mountain and foothill coal mines located in Alberta.³⁶¹ Mr. Dane McCoy elaborated on these examples in PowerPoint slides he presented to the Panel, which can be found at CIAR #819.

256. In his oral evidence, Mr. McCoy spoke to the fact that coal mine reclamation has been carried out since the early 1970s. In the beginning, there was of course uncertainty about reclamation, especially at a scale required for a mine disturbance. A great deal of research and monitoring was necessary to test and prove

³⁵⁸ CIAR #830 at 2571 – 2572; CIAR #42, Addendum 10, Package 2 at PDF 69 – 72; CIAR #819 at PDF 2 – 15.

³⁵⁹ This included a review of the native plant communities in the pre-disturbance and surrounding landscapes to develop the species composition and distribution required for each ecological reclamation unit.

³⁶⁰ CIAR #42, Addendum 10, Package 2 at PDF 74 and 129; CIAR #830 at 2573 – 2574.

³⁶¹ CIAR #571, Appendix C at PDF 73 – 101.

effective reclamation practices. As Mr. McCoy said, since his first experience in coal mine reclamation as a summer student at the Luscar mine in 1980, much has been learned and improved upon.³⁶² Benga has hired employees and contractors with the knowledge and experience required to apply to Grassy Mountain the lessons learned over the 50-year evolution in coal mine reclamation in Alberta.

257. Recognizing that there are differences between each individual mine site, Benga's examples of successful mine reclamation nevertheless raise several relevant points for Grassy Mountain. For one, those examples show that coal mine reclamation is not impossible and fraught with failure, as asserted by several hearing participants. In fact, the last 20 years, in particular, have shown considerable success in mine reclamation in Alberta. Secondly, the photograph examples from Luscar Mine, Gregg River Mine, Coal Valley, Obed Mountain Mine, and the Grande Cache Mine³⁶³ demonstrate the significant importance of monitoring and adaptive management, in terms of checking actual results against objectives, and modifying tactics where necessary to achieve desired outcomes.
258. Lastly, the examples of successful reclamation in Alberta show the necessity of learning from past experiences and using industry best practices. That is how reclamation planning should be done, and is being done for the Project.
259. Benga has assessed the legitimate threats to reclamation and incorporated appropriate mitigations to address those threats, based on the knowledge and experience of reclamation professionals. For example, as Mr. Houston and Mr. McCoy stated during cross-examination, the threat of erosion to tree regeneration will be addressed by developing reclaimed terrain with appropriate slopes and relief, initiating revegetation quickly to minimize any erosion, and implementing proven safeguards where necessary to protect tree seedlings and rough fescue from ungulate grazing.³⁶⁴
260. Extremely small, indeed essentially unheard of risks, such as planted seedlings blowing away in the wind, are much more easily addressed by using professional planters with appropriate microsite selection.³⁶⁵ Knowledge acquired through hundreds of years of forestry practices informs land managers that properly planted trees do not take flight and blow away in the wind.
261. Benga has developed a Closure Plan³⁶⁶ that provides the principles and objectives that will define the reclamation end points needed to achieve equivalent land capability following mine closure. The Closure Plan addresses soil management, revegetation, water management, features of the closure landscape,

³⁶² CIAR #830 at 2588 – 2589.

³⁶³ CIAR #819 at PDF 17 – 31.

³⁶⁴ CIAR #830 at 2652:11-24, 2653:1-18.

³⁶⁵ CIAR #830 at 2650:9-26, 2651 – 2652.

³⁶⁶ CIAR #42, Addendum 10, Package 2, starting at PDF 146.

including the conceptual characteristics of the end-pit lake, and how the reclaimed landscapes will compare to pre-mining.³⁶⁷

262. Final reclamation certificates for the mine site will be granted by the Alberta Government only after the landscape has been returned to an equivalent capability and is safe and stable.³⁶⁸

5.5.1.2 *Evidence of Dr. Gord McKenna - LLG*

263. LLG expert witness, Dr. Gord McKenna, spoke at the hearing of his experience with site reclamation and gave his recommendations for the Project. His focus, as stated in oral evidence was “on highlighting what [he] believe[s] are significant deficiencies in the current reclamation and closure design.”³⁶⁹ Mainly, Dr. McKenna in his report and PowerPoint presentation, said Benga should be providing a more detailed closure and reclamation design. He said that in his assessment of the Project’s EIA, he looked “through the lens of landform design”.³⁷⁰ As Dr. McKenna stated, “Many of [his] clients have adopted this landform design approach for their mining projects”.³⁷¹

264. Dr. McKenna is the chair and founder of the Landform Design Institute, an organization whose objective is to make landform design routine in the mining industry worldwide by 2030.³⁷² It makes sense that Dr. McKenna would recommend for Benga to adopt Dr. McKenna’s own approach of landform design over the multitude of other viable options.

265. Dr. McKenna argued in his evidence for the need for detailed and final designs at this stage of the regulatory process to achieve reclamation success. He then went on to acknowledge in cross-examination that he played a role in reclaiming "Suncor Pond 1" or the "Wapisiw Lookout". The Suncor Pond 1 was created by something called "Tar Island Dyke" in 1967. It was the first tailings pond ever built in the oil sands industry. Suncor decided in 2007 to stabilize and reclaim the tailings pond landscape by the end of 2010 and that objective was achieved.³⁷³ Dr. McKenna knows first-hand from his experience on Suncor Pond 1 that final designs for reclamation do not need to be provided at this stage of the regulatory process to ensure success.

266. Dr. McKenna appears to commend in his evidence several aspects of Benga’s proposed plans for reclamation, including the plan for early and continuous progressive reclamation, direct placement of

³⁶⁷ CIAR #42, Appendix 10, Package 2, s F.4.

³⁶⁸ CIAR #830 at 2575; CIAR #571 at PDF 19.

³⁶⁹ CIAR #848 at 3225.

³⁷⁰ CIAR #848 at 3228:7-8.

³⁷¹ CIAR #848 at 3228:1-2.

³⁷² CIAR #848 at 3254:12-26, 3255:1.

³⁷³ CIAR #848 at 3255 – 3256.

reclamation material, the building of out-of-pit waste rock dumps using bottom-up lifts, mining and pit-filling to maximize in-pit waste rock storage, and a compact mine footprint to minimize sprawl.³⁷⁴ Dr. McKenna stated in his direct evidence at the hearing: “I’m certain the mined land can be well reclaimed with good design, execution, monitoring, and oversight by the regulator and members of the local community”.³⁷⁵ Benga agrees. The Project’s C&R Plan, which will be finalized through continued consultation with Indigenous groups and the AER, coupled with monitoring and oversight, will be able to achieve its stated objectives.

5.5.1.3 *Mine Financial Security Program*

267. Several hearing participants raised fears that Benga will leave the Project footprint un-reclaimed. Others are of the view that the financial security required of Benga under the AER’s Mine Financial Security Program (“MFSP”) would not be enough to guarantee reclamation.
268. Benga addressed these concerns in its October 5, 2020 submission. The AER oversees the MFSP, which is specifically designed on the principle that an approval holder must provide sufficient funds to carry out suspension, abandonment, remediation, and surface reclamation work to Alberta’s standards. Benga must satisfy the requirements of the MFSP.³⁷⁶ The Government of Alberta has established the MFSP and the AER administers it in accordance with published guidelines (e.g. Guide to the Mine Financial Security Program).³⁷⁷ Benga will be in compliance with the requirements of the MFSP.
269. Benga has not made a final determination as to whether it will elect to pay full financial security at the start of the Project, or elect to use the MFSP assets-to-liability system.³⁷⁸ Benga is not required to elect one over the other at this time.
270. Benga has provided the total estimated cost figures for mine reclamation that will be outstanding for disturbed lands on the Project in years 10 and 15 of the Project’s life. Benga has also provided estimates for financial security calculated using the assets-to-liability approach.³⁷⁹ Additionally, Benga’s plan for aggressive progressive reclamation assures that the outstanding reclamation liability is minimized throughout the mine’s life.

³⁷⁴ CIAR #552 at PDF 9 – 10; CIAR #848 at 4243 – 4244.

³⁷⁵ CIAR #848 at 3232:12-14.

³⁷⁶ CIAR #571 at PDF 19.

³⁷⁷ As references in CIAR #571 at PDF 9: AER, “Mine Financial Security Program”, Liability Management Programs and Processes, online: <www.aer.ca/regulating-development/project-closure/liability-management-programs-and-processes/mine-financialsecurity-program.html>.

³⁷⁸ CIAR #830 at 2708:14-21.

³⁷⁹ CIAR #42, Addendum 10, Package 5 at PDF 180; CIAR #863 at PDF 4.

5.5.2 *Rare plant communities and species of concern*

271. Benga completed a detailed vegetation and wetlands assessment for the Project in 2014, and supplemented that assessment with further data collected in 2016. Benga did an extensive review of literature and existing mine reclamation practices to develop the C&R Plan in accordance with what is known of the species and community types whose ranges overlap the Project footprint.³⁸⁰ Benga used the information it gathered to develop its Rare Plant Propagule or Relocation Mitigation Plan for perennial vascular plants, a Rare Plant General Mitigation Plan, a Fescue Grassland Community Mitigation Plan, and Whitebark Pine and Limber Pine Mitigation Plans.³⁸¹

5.5.2.1 *Whitebark and Limber Pine*

272. Whitebark Pine is listed as endangered on Schedule 1 of the *SARA*. Limber pine is not listed under the *SARA*, but it has been assessed as endangered by the Committee on the Status of Endangered Wildlife in Canada (“COSEWIC”). The Agency’s Guidelines and the AER ToR required Benga to complete a baseline assessment and effects assessment on species at risk, which Benga has done for both Whitebark and Limber pine. The JRP’s ToR require the Panel to consider the effects of the Project on *SARA*-listed wildlife species, such as Whitebark pine, and their critical habitat, and to identify measures that could be taken to avoid or lessen those effects and to monitor them.

273. Benga’s assessment conservatively estimated approximately 21,000 Whitebark pine, and approximately 1,000 Limber pine within the proposed Project footprint.³⁸² Benga determined these estimates using Alberta Vegetation Inventory data which maps at a scale of 2 hectares or larger, helicopter surveys, and field surveys.³⁸³

274. The evidence on the record suggests the current condition of Whitebark pine in the Project area is one of concern:

The whitebark pine and limber pine identified within the LSA appeared relatively healthy (note: some trees adjacent to confirmed individuals had branches with no needles, and some trees had died).³⁸⁴

[Janet Bauman]: When I was out there in 2019, I noted that many of the -- the trees in many of the locations that were previously documented were dying or already dead ...

[Kirk Lambrecht, QC]: And is this the rust disease?

³⁸⁰ CIAR #830 at 2572.

³⁸¹ CIAR #42, Addendum 10, Package 2 at PDF 69 – 72.

³⁸² CIAR #830 at 2573; CIAR #42, Consultant Report 8 at PDF 82 – 83.

³⁸³ CIAR #830 at 2625:9-26, 2626:19-26, 2627:1-3.

³⁸⁴ CIAR #42, Consultant Report 8 at PDF 81 – 82.

[Janet Bauman]: I -- I suspect it is, but I wasn't out there in June/July when the -- the rust is producing spores -- actively producing spores. The symptoms I was observing, dying from the top down -- several trees appeared to be blisters on them; they were weeping sap -- would be consistent with the whitebark pine -- or the white pine blister rust.³⁸⁵

[Cliff Wallis]: Most of the whitebark pine that I looked at [in the field in 2020 outside the area that Ms. Bauman looked at] were healthy. I did observe a very small number of blister rust-infected trees in the more closed forest, but trees on the steeper, more open slopes were apparently still healthy....³⁸⁶

275. ECCC's *Recovery Strategy for the Whitebark Pine (Pinus albicaulis) in Canada [Proposed]*, as cited in ECCC's submission at CIAR #542, emphasizes that White Pine Blister Rust is the greatest threat to Whitebark pine.³⁸⁷ ECCC's submission states:

Individuals that are resistant to White Pine Blister Rust are required to sustain the population or improve its abundance in the foreseeable future.... White Pine Blister Rust alone is projected to lead to a decline in Whitebark Pine of more than 50% over a 100-year time period."³⁸⁸

276. As for Limber pine, ECCC's written submission states that the Canadian population is decreasing by 1% per year, and:

Studies in Alberta indicate that most populations of Limber Pine are rapidly declining as a result of mortality from Blister Rust. Blister Rust infection exceeds the rate of Limber Pine recruitment, especially in the southern portion of the Alberta range where the Project is located (Alberta Limber Pine Recovery Plan, 2014-2019).³⁸⁹

277. Benga has committed to working with provincial, federal, and five needle pine working groups to secure Whitebark pine and Limber pine seeds that are resistant to White Pine Blister Rust for planting on the Project footprint.³⁹⁰ As part of the C&R Plan, Benga will plant 63,000 Whitebark pine seedlings – three times the pre-development number – to account for planting and natural mortality that could potentially occur.³⁹¹ Benga will carry out pre-harvest cone collection, rust-resistant

³⁸⁵ CIAR #842 at 3024:11-26, 3025:1-3.

³⁸⁶ CIAR #842 at 3153:25-26, 3154:1-6.

³⁸⁷ ECCC, *Recovery Strategy for the Whitebark Pine (Pinus albicaulis) in Canada [Proposed]* (Ottawa: Environment and Climate Change Canada, 2017), Species at Risk Act Recovery Strategy Series at PDF 7.

³⁸⁸ CIAR #542 at PDF 35.

³⁸⁹ CIAR #542 at PDF 36.

³⁹⁰ CIAR #830 at 2573; CIAR #42, Addendum 10, Package 2 at PDF 107.

³⁹¹ CIAR #42, Addendum 10, Package 2 at PDF 107 – 108.

seed selection, and planting in accordance with management guidance provided in the *Alberta Whitebark Pine Recovery Plan and Limber Pine Recovery Plan, 2013-2018*.³⁹²

278. ECCC stated in its submission to the Panel at CIAR #542 that: “ECCC is in agreement with Benga’s intent to undertake progressive reclamation of the mine site, and is supportive of its plan to replant with Blister Rust Resistant trees, as this may be beneficial to Whitebark Pine and Limber Pine populations in the long terms at a local level.”³⁹³
279. Benga notes that some participants, most notably the Coalition, have raised the concern that critical habitat for Whitebark pine may exist within the Project footprint.
280. First, it is important for the Panel to understand that there is not in fact any critical habitat delineated for Whitebark pine in a finalized recovery strategy at this time. ECCC witness Paul Gregoire confirmed in cross-examination that the most up-to-date map for Whitebark pine critical habitat, based on the “latest, best available information on proposed critical habitat” does not include the Project area.³⁹⁴
281. Secondly, even if the Project footprint did contain area identified as critical habitat for Whitebark pine, the Panel should be aware that:
- a. SARA prohibitions for a terrestrial species like Whitebark pine (as in the case with Little brown myotis) apply only to federal lands, not to provincial Crown lands and private land;³⁹⁵ and
 - b. Even if the SARA prohibitions applied, SARA provides for permits to be issued to allow for the harvest of a SARA-listed species on federal lands should s. 73 of the Act be satisfied.³⁹⁶ Relevant considerations for a s. 73 permit, if one were required, would include the fact that the harvest of Whitebark pine in this case is incidental to the activity taking place – coal mining – and the local population stands to benefit in terms of stems being replanted with Blister Rust-resistant stock at greater numbers than what is being harvested.

³⁹² Cited in Addendum 10, Package 2: Alberta Whitebark and Limber Pine Recovery Team, *Alberta Whitebark Pine Recovery Plan 2013-2018* (Edmonton, AB: Alberta Environment and Sustainable Resource Development, 2014), Alberta Species at Risk Recovery Plan No. 34, online: <<https://open.alberta.ca/dataset/5632101d-9450-4f14-b601-64470de6ad9f/resource/2fcc3797-f018-4666-bd45-32d12813a4e9/download/2014-sar-whitebarkpinerecoveryplan-jan-2014.pdf>>.

³⁹³ CIAR #542 at PDF 38.

³⁹⁴ CIAR #842 at 3074:9-11, 3077:3-9, 3078:14-26, 3079:1-22; CIAR #825 at PDF 5, 8 – 9. ECCC map included in CIAR #571 at PDF 116.

³⁹⁵ This was put in plain terms by ECCC witness, Paul Gregoire, in CIAR #941 at 6026:19-22.

³⁹⁶ See e.g. CIAR #571 at PDF 22, citing Species at risk public registry, “Explanation for issuing permit (BNP-840) pursuant to the provisions of section 74 of SARA - Whitebark Pine” (issued 2015), online: <species-registry.canada.ca/index-en.html#/permits/1757-1>; CIAR #838.

5.5.2.2 *Foothills Rough Fescue Grasslands*

282. The Coalition raised concerns in its written submission at CIAR #553 and in its oral evidence regarding the Project's impact on foothills rough fescue grassland communities.
283. Benga's vegetation assessments have indicated there is approximately 58 hectares of grassland communities containing foothills rough fescue within the Project footprint. This equates to about 3.8% of the Project area.³⁹⁷ Completely avoiding these grasslands within the Project is not possible, so Benga has proposed several strategies based on industry best practices and key findings from successful reclamation efforts to restore foothills rough fescue on the post-development landscape.³⁹⁸
284. Direct placement of salvaged reclamation material will be prioritized to promote foothills rough fescue and native grassland establishment. Other mitigations that will be applied, as set out in the Foothills Rough Fescue Mitigation Plan, within the C&R Plan, include:
- Collection of native foothills rough fescue seed from across the site;
 - Seeding of wild harvested certified weed-free native seed as a monocultures and as part of a certified, weed-free native seed mix;
 - Seeding and growing of foothills rough fescue plugs in a greenhouse for transplanting onto reclaimed areas of the site;
 - Natural regeneration of native fescue; and,
 - Promoting the seeding of foothills rough fescue on the rough areas of the proposed golf course development to increase overall distribution of fescue grasslands.³⁹⁹
285. These measures are consistent with the research literature and Government of Alberta guidance documents cited in Benga's C&R Plan.⁴⁰⁰ As noted in the literature review by J. Lancaster et al., entered as an exhibit by the Coalition,⁴⁰¹ there has been some success in reclaiming foothills rough fescue with the use of seeding,⁴⁰² plugs,⁴⁰³ and natural regeneration.⁴⁰⁴ Benga is proposing the use of those strategies,

³⁹⁷ CIAR #830 at 2572.

³⁹⁸ CIAR #42, Addendum 10, Package 2 at PDF 108.

³⁹⁹ CIAR #42, Addendum 10, Package 2 at PDF 109 – 110.

⁴⁰⁰ CIAR #42, Addendum 10, Package 2 at PDF 108 – 111.

⁴⁰¹ CIAR #826.

⁴⁰² At PDF 23.

⁴⁰³ At PDF 29.

⁴⁰⁴ At PDF 30.

together with a monitoring program that Benga recognizes is particularly important during the first five years following reclamation, and long term monitoring as recommended for disturbance and reclamation of rough fescue grasslands.⁴⁰⁵

286. The Coalition’s assertion that restoration techniques for rough fescue grassland are unproven, and because they have failed in some experiments in the past, they are bound to fail for this Project, is simply not supported by the literature.

5.5.2.3 *Evidence of Cliff Wallis – Coalition*

287. Coalition witness Cliff Wallis gave evidence at the hearing primarily relating to environmentally significant areas (“ESAs”), native grasslands, Whitebark pine, and the SSRP. Mr. Wallis expressed the opinion of someone personally opposed to coal resource development in Alberta, and the opinion of someone who sits on the board of directors for an organization that has long opposed the Project. Mr. Wallis is the Director of the AWA, one of the very parties who retained him to produce his report.⁴⁰⁶ Mr. Wallis’ evidence clearly lacked an appropriate degree of objectivity, and his evidence should be weighted accordingly.

288. Mr. Wallis provided several quotes from the SSRP, including the statement that “The South Saskatchewan Region supports a diverse and growing population. Economic diversification supports employment and contributes to a prosperous future.” Mr. Wallis went on to opine that “Although coal is mentioned in other portions of the SSRP, it is not specifically cited in the vision of the SSRP.... The vision has a clear focus on sustainability and conservation as well as non-renewable resource production centred on oil and natural gas.”⁴⁰⁷ The quotes Mr. Wallis chose to highlight are from the Strategic Plan section of the SSRP, which is of course not intended to have binding legal effect, and rather contains statements of policy to inform decision-makers and others in respect of the SSRP and the planning region.

289. The Strategic Plan of the SSRP also expressly recognizes the significance of metallurgical coal potential in the region, and states: “Ensuring opportunities for coal exploration and development in the region will create economic diversification opportunities and export markets for Alberta coal and mineral resources and will result in increased employment in the region.”⁴⁰⁸ Mr. Wallis’ assertion that coal development does not count as “economic diversification”, and that references to coal in the SSRP are less important than the references he chose to highlight is clearly based on personal opinion, and not on objective fact.

⁴⁰⁵ CIAR #42, Addendum 10, Package 2 at PDF 111.

⁴⁰⁶ CIAR #842 at 3162:23-24, 3164:3-16.

⁴⁰⁷ CIAR #553 at PDF 269.

⁴⁰⁸ SSRP at PDF 14.

290. Mr. Wallis correctly pointed out in his evidence that the Project footprint is located in one or more ESAs, as mapped in 2014 by Fiera Biological Consulting (“Fiera 2014”).⁴⁰⁹ To Mr. Wallis’ credit, he also acknowledged that the intended use of ESAs is very limited: their identification does not consider how the areas are being or how they should be managed or conserved, they do not require specific management objectives, and they are not considered comprehensive status reporting.⁴¹⁰ As Mr. Wallis put it, “there’s no regulatory mandate, if you wish, to manage them in a certain way.”⁴¹¹ However, while Mr. Wallis was willing to admit the limitations of ESAs, he refused to admit it is rather insignificant to simply note that the Project falls within one or more ESA, given that 45% of the province falls within an ESA (i.e. nearly every mining project in the province is likely covered by one or more ESA).⁴¹²
291. Mr. Wallis stated in his report that he found it astounding that Benga believed it could have a positive contribution for Whitebark pine, because the Project involves harvesting “tens of thousands of apparently healthy individuals”.⁴¹³ Mr. Wallis neglected to include in his written report what he acknowledged at the hearing, which is that Benga noted in Consultant Report #8 that trees adjacent to confirmed Whitebark pine had branches with no needles and had died,⁴¹⁴ and that Mr. Wallis observed stems on the Project site infected with White Pine Blister Rust in 2020.⁴¹⁵
292. ECCC’s submission that Benga’s plans for replanting Blister Rust-resistant seedlings “may be beneficial to Whitebark Pine and Limber Pine populations in the long terms at a local level”⁴¹⁶ should be preferred over Mr. Wallis’ evidence.

5.5.3 Weeds

293. One concern that was raised by hearing participants, most notably Ranchland, was with respect to noxious weeds and invasive vegetation species. The AER ToR states that the Project EIA should “[d]iscuss weeds

⁴⁰⁹ Fiera Biological Consulting Ltd, “Environmentally Significant Areas in Alberta: 2014 Update” (2014), Report prepared for the Government of Alberta, Fiera Biological Consulting Report Number 1305. Benga reviewed and cited this report in its EIA: CIAR #42, EIA, Section E at PDF 216-217.

⁴¹⁰ CIAR #842 at 3165:8-26, 3166:16-20; CIAR #553 at PDF 274.

⁴¹¹ CIAR #842 at 3167:15-16.

⁴¹² CIAR #842 at 3169 – 3170.

⁴¹³ CIAR #553 at PDF 318.

⁴¹⁴ CIAR #842 at 3171:18-26, 3172:1-5.

⁴¹⁵ CIAR #842 at 3153:25-26, 3154:1-6.

⁴¹⁶ CIAR #542 at PDF 38.

and non-native invasive species and describe how these species will be assessed and controlled prior to and during operation and reclamation.”⁴¹⁷ Benga has satisfied this requirement.

294. Benga’s EIA included a baseline assessment of noxious and invasive vegetation species in the Project area, an assessment of the Project’s potential effects on noxious and invasive weeds, and proposed mitigations and monitoring plans.⁴¹⁸ Benga further recognized in the EIA the potential negative impacts weeds can have on ecosystem health.⁴¹⁹ Benga has committed to site-specific and species-specific controls for weeds, including hand-pulling, cultivation, and/or spot-spraying of herbicide, and will be carrying out its weed management and control in accordance with Alberta’s *Weed Control Act*⁴²⁰ and *Weed Control Regulation*.⁴²¹

5.5.3.1 Evidence of Dr. Terry Osko - Ranchland

295. Ranchland retained Dr. Terry Osko to prepare a report and give evidence at the hearing with respect to noxious weeds and invasive species. Dr. Osko acknowledged in his report and in oral evidence that Benga’s planned mitigations for managing weeds “appear to hit all the right notes regarding statements of best practice and compliance with regulations”. He confirmed at the hearing that he mainly just takes issue with the level of detail presented with respect to the potential risks of weeds on the Project site.⁴²²

296. Dr. Osko said in oral evidence that Benga should have done more to expressly recognize the many vectors for weed-spread on and off the site, such as wind, water, animals, people, and personal vehicles. His concern was that Benga underestimated the number and location of potential weed problems.⁴²³ Dr. Osko expounded on why he believed Benga has underestimated the risks of various weed vectors by presenting an extensive review of what he viewed to be relevant literature on the subject.

297. Some of the literature Dr. Osko cited in relation to the Grassy Mountain Project provided the following statements:

⁴¹⁷ AER ToR at PDF 21.

⁴¹⁸ CIAR #42, Consultant Report 8 at PDF 125 – 126, 231 – 235; CIAR #42, EIA, Section E at PDF 160, 176, 180, 203.

⁴¹⁹ CIAR #42, Consultant Report 8 at PDF 21, 27

⁴²⁰ SA 2008, c W-5.1.

⁴²¹ Alta Reg 19/2010.

⁴²² CIAR #539 at PDF 25; CIAR #842 at 3115:5-16.

⁴²³ CAIR #842 at 3111 – 3112.

- The annual amount of seeds deposited in horse manure is reportedly estimated at 500,000 seeds per horse (Dr. Osko does not, however, expect there to be horses on the Project site);⁴²⁴
- In Iran, sheep manure (of unknown volume) added 10 million seeds per hectare each time it was put on soil (there will be no sheep manure added to the Project site);⁴²⁵
- Between 1.9 and 2.4 million weed seeds could be distributed by hikers in an Australian national park over one season (the park, Kosciuszko National Park, sees about 3 million visitors a year, which Dr. Osko admits is a significant order of magnitude greater than what Grassy Mountain will ever see);⁴²⁶ and,
- Irrigation water deposits an estimated 296,000 seeds per hectare annually on irrigated fields in Nebraska (there will be no irrigation on the Project site, and as Dr. Osko noted, water falling on the Project site will be captured, not permitted to run directly from the footprint surface into Gold and Blairmore Creeks).⁴²⁷

298. While interesting, these statements show that Dr. Osko’s report invites the JRP to consider situations that have limited relevance and overinflate the weed risks posed by the Grassy Mountain Project, particularly given that Benga’s mitigations “hit all the right notes regarding statements of best practice and compliance with regulations.”

299. It is also important to note that Dr. Osko spoke in his evidence of the decades-long battle Ranchland has fought preventing the spread of noxious weeds already present on the proposed mine site due to un-reclaimed legacy mining activity.⁴²⁸ Weeds on the proposed Project site are an existing problem for Ranchland,⁴²⁹ and one that is not going away without the reclamation of the legacy mining disturbance. Based on Ranchland’s expressed concerns, Benga’s plans for progressive reclamation, weed management and control, and revegetation of currently un-reclaimed lands, will in many ways assist Ranchland in its ongoing battle against noxious weeds.

5.5.4 *Monitoring and Adaptive management*

5.5.4.1 *Benga’s Evidence*

300. At the hearing, Mr. Houston referred to the necessity of site-wide environmental monitoring to assess whether landforms, soil conditions, and vegetative communities maintain the appropriate trajectory towards the desired end land uses. Benga’s plans for ongoing research and monitoring will allow Benga to measure actual performance against site objectives and to adapt its management practices to ensure

⁴²⁴ CIAR #842 at 3115:17-26, 3116:1-21.

⁴²⁵ CIAR #842 at 3116:24-26, 3117:1-12.

⁴²⁶ CIAR #842 at 3117:13-26, 3118:1-26, 3119:1-10.

⁴²⁷ CIAR #842 at 3119:11-26, 3120:1-12.

⁴²⁸ CIAR #842 at 3120; CIAR #839 at PDF 8.

⁴²⁹ CIAR #842 at 3120.

conservation and reclamation goals are being achieved. Benga has committed to using data collected on-site and from other regional operators, as well as advances in technology over the life of the Project, to continually assess and improve its ongoing reclamation practices.⁴³⁰

301. Benga has described in the C&R Plan its proposed monitoring and research program for a wide range of environmental values including water quality, fisheries, soils, wildlife, and revegetation as part of the Project's overall monitoring and follow-up requirements.⁴³¹ The C&R Plan also clearly sets out how adaptive management will be utilized in reclamation on the Project.⁴³²
302. Looking back to the AER ToR, Benga was directed to describe its current and proposed monitoring programs for the Project, and to provide in the project description the adaptive management approach that will be implemented through the life of the Project.⁴³³ The Agency's Guidelines provided that a Project EIS should present a "preliminary" follow-up program and an outline for a "preliminary" environment monitoring program to determine the effectiveness of the mitigation measures implemented for the Project.⁴³⁴
303. Benga has developed and described its monitoring and adaptive management plans in accordance with the ToR and the Guidelines issued for the Project. Benga's proposed approach to adaptive management is also consistent with the Agency's Operational Policy Statement for Adaptive Management Measures under the Canadian Environmental Assessment Act ("OPS for Adaptive Management").⁴³⁵
304. While some hearing participants, such as CPAWS and the LLG, now ask that the Project be required to provide more detailed outlines for monitoring and follow-up, introducing such requirements at this stage would be inappropriate. Respectfully, the time for parties to submit their input on the terms the Project should have to meet for its EIA, and for the information Benga should provide, was during the generous public consultation periods that preceded the development of the AER ToR, the Agency's Guidelines, and the JRP ToR, and during the IR process, not during the public hearing.

⁴³⁰ CIAR #830 at 2574 – 2575; CIAR #42, Addendum 10, Package 2 at PDF 138-139.

⁴³¹ See CIAR #42, Addendum 10, Package 2 at PDF 131 – 137.

⁴³² CIAR #42, Addendum 10, Package 2, starting at PDF 138.

⁴³³ AER ToR at PDF 7, 30.

⁴³⁴ Agency's Guidelines at PDF 38 – 39.

⁴³⁵ Canadian Environmental Assessment Agency, "Adaptive Management Measures under the Canadian Environmental Assessment Act" (2016), Operational Policy Statement, online: <https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/adaptive-management-measures-under-canadian-environmental-assessment-act.html>.

5.5.4.2 Evidence of Martin Olszynski - CPAWS

305. CPAWS retained Professor Martin Olszynski to provide a report on adaptive management.⁴³⁶ Professor Olszynski expressed his opinion that Benga has misconstrued adaptive management, its potential, and limitations.
306. Professor Olszynski provided an interesting academic review of the history and practice of adaptive management as it has varied over time, and around the world. He also explored some of the different potential definitions and variations that might be used for adaptive management. He expressed his view about how and when adaptive management ought to be applied, and what an adaptive management plan for a project should look like. Professor Olszynski even “analyzed” Benga’s use of the term “adaptive management” using the keyword search function and a table of criteria for components of adaptive management he believes should be present. While thought-provoking on its face, this is hardly indicative of a substantive evaluation.
307. Benga agrees with Professor Olszynski’s statements that adaptive management is not fail-safe, it is not a panacea, and if properly implemented, it should be systematic, and the result of careful and deliberate planning and rigorous implementation.⁴³⁷ Otherwise, Professor Olszynski’s evidence is interesting for its philosophical approach and his ideas for how adaptive management might be better incorporated in policy guidance for future projects. However, his evidence is completely irrelevant to the Panel’s mandate to review the Grassy Mountain Project’s EIA.
308. Professor Olszynski has an opinion regarding the proper definition of “adaptive management”, and what standard this Project’s monitoring and adaptive management plans should be measured against. However, the fact is that the appropriate time for him to weigh on those matters was during the public consultation periods for the ToR and the Guidelines developed for this Project – not during the hearing.
309. Professor Olszynski has expressed his opinion that the definition set out for “adaptive management” in the Agency’s OPS for Adaptive Management does not go far enough to convey the important limitations of adaptive management.⁴³⁸ He may want adaptive management to be defined and applied differently than what is set out in current policy. This does not, however, pertain to this Project’s review under provincial legislation or the *CEAA 2012*.
310. Professor Olszynski additionally showed that he is unable to admit that responding “to changes and advances in technology, such as reclamation material replacement and revegetation, to meet specific objectives” is a good thing.⁴³⁹ If it is not a definition found in peer-reviewed literature (preferably his

⁴³⁶ In CIAR #555.

⁴³⁷ CIAR #842 at 3182; CIAR #555 at PDF 611.

⁴³⁸ CIAR #555 at PDF 600.

⁴³⁹ CIAR #842 at 3197.

own), it is not good enough for Professor Olszynski. His preferential bias for his own literature and views, to the exclusion of any level of objective analysis, is clear in his evidence, and it should be considered accordingly.

5.5.5 Cumulative effects

311. CPAWS, the Coalition, the ACWS, and the LLG all expressed concerns that Benga's cumulative effects assessments was not broad enough. In particular, participants expressed their dissatisfaction that Atrum Coal Limited's conceptual project of "Atrum Elan South" was not included in the cumulative effects assessment. The cumulative effects assessment is relevant to all topic blocks, but we address it here because it was discussed in greatest depth by hearing participants in the vegetation topic block.

312. Benga would direct these participants to the ToR and Guidelines issued for the Project and the work Benga has done to satisfy the requirements for its cumulative effects assessment. Key guidance provided by the JRP ToR, the Agency's Guidelines, and the JRP's written directions for the scope of the cumulative effects assessment include the following:

- Per the JRP ToR: "Cumulative effects assessment should include effects from projects or activities that have been or will be carried out, including a consideration of accidents or malfunctions, as of the issuance of the JRP's ToR" [emphasis added].⁴⁴⁰
- Per the Agency's Cumulative Effects OPS: "A cumulative environmental effects assessment of a designated project must include future physical activities that are certain and should generally include physical activities that are reasonably foreseeable" [emphasis added].⁴⁴¹
- Per the Agency's Cumulative Effects Technical Guidance document for assessing cumulative effects under *CEAA 2012*: "Temporal [and spatial] boundaries should be identified and justified clearly, and be set taking into account direction provided by the Agency".⁴⁴²
- Per the JRP's direction in CIAR #86: "Benga must include any new developments in the area that could result in cumulative effects as of August 17, 2018."

⁴⁴⁰ JRP Agreement at PDF 8.

⁴⁴¹ Government of Canada, "Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012" (March 2015), online: <<https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/assessing-cumulative-environmental-effects-under-canadian-environmental-assessment-act-2012.html>>.

⁴⁴² Government of Canada, "Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012", Interim Technical Guidance (March 2018) at 1.3 online: <<https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/assessing-cumulative-environmental-effects-ceaa2012.html>>.

- Per the JRP’s letter to CPAWS dated January 24, 2020: “at present, the Panel does not consider the Elan South Coal Project to be ‘reasonably foreseeable’, as defined in the Agency’s Operational Policy Statement (OPS)”.⁴⁴³
313. In accordance with the JRP ToR, the Agency’s Guidelines, and the AER ToR, Benga completed a cumulative effects assessment in its 2016 EIA. Benga provided an updated cumulative effects assessment in October of 2018⁴⁴⁴ in response to an IR from the Agency,⁴⁴⁵ and a letter from the JRP.⁴⁴⁶
314. Witnesses have asked the JRP to effectively shift the goal posts to require Benga to provide a further updated cumulative effects assessment that takes into account currently undefined and speculative projects. To cater to such requests would be inappropriate, unfair, and insert such a degree of unpredictability into the EA review that it would undermine the process.
315. CPAWS has additionally submitted that a new cumulative effects assessment “is particularly important given Alberta’s decision to rescind their 1976 coal policy and encourage metallurgical coalmines in the Rocky Mountains.”⁴⁴⁷ In that respect, CPAWS appears unaware that the now rescinded *A Coal Development Policy for Alberta*⁴⁴⁸ did not restrict development in the area of the Grassy Mountain Project. CPAWS has also failed to acknowledge that the SSRP expressly contemplates the development of metallurgical coal mines in the Crowsnest Pass.

⁴⁴³ CIAR #308.

⁴⁴⁴ CIAR #42, Addendum 8 at PDF 38-45, Appendix A-1.

⁴⁴⁵ CIAR #77.

⁴⁴⁶ CIAR #86.

⁴⁴⁷ CIAR #555 at PDF 66.

⁴⁴⁸ CIAR #889.

5.6 Water, including surface and groundwater management, quantity and quality, selenium management and aquatic resources, including fish, fish habitat, and fish species at risk

316. In his opening remarks for the water topic block, Mr. Houston stated that water and aquatic resources are of paramount importance to the successful implementation of any resource project, and this is especially so for the Grassy Mountain Project.⁴⁴⁹ Among the many topics this Panel must consider, the protection and recovery of the WSCT, and the management and mitigation of selenium deserve particular attention.

5.6.1 Non-Contact Water

317. In its August 28, 2020 submission, Benga described the processes it will employ to keep clean water clean and to appropriately treat contact water, which may contain elevated levels of selenium. Most water pumped from the mine pit or intercepted on the site will not be negatively affected due to leaching of minerals from the mined rock. This water will be safely returned to the environment.⁴⁵⁰

318. Non-contact water will be directed towards sedimentation ponds where any excess sediment will be removed using standard proven settling processes. Once tested and confirmed to be of suitable quality, this water will be returned to the environment through outflow points to Blairmore and Gold Creeks, according to standard best practices for water management.⁴⁵¹

319. This process is necessary to remove any elevated levels of sediment occurring in the non-contact water due to vegetation removal on the site.⁴⁵² All water will be assessed to ensure it is treated appropriately, either as clean water directed to the sedimentation ponds, or as contact water processed through the surge ponds and Benga's water treatment program.⁴⁵³

5.6.2 Contact Water

320. Contact water is water that percolates across mined waste rock in the presence of air (oxygen) and leaches elements like selenium into the water. Contact water may also contain nitrate and ammonia left over from the blasting process. Benga acknowledged in its August 28th submission that selenium and nitrates in contact water is a well-known problem in coal mines with similar geology in the region. As one of the first mines to be designed from the beginning to deal with this problem, the Grassy Mountain Project has a tremendous advantage over existing operations.⁴⁵⁴

⁴⁴⁹ CIAR #848 at 3268 – 3269.

⁴⁵⁰ CIAR #503 at PDF 11.

⁴⁵¹ CIAR #503 at PDF 11.

⁴⁵² CIAR #866 at 3670 – 3671.

⁴⁵³ CIAR #866 at 3671 – 3672.

⁴⁵⁴ CIAR #503 at PDF 12.

321. Benga has committed to place as much waste rock as possible in the mined-out pit and below groundwater levels where leaching of minerals will be negligible. We note that LLG witness Dr. McKenna referred to mining and pit-filling to maximize in-pit waste rock storage as a key design element to protect downstream resources.⁴⁵⁵ Benga agrees.
322. For waste rock that must be placed outside the mine pit, Benga has selected storage sites on relatively high ground and steeper slopes to minimize the amount of contact water and to facilitate its collection. These out-of-pit storage sites (the North, Central, and South Rock Disposal Areas (“RDAs”)) will be designed to promote movement of water out of the rock piles and into collection ditches and drainage to engineered surge ponds. Preparation of these sites will include grading to eliminate ponding, drainage ditches and, if necessary, selective sealing of fissures in the underlying rock.⁴⁵⁶
323. Benga will use the natural, steep topography of the North RDA, for example, to facilitate capture of contact water that percolates through the rock dump.⁴⁵⁷ Once captured, contact water will be collected in one of the surge ponds.⁴⁵⁸
324. Once collected in the dedicated surge ponds, contact water will be directed to a Saturated Backfill Zone (“SBZ”). Benga will manage oxygen levels in the SBZ to promote natural biological processes that will remove dissolved nitrate and selenium from the water. As Benga has previously pointed out, these are the same biological processes used in many commercial water treatment plants.⁴⁵⁹
325. Mr. Houston describes this process and some of the water modelling assumptions Benga made with respect to contact water and the out-of-pit rock dumps in his oral evidence at the hearing:

We will remove any organic materials, do additional grading to further improve drainage, and construct under-drains in the lower elevations. We will capture the natural drainage from this waste rock in the northwest surge pond, which will be in the same place where water naturally exits ... the area today. As the dumps are created, the waste rock will be compacted in layers to further encourage water exodus from the waste rock dump.

Our water quality modelling is based on humidity cell tests and regional experience to determine the propensity for selenium leaching from expected mass of waste rock. The model makes the simplifying assumption that 5 percent of the contact water may seep

⁴⁵⁵ CIAR #552 at PDF 9 – 10.

⁴⁵⁶ CIAR #503 at PDF 12.

⁴⁵⁷ CIAR #848 at 3276 – 3277.

⁴⁵⁸ CIAR #866 at 3672 – 3674.

⁴⁵⁹ CIAR #503 at PDF 12.

into the groundwater and immediately enter the creeks. The model further assumes that there's no attenuation of seepage or leaching rates with time.⁴⁶⁰

326. The water modelling assumptions summarized by Mr. Houston are conservative, given that:

- Benga has committed to maximize in-pit storage of waste rock and expects that quantities of ex-pit waste rock storage can be reduced from the quantities assumed for the application;
- Any seepage that does occur through groundwater will move relatively slowly at the rate of 1 to 2 metres per week, taking a number of years to reach the creeks;
- During the lengthy journey through the groundwater system, it is possible that selenium content will be attenuated naturally following a bio-chemical process similar to what Benga will be managing in the SBZ; and,
- Observations of selenium levels at some reclaimed mines have demonstrated a decrease in leaching of selenium over time.⁴⁶¹

327. Benga has committed to monitor groundwater down gradient from the RDAs, both immediately adjacent to the RDAs, and adjacent to the receiving environments, to detect if there is significant seepage through the groundwater. If there are any indications that seepage of contact water is greater than what is predicted, Benga will be alerted to this early through the monitoring wells. Benga has a number of tools for returning the water to acceptable seepage rates should this occur, including:

- Installation of seepage capture wells down gradient from the ex-pit dumps;⁴⁶²
- Reducing the quantity of water that infiltrates and percolates through the waste rock and encourage run-off by implementing more aggressive final slopes and revegetation of the ex-pit dumps; and,
- Promoting selenium reduction within the RDAs, using processes similar to those used within the SBZ.⁴⁶³

5.6.3 *Contact Water Treatment and Contingencies*

328. As noted above, Benga will employ its SBZ to treat contact water. The process that takes place in the SBZ – anaerobic biological reduction – is well known and well documented. Benga has provided several examples of its application in its filings on the Agency's registry. The general technology has been used for selenium treatment since the early 2000s and is becoming evermore common and better established

⁴⁶⁰ CIAR #848 at 3277.

⁴⁶¹ CIAR #848 at 3277 – 3278.

⁴⁶² CIAR #69, Addendum 5, Appendix A-3 at PDF 564.

⁴⁶³ CIAR #848 at 3278 – 3279.

internationally.⁴⁶⁴ Its specific application in a SBZ, in terms of flow rates and operating parameters, has been used by Teck since 2017.⁴⁶⁵

329. Teck's experience with SBZs has indicated that SBZs have advantages over other selenium and nitrate treatment options because they are less complex to operate, they have lower capital and operating costs, they treat larger volumes of water, use less energy, and they require smaller surface footprints.⁴⁶⁶ This aligns with Benga's review of SBZs and alternative methods of contact water treatment.
330. Benga has committed to implementing a field-scale pilot during the construction phase of the Project to develop the necessary engineering parameters required for the final SBZ design. This approach is in accordance with the recommendations of other hearing participants, including the KNC, who have highlighted the need for site-specific field scale tests to properly evaluate the SBZ design and operating parameters for the Project.⁴⁶⁷
331. Based on Benga's extensive review of similar technology installed at Teck and in other industrial settings, Benga is confident it will achieve treated selenium water concentrations lower than the 15 µg/L assumed for the Project's water balance models.
332. Benga has also discussed the alternative measures available to treat contact water should the SBZ not perform as predicted. If the SBZ shows signs of not performing as planned, Benga will implement a water treatment plant or gravel bed reactor in parallel or in series to achieve selenium concentrations below 15 µg/L for treated water.⁴⁶⁸
333. Benga estimates that implementing a gravel bed reactor is achievable in approximately one year, and a water treatment plant could be implemented within three years.⁴⁶⁹ Given the slow rate at which the buildup of selenium concentration will occur, there is ample time to assess the need for and implement a gravel bed reactor or water treatment plant. It is also important to keep in mind what Mr. Houston emphasized in his direct evidence at the hearing: all contact water on the Project site will be treated and returned to Blairmore Creek.⁴⁷⁰

⁴⁶⁴ CIAR #848 at 3295, 3299 – 3300.

⁴⁶⁵ CIAR #848 at 3294 – 3295.

⁴⁶⁶ CIAR #848 at 3279 – 3280.

⁴⁶⁷ CIAR #848 at 3280.

⁴⁶⁸ CIAR #854 at 3645 – 3646; CIAR #848 at 3280 – 3281.

⁴⁶⁹ CIAR #854 at 3645 – 3646.

⁴⁷⁰ CIAR #848 at 3276.

5.6.4 *The Site-Specific Selenium Water Quality Objective*

334. Benga has proposed an achievable and adequately protective site-specific water quality objective (“SSWQO”) for selenium in Blairmore Creek. Selenium concentrations in Blairmore Creek downstream of effluent discharge (at site BC-03) are predicted to range between approximately 4 and 9.5 µg/L. These levels are lower than the proposed site-specific benchmark for selenium in Blairmore Creek, which varies with waterborne sulphate concentrations.⁴⁷¹
335. As noted in Benga’s October 5, 2020 submission, ECCC reviewed the proposed SSWQO and concluded: “A sulphate-adjusted guideline for selenate is based on sound science, since sulphate and selenate compete for the same active (saturable, energy-requiring) transporter in algae”.⁴⁷² Benga agrees with that statement.
336. Teck’s saturated rock fill has achieved selenium concentrations of 15 µg/L and lower.⁴⁷³ This supports the assumption Benga has made in its water modelling for water leaving the SBZ.
337. Comparing the range identified in the SSWQO to existing site-specific, instream objectives for selenium in western Canada (all in British Columbia) demonstrates that Benga’s range for selenium concentrations in Blairmore Creek is protective. In smaller streams, similar to Blairmore Creek, permitted selenium objectives existing downstream of coal or metal mines are in the range of 10 to 20 µg/L. These comparisons provide greater certainty that the SSWQO for Blairmore Creek will protect aquatic life.⁴⁷⁴
338. Benga witness Mr. David DeForest explained that Alberta’s selenium release guideline of 2 µg/L is designed conservatively to protect waters with high bioaccumulation potential, such as lakes. In flowing water such as Blairmore Creek, selenium bioaccumulation potential is anticipated to be lower than the waters that are the basis for the release guideline. As ECCC witness Marie-Claude Sauvé said in her presentation to the Panel, fast-flowing, well oxygenated creeks and rivers (lotic environments), like Blairmore Creek, favour the formation of selenate.⁴⁷⁵ For this reason, the 2 µg/L guideline is overly conservative for the Grassy Mountain Project.⁴⁷⁶

⁴⁷¹ CIAR #571 at PDF 21.

⁴⁷² CIAR #542 at PDF 39 – 45; CIAR #571 at PDF 20.

⁴⁷³ CIAR #848 at 3305; CIAR #503 at PDF 42.

⁴⁷⁴ CIAR #571 at PDF 21.

⁴⁷⁵ CIAR #891 at 4658:1-7; CIAR #857 at PDF 7 (ECCC Hearing Presentation for Water Topics).

⁴⁷⁶ CIAR #848 at 3351 – 3352.

339. Sulphates mitigate the uptake of selenate into the food web by competing with selenate at the molecular level.⁴⁷⁷ This is not the case for selenite, which is why Benga has committed to ensuring that selenate will be the selenium species present.⁴⁷⁸
340. If necessary, Benga will employ an advanced oxidation process to convert selenite, and other species of selenium such as organo-selenium, to selenate.⁴⁷⁹ This would be employed to avoid the more aggressive bioaccumulation that occurs with selenite and organo-selenium, which are not mitigated by sulphate levels.⁴⁸⁰
341. Benga acknowledges that this process for selenium attenuation requires that sulphate levels be high enough to mitigate selenium. Benga's analysis demonstrates that sulphate concentrations of 700 milligrams per litre could be tolerated at the most sensitive endpoints with minimal effects. This would be confirmed through Benga's aquatics monitoring program.⁴⁸¹

5.6.5 *Water quality concerns regarding substances other than selenium*

342. Benga recognizes that water quality modelling results presented in its Eleventh Addendum to the EIA⁴⁸² predict exceedances of the Alberta guidelines for chromium, cobalt, ammonia, and nitrate for Blairmore and Gold Creeks.⁴⁸³ These results also predict exceedance of the Canadian environmental quality trigger value for phosphorous.⁴⁸⁴
343. Benga is additionally aware that predicted concentrations of various contaminants in the end-pit lake including selenium, arsenic, cadmium, cobalt, copper, nickel, and zinc exceed guidelines.⁴⁸⁵

⁴⁷⁷ CIAR #884 at 4415; CIAR #857 at PDF 8 (ECCC Hearing Presentation for Water Topics).

⁴⁷⁸ CIAR #571 at PDF 21.

⁴⁷⁹ CIAR #884 at 4410; CIAR #313, Addendum 11 at PDF 229.

⁴⁸⁰ CIAR #884 at 4415 – 4416.

⁴⁸¹ CIAR #884 at 4438.

⁴⁸² CIAR #313.

⁴⁸³ CIAR #884 at 4600 – 4601.

⁴⁸⁴ CIAR #884 at 4601.

⁴⁸⁵ CIAR #884 at 4601.

344. However, these exceedances are within the margins of safety in Benga’s Human Health Risk Assessment (“HHRA”)⁴⁸⁶ and are the product of conservative analyses.⁴⁸⁷ Given this conservatism and the results not revealing potential risk of adverse human health effects, it is unlikely that a metals treatment plant will be required.⁴⁸⁸ Gold Creek will not receive contact water aside from the minimal amount expected to occur through seepage. There will be more than sufficient time to review the need for a metals treatment facility to address discharges into Blairmore Creek, and in the unlikely event that facility is needed, Benga will install it.⁴⁸⁹
345. Benga has clarified that it does not expect ammonia to be a concern for the Grassy Mountain Project. Most ammonia is converted to nitrate before the water is treated and reaches the point of release. This process led Benga to focus on nitrate treatment.⁴⁹⁰
346. Unfortunately, the model used in Benga’s 2016 EIA contained an error regarding ammonia. The model did not identify ammonia as a potential water quality issue and so did not further refine source terms and other assumptions. It did not account for ammonia oxidation into nitrate and did not estimate guideline concentrations manually to account for pH and temperature.⁴⁹¹ Benga addressed this shortfall in the original EIA modelling in a response to undertaking #18 given in the hearing.⁴⁹²
347. Benga’s undertaking response confirmed that data from analogous mine sites indicate extensive oxidation of ammonia to nitrate. Adopting a conservative but realistic assumption that ammonia would account for 2% of all nitrogen associated with residual explosives produced revised model outputs. These model outputs predicted ammonia-N concentrations below 1 mg/L in Blairmore Creek, without accounting for attenuation that may occur in the SBZ.⁴⁹³ In light of this revised modeling, Benga is confident that ammonia is not a topic for concern for the Grassy Mountain Project.

5.6.6 Long Term Site Monitoring After Closure

348. Benga recognizes that water quality concerns will continue after mine closure and has committed to ensure continued monitoring and appropriate treatment until the site is self-sustaining.

⁴⁸⁶ CIAR #313 at PDF 1274.

⁴⁸⁷ CIAR #884 at 4603; CIAR #313 at PDF 1274.

⁴⁸⁸ CIAR #884 at 4604; CIAR #313 at PDF 1274.

⁴⁸⁹ CIAR #884 at 4605.

⁴⁹⁰ CIAR #856 at PDF 1 – 2.

⁴⁹¹ CIAR #856 at PDF 2.

⁴⁹² CIAR #856.

⁴⁹³ CIAR #856 at PDF 3 – 4.

349. Benga has committed to maintaining the Project site, selenium treatment equipment, and water management program until the site is self-sustaining.⁴⁹⁴ Modelling with regards to long-term water quality was performed conservatively, assuming no selenium attenuation, as attenuation is presently anticipated but unquantified.⁴⁹⁵
350. Benga recognizes and has accounted for the possibility that metal leaching may occur for an extended period after mine closure.⁴⁹⁶ Accordingly, Benga estimates a long-term care and custody cost of \$22 million.⁴⁹⁷ This estimate will be revised in response to reclamation work and monitoring done as the Project progresses.⁴⁹⁸
351. The water quality in the Oldman reservoir will be monitored either by Benga or with funding from Benga.⁴⁹⁹ This will include collecting baseline selenium data prior to mine construction.⁵⁰⁰

5.6.7 *Westslope Cutthroat Trout*

352. The WSCT (Saskatchewan-Nelson River populations) is listed as threatened in Schedule 1 of the SARA. Stressors on the local population of this species include competition from invasive Brook Trout and hybridization with invasive Rainbow Trout.⁵⁰¹ The *Recovery Strategy and Action Plan for the Westslope Cutthroat Trout (Oncorhynchus clarkii lewisi) Alberta Population (also known as Saskatchewan-Nelson River Populations) in Canada* (“RS-AP”)⁵⁰² was finalized in December of 2019. The RS-AP sets out where the SARA prohibitions apply with respect to individual WSCT and their residences (pursuant to SARA, ss. 32 and 33), and identifies critical habitat for the species (pursuant to SARA, s. 58(1).
353. The RS-AP states that “the SARA prohibitions relating to individuals only apply to genetically pure populations within the original Westslope Cutthroat Trout distribution.”⁵⁰³ A portion of the Gold Creek watershed contains a ≥ 99% genetically pure subpopulation of WSCT and the Blairmore Creek watershed contains a 95% – 99% genetically pure (near-pure) subpopulation of WSCT. As such, DFO confirmed in

⁴⁹⁴ CIAR #884 at 4508.

⁴⁹⁵ CIAR #884 at 4507 – 4508.

⁴⁹⁶ CIAR #884 at 4488.

⁴⁹⁷ CIAR #884 at 4490.

⁴⁹⁸ CIAR #884 at 4489 – 4490.

⁴⁹⁹ CIAR #884 at 4510.

⁵⁰⁰ CIAR #884 at 4510 – 4511.

⁵⁰¹ CIAR #42, Addendum 8 at PDF 876.

⁵⁰² CIAR #493 [RS-AP].

⁵⁰³ RS-AP at PDF 38.

its submission to the Panel that the population of WSCT in Blairmore Creek “are not afforded protection under SARA and the habitat is not identified as critical.”⁵⁰⁴

354. SARA protections apply to the genetically pure WSCT population found in a portion of Gold Creek. The RS-AP identifies WSCT critical habitat as including a section of Gold Creek’s mainstem, and potentially includes area within its tributaries.⁵⁰⁵ As described in further detail below, SARA permits issued under ss. 73 or 74 are required to impact the WSCT in ways that would otherwise be prohibited by SARA ss. 32, 33, and 58(1).
355. The RS-AP identifies the primary threats to WSCT as including invasive species, adverse effects on habitat, consumptive use, stocking, pollution, and climate change. The RS-AP also sets out multiple activities and land uses that cause adverse effects on WSCT habitat, such as habitat loss and fragmentation (associated with dams or linear disturbances), changes in flow, and sedimentation (associated with activities such as off-highway vehicle use, cattle grazing, forestry, and mining).⁵⁰⁶
356. As Mr. Houston stated at the hearing, the Gold Creek WSCT population’s genetic purity has been maintained in part because of a man-made barrier. This barrier prevents the invasion of Rainbow Trout, but also confines the local Gold Creek population to an area of suboptimal habitat.⁵⁰⁷
357. Research related to the Grassy Mountain Project has expanded the knowledge available on WSCT and the limitations of WSCT habitat in Gold Creek. We know that, while the RS-AP classifies Gold Creek as critical habitat, it is not good habitat. Multiple existing stressors directly threaten the survival of WSCT in Gold Creek, including:
- a. Historical mining and logging developments associated with changes in flow and sediment loading;⁵⁰⁸
 - b. Flooding events that have changed Gold Creek’s path near the Lille historical townsite;⁵⁰⁹
 - c. Current cattle grazing and stream crosses that cause ongoing riparian disturbance, changes to stream structure, and sediment loading;

⁵⁰⁴ CIAR #542 at PDF 235.

⁵⁰⁵ CIAR #571 at PDF 22; CIAR #493 at PDF 68.

⁵⁰⁶ CIAR #42, Addendum 8 at PDF 876; CIAR #493 at PDF 32 – 34.

⁵⁰⁷ CIAR #848 at 3269 – 3270; CIAR #42, Addendum 8 at PDF 464-465.

⁵⁰⁸ CIAR #42, Addendum 8 at PDF 876; CIAR #493 at PDF 33, 105.

⁵⁰⁹ CIAR #848 at 3269 – 3271.

- d. Prevalent recreational off highway vehicle fordings in both Blairmore and Gold Creek watersheds associated with surface erosion and run-off, fine sediment deposition, increased access, physical loss of habitat from use (i.e., footprint), and barriers to movement.⁵¹⁰

358. During cross-examination of Benga's witness panel, legal counsel for Timberwolf, Mr. Sawyer, suggested that the Fish Sustainability Index ("FSI") score for WSCT in Gold Creek is 0.8 (on a scale from 0 to 5).⁵¹¹ An FSI score of 1 is a population that is least sustainable. Mr. Sawyer appeared to insinuate that Gold Creek's FSI score of less than 1 is a good thing, when comparing it to the FSI scores for WSCT populations in other locations.⁵¹²
359. It is worth noting for the Panel that the Alberta Government's *Limitations and Caveats of Alberta's Fish Sustainability Index (FSI)*⁵¹³ has set out several limitations for the use of FSI scores. These limitations include that FSI is not representative of fine-scale processes and management, a lack of information on fish populations can mean the metric is largely subjective, and the accuracies of FSI assessments vary by location depending on when, where, and how fisheries data has been collected. As Mr. Cory Bettles stated in the hearing, Benga's assessment of Gold Creek and its WSCT population provides the Panel with a much more detailed and finer resolution view than FSI comparisons. The fact is that Gold Creek is known habitat for WSCT, but it is not good habitat, and it is not improving on its own over time. This fact was attested to by witnesses for several hearing participants, including Timberwolf, the Coalition, Benga, and Mr. Jim Rennie.
360. Benga has identified three known fragmentation sites where surface water becomes absent, completely disconnecting sections of Gold Creek at key times of the year. WSCT have been observed stranded in disconnected, isolated, and rapidly drying pools at these fragmentation sites. Benga has proposed to re-establish connectivity of Gold Creek to allow the WSCT to move freely along its length. As we will discuss below, Benga has proposed several other additional offsetting measures to improve the future outlook for the local WSCT populations in both Gold and Blairmore Creeks.⁵¹⁴

⁵¹⁰ CIAR #42, Addendum 8 at PDF 876; CIAR #493 at PDF 33, 34, 99, 100 and 105.

⁵¹¹ CIAR #866 at 3853:17-26, 3854:19-26, 3855:4-10.

⁵¹² CIAR #866 at 3855:21-26, 3856:1-6.

⁵¹³ CIAR #888.

⁵¹⁴ CIAR #848 at 3269 – 3271.

5.6.8 *Stream Flow in Gold and Blairmore Creeks*

361. Groundwater flows and upwellings are important features of WSCT habitat.⁵¹⁵ The RS-AP identifies changes in flow as a threat to WSCT, and as having the potential to destroy WSCT habitat.⁵¹⁶
362. Benga recognizes that pumping activities for the Project will decrease the water level and hydraulic head within the subsurface geology and affect downstream surface water base-flow in Gold and Blairmore Creeks.⁵¹⁷ Benga predicts an average 12% reduction in base flow in Gold Creek at the end of mine operations and an average 6% permanent reduction of base flow in Gold Creek after reclamation.⁵¹⁸ Blairmore Creek is predicted to see an average base flow reduction of 26% at the end of mine operations and an average 9% permanent base flow reduction.⁵¹⁹ However, it is also important to note that these estimates do not account for mitigations.
363. One of the key mitigations during operations is to pump intercepted pit groundwater into the sedimentation ponds for treatment and release to Gold and Blairmore Creeks, offsetting decreased water levels.⁵²⁰ The estimated reduction in groundwater flow will be largely offset by an increase in surface water flow.⁵²¹
364. Benga also anticipates increased flow in Blairmore Creek of less than 15% in the open water season.⁵²² This increase will be caused by additional contribution of flow from some Gold-Creek sub-catchments and by increased runoff caused by changes to the hydrological characteristics of the developed mine areas.⁵²³

⁵¹⁵ CIAR #866 at 3710.

⁵¹⁶ CIAR #493 at PDF 32, 98 – 99.

⁵¹⁷ CIAR #866 at 3731 – 3733; CIAR #42, Consultant Report 3 at PDF 48.

⁵¹⁸ CIAR #42, Consultant Report 3 at PDF 48.

⁵¹⁹ CIAR #42, Consultant Report 3 at PDF 48.

⁵²⁰ CIAR #42, Consultant Report 3 at PDF 49 – 50.

⁵²¹ CIAR #42, Consultant Report 4 at PDF 29 – 30.

⁵²² CIAR #42, Consultant Report 4 at PDF 32.

⁵²³ CIAR #42, Consultant Report 4 at PDF 30 – 31.

365. Benga's estimates account for potential summer drought caused by predicted warmer temperatures and earlier spring melt in the region.⁵²⁴ The anticipated changes in creek flows are well within the range of natural variability that would occur between wet and dry years.⁵²⁵
366. Benga will monitor and offset changes to stream flow and temperature. In preparing Consultant Report #3, "Grassy Mountain Coal Project Hydrogeology", Benga's consultants reviewed areas of groundwater discharged within part of the Project site. A baseflow analysis of creek-flow data to separate quick flow and base flow was also completed to determine groundwater contributions at several locations on Gold and Blairmore Creeks.⁵²⁶ This baseflow information provides a measure against which to monitor change.
367. Benga currently has six hydrometric stations on Gold Creek and four on Blairmore Creek. Additionally, there is a Water Survey of Canada hydrometric station on Gold Creek. These stations operate year-round and provide continuous information regarding water temperature and depth. Water depth data from these stations are translated into continuous flow data, and water temperature data is monitored continuously at a 15-minute resolution.⁵²⁷
368. Benga's Groundwater Management Plan will establish a network of monitoring wells. Upper and lower control limits will be established, representing the range of natural variation in the hydraulic heads.⁵²⁸ If hydraulic heads are reported below threshold values near the pit, indicating a drawdown magnitude greater than anticipated, Benga will address any resulting decrease in groundwater discharge to surface water through flow augmentation.⁵²⁹

5.6.9 *Fish Numbers*

369. Benga's proposed fisheries offsetting measures will provide the WSCT with greater security than present habitat conditions support.⁵³⁰ Current data on the relative abundance of WSCT in Gold and Blairmore Creeks demonstrate these populations are declining under existing conditions.
370. During the hearing, Benga provided the most recently updated estimates for fish relative abundance numbers in Gold and Blairmore Creeks.⁵³¹ Notwithstanding minor inconsistencies noted by Timberwolf's

⁵²⁴ CIAR #866 at 3878 – 3883

⁵²⁵ CIAR #42, Consultant Report 3 at PDF 50.

⁵²⁶ CIAR #866 at 3710 – 3711.

⁵²⁷ CIAR #866 at 3720 – 3721.

⁵²⁸ CIAR #42, Consultant Report 3 at PDF 65.

⁵²⁹ CIAR #42, Consultant Report 3 at PDF 65 – 66.

⁵³⁰ CIAR #848 at 3363.

⁵³¹ CIAR #843.

counsel, Mr. Sawyer,⁵³² the fish estimates show a clear downward trend in the local WSCT population in both Gold and Blairmore Creeks.

371. Despite slight year-to-year variations and corrections to Benga’s survey results, the updated numbers paint a clear picture. Present habitat conditions in Gold and Blairmore Creeks do not support WSCT recovery and survival.

5.6.10 *Critical Habitat and Permits Under Sections 73 and 74 of the SARA*

372. Identified WSCT critical habitat includes a portion of Gold Creek and its tributaries adjacent to the Project. This critical habitat has been identified using the “bounding box approach”, which means that the net is cast broadly to include areas within which critical habitat might be found. As the RS-AP states, “critical habitat is not comprised of the entire area within the identified boundaries but only those areas within the identified geographical boundaries where the described biophysical feature and function it supports occur.”⁵³³ Further research is required to identify additional habitat, refine the boundaries of the currently identified critical habitat, and refine knowledge of the biophysical functions, features, and attributes used to identify habitat that is critical to WSCT.⁵³⁴

373. The current species at risk status of the WSCT does not mean that the Project cannot proceed.⁵³⁵ Pursuant to the SARA, permits may be granted under s. 73 where effects on species at risk are “incidental” to the activity in question.⁵³⁶ In DFO’s own evidence, industrial projects such as Grassy Mountain usually satisfy the “incidental” category of activities as they are not directed at the species itself.⁵³⁷

374. The competent minister may issue a s. 73 permit if: (1) they are satisfied that all reasonable alternatives have been considered; (2) all feasible measures will be taken to minimize the impact; and, (3) the activity will not jeopardize the survival or recovery of the species. The legislation explicitly allows for a proponent to disturb a SARA-listed species and its critical habitat provided that, among other things, the activity will not jeopardize the survival or recovery of the species.

375. Some hearing participants have taken the view that the DFO does not have discretion to issue Benga a permit for its activities affecting WSCT critical habitat in Gold Creek. This position is founded in an

⁵³² CIAR #881 at 4284 – 4288.

⁵³³ RS-AP at PDF 29 and 53.

⁵³⁴ RS-AP at PDF 29 – 30.

⁵³⁵ CIAR #571 at PDF 22.

⁵³⁶ CIAR #891 at 4631, as stated by DFO witness Stephanie Martens.

⁵³⁷ CIAR #891 at 4697:5-19.

incorrect and narrow interpretation of the discretion granted in s. 73 of the *SARA*. It is also important to keep in mind that DFO is not making a s. 73 permit determination in this hearing, nor is this Panel.

376. Activities that affect an aquatic species at risk or its critical habitat may be permitted pursuant to ss. 73 and 74 of the *SARA*, and these permits are not rare.⁵³⁸ Benga has provided several examples of such permits issued for activities relating to Alberta coal mines, pipelines, hydroelectric generations facilities, electricity transmission, and stream alterations. As described in further detail above, these permitted activities range from the clearing of Whitebark pine in Banff National Park to allow for an electrical supply line to serve a gondola⁵³⁹ to the clearing of 27,000 trees within critical caribou habitat in Jasper National Park for an ATCO transmission line and substation,⁵⁴⁰ construction of a trenchless pipeline in Nooksack dace critical habitat,⁵⁴¹ and the infilling and manipulation of critical fish habitat in southern Alberta creeks, among a number of other examples.⁵⁴²
377. Benga's proposed offsets will improve WSCT habitat by re-establishing connectivity, removing the threat of invasive species in a section of Gold Creek, and improving both in-stream and riparian habitat. These positive contributions to the Gold Creek habitat will promote *SARA*'s overarching purposes of "preservation, recovery and management of wildlife species of special concern".⁵⁴³ The contributions further demonstrate that the Project's effects on WSCT are incidental to the Project, and will not jeopardize the survival or recovery of the species.

5.6.11 *Efficacy of, and Support for, the Proposed Offsets*

378. Benga has identified invasive species and adverse effects on critical habitat as two main categories of site-specific threats to WSCT and has proposed offsetting measures to counterbalance these threats. As Mr. Houston stated in oral evidence in the water topic block, the draft Fisheries Offsetting Plan ("FOP") that includes these proposed measures is not final, but it aligns with the criteria and conditions set out in the RS-AP and offsetting guidance provided by the DFO. The FOP will be finalized through continued consultation with DFO and its provincial counterparts.

⁵³⁸ CIAR #571 at PDF 22.

⁵³⁹ CIAR #571 at PDF 22, citing Species at risk public registry, "Explanation for issuing permit (BNP-840) pursuant to the provisions of section 74 of *SARA* - Whitebark Pine" (issued 2015), online: <species-registry.canada.ca/index-en.html#/permits/1757-1>.

⁵⁴⁰ CIAR #838.

⁵⁴¹ CIAR #886.

⁵⁴² CIAR #571 at PDF 22 – 23; CIAR #887.

⁵⁴³ *Podolsky v Cadillac Fairview Corp*, 2013 ONCJ 65.

5.6.11.1 Aquatic Habitat Enhancement and Creation

379. Benga has proposed measures to convert low value habitat in the mainstem of upper Gold and Blairmore Creeks to higher quality habitat, enhancing WSCT productivity and persistence. This will involve creating overwintering pools and re-establishing critical habitat connectivity.⁵⁴⁴
380. The availability of adequate wintering habitat promotes WSCT over-winter survival. The key features of this habitat are low velocity areas, formed of deep pools, complex woody debris, and interstitial cover. The upper reaches of Gold and Blairmore Creeks are deficient in deep pools that provide this habitat. Coalition witness Allan Locke correctly noted in his report that “[i]t is well known that overwintering habitat, in particular deep pool habitat in east slopes streams is naturally limiting to fish populations.”⁵⁴⁵ The creation of additional pool habitat in Gold Creek will provide both overwintering and secondary summer rearing habitats.⁵⁴⁶
381. Benga’s studies have identified eleven candidate sites for creation and enhancement of overwintering pools on Blairmore and Gold Creeks. The highest priority has been given to the headwaters and upper ford on Gold Creek and to sites on Blairmore Creek which are situated far from existing overwintering habitat.⁵⁴⁷ Benga’s design for overwintering pools is based on the features that exist in overwintering habitat already used by WSCT in Blairmore and Gold Creeks as well as the findings from other research studies in similar systems.⁵⁴⁸ The candidate sites currently consist of shallow riffle-tertiary pool complexes. These sites will be transformed into deep pools through techniques such as narrowing the channel, excavation, and directing the flow with boulders and large woody debris.⁵⁴⁹
382. Benga also proposes to repair a section of Gold Creek near the historic Lille townsite where the original channel is damaged and disappears into many braided sections, forming a seasonal barrier to fish. Re-establishing seasonal flow in this section of Gold Creek will provide additional, high quality WSCT habitat, improve access to upstream and downstream habitat, and promote increased gene flow. This is expected to improve WSCT productivity and sustainability.⁵⁵⁰
383. This offsetting measure will involve diverting flow into the original main channel by removing debris from the upstream portion of the original channel at the top of each braided section and installing armor to divert stream flow into the original channel. This will provide significant benefit to WSCT without

⁵⁴⁴ CIAR #42, Addendum 8 at PDF 889.

⁵⁴⁵ CIAR #553 at PDF 141.

⁵⁴⁶ CIAR #42, Addendum 8 at PDF 889.

⁵⁴⁷ CIAR #42, Addendum 8 at PDF 894 – 895.

⁵⁴⁸ CIAR #42, Addendum 8 at PDF 898 – 899.

⁵⁴⁹ CIAR #42, Addendum 8 at PDF 901.

⁵⁵⁰ CIAR #42, Addendum 8 at PDF 890.

requiring extensive in-stream works. It is expected to enhance the habitat suitable for spawning and overwintering and will offer some rearing potential. Increasing the extent and availability of suitable habitat in this portion of Gold Creek, which has no competition from invasive species,⁵⁵¹ will help maintain a self-sustaining and persistent population of WSCT.⁵⁵² Benga has also identified two additional seasonal barrier sites where this type of offsetting may be possible.⁵⁵³

384. Benga has also proposed enhancements to riparian zones by planting native species and through soil amendments which will transform low functioning vegetation areas to more structurally and functionally diverse vegetation.⁵⁵⁴ Benga has identified candidate sites and will prepare planting plans for each using native plant species in consideration of site-specific features to create multiple layers of native vegetation. Benga's plans account for TEK resources and promotion of biodiversity.⁵⁵⁵
385. Soil reclamation activities will establish reclamation material capable of supporting adequate moisture retention, nutrient supply, and an erosion-resistant vegetation cover. A seed mix will then be applied to prevent erosion and establishment of noxious or invasive plants. Seed mixes have been developed through the C&R Plan, in line with the *Native Plant Revegetation Guidelines for Alberta* (Native Plant Working Group 2000) and discussed with the AEP land manager.⁵⁵⁶

5.6.12 Witness Evidence

5.6.12.1 Fisheries and Oceans Canada ("DFO")

386. The DFO's evidence has demonstrated a high degree of turn-over in the DFO team assigned to this Project. This has led to inconsistent communication with Benga regarding expectations for responding to updates in the finalized RS-AP and WSCT habitat mitigations. DFO's evidence also suggests a general lack of familiarity with the Grassy Mountain Project site.
387. DFO did acknowledge in its evidence that it has granted permits under ss. 73 and 74 of the *SARA* for industrial activities, and that the *SARA* is consistently interpreted as authorizing such permits. DFO further acknowledged at the hearing that the identification of critical habitat in the RS-AP for WSCT is not precise, and only shows the area within which critical habitat may exist.

⁵⁵¹ This section of Gold Creek is above a permanent barrier which prevents migration of Brook Trout.

⁵⁵² CIAR #42, Addendum 8 at PDF 905.

⁵⁵³ CIAR #848 at 3273:11-17.

⁵⁵⁴ CIAR #42, Addendum 8 at PDF 908.

⁵⁵⁵ CIAR #42, Addendum 8 at PDF 919

⁵⁵⁶ CIAR #42, Addendum 8 at PDF 920.

388. Benga has engaged in extensive consultation with the DFO with respect to this Project beginning in 2015.⁵⁵⁷ Many of the DFO personnel involved with the file up to 2019 have been shifted within the Department. In 2018 and 2019, Ms. Ross, Mr. Shpeley, and Mr. Watson were identified as contacts for the DFO's participation in the EIA. These individuals are no longer assigned to work on this Project.⁵⁵⁸ Mr. Janowicz, another individual referred to in the communication log filed by Benga in CIAR #571, has also been placed on another DFO file.⁵⁵⁹ The DFO witness panel at the hearing took over the file in the spring of 2019⁵⁶⁰ and none have been to the Grassy Mountain Project site for the purpose of evaluating the Project.⁵⁶¹
389. All communication between the DFO and Benga since August 2018, when the JRP was struck, is reflected in the Agency's registry. From the time the JRP was established, the DFO has never requested a meeting with Benga.⁵⁶²
390. Despite extensive consultation over the last four years, during which Benga took appropriate steps to engage the DFO and respond to IRs⁵⁶³ the DFO first advised of its conclusions and recommendations regarding WSCT habitat in its September 21, 2020 submission.⁵⁶⁴ This DFO submission did not align with the consultation that had already taken place regarding the Project, and was made inappropriately late in the regulatory process, just weeks before the hearing.⁵⁶⁵
391. The current DFO staff assigned to the Project had several earlier opportunities to advise Benga of their concerns. The DFO issued IRs to Benga on October 24, 2019, shortly before the final RS-AP for WSCT was issued in December. DFO witness Ms. Phalen prepared these IRs as technical assessor and noted in

⁵⁵⁷ CIAR #571 at PDF 25 – 27.

⁵⁵⁸ CIAR #891 at 4736, 4741 – 4742.

⁵⁵⁹ CIAR #891 at 4737 – 4738.

⁵⁶⁰ CIAR #891 at 4744.

⁵⁶¹ CIAR #891 at 4737. Martyn Curtis visited the site once in 2016 for another purpose relating to the investigation of a reported sedimentation event in Gold Creek: see CIAR #897 for details on the outcome of the AER's investigation.

⁵⁶² CIAR #891 at 4739 – 4740.

⁵⁶³ CIAR #571 at PDF 27.

⁵⁶⁴ CIAR #542.

⁵⁶⁵ CIAR #571 at PDF 23.

her oral evidence at the hearing that a draft version of the RS-AP for WSCT was posted at that time⁵⁶⁶ However, these IRs did not request that Benga update its critical habitat assessment.⁵⁶⁷

392. There was also no request for Benga to update its plans as they relate to WSCT critical habitat in the DFO IRs issued on May 4, 2020. By that time, the RS-AP for WSCT had been finalized.⁵⁶⁸ In May 2020, the DFO stated it could not comment on the sufficiency and merit of Benga's modelling. As stated in Benga's October 5, 2020 submission, the DFO's failure to address concerns earlier in the regulatory process is highly disappointing.⁵⁶⁹
393. Benga considers that the DFO's own policy regarding permits issued under s. 73 of the *SARA* is consistent with Benga's proposed impacts, mitigations, and offsets concerning WSCT habitat. DFO staff acknowledged that further site-specific information is required to determine which sites within the area indicated in the RS-AP are critical habitat.⁵⁷⁰ The DFO has issued permits under the *SARA* authorizing activities in not just potential critical habitat, but known critical habitat.
394. For example, as we have already discussed above: in 2020, the DFO issued a s. 35(2)(b) *Fisheries Act* authorization, also acting as a *SARA* s. 73 permit (per *SARA*, s. 74), for activities related to the construction of a trenchless pipeline crossing under two tributaries to the Brunette River in New Westminster, BC. This permit authorized the proponent to clear approximately 1000 square meters of riparian vegetation designated as critical habitat for the endangered Nooksack dace. A condition of the authorization was that the proponent implement planned offsetting measures that included the creation of a total of 1,020 square meters of Nooksack dace instream riffle habitat (an offsetting ratio of a little more than 1:1).⁵⁷¹
395. Similarly, in 2019 DFO issued a *SARA* s. 73 permit relating to the proposed works of the Coal Valley Mine, Mercoal West Development, and the diversion of a Mercoal Creek tributary to facilitate coal mining. The specific activity authorized by the permit included various measurement tactics and monitoring to help with future management decisions. The activity had the potential to result in the incidental harm, harassment, or death of Rainbow Trout (Athabasca River populations), which is listed as

⁵⁶⁶ CIAR #891 at 4744 – 4745.

⁵⁶⁷ CIAR #891 at 4745.

⁵⁶⁸ CIAR #891 at 4746 – 4747.

⁵⁶⁹ CIAR #571 at PDF 26-27.

⁵⁷⁰ CIAR #891 at 4747 – 4748.

⁵⁷¹ CIAR #886.

endangered under the SARA.⁵⁷² Ms. Phalen was the senior biologist in the DFO's review of this permit and Mr. Curtis oversaw the review from a position of senior management.⁵⁷³

396. It is important for the JRP to be mindful of the fact that the question of whether a SARA s. 73 permit should be issued is not a question before this Panel. Benga has not yet applied for a SARA permit. Benga will be applying to DFO for such a permit should it receive this Panel's approval to proceed with the Project. DFO has stated in its most recent submissions to the Panel that more work will be needed on Benga's proposed mitigations and offsetting measures before a SARA s. 73 permit will be considered.
397. Benga acknowledged at the hearing that there needs to be further study and engineering design work completed in collaboration with DFO and AEP to further develop Benga's current offsetting approach to meet SARA and Fisheries Act requirements. Benga has committed to embark on that work immediately following this EA review to allow for early implementing of the offsetting proposals.⁵⁷⁴
398. DFO has presented in its submissions the recommendation that offsetting measures should be implemented and verified before the Project proceeds.⁵⁷⁵ Panel member Mr. O'Gorman asked DFO at the hearing "how that would work in real life?" – as to whether Benga would need to implement its offsetting measures and monitor for several years before ever constructing the Project?⁵⁷⁶ Clearly, such a condition for Benga would be untenable.
399. Should the Project proceed, conditions for offsetting and monitoring will be determined in discussions between Benga and DFO in the lead-up to obtaining the requisite Fisheries Act authorizations and SARA permits. This would occur after DFO's team visits the Project site and further work is completed by both sides.
400. To the extent DFO relies on the assessment report it published on the first day of the water topic block, *Assessment of the Ecological Impact of the Grassy Mountain Coal Project on Westslope Cutthroat Trout in the Blairmore and Gold Creek Watersheds, Alberta*,⁵⁷⁷ this Panel should give that report no weight in this joint review. Submitting new evidence during the hearing to prop up an earlier submission (especially when the new evidence is contributed to by the same witnesses who drafted the earlier submission) is extremely unorthodox. This sort of filing can be likened to what the Supreme Court of Canada has referred

⁵⁷² CIAR #887.

⁵⁷³ CIAR #891 at 4749.

⁵⁷⁴ CIAR #848 at 3275:15-22.

⁵⁷⁵ CIAR #542 at PDF 267: DFO Recommendation #15.

⁵⁷⁶ CIAR #891 at 4812:25-26, 4813:1-21.

⁵⁷⁷ DFO, *Assessment of the Ecological Impact of the Grassy Mountain Coal Project on Westslope Cutthroat Trout in the Blairmore and Gold Creek Watersheds, Alberta* (2020), Sci Advis Sec Sci Resp 2020/052.

to as “bootstrapping”, a term for circular arguments in which a questionable piece of evidence essentially “picks itself up by its own bootstraps” in an attempt to corroborate itself.⁵⁷⁸

5.6.12.2 *Marc Bowles and Sara Doherty – CPAWS*

401. Marc Bowles and Sara Dougherty provided expert evidence on behalf of CPAWS in the water topic block. Mr. Bowles’ and Ms. Dougherty’s report notes areas in which Benga may need to employ contingencies. However, the report also acknowledges key points in which they appear to agree with Benga’s proposed plans for the Grassy Mountain Project.
402. In their report, Mr. Bowles and Ms. Dougherty state that Benga has clearly identified the need for post-closure groundwater monitoring. They go on to say that if monitoring programs do not show that conditions are stable, installing additional groundwater capture and remediation systems (i.e. adapting the plans based on measured results) will be required.⁵⁷⁹ Benga agrees.
403. Mr. Bowles and Ms. Dougherty also acknowledged the opportunity to use SBZs as proven selenium attenuation technology: “SBZs are currently in use at a nearby coal mining facility (Elk Valley, which is run by Teck Resources). The SBZs have been effective for selenium removal from water at that facility thus far, which provides some case study evidence that this system will work under controlled conditions (Teck 2019a).”⁵⁸⁰ Benga agrees with their additional statement that “A Site-specific pilot test would provide better information concerning the risk of failure with respect to selenium removal efficiency.”⁵⁸¹ As stated at the hearing, Benga will be conducting such a site-specific test.

5.6.12.3 *Coalition Witnesses*

404. Dr. Jon Fennell, Dr. John Post, Allan Locke, and Lorne Fitch all provided evidence for the Coalition.

5.6.12.3.1 *Dr. Jon Fennell*

405. Dr. Fennell gave evidence in his report and at the hearing that raised several red flags with respect to the reliability of that evidence.

⁵⁷⁸ See e.g. *R v Khelawon*, 2006 SCC 57 at para 100; *R v Badgerow*, 2014 ONCA 272 at paras 170-171, leave to appeal to SCC refused.

⁵⁷⁹ CIAR #555 at PDF 526.

⁵⁸⁰ CIAR #555 at PDF 528.

⁵⁸¹ CIAR #555 at PDF 529.

406. Dr. Fennell claimed that trellis drainage patterns are associated with faults and fractures.⁵⁸² However, Dr. Fennell’s evidence provided absolutely no authority for that association.⁵⁸³
407. While giving evidence at the hearing on November 24, 2020, Dr. Fennell undertook to provide a textbook or peer-reviewed paper that confirms his view that “it is a fact in geology that this type of drainage pattern is typified by faulting and fracturing”.⁵⁸⁴ His response to this undertaking confirmed that there is no authority for an association between trellis drainage and faulting or fracturing. Dr. Fennell acknowledged “the co-occurrence of folding and faulting does not exactly meet the textbook definition of ‘trellis drainage’.”⁵⁸⁵ Instead, Dr. Fennell’s undertaking response provided definitions of “parallel” and “rectangular” drainage patterns, which note that these distinct drainage patterns are characterized by faulting.⁵⁸⁶
408. As Mr. Secord highlighted at the hearing, Dr. Fennell’s calculations estimated an impact distance of drawdown in groundwater of between 1,500 and 2,400 meters.⁵⁸⁷ However, Benga witness Ms. Nancy Grainger explained in cross-examination that the larger impact area suggested in Dr. Fennell’s report does not account for the tilted angle of the Project site, which results in the drawdown extending over a much smaller area than it would in a flatter setting.⁵⁸⁸
409. Dr. Fennell also asserted that the EIA’s assumption of 28% of mean annual precipitation as the recharge input into the SRK groundwater numerical model is high, given documented mountain front/block recharge estimates.⁵⁸⁹ For this assertion, Mr. Fennell cited a paper by Wilson and Guan entitled “Mountain-block hydrology and mountain-front discharge”.⁵⁹⁰ As Ms. Grainger explained to the Panel, that paper is not applicable to the Grassy Mountain Project site. In their study, Wilson and Guan reviewed sites with considerably lower precipitation and substantially different geology.⁵⁹¹ Furthermore, the paper

⁵⁸² CIAR #903 at 5015 – 5020.

⁵⁸³ CIAR #903 at 5015 – 5020.

⁵⁸⁴ CIAR #903 at 5019 – 5020.

⁵⁸⁵ CIAR #924 at PDF 3.

⁵⁸⁶ CIAR #924 at PDF 3 – 4.

⁵⁸⁷ CIAR #854 at 3550 – 3552.

⁵⁸⁸ CIAR #854 at 3552; CIAR #553 at PDF 78.

⁵⁸⁹ CIAR #553 at PDF 74.

⁵⁹⁰ CIAR #553 at PDF 74: J.L. Wilson & H. Guan, “Mountain-block hydrology and mountain-front recharge” in F. Phillips, J. Hogan & B. Scanlon, Eds, *Groundwater recharge in a desert environment, The southwestern United States* (AGU: Washington, DC, 2004).

⁵⁹¹ CIAR #854 at 3522.

identified a range of percent recharge, which is in fact within the range used in the SRK groundwater numerical model.⁵⁹²

410. Also concerning was the fact that Dr. Fennell reached far beyond his expertise as a hydrogeologist and hydrochemist when he spoke of Canada's climate commitments, land planning, and trade-offs.⁵⁹³ Dr. Fennell acknowledged that he is not aware of any Canadian policies which discourage the use of steel or the use of metallurgical coal to make steel.⁵⁹⁴
411. In Benga's view, the above concerns should raise significant doubts about the reliability of Dr. Fennell's evidence.

5.6.12.3.2 Dr. John Post

412. Dr. John Post told the Panel he was retained to prepare his report sometime around July of 2020.⁵⁹⁵ His report is less than three pages long, including the three references he cited.⁵⁹⁶ These three pages make no reference to a single document filed on the Agency's registry for the Project EIA. It is not clear whether Dr. Post reviewed the EIA at all. The brevity and lack of specificity in Dr. Post's report suggests that at best, Dr. Post undertook a cursory desktop review of just enough documentation in the EIA to support the conclusions he had drawn before ever looking at the Project's details.
413. At the hearing, Dr. Post introduced new evidence in a PowerPoint presentation, including calculations not included in his report.⁵⁹⁷ The Panel should give this evidence very little, if any, weight, given its inappropriate introduction.
414. One thing asserted by Dr. Post in his evidence was that, in his opinion, overwintering habitat is not a limiting factor for WSCT in Gold Creek, so creating additional overwintering habitat will not help the local WSCT populations.⁵⁹⁸ This does not align with fellow Coalition witness Allan Locke's evidence that "[i]t is well known that overwintering habitat, in particular deep pool habitat in east slopes streams is naturally limiting to fish populations."⁵⁹⁹

⁵⁹² CIAR #854 at 3522.

⁵⁹³ CIAR #903 at 5023 - 5025; CIAR #553 at PDF 90.

⁵⁹⁴ CIAR #903 at 5023.

⁵⁹⁵ CIAR #903 at 4987 - 4988.

⁵⁹⁶ CIAR #553 at PDF 219 - 222.

⁵⁹⁷ CIAR #903 at 4988.

⁵⁹⁸ CIAR #903 at 4982.

⁵⁹⁹ CIAR #553 at PDF 141.

5.6.12.3.3 Allan Locke

415. Mr. Locke reviewed the instream flow assessment performed for Benga by Mr. Dan Bewley and Mr. Cory Bettles.⁶⁰⁰ Benga appreciates Mr. Locke's contributions to the EIA's review and to the discussion which occurred during the hearing.⁶⁰¹
416. In particular, Mr. Locke recommended that an ecosystem base flow be developed using the information that Benga has already collected and will collect in the future, through discussions between Benga, the provincial and federal regulators, and interested parties.⁶⁰² This ecosystem base flow, combined with the percent of flow reduction fraction, can then be used to set an environmental flow recommendation for Blairmore and Gold Creeks which will address the low flow periods in late summer and winter.⁶⁰³ Benga generally agrees with Mr. Locke's recommendation.⁶⁰⁴

5.6.12.3.4 Lorne Fitch

417. Lorne Fitch's evidence drew attention to the fact that WSCT currently face several stressors including hybridization and habitat degradation.⁶⁰⁵ He acknowledged that legacy mine workings, linear features, recreation, logging, and livestock grazing and crossings have all potentially contributed to the degraded riparian areas of Gold and Blairmore Creeks.⁶⁰⁶ Mr. Fitch also raised doubts that Benga could be successful in its proposal to restore and improve riparian areas as part of its draft FOP.⁶⁰⁷ As he put it in his report:

Restoring riparian vegetation, especially on sites compromised by present and previous land use activities, with existing invasive plant establishment, compacted soils, poor soil development, unstable stream banks and a lack of shallow ground water is a herculean task, fraught with failure.⁶⁰⁸

418. In stark contrast to his report and oral evidence, Mr. Fitch in cross-examination touched upon the many examples of successful riparian restoration presented by Alberta's "Cows and Fish" program. In his role with Cows and Fish, Mr. Fitch helped author a document entitled *Caring for the Green Zone: Riparian*

⁶⁰⁰ CIAR #881 at 4173.

⁶⁰¹ CIAR #881 at 4173.

⁶⁰² CIAR #553 at PDF 139 – 141.

⁶⁰³ CIAR #553 at PDF 139 – 141.

⁶⁰⁴ CIAR #881 at 4173 – 4175.

⁶⁰⁵ CIAR #903 at 4930.

⁶⁰⁶ CIAR #903 at 4943, 4997-4998; CIAR #553 at PDF 178, 182.

⁶⁰⁷ CIAR #903 at 4998; CIAR #553 at PDF 185.

⁶⁰⁸ CIAR #553 at PDF 185.

Areas and Grazing Management - Third Edition (“*Caring for the Green Zone*”).⁶⁰⁹ This document includes a brief statement on the destructive impact that cattle grazing has on riparian areas: “Hoof power can’t be underestimated. Cattle exert about 10 times the weight or pressure per unit area as a D9 cat with a blade.”⁶¹⁰

419. Despite the destructive nature of cattle grazing, *Caring for the Green Zone* goes on to provide several examples of successful riparian restoration following degradation due to livestock.⁶¹¹ These examples include the increase of forage production⁶¹² along a creek in southeastern Alberta from about 600 lbs/acre to 6000 lbs/acre over a five year period by reducing cattle grazing; the recovery of woody vegetation over a nine-year period to re-establish a healthy riparian area in the grazing-degraded Mosquito Creek watershed;⁶¹³ and the restoration of riparian vegetation, including willows, poplars, and other woody species by using fences to prohibit livestock grazing.⁶¹⁴
420. Mr. Fitch and the Cows and Fish program have proven how quickly and effectively land managers can restore riparian areas. Benga has proposed to similarly restore and improve riparian areas to benefit WSCT in Gold and Blairmore Creeks.
421. Mr. Fitch provided the Panel with several examples of historic mining incidents between the early 1970s and the early 1990s that had negative impacts on streams.⁶¹⁵ In cross-examination, Mr. Fitch agreed that historical grazing practices have also had negative impacts on aquatic and riparian areas across the western United States and Canada, especially up to the late 1980s.⁶¹⁶ However, Mr. Fitch was also quick to acknowledge that rangeland management practices have evolved substantially between the 1960s and 1970s up to now.⁶¹⁷

⁶⁰⁹ CIAR #896: Lorne Fitch, Barry Adams & Kerri O’Shaughnessy, *Caring for the Green Zone: Riparian Areas and Grazing Management - Third Edition* (Lethbridge, Alberta: Cows and Fish Program, 2003) [*Caring for the Green Zone*].

⁶¹⁰ *Caring for the Green Zone* at PDF 12.

⁶¹¹ *Caring for the Green Zone* at PDF 32 – 44.

⁶¹² *Caring for the Green Zone* at PDF 35: “Forage production is a reflection of the recovery of the riparian sponge that traps and holds moisture”.

⁶¹³ *Caring for the Green Zone* at PDF 36.

⁶¹⁴ *Caring for the Green Zone* at PDF 38.

⁶¹⁵ CIAR #553 at PDF 168-170; CIAR #903 at 4936 – 4937.

⁶¹⁶ CIAR #903 at 5003 – 5005.

⁶¹⁷ CIAR #903 at 5005:18-26, 5006:1-14.

422. As in the case with agriculture, the coal mining industry has evolved its practices over the last 50 years. Practices that existed in the 1970s through the early 1990s will not be the same practices used in the 2020s and 2030s on the Grassy Mountain Project.
423. Mr. Fitch further expressed in his report and in his oral evidence that he is concerned about the potential impacts that the Project's noise will have on fish in Gold and Blairmore Creeks.⁶¹⁸ Mr. Fitch said in cross-examination that he had reviewed Benga's Noise Impact Assessment ("NIA") in Consultant Report #2, but he did not assess the mitigations proposed by Benga to minimize potential noise from the Project.⁶¹⁹
424. Mr. Fitch also said he did not read the report completed by Mr. James Farquharson, the witness retained by the Coalition to review Benga's NIA. He would therefore have been unable to take into account Mr. Farquharson's statement that Benga's "Noise Impact Assessment indicates the operations are predicted to comply with the Permissible Sound Levels at all receptors assessed for each of the three mining years examined", and the fact that Mr. Farquharson agrees "with the general mitigation measures described in Benga's Noise Impact Assessment for blasting and vehicle back-up alarm systems."⁶²⁰
425. It is noteworthy that 100-meter undisturbed buffers will be maintained between Project development and Gold and Blairmore Creeks. That is a far cry from the 150 centimeter-distance between the sound sources and the fish subjects tested in the study cited by Mr. Fitch for the proposition that noise may impact fish cardiac activity.⁶²¹ Furthermore, Mr. Fitch did not acknowledge in his report or oral evidence the significant difference between sounds created within water that may impact fish, and sounds created outside of water that must transmit into the water in order to reach aquatic life (as the case would be for sounds emitted from the Project).
426. Noise created on the Project site that would have to transmit through air, vegetation, and rock, and then into the waters of Gold or Blairmore Creeks is unlikely to ever reach and impact any aquatic life. As Benga's noise expert witness pointed out in a separate topic block, water is acoustically reflective. This is why NIAs generally assign a ground absorption coefficient of zero to water bodies.⁶²²

⁶¹⁸ CIAR #903 at 4939 – 4940.

⁶¹⁹ CIAR #903 at 5010:7-12.

⁶²⁰ CIAR #553 at PDF 341-342.

⁶²¹ CIAR #553 at PDF 180; CIAR #903 at 5007 – 5008.

⁶²² CIAR #919 at 5383:14-26, 5384:1-7.

5.6.12.4 *David Mayhood – Timberwolf*

427. Timberwolf retained Mr. David Mayhood to provide a written report and give oral evidence at the hearing.⁶²³
428. In considering Mr. Mayhood’s evidence, it is important for the Panel to take into account that Mr. Mayhood is also a Director of Timberwolf.⁶²⁴ As a Director, Mr. Mayhood plays a role in determining Timberwolf’s public position on projects, including the Grassy Mountain Project.⁶²⁵ Mr. Mayhood has previously made submissions to the Panel with respect to the Project as President of Timberwolf, and through his company, Freshwater Research Limited, on behalf of Timberwolf. It was after making these submissions on Timberwolf’s behalf that Timberwolf retained Mr. Mayhood to provide a report to this Panel.⁶²⁶ This conflict of interest impedes Mr. Mayhood’s ability to fulfill his acknowledged role of providing “accurate, objective, and independent advice to the Joint Review Panel”.⁶²⁷
429. The content of Mr. Mayhood’s evidence also fails in some respects to reflect a truly objective assessment. Rather than engage in a review of Benga’s proposed mitigations, Mr. Mayhood merely dismissed Benga’s proposed offsets, stating that they “miss the point”.⁶²⁸ As acknowledged during cross-examination, Mr. Mayhood failed to review available literature on the topics of salmonid habitat offsetting and habitat restoration to inform his opinion on Benga’s proposals before drafting his report.⁶²⁹
430. Mr. Mayhood included in his PowerPoint presentation at the hearing a Google Earth image of the eastern slope of Grassy Mountain, with arrows drawn on the image in the same red font as the text along the top, reading “Critical habitat”.⁶³⁰ In cross-examination, Mr. Mayhood clarified that these red arrows he drew do not in fact set out locations of confirmed WSCT critical habitat. He acknowledged that there has been no identification of the biophysical functions, features, or attributes for any WSCT life stages described in the RS-AP at any of those locations.⁶³¹

⁶²³ CIAR #558 at PDF 7 – 74.

⁶²⁴ CIAR #907 at 5128, 5152.

⁶²⁵ CIAR #907 at 5152.

⁶²⁶ CIAR #907 at 5153 – 5155.

⁶²⁷ CIAR #907 at 5125.

⁶²⁸ CIAR #907 at 5132.

⁶²⁹ CIAR #907 at 5156 – 5159.

⁶³⁰ CAIR #865 at PDF 8.

⁶³¹ CIAR #907 at 5160.

431. Mr. Mayhood further asserted in oral evidence that “It’s the proposed mine that is the greatest threat to Gold Creek’s cutthroat population.”⁶³² However, he also stated that even at the current time, “[t]he Gold Creek population is showing evidence of an abrupt decline in abundance”.⁶³³ His report spoke of the current pressures on WSCT in Gold Creek due to low winter flows, historical industrial development, habitat damage, angling pressure, and hybridization.⁶³⁴ The fact is that the Project is not the greatest threat to WSCT – it is a proposal that could reverse the local population’s downward trajectory.
432. Lastly, Mr. Mayhood’s report and oral evidence included legal argument regarding the correct interpretation and application of the *SARA*.⁶³⁵ Mr. Mayhood is not a lawyer and is not qualified to give legal opinion. His evidence in this regard should be given no weight.

5.6.12.5 *Dr. Gord McKenna – LLG*

433. Dr. Gord McKenna gave evidence on behalf of the LLG. It is important for the Panel to appreciate, first that Dr. McKenna promotes his own, alternative approach as a geotechnical engineer and, second, does not have personal expertise in surface water capture.
434. As noted in the vegetation topic block, Dr. McKenna founded the Landform Design Institute.⁶³⁶ This organization’s website describes landform design as “an emerging process to reconstruct mine landscapes with confidence and pride”.⁶³⁷
435. Dr. McKenna’s organization aims to make landform design routine in the mining industry by 2030.⁶³⁸ In keeping with this aim, Dr. McKenna recommended that Benga’s designs for out-of-pit dumps for source control of selenium be reworked using the observational method as part of landform design.⁶³⁹ While this recommendation may have been relevant in determining the ToRs and the Agency’s Guidelines for the review of the Grassy Mountain Project, it does not assist the Panel at this stage. LLG did not recommend the use of landform design in any comments or submissions made prior to retaining Dr. McKenna.⁶⁴⁰

⁶³² CIAR #907 at 5132:7-9.

⁶³³ CIAR #907 at 5144.

⁶³⁴ CIAR #558 at PDF 17, 26, 29.

⁶³⁵ CIAR #907 at 5131 – 5132; CIAR #558 at PDF 10, 11, 16 – 17, 30 – 33, 40, 42.

⁶³⁶ CIAR #848 at 3254 – 3255; CIAR #907 at 5207.

⁶³⁷ CIAR #848 at 3255; CIAR #907 at 5207.

⁶³⁸ CIAR #848 at 3255.

⁶³⁹ CIAR #907 at 5205.

⁶⁴⁰ CIAR #907 at 5205 – 5206.

436. In his evidence regarding water, Dr. McKenna acknowledged that he would not design systems for capture of surface water himself. Rather, he suggested that a proponent would generally retain a hydrologist or hydrogeologist for this aspect of a mining project and use a team of professionals to do such design work.⁶⁴¹ That is precisely the approach Benga has taken.

5.6.12.6 *Jim Rennie*

437. Mr. Jim Rennie gave evidence at the hearing with respect to the number of fish he has caught and released from Gold Creek over multiple decades of flyfishing. He has noticed a general decline in his catch rate over the last 30 years, with a drastic decline in catches experienced between 2015 and 2017.⁶⁴² Mr. Rennie believes the decline in fish catches in Gold Creek is due to a sedimentation incident documented to have occurred on July 17, 2015. Mr. Rennie believed at the time he drafted his submission to the Panel that the sedimentation was due to an “uncontrolled groundwater flow encountered by Benga during coal exploration drilling.”⁶⁴³

438. Benga sent Mr. Rennie a copy of the AER’s *Investigation Summary Report* (“*AER Report*”) relating to the Gold Creek sedimentation incident.⁶⁴⁴ The *AER Report* is publicly available on the AER’s website, but Mr. Rennie had not seen the *AER Report* until Benga provided him with a copy as an aid to cross the day before he gave evidence at the hearing. Mr. Rennie noted in cross-examination that the *AER Report* was useful because “it clears up a lot of misconceptions that people may have had, myself included, about how this all started out and where it came from”.⁶⁴⁵

439. The *AER Report* found that the Gold Creek sedimentation event occurred after a heavy rainfall event, and was the result of surface-water runoff that flowed off the historical disturbed area on Grassy Mountain.⁶⁴⁶ The *Report* concluded there was no noncompliance of AER requirements, and there was no evidence to show coal and loose coal fines came from areas under Benga’s control.⁶⁴⁷ There were no provincial or federal enforcement actions resulting from the incident.

440. The *AER Report* stated further that there was evidence of scouring and erosion in the coal seam connected to the sedimentation incidents, suggesting that erosion and transport of sediments and coal into Gold

⁶⁴¹ CIAR #907 at 5205.

⁶⁴² CIAR #527 at PDF 7 – 10.

⁶⁴³ CIAR #527 at PDF 4.

⁶⁴⁴ CIAR #897, AER, *Investigation Summary Report – 2015-020: Benga Mining Limited, operating as Riversdale Resources* (March 8, 2017) (“*AER Report*”).

⁶⁴⁵ CIAR #903 at 5075:14-23.

⁶⁴⁶ *AER Report* at PDF 6.

⁶⁴⁷ *AER Report* at PDF 10.

Creek has been happening for some time.⁶⁴⁸ The *Report* notes that Benga’s review of the area indicates that these kinds of incidents have likely been occurring since the historical mining operations were abandoned in the 1960s. Mr. Rennie expressed that he is aware of “slumping events and downslope transportation of debris coming off ... Grassy Mountain for a long time”.⁶⁴⁹

441. Mr. Rennie expressed his concern that mining activities could mobilize materials in the legacy waste piles currently situated on Grassy Mountain, resulting in future sedimentation events in Gold Creek. The truth is, however, that Mr. Rennie’s evidence and the *AER Report* demonstrate that the un-reclaimed mining disturbance on Grassy Mountain is an existing and continuing threat to Gold Creek and the WSCT, even in the complete absence of the Grassy Mountain Project. Without action, erosion and sedimentation events will continue.
442. Benga has committed to reclaiming the entirety of the legacy mining disturbance that falls within the Project’s footprint, which would be a net-positive for the area.⁶⁵⁰ Benga is also well aware of the historical spoil piles within the Project footprint, and agrees with Mr. Rennie that significant care must be taken in during construction, operations, and reclaiming those piles properly.

⁶⁴⁸ *AER Report* at PDF 10.

⁶⁴⁹ CIAR #903 at 5077:13-23.

⁶⁵⁰ See e.g. CIAR #503 at PDF 4.

5.7 Dust, air quality, greenhouse gas emissions, noise, and light

5.7.1 Dust

443. In his opening remarks on the topic of fugitive dust, Mr. Houston highlighted that Benga's air quality models show dust or total suspended particle levels remaining close to current levels in Blairmore with the Project's implementation. Levels close to the MPB will stay within air quality guidelines over the course of the Project's construction and operation.⁶⁵¹

444. Benga has committed to several strategies to effectively mitigate dust concerns associated with the Project. These include:

- Containing the coal processing plant within an enclosed area and handling all coal material via covered conveyors;
- Minimizing dust generated while transferring coal from the conveyor to the stockpile using luffing stackers to decrease the coal's drop height and drop time; and,
- Minimizing fugitive dust generation at the rail load out by employing full cladding on the sides of the loadout, a structure to create a wind shelter, a moveable discharge chute, and applying tackifier onto the coal surface of loaded railcars.⁶⁵²

445. Benga has also acknowledged that road dust is typically one of the largest sources of fugitive emissions from mining operations.⁶⁵³ As such, Benga has committed to systematically apply water to haul and plant access roads; apply environmentally-friendly chemical dust suppressants to roads as necessary; and, retain snow cover on roads during winter months where doing so does not compromise safety, in order to mitigate dust emissions from the mine's roads.⁶⁵⁴

5.7.1.1 Wind

446. Hearing participants have emphasized the unique wind conditions in the Crowsnest Pass and have proposed alternative models for assessing dust emissions under high wind conditions. Benga has undertaken studies and modelling using approaches recommended for air quality monitoring⁶⁵⁵ to

⁶⁵¹ CIAR #907 at 5253.

⁶⁵² CIAR #505 at PDF 14 – 15; CIAR #907 at 5253 – 5254.

⁶⁵³ CIAR #919 at 5411.

⁶⁵⁴ CIAR #505 at PDF 14 – 15.

⁶⁵⁵ CIAR #919 at 5460.

understand the wind conditions created by Grassy Mountain's topography, and to ensure that its emission assessments are conservative.⁶⁵⁶

447. For the purpose of year-round assessment, Benga relied on information from the ECCC Crowsnest and Beaver Mines stations and the Alberta Environment dataset from 2002 to 2006 to develop its meteorological data for dispersion modelling.⁶⁵⁷ Additionally, two on-site monitoring stations recorded measurements during periods of two and three months in 2014 to provide information regarding how the local terrain influences wind. While not representative of a year-round assessment, these on-site stations provided site-specific information to help inform Benga's modelling.⁶⁵⁸

5.7.1.2 Evidence of Dr. James Young – LLG

448. The LLG retained Dr. James Young to provide comments on air quality and meteorology relating to the Grassy Mountain Project. Dr. Young's review of the Project was purely abstract and restricted to his desktop, as he has never been to the Project site, nor to the Crowsnest Pass.⁶⁵⁹ When asked at the hearing, Dr. Young guessed that he has not been to Alberta in at least a decade.⁶⁶⁰

449. In his report, Dr. Young states that particle emissions increase to the third power of wind speed and that dispersion increases by the inverse of wind speed.⁶⁶¹ This approach was put to Benga witness Mr. Rudolph during cross-examination. Mr. Rudolph clarified that regulators including ECCC and the United States Environmental Protection Agency ("USEPA") do not recommend this calculation of Dr. Young's as an approach to emission modelling.⁶⁶²

450. At the hearing, Dr. Young relied upon a paper by Duane Ono and Scott Weaver titled "Quantifying Particulate Matter Emissions from Windblown Dust Using Realtime Sand Flux Measurements"⁶⁶³ ("Ono & Weaver") to reinforce his position that Benga's assessment underpredicts dust emissions.⁶⁶⁴ LLG counsel Mr. Fitch also put Ono & Weaver to Benga's witness panel on cross-examination.

⁶⁵⁶ Wind-driven dust modelling is recorded in CIAR #42, Consultant Report 1, Table 4.2.7 at PDF 45.

⁶⁵⁷ CIAR #919 at 5468 – 5469.

⁶⁵⁸ CIAR #919 at 5467 – 5469.

⁶⁵⁹ CIAR #943 at 6228 – 6229.

⁶⁶⁰ CIAR #943 at 6228:25-26, 6229:1-2.

⁶⁶¹ CIAR #919 at 5455; CIAR #552 at PDF 55 – 56.

⁶⁶² CIAR #919 at 5455 – 5456.

⁶⁶³ CIAR #911.

⁶⁶⁴ CIAR #943 at 6188:15-24.

451. Mr. Rudolph pointed out Ono & Weaver has no application to the Project site and includes unverifiable assumptions, which may be incorrect.⁶⁶⁵ The Ono & Weaver study compared wind erosion estimates produced using the Dust ID model and the USEPA's AP-42 methodology. The study concluded that, in a 285 square kilometer dried, saline California lake bed, the USEPA method overestimated emissions in low wind speed conditions and underestimated emissions under high wind speeds.⁶⁶⁶ The authors studied a large, flat, unvegetated area approximately 850 times larger than the Grassy Mountain Project's 0.35 square kilometer windblown dust area.⁶⁶⁷ The authors note that this area is the largest single source of particulate matter pollution in the United States.⁶⁶⁸ The Project site's size, terrain, climate, and vegetation are completely distinct from the Ono & Weaver study site.

452. As Mr. Rudolph explained in cross-examination, the literature and the regulatory requirements for industrial air quality assessments on smaller scales do not use the Ono & Weaver approach to estimate vertical emissions.⁶⁶⁹ Benga's assessment of fugitive dust is consistent with approaches recommended for assessing proposed development projects in Canada.

5.7.2 *Air Quality*

453. Benga has demonstrated its commitment to air quality monitoring and to transparency over the Project's lifetime. Benga installed an air-monitoring station at the site of the proposed rail loadout in Blairmore in 2019. This station has now collected more than one year of baseline data. Benga will continue to monitor air quality at this site, or at another site agreed upon between the MCNP and regulators, over the Project's lifetime.⁶⁷⁰ Air quality monitoring data from this station will be made available to regulators, the MCNP, Indigenous communities, and the public through routine reports or data transfers in a manner to be agreed upon by the MCNP and regulators.⁶⁷¹

454. Information collected from the Blairmore station allowed Benga to produce a revised model approach for NO₂ predictions for receptors in the RSA established in the Project's Air Quality Assessment. The revised model's output demonstrates that the results of all air quality model approaches taken over the course of

⁶⁶⁵ CIAR #919 at 5457 – 5458.

⁶⁶⁶ CIAR #919 at 5458.

⁶⁶⁷ CIAR #919 at 5458 – 5459.

⁶⁶⁸ CIAR #911 at PDF 2.

⁶⁶⁹ CIAR #919 at 5459.

⁶⁷⁰ CIAR #571 at PDF 14; CIAR #907 at 5254.

⁶⁷¹ CIAR #907 at 5254 – 5255.

the EA process are reasonably consistent with each other and consistent with one year of monitored NO₂ concentrations at the air monitoring station in Blairmore.⁶⁷²

455. ECCC has confirmed that Benga's updated modelling information satisfies its previous recommendation for modelling NO₂,⁶⁷³ and that ECCC is satisfied with modelling for fine particulate matter (PM_{2.5}).⁶⁷⁴ With these recommendations satisfied, ECCC suggests that the focus going forward should be on air quality monitoring.⁶⁷⁵ Benga agrees.

5.7.2.1 Sparwood Livability Study

456. On the topic of air quality, LLG counsel Mr. Fitch asked Benga's witnesses to comment on the "Sparwood Livability Study" ("SLS").⁶⁷⁶ The SLS is a report prepared for the District of Sparwood Council as a condition of Alberta Environmental Assessment Certificate #M16-01 for the Teck Baldy Ridge Extension project. The SLS includes subjective responses collected from Sparwood residents, as well as some objective data.
457. It is important to note that the SLS is generally very positive, both in objective findings and in subjective views expressed by participants. A review of the study as a whole demonstrates that individual, negative perceptions of air quality do not reflect objective measures. The study also omits factors relevant to dramatic spikes in particulate matter, most notably seasonal wildfires.
458. On topics beyond air quality, the SLS provides a glowing review. 82.1% of respondents agreed or strongly agreed that Sparwood has high quality and safe drinking water. In 2018, no district wells exceeded site performance objectives for selenium, nitrate, sulphate or cadmium levels.⁶⁷⁷
459. Regarding Sparwood's economy, the study shows a high median household income of \$103,538, compared to the BC average of \$69,995.⁶⁷⁸ The SLS finds that Sparwood has grown significantly as a result of mining expansion and, although the regional economy is resource dependent, tourism is also expanding gradually. This tourism is based in outdoor recreation including hiking, biking, camping, fishing, and motorsports.⁶⁷⁹ 77.1% of survey participants agreed or strongly agreed that Sparwood has a

⁶⁷² CIAR #907 at 5255; CIAR #571, Appendix "B"; CIAR #42, Consultant Report 1.

⁶⁷³ CIAR #941 at 5985. See ECCC Recommendation in CIAR #542, Section 6.1 at PDF 50.

⁶⁷⁴ CIAR #941 at 5986.

⁶⁷⁵ CIAR #941 at 5986.

⁶⁷⁶ CIAR #920.

⁶⁷⁷ CIAR #920 at PDF 7, 35.

⁶⁷⁸ CIAR #920 at PDF 14.

⁶⁷⁹ CIAR #920 at PDF 14.

high-quality trail system, promoting active living and tourism.⁶⁸⁰ Overall, 67.9% of community respondents agreed or strongly agreed that Sparwood is an ideal place to live.⁶⁸¹

5.7.3 GHG Emissions

460. Benga has developed a draft GHG Management Plan which aims to manage and ultimately reduce GHG emissions, particularly CO₂ and methane associated with the Project. This plan also provides a credible means of tracking emissions to enable ongoing, continuous improvement.⁶⁸²
461. Having identified its mine fleet as a key emission source, Benga has targeted procurement and operational measures in its draft GHG Management Plan to reduce GHG emissions associated with the fleet.⁶⁸³ Benga has committed to acquiring mobile mine fleet equipment that meets TIER 4 standards.⁶⁸⁴ Benga has further committed to optimizing haul distances, limiting haul speeds, and servicing haul equipment on a routine basis. Benga will regularly upgrade its fleet and consider the potential to replace some of the diesel fleet with electric powered units.⁶⁸⁵
462. As part of its commitment to ongoing monitoring, Benga will track fuel use associated with its fleet and apply appropriate factors to estimate emissions. Benga will track its fuel orders placed and received via invoices and individual vehicles' fuel use. The fuel consumed by blasting will be tracked via invoices for ammonium nitrate and fuel oil ("ANFO") purchased and received. In all Requests for Proposals, Benga will require that its contractors track fuel consumption on the Project site.⁶⁸⁶
463. While Benga acknowledges that it cannot make decisions on behalf of its commercial partners,⁶⁸⁷ Benga will pursue additional GHG emission reductions associated with rail and marine transport by requesting that CP Railway and Benga's marine contractor use low emitting units to transport Grassy Mountain's coal product.⁶⁸⁸

⁶⁸⁰ CIAR #920 at PDF 34.

⁶⁸¹ CIAR #920 at PDF 15.

⁶⁸² CIAR #907 at 5255 – 5256; CIAR #42, Addendum 10, Package 1 at PDF 112

⁶⁸³ CIAR #907 at 5257; CIAR #42, Addendum 10, Package 1 at PDF 113.

⁶⁸⁴ CIAR #928 at 5673 – 5674.

⁶⁸⁵ CIAR #928 at 5676.

⁶⁸⁶ CIAR #42, Addendum 10, Package 1 at PDF 115.

⁶⁸⁷ CIAR #928 at 5664.

⁶⁸⁸ CIAR #907 at 5256; CIAR #42, Addendum 10, Package 1 at PDF 113

464. Benga's review of the Project's expected GHG emissions demonstrates that the Project will contribute a small percentage of Alberta's and Canada's total GHG emissions annually. Consultant Report #1 estimated total direct GHG emissions from the Project would comprise approximately 0.14% of Alberta's 2013 GHG emissions and 0.05% of Canada's 2013 GHG emissions.⁶⁸⁹ Those estimates are based on GHG emissions predicted for year 19 of the Project, which is the year predicted to have the maximum GHG emissions. The Project's contributions to Alberta's and Canada's total GHG emissions are anticipated to be lower in all other years of the Project's life.
465. Benga's commitment to continuous improvement with respect to GHG emissions⁶⁹⁰ will allow Benga to identify and act on opportunities to out-perform its currently anticipated emissions. During the hearing, Mr. Houston provided the example of diesel combustion fleet equipment. As new, better performing equipment becomes available during the Project's life, Benga will update its fleet to reduce GHG emissions.⁶⁹¹ Similarly, as Alberta's electricity supply moves away from coal, changes in the future power mix of the electricity grid could reduce the Project's lifetime GHG emissions by about 10%. This estimate is conservative, as it is based on coal fired power being replaced by natural gas rather than renewable sources. Benga is also following potential local sources for wind and solar generated electricity, which are becoming increasingly cost effective.⁶⁹²
466. Accounting for present commitments, ongoing monitoring, and continuous improvement, the Grassy Mountain Project has the potential to become a leading low-emitter among Canadian metallurgical coal mines.

5.7.4 Noise

5.7.4.1 Noise Impact Assessment and Mitigations

467. Benga acknowledges that noise levels near the Project site will increase from present levels.⁶⁹³ However, Benga's NIA indicates that noise levels will remain below AER guidelines for all assessed residential receptors.⁶⁹⁴
468. To minimize noise impacts on residential receptors, Benga has committed to noise mitigations where necessary. These mitigations include routing the haul road on the western slope of the Project site and

⁶⁸⁹ CIAR #919 at 5511 – 5512; CIAR #42, Consultant Report 1 at PDF 47.

⁶⁹⁰ CIAR #42, Addendum 10 at PDF 116 – 117.

⁶⁹¹ CIAR #919 at 5512 – 5513.

⁶⁹² CIAR #42, Addendum 10, Package 1 at PDF 113 – 114.

⁶⁹³ CIAR #907 at 5257.

⁶⁹⁴ CIAR #42, Consultant Report 1 at PDF 36.

constructing a berm along the eastern most areas of the South RDA.⁶⁹⁵ The berm will be approximately 10 meters high at its smaller sections.⁶⁹⁶ Benga's modelling has shown that, while engineering and construction specifics for this mitigation are not finalized at this stage, a berm is a viable means of mitigating noise at this location.⁶⁹⁷

469. Benga has additionally committed to continue monitoring noise associated with the Project over its lifetime. Noise monitoring studies will be done within the first year of operations and thereafter at five-year intervals. These studies will confirm that actual noise levels are consistent with results modelled in the EIA and will be used to re-model anticipated noise based on updated mine plans.⁶⁹⁸ If parameters such as equipment numbers and the mine plan change significantly from what was assumed in the NIA, Benga will undertake a new NIA and consider further mitigations.⁶⁹⁹ Consistent with AER Directive 038 and in addition to the periodic monitoring surveys, Benga will also complete a comprehensive sound level survey should it receive noise complaints.⁷⁰⁰

470. Coalition witness James Farquharson of FDI Acoustics reviewed Benga's NIA and provided the following comments in his report:

The Noise Impact Assessment indicates the operations are predicted to comply with the Permissible Sound Levels at all receptors assessed for each of the three mining years examined....

FDI Acoustics acknowledges the process followed in the preparation of the Noise Impact Assessment follows similar strategies employed by FDI Acoustics when assessing the noise impact of mining operations...

FDI Acoustics agrees with the general mitigation measures described in the Noise Impact Assessment for blasting and vehicle back-up alarm systems.⁷⁰¹

471. Mr. Farquharson also agreed with Benga that it should complete noise monitoring studies at five-year intervals over the Project's life.

⁶⁹⁵ CIAR #919 at 5389 – 5392.

⁶⁹⁶ CIAR #919 at 5392.

⁶⁹⁷ CIAR #919 at 5393 – 5394.

⁶⁹⁸ CIAR #571 at PDF 15; CIAR #919 at 5406.

⁶⁹⁹ CIAR #919 at 5407 – 5408.

⁷⁰⁰ CIAR #919 at 5407.

⁷⁰¹ CIAR #553 at PDF 341-342.

5.7.4.2 Residential Receptors in the NIA

472. An issue raised by the Coalition during the hearing was the location of the residential receptors used in Benga's NIA.
473. Benga determined the location of its residential receptors in line with AER Directive 038, which specifies the level of permanency and the duration of occupancy to qualify a dwelling as a receptor.⁷⁰² The assessed residential receptors include all permanently and seasonally occupied dwellings.⁷⁰³ AER Directive 038 defines a seasonally occupied residence as being a fixed residence occupied for six weeks per year or more, not being mobile, and having some kind of foundation or features of permanence. Examples of these features include electrical power, domestic water supply or a septic system.⁷⁰⁴ Based on the criteria, Benga identified residential receptors on lands owned by Mr. Emard and the Watmough family for the purpose of the NIA.⁷⁰⁵
474. To provide a conservative assessment of noise effects on residential receptors, Benga's NIA considered the worst-case scenario for the equipment used at the South RDA, resulting in the highest noise levels possible for residential receptors.⁷⁰⁶ Noise impacts associated with work on the eastern edge of the rock dump represent the worst possible noise effects on residential receptors. These impacts will be intermittent, not continuous, and will only occur during the first five to six years of the Project. After this time, the eastern edge of the South RDA will be in reclamation.⁷⁰⁷
475. For the purpose of the NIA, equipment was assumed to be working on the far east side of the South RDA, at the closest possible location to the two residential receptors. In this worst-case scenario, an area of intact vegetation will remain between the equipment location and the residences and will function to absorb noise with an absorption coefficient of 0.7.⁷⁰⁸ In this scenario, vegetation will be removed from the area west of the equipment, but this removal will not impact noise levels at residences located to the east.⁷⁰⁹

⁷⁰² CIAR #919 at 5350 – 5251.

⁷⁰³ CIAR #919 at 5352 – 5356.

⁷⁰⁴ CIAR #907 at 5322 – 5323. AER Directive 038 states that a summer cottage may be an example of a seasonally occupied dwelling, while a holiday trailer would not.

⁷⁰⁵ CIAR #919 at 5356.

⁷⁰⁶ CIAR #919 at 5367.

⁷⁰⁷ CIAR #919 at 5396.

⁷⁰⁸ CIAR #919 at 5364 – 5365, 5369.

⁷⁰⁹ CIAR #919 at 5369.

476. Notably, stripping activity for the removal of vegetation will take place only during daytime hours.⁷¹⁰ Benga acknowledges that this activity will expose a hard rock surface that could potentially result in higher levels of sound propagation during the first year of the Project, depending on the location of the sound source. However, the increased distance from the residential receptors and the intervening elevation contours mean that noise levels will remain lower than in the worst-case scenario, which assumed mining equipment was located at the east side of the South RDA, closer to the residential receptors.⁷¹¹
477. Despite their assertions to the contrary at the hearing, Ms. Gilmar and the Donkersgoeds do not have structures on their lands east of the Project that qualify as permanent or seasonal dwellings as defined by AER Directive 038.⁷¹² Legal counsel for the Coalition suggested that there is a cabin on Ms. Gilmar's lands within the MPB and a mobile home on the Donkersgoeds' property. However, these participants did not provide evidence to demonstrate that the structures built, and the use of those structures, satisfy the criteria for residential receptors under Directive 038.⁷¹³ There are no established residential receptors located within the MPB.⁷¹⁴
478. Coalition witness Mr. Wallis produced a map in the proceeding where he attempted to indicate the location of alleged residences on Ms. Gilmar's and the Donkersgoeds' lands.⁷¹⁵ It is noteworthy that Mr. Wallis said in oral evidence that he initially mapped a barn on Ms. Gilmar's property as a residence, having apparently confused the barn and the structure Ms. Gilmar actually alleges to be a cabin residence.⁷¹⁶ The evidence suggests that neither the barn nor the alleged cabin are dwellings.
479. Despite their limited permanence and occupancy, Benga recognizes that the structures on Ms. Gilmar's and the Donkersgoeds' lands are neighbours to the Grassy Mountain Project. Benga will work with Ms. Gilmar and the Donkersgoeds to mitigate noise should concerns arise.⁷¹⁷

5.7.5 *Light*

480. As Mr. Houston stated at the hearing, Benga recognizes that artificial lighting has potential to impact not only people, but also wildlife and bird habitat. Even small amounts of light may have effects.⁷¹⁸ To avoid

⁷¹⁰ CIAR #919 at 5373.

⁷¹¹ CIAR #919 at 5373 – 5377.

⁷¹² CIAR #907 at 5321.

⁷¹³ CIAR #907 at 5330.

⁷¹⁴ CIAR #907 at 5322.

⁷¹⁵ CIAR #934.

⁷¹⁶ CIAR #941 at 6126:21-26, 6127, 6128:1-5.

⁷¹⁷ CIAR #919 at 5395 – 5396, 5399.

⁷¹⁸ CIAR #928 at 5656.

and minimize these impacts, Benga has committed to implementing the International Dark Sky Association's Dark Sky Lighting Principles ("Dark Sky Principles").⁷¹⁹

481. The Dark Sky Principles provide practical and reasonable guidance for lighting. They state that all lights should have a clear purpose; should be directed only to the locations where they are needed; should not be brighter than necessary; should be controlled and used only when useful; and, should be a warm colour where possible.⁷²⁰
482. In keeping with these principles, Benga will design Project lighting in a manner that minimizes outdoor light pollution.⁷²¹ Lighting will be directed to areas of the Project site which must be lit for safety reasons and will not be applied to buffer zones intended to preserve habitat connectivity.⁷²² Shielded lights will focus light on the work area and minimize light emissions while allowing Benga to use the lowest number of lights necessary.⁷²³ Developments in lighting technology will also allow Benga to select appropriate wavelengths and to accurately target lighting.⁷²⁴

⁷¹⁹ CIAR #907 at 5257 – 5258.

⁷²⁰ CIAR #928 at 5648.

⁷²¹ CIAR #907 at 5257 – 5258.

⁷²² CIAR #928 at 5655 – 5656.

⁷²³ CIAR #928 at 5656.

⁷²⁴ CIAR #928 at 5657 – 5658.

5.8 Wildlife, including migratory birds and species at risk, wildlife health, and human health risk assessment

5.8.1 Wildlife

5.8.1.1 Overview

483. Benga stated in its August 28, 2020 submission that, as in the case with many, if not all, development projects, some wildlife habitat loss and changes in wildlife movement due to avoidance can be expected to occur with the Grassy Mountain Project.⁷²⁵ This is especially true of the active mining area. However, as Mr. Houston provided in his opening statement in this topic block, it is expected that through the Project's progressive reclamation and extensive mitigation plans, long-term project effects on habitat availability, wildlife movement, mortality risk, wildlife abundance, and wildlife diversity will be effectively mitigated.⁷²⁶

484. Key mitigations targeting wildlife include:

- The progressive site reclamation plan, which will ensure early establishment of a variety of vegetation species and communities suitable for wildlife, and will encourage structural complexity within the regenerating forests;
- Forested buffers adjacent to creeks and linear corridors will be preserved to provide habitat and connectivity around the site;
- The existing legacy mining disturbance will be incorporated into the development and reclamation plans for the Project so there is a net gain in habitat at the end of the Project;
- Pre-disturbance surveys will be conducted along the edges of all areas to be cleared during Project development to determine the occurrence of any important wildlife habitat features;
- Vegetation clearing activities will occur outside the April 15 to August 15 period to avoid disrupting nesting migratory and resident songbirds and raptors;
- Pre-disturbance denning (bears, marten, etc.) and roosting (bats) surveys will be conducted prior to vegetation clearing and other high-disturbance activities; and,
- Wildlife crossing locations will be adopted (ravines, gullies) or constructed (underpasses, culverts) along the conveyor belt route to promote east-west movement of mammals. Monitoring of these crossings will be conducted and design alterations completed if crossing detection rates are not satisfactory.⁷²⁷

⁷²⁵ CIAR #503 at PDF 14.

⁷²⁶ CIAR #907 at 5258:18-26.

⁷²⁷ CIAR #503 at PDF 14 – 15; CIAR #907 at 5259 – 5260.

485. During cross-examination by legal counsel for the Coalition, Benga witness John Kansas described some of the similarities and differences between the Grassy Mountain Project area, and the Gregg River Mine, the Luscar Mine, the Obed Mountain Mine, the Coal Valley Mine, and the Grande Cache Mine. While acknowledging that each of those mine sites is unique as compared to each other, and to Grassy Mountain, those sites provide successful examples of wildlife species returning to the landscape following mine reclamation.
486. Mr. Kansas has years of first-hand experience working on the wildlife-aspects of some of these other coal mines. As he said, the experience on those sites is that it is very much possible to achieve success, the biggest of which is “being able to bring back wildlife biodiversity” and to bring back multiple wildlife species quickly.⁷²⁸ In a response to undertaking #24, Benga provided a copy of the Ungulate, Small Mammal, Avifauna, Amphibian Assessment completed for the Mercoal West - Yellowhead Tower Mine Extension Project (“MW-YT Wildlife Report”).⁷²⁹ This assessment provides an example of wildlife species returning to the reclaimed Coal Valley Mine area, within which 162 wildlife species were identified.⁷³⁰
487. While several hearing participants expressed their concern that different wildlife species may occupy the Project site in the short term following reclamation, they largely failed to compare this to natural succession that follows any disturbance, natural or otherwise. Benga has stated clearly in its C&R Plan that the Project footprint, once revegetated, will evolve through stages of initial revegetation to self-sustaining ecosystems consisting of mature vegetation communities typical of the subalpine and montane subregions of the Rocky Mountain natural region. Biodiversity and the specific wildlife species that occupy the site will change over time through habitat progression through different seral stages, as species have varying preferences for habitats in different stages of succession.⁷³¹ This is what happens after a disturbance of any kind.
488. In cross-examination, Mr. Kansas explained this natural process of succession and wildlife species moving into an area following disturbances, and how that may compare to areas in which long-term wildfire suppression has taken place.⁷³² The return of wildlife to the mine site during progressive

⁷²⁸ CIAR #903 at 5267:14-16.

⁷²⁹ CIAR #908, starting at PDF 4.

⁷³⁰ CIAR #908 at PDF 90 – 91 and Table 9.1.

⁷³¹ See e.g. the description of wildlife species’ preferences that vary between Grizzly bears, moose, mule deer, hare, lynx, Little brown myotis, American marten, and forest-dwelling migratory birds: CIAR #42, Consultant Report 9 at sections 2.4.3.3.4.1.1, 3.2.3, 4.4.7, 4.4.9, 5.3.5, 5.3.6, 5.3.9, 5.5.1.

⁷³² CIAR #907 at 5268 – 5270.

reclamation will also be aided in the case of Grassy Mountain by forested buffers maintained along Blairmore and Gold Creeks on either side of the Project.⁷³³

5.8.1.2 *Key Evidence from Environment Canada and Climate Change (“ECCC”)*

489. A number of ECCC witness provided evidence on topics that were raised by hearing participants or in the cross-examination of Benga’s wildlife witness panel.

490. ECCC witness Paul Gregoire provided several instructive comments that incorporated his knowledge of SARA-listed bird species and migratory bird species with his awareness of the Project’s potential impacts. Mr. Gregoire pointed out in a response to a question from Ms. Kapel Holden, for example, that progressive reclamation is positive for returning bird species to the post-development landscape. Benga agrees with his statement that “[t]he sooner you can start putting the habitat back, the less of a lag you have, and the sooner birds will return to the landscape.”⁷³⁴ Mr. Gregoire also noted that even with some delays to progressive reclamation, were they to arise, that “we [ECCC] believe, with mitigation, it’s -- it will not negatively affect survival and recovery of the species for this project, for the species, specific species in the area that are being affected.”⁷³⁵ This aligns with Benga’s assessment of potential impacts on bird species in the Project area.

491. In response to questions from Mr. Kirk Lambrecht, QC, regarding ECCC’s position on the significance of the Project’s effects on species at risk and migratory birds, Mr. Gregoire said:

Well, in consideration of mitigation measures, I mean, weighing in that they are planning to undertake progressive reclamation, that there is an existing legacy footprint on the mine site, and they will be restoring that, and in consideration of putting back the closed-canopy coniferous forest, if they’re successful with the whitebark pine in actually putting back [rust]-resistant whitebark pine, consider all those measures together, then, in -- our view is that, overall, the effects of the project could be reasonably determined as mitigable.

...

So, again, if we’re speaking to migratory birds – so we’re saying it’s temporary loss because there will be mitigation. So in -- in that context, say – we haven’t identified a conservation concern there, no.⁷³⁶

492. The Little brown myotis, a SARA-listed endangered bat species, was another topic discussed at length in the hearing. Benga has collected data on the Little brown myotis in the Project area over several years now, including conducting searches for hibernacula on the Project footprint. Benga has proposed several

⁷³³ CIAR #907 at 5276.

⁷³⁴ CIAR #941 at 6006:2-6.

⁷³⁵ CIAR #941 at 6008:9-17.

⁷³⁶ CIAR #941 at 6019:3-24.

mitigation measures to minimize impacts on the species, including the planning of vegetation clearing to avoid the May to August summer bat season, installing bat houses in suitable habitats after clearing and during reclamation to provide supplemental roosting locations, avoiding direct and indirect impacts to known maternity roosts, and minimizing the use of non-essential artificial lighting.⁷³⁷

493. Mr. Gregoire correctly pointed out that although Little brown myotis is a SARA-listed species, SARA prohibitions do not apply with respect to that species on private lands or provincial Crown land.⁷³⁸

5.8.1.3 Evidence of Cliff Wallis – Coalition

494. Coalition witness Cliff Wallis gave evidence at the hearing mainly regarding his concerns for the Little brown myotis, the post-development return of wildlife to the Project area, and his belief that Atrium's conceptual project of Elan South should have been considered in the cumulative effects assessment (note that we address this assertion in the vegetation topic block above).

495. Mr. Wallis' evidence must be assessed in light of the fact that he has not engaged in an objective analysis of the Project and its potential effects. Mr. Wallis is a Director of the very organization that retained him to complete a report on the Grassy Mountain Project, and that organization has publicly opposed the Project for several years.⁷³⁹ Even without factoring in that issue of conflicting interests, Mr. Wallis' evidence was clearly based more on personal opinion and a long-standing position against all resource development, than on facts.

496. For much of the time that he gave direct evidence during the hearing, Mr. Wallis focused more on asserting that other experts in his field are wrong, rather than outlining facts that support his position against the Project. In his direct evidence relating to vegetation, Mr. Wallis cast doubt on the authors of the very report (Fiera 2014) that he had cited for the significance of ESAs. When asked in that topic block if he agreed that Fiera 2014 presented the most up-to-date and best data available for the most comprehensive ESA product produced to date (Mr. Wallis produced earlier versions of ESA reports in the 1970s through the 1990s that have been replaced with the more recent reports), Mr. Wallis would only say "Well, I could have a long disagreement with -- with you about that."⁷⁴⁰

497. Turning to wildlife, Mr. Wallis appeared similarly preoccupied with pursuing disagreements with other biologists in his field. He took aim at biologists retained on this Project, including Mr. Kansas and Ms. Bauman, as well as the author of the MW-YT Wildlife Report, a well-respected biologist who has never even worked on the Grassy Mountain Project.

⁷³⁷ CIAR #42, Addendum 1, Wildlife Addendum Little Brown Bat at PDF 26; CIAR #42, Addendum 8 at PDF 65 – 66.

⁷³⁸ CIAR #941 at 6026:19-22.

⁷³⁹ CIAR #842 at 3162:23-24, 3164:3-16; CIAR #941 at 6146, 6150:25-26, 6151:1-3.

⁷⁴⁰ CIAR #842 at 3166:26 – 3167:1-5.

498. In direct evidence that was difficult to distinguish from legal argument, Mr. Wallis characterized Mr. Kansas' evidence regarding species diversity observed on the reclaimed Coal Valley Mine, and the findings of the MW-YT Wildlife Report, as “puffery”, “false claim[s]”, and even “spurious”.⁷⁴¹ These are not words commonly used by an expert retained to provide an objective and non-partisan assessment for the benefit of a decision-maker.
499. Mr. Wallis went on to assess the responses of Benga witnesses to the efficacy of one of many mitigations that Benga has proposed to minimize impacts on the Little brown myotis – bat boxes. Mr. Wallis thought it necessary to expound on his belief that bat boxes would not be an effective mitigation to support maternity roosting, notwithstanding clear evidence provided in peer reviewed literature⁷⁴² and the *Recovery Strategy for the Little Brown Myotis (Myotis lucifugus), the Northern Myotis (Myotis septentrionalis), and the Tri-colored Bat (Perimyotis subflavus) in Canada*⁷⁴³ that bat boxes are suitable for such purposes.
500. Mr. Wallis also made a point of stating in his evidence that “some of the few (and more extensive) areas of high or moderate suitability habitat in the area west of the Livingstone Range are within the project boundary”. He referred to Figure 10 in his report to support this statement.⁷⁴⁴ This statement is, however, misleading.
501. First of all, Mr. Wallis' Figure 10 is a zoomed-in version of a larger map provided in Benga's EIA.⁷⁴⁵ The full map shows the broader expanse of high or moderate suitability habitat west of the Livingstone Range. Secondly, even in Mr. Wallis' Figure 10,⁷⁴⁶ it is clear that the vast majority of high or moderate suitability habitat for the Little brown myotis in the region is along the Livingstone Range itself – none of that area will be impacted by the Project.
502. Lastly, Mr. Wallis' statement gave the impression that the Little brown myotis as a species has severely restricted habitat west of the Livingstone Range. He did not include in his evidence any reference to the fact that the Little brown myotis' range extends out to the west coast of British Columbia, up to Alaska, and down to southern California,⁷⁴⁷ all west of the Livingstone Range.

⁷⁴¹ CIAR #941 at 6111:14-26, 6112:1-16, 6115:12-16.

⁷⁴² CIAR #908, starting at PDF 174: Niels Rueegger, “Bat boxes — a review of their use and application, past, present and future” (2016), 18(1) Acta Chiropterologica 279.

⁷⁴³ CIAR #904 at PDF 30, 46.

⁷⁴⁴ CIAR #553 at PDF 306.

⁷⁴⁵ CIAR #42, Addendum 1, Wildlife Addendum Little Brown Bat at PDF 37.

⁷⁴⁶ CIAR #553 at PDF 309.

⁷⁴⁷ CIAR #904 at PDF 18.

503. All of the above suggests Mr. Wallis' evidence should be given very little weight in the Panel's deliberation.

5.8.2 *Wildlife Health Risk Assessment ("WHRA")*

504. Benga completed a wildlife health risk assessment ("WHRA") in 2016 and provided an update to that assessment in Addendum 10 to the EIA, submitted in July of 2019, and again in March of 2020 in Addendum 11. The update in Addendum 11 included water-based exposure pathways in the LSA, RSA, the Oldman Reservoir, and the end-pit lake in the post-closure landscape. In Addendum 12, Benga provided additional detail regarding how Benga completed its updated WHRA, particularly with respect to how concentrations of contaminants of potential concern ("COPCs") were derived and the level of conservatism represented by the derived concentrations.

505. At the Chair's request, Benga gave an undertaking at the hearing to provide further information to better enable the Panel to have confidence in the WHRA's conclusions. To do so, Benga provided recalculated exposure ratios for aquatic wildlife, applying the updated surface water modelling results for Blairmore Creek.⁷⁴⁸ The results in the undertaking response showed increases in predicted exposure ratios from previous WHRA results, but the changes were not substantial enough to change the overall conclusions of the WHRA.

506. The WHRA results demonstrate that there is no potential risk of adverse effects associated with Project emissions on wildlife health in the study areas. Similarly, maximum predicted long-term soil and surface water concentrations are not expected to exceed the soil quality and surface water quality guidelines.⁷⁴⁹

507. Overly conservative assumptions were built into the exposure assessment of the WHRA to overestimate potential risks. For example, wildlife receptors were assumed to spend their entire lifetimes within the Project area, and wildlife receptors were assumed to be exposed to the upper distribution of predicted water quality concentrations and predicted air concentrations at the maximum point of impingement for the LSA and RSA for the chronic exposure periods considered.⁷⁵⁰ These and other similarly conservative assumptions built into the WHRA overestimated potential exposure and thus overestimated potential risk of adverse health effects.

508. Benga has committed to ongoing monitoring of air, water, and COPCs associated with the Project to ensure that measured results do not exceed those predicted in the WHRA.⁷⁵¹

⁷⁴⁸ CIAR #945, Response to Undertaking #28.

⁷⁴⁹ As summarized by Mr. Houston in direct evidence: CIAR #907 at 5260 – 5261.

⁷⁵⁰ CIAR #42, Consultant Report 12 at PDF 478.

⁷⁵¹ CIAR #907 at 5261:11-14.

5.8.2.1 *Amphibian and Bird Health*

509. Hearing participants, counsel for the AER and the JRP, and the Panel raised several important questions specific to the WHRA. One issue that garnered particularly significant attention during the hearing was with respect to the Project's potential effects on amphibians and waterbirds.
510. Benga has acknowledged that there will be periods where, subject to the results of its ongoing water quality monitoring, Benga will need to implement protective measures to limit the interaction of wildlife with untreated water accumulating in the raw water storage pond, surge ponds, or other water management ponds and drainage ditches. Benga has provided a non-exclusive list of deterrents that may be used to limit such wildlife interaction, such as wildlife fencing, amphibian pit fall traps, and mannequins (scarecrows).⁷⁵² In cross-examination, Benga witnesses discussed the potential for using flagging tape on ropes, fencing, water cannons, and effigies or scarecrows.⁷⁵³
511. ECCC witness Lukas Mundy attested to the effectiveness of mitigation measures including pitfall traps, wildlife fencing, flagging tape, noisemakers, and effigies, like scarecrows, to limit the interaction of wildlife species and water ponds.⁷⁵⁴ While some hearing participants expressed doubt about the concept of pitfall traps for amphibians, Mr. Mundy stated that it is a recognized method, albeit that they need to be coupled with effective on-site monitoring to ensure amphibians do not remain in the traps for extended periods.⁷⁵⁵ Benga agrees with that point.
512. In the course of the hearing, the Chair additionally asked ECCC for its comments on whether proposed mitigation measures to reduce risks to amphibian species from exposure to selenium and other COPCs in the surge ponds is practical and could be effective in the long term. Mr. Mundy responded for ECCC, noting first that there are concerns with amphibians potentially coming into contact with surge ponds. He went on to say that, given Benga's proposed methodologies for limiting wildlife contact with untreated water: "we [ECCC] would be in agreement with those – with those methodologies to limit that interaction."⁷⁵⁶
513. In response to the same question, but with respect to bird species at risk of exposure to surge ponds and the end-pit lake, Mr. Mundy agreed with Benga's proposed mitigation strategies to limit bird interaction

⁷⁵² CIAR #42, Addendum 6 at PDF 69.

⁷⁵³ CIAR #928 at 5617 – 5618; CIAR #931 at 5934 – 5935, 5944:10-18.

⁷⁵⁴ CIAR #941 at 6001:7-26, 6002:1-23.

⁷⁵⁵ CIAR #941 at 6003:1-19.

⁷⁵⁶ CIAR #941 at 6088.

with those water bodies. Mr. Mundy further emphasized the importance of wildlife monitoring to ensure birds are kept safe from these potential exposures.⁷⁵⁷ Benga agrees with that assertion.

5.8.3 Human Health Risk Assessment (“HHRA”)

5.8.3.1 Overview

514. As in the case with Benga’s WHRA, Benga completed an original HHRA in 2016. Benga then updated that HHRA in Addendum 10 to the EIA, and again in Addendum 11 to include water-based exposure pathways in the LSA, the RSA, and the Oldman Reservoir and the end-pit lake in the post-closure landscape. In Addendum 12, Benga provided additional detail regarding how Benga completed its updated HHRA, particularly with respect to how COPCs were derived and the level of conservatism represented by the derived concentrations.

515. At the Chair’s request, Benga gave an undertaking at the hearing to provide further information to better enable the Panel to have confidence in the HHRA’s conclusions. In its response to Undertaking #27, Benga provided a recalculation of the incremental lifetime cancer risk (“ICLR”) for arsenic exposure for Blairmore Creek using the updated water quality modelling results, and a recalculation of the hazard quotient (“HQ”) for copper (as the COPC with the greatest increase in predicted concentrations in water relative to the original water quality modelling, and one of the COPCs that exceeded the HQ of 0.2).⁷⁵⁸ The results in the undertaking response showed a small increase in predicted risk associated with exposure to increased predicted water concentrations but did not change substantially from the original HHRA.

516. The results of the HHRA demonstrate that emissions from the Project are not predicted to pose a risk of adverse health effects at receptor locations accessible to the general public.⁷⁵⁹

517. Overly conservative assumptions were built into the exposure assessment of the HHRA to purposely overestimate potential risks to humans. For example, with respect to the surface-water exposure pathway, the HHRA assumed a person lives in the area for 100% of their lifetime at each location assessed and surface water was assumed to be the only source of drinking water.⁷⁶⁰ With respect to exposure from food consumption, COPCs were all assumed to be fully bioavailable in food and all food eaten by receptors was assumed to be derived from the study area, with wild game spending their entire lifespans within the study area.⁷⁶¹ These and other similarly conservative assumptions built into the HHRA overestimated potential exposure and thus overestimated potential risk of adverse health effects.

⁷⁵⁷ CIAR 941 at 6089.

⁷⁵⁸ CIAR #945, Response to Undertaking #27.

⁷⁵⁹ As summarized by Mr. Houston in direct evidence: CIAR #907 at 5260 – 5261.

⁷⁶⁰ CIAR #42, Addendum 12 at PDF 12, 17 – 18.

⁷⁶¹ CIAR #42, Consultant Report 12 at PDF 57 – 58.

518. As in the case with respect to wildlife health, Benga will conduct ongoing monitoring of air, water, and COPCs associated with the Project to ensure that measured results do not exceed those predicted in the HHRA.⁷⁶²
519. At the hearing, the importance of monitoring was highlighted by witnesses for several parties. While we will not provide an expansive discussion of all the instances in which that issue arose in this topic block, it is worth touching upon briefly here, in light of Benga's above commitment.
520. The Chair asked the Health Canada witness panel whether Health Canada believes additional risk assessment and mitigation for arsenic is warranted on the Project, specifically with respect to the end-pit lake. In response, witness Melissa Gorman stated that:

with respect to the end-pit lake, we [Health Canada] were requesting that it be monitored. So not specific to any mitigation, but in terms of monitoring, we would say that there are potential concerns with respect to the arsenic levels ... we are looking to have that source water be characterized at the postclosure phase and then monitored annually, at least at the beginning, and then that that monitoring program be adapted, whether or not the characterization says that there should be more frequent monitoring or if any of the chemicals that are measured are starting to approach or exceed those quality guidelines.⁷⁶³

521. Ms. Gorman went on to note some potential uncertainties that remain specific to the end-pit lake. As such, she gave Health Canada's recommendation that:

we would obviously recommend monitoring of that end-pit lake specific to those contaminants of potential concern that are determined based on the characterization of the source water. So it would be important to monitor overall given these uncertainties.⁷⁶⁴

522. Benga has recognized in its HHRA the potential uncertainties in modelling with respect to COPCs and their potential impacts, and is in agreement with Health Canada that careful monitoring will be absolutely necessary. Benga has proposed such monitoring to be implemented at all stages of the Project's life and post-closure.

5.8.3.2 *Evidence of Dr. John Dennis – LLG*

523. The LLG retained Dr. John Dennis to review Benga's HHRA. Dr. Dennis' oral evidence and report focused primarily on his review of literature regarding human health in communities of the Appalachian Mountains ("Appalachians") in northeastern United States.

⁷⁶² CIAR #907 at 5261:11-14.

⁷⁶³ CIAR #941 at 6061:2-16.

⁷⁶⁴ CIAR #941 at 6065.

524. Dr. Dennis referenced Consultant Report #12 and sections of the EIA in his report, but he gave no indication that he reviewed any of the updates to the HHRA provided in subsequent addenda. It is doubtful that he reviewed any of the addenda, given that his report was focused on the Appalachians and the general practice of preparing HHRAs.
525. At the hearing, it became clear where Dr. Dennis derived the information he included in his report, as it pertains to studies on communities. In his report, Dr. Dennis provides a statement in italic font where he appears to summarize information that another individual, Dr. Michael Hendryx, shared with him about the potential effects of mining on human health in the Appalachians.⁷⁶⁵ Dr. Dennis says in his report that this summary is “adapted from Appendix B” to Dr. Dennis’ report. Appendix B to Dr. Dennis’ report is an untitled, undated, and apparently un-reviewed document that states it is prepared by Dr. Hendryx.⁷⁶⁶ The “Appendix B” document contains brief summaries of a number of research papers.
526. At the hearing, Dr. Dennis explained how he came across the literature on mining in the Appalachians and how he prepared his report:

[I]n the northeast United States of America, there is a mountain chain, the Appalachian Mountains. It has a -- similar, I think, coal seams and certainly mining operations that we've seen proposed for Grassy Mountain.⁷⁶⁷

...

I see these dozens of papers, and it leads me to conclude there's something going on in relation to the epidemiology of -- in terms of establishing health impact in coal mining operations.⁷⁶⁸

...

Because I have not done this work, I don't know the academics who have done this work. I reached out to Michael Hendryx, who's a prof in the States -- fairly busy guy now 'cause he's -- he's the head of his department -- to talk to him about -- on the -- on the phone to talk to him about what he thought about this decade of research, and he shared this view with me which I wanted to reproduce here. I include his -- he -- he sent me an email, which I -- I -- I think is very valuable, and -- and a very seminal authoritative summary written by one of the -- one of the -- one of the main authors of a number of these papers, and I put it in Appendix B of my report in its entirety.⁷⁶⁹

⁷⁶⁵ CIAR #553 at PDF 74 – 75.

⁷⁶⁶ CIAR #553, starting at PDF 109.

⁷⁶⁷ CIAR #943 at 6208:14-18.

⁷⁶⁸ CIAR #943 at 6212:11-14.

⁷⁶⁹ CIAR #943 at 6212:16-26, 6213:1-2.

527. What Dr. Dennis has clearly done in this proceeding is reproduce and rely entirely upon an email from “a prof in the States” who, to the Panel’s knowledge, may have never been to Alberta or Canada, let alone the Crowsnest Pass. Dr. Hendryx, whose personal email Dr. Dennis has reproduced as Dr. Dennis’ own evidence, was never presented at the hearing to respond to cross-examination by Benga, or to questions from the Panel.
528. This sort of stacking of tenuous, untested evidence to bolster its credibility is analogous to a witness who attempts to boot-strap hearsay upon hearsay to make it more trustworthy. Courts have held that this is not appropriate,⁷⁷⁰ and on this basis alone, the Panel should give Dr. Dennis’ evidence no consideration.
529. Furthermore, the Panel cannot take any assurance that the Appalachian studies are relevant at all to the Panel’s mandate. Dr. Dennis described the connection between Grassy Mountain and the Appalachians as “there is a mountain chain, the Appalachian Mountains. It has a -- similar, I think, coal seams.” With all due respect, the statement, “similar, I think, coal seams” is useless when taking into account that Dr. Dennis provided no evidence to link the coal, the climate, wind patterns, mining practices, baseline health conditions, other local industries present, or the regulatory regime, of Grassy Mountain to the Appalachian studies.
530. Dr. Dennis also included at Appendix “C” of his report a peer-reviewed paper that evaluated existing literature on health effects potentially related to mining in the Appalachians.⁷⁷¹ Dr. Dennis said this paper was the most “objective human health impact review of all the literature” and that “[t]here is no better summary of relevant information available anywhere.”⁷⁷² That paper included in its stated limitations and conclusions the following:

[T]he specific surface mining technique of MTR mining, coupled with the Appalachian region's unique geography and geology, warranted a specific review of the health effects of MTR mining in these areas.

...

The studies of exposures associated with MTR mining indicate that these activities cause the release of various chemicals and particulate matter into the surrounding air/water. These chemicals could in turn contribute to the poor health outcomes reported in the exposed areas. However, a direct link between the exposures and health effects cannot be confirmed, given the following limitations. The human health effects studies could not be combined quantitatively in a meta-analysis, as outcomes were either disparate (e.g., cardiopulmonary studies included a variety of self-reported and hospitalization outcomes) or studies had significant overlap in subjects such that estimates could not be considered independent (e.g. mortality in Appalachia). The available health effects studies had exposure assessment methods that were high risk of bias not tied to individual study participants.... Without individual subject level data, critical confounding variables

⁷⁷⁰ *DCP v CP*, 2014 PECA 18 at para 71 (PEI CA).

⁷⁷¹ CIAR #552 at PDF 119.

⁷⁷² CIAR #552 at PDF 80.

(e.g., smoking, socioeconomic status) could not be incorporated into the analysis to minimize bias.

...

4. Conclusion

...

The observational literature identified by this systematic review was found to include inconsistent associations of MTR mining with a variety of human health effects (e.g., cardiopulmonary effects, mortality, and general health status). It was also found that these studies were not designed to tie individual-level exposure data to individual-level health effects, raising the potential for bias in the reported results.... Particulate matter in the air and contaminants in the water supply can adversely affect the people who breathe and drink them, but without this additional research, the contribution of MTR mining on the health of residents in nearby communities cannot be fully assessed.⁷⁷³

[Emphasis added].

531. This peer-reviewed paper concluded that the Appalachian studies were specific to the unique features of the Appalachians and the local communities assessed. The paper's authors concluded that available literature showed "inconsistent associations", no "direct link", and the exposure assessments had "high risk of bias".
532. The evidence before the Panel is that Benga has provided a robust HHRA that complies with the AER's ToR, the JRP ToR, and the Agency's Guidelines. The HHRA aligns with regulatory guidance for how HHRAs should be conducted for proposed development projects in Canada. This is the information that is relevant to the JRP's mandate, and the Project being reviewed.

⁷⁷³ Passages reproduced in CIAR #552 at PDF 126 – 127.

6.0 CONCLUSION

533. In conclusion, Benga submits that there is no credible evidence that this Project will have significant adverse environmental effects. The potential impacts of this Project can and will be addressed by a responsible and committed corporation. The benefits of this Project to local Indigenous communities, Alberta, and Canada are significant. The negative effects can all be managed with the mitigations and initiatives that are already in place or that are underway and to which Benga has committed.
534. Benga is a responsible Canadian corporation that has the wherewithal to carry out the Project from construction through to closure and reclamation in a manner that meets or exceeds all regulatory requirements. As Mr. Houston said in his opening statement in the hearing on October 27, 2020, demand for steel-making coal is expected to continue growing in the future. As the steel intensity per capita of Asian, South American, and African nations increases, demand for infrastructure, automobiles, machinery, buildings, and other steel-consuming industries will grow in-step. The ability to source high quality steel-making coal from countries that can provide reliable supply, like Canada, will be critical.
535. There is need for this Project, in terms of the jobs, taxes, and royalties it will bring to local residents and their communities, to Alberta, and to Canada. The construction phase of the Grassy Mountain Project will create over 1,500 person years of total employment in Alberta and BC, with approximately 190 people employed onsite.⁷⁷⁴ In addition, the construction phase alone is expected to support GDP growth of \$210 million in Alberta and BC. During operations, there will be approximately 400 workers employed directly on the Project, creating total employment effect of about 850 person years in Alberta and BC for each year of the Project's 23-year life.⁷⁷⁵
536. The development and ongoing operation of the Project will contribute a total of \$1.5 million annually in property taxes to Ranchland and the MCNP. Coal royalties and income taxes payable to the provincial and federal governments are expected to total \$1.7 billion dollars over the life of the Project.⁷⁷⁶ At the same time, Benga has given its full commitment to responsible resource development and preserving the social and ecological values derived from the Crowsnest Pass.
537. Benga has entered into agreements or protocols with all Treaty 7 First Nations and the MNA, and these Indigenous groups have all issued letters stating they do not oppose the Project. Benga has also extended basic commitments to the KNC and the Shuswap Indian Band. The ACO's Hearing Reports have concluded that consultation with all Treaty 7 First Nations has been adequate.

⁷⁷⁴ CIAR #756 at 635:1-2; CIAR #762 at 820:6-9.

⁷⁷⁵ CIAR #756 at 635.

⁷⁷⁶ CIAR #756 at 635:10-16.

538. We ask that the Panel approve this Project as the AER, and we ask that as the *CEAA 2012* Joint Review Panel, you recommend that this Project is not likely to cause any significant adverse environmental effects that cannot be mitigated.
539. Since acquiring the Grassy Mountain properties in 2013, Benga has expended significant efforts developing a robust application that minimizes the potential environmental and social impacts of this Project, and to engaging with all stakeholders and Indigenous communities in an open and honest manner. It is through those efforts, and the collaboration and input from this Panel, federal and provincial regulatory authorities, Indigenous groups, local communities and residents, and other stakeholders, that this application has been brought before the JRP.
540. With all this in mind, Benga would like to remind the Panel that conditions imposed on the Grassy Mountain Project will have a material impact on whether Benga is able to advance the Project. Benga submits that imposing any extraneous conditions for conditions-sake would be inefficient and prohibitive to natural resource development in a region that recognizes the importance of investment in its resources, and in its people, at this time, more than ever.
541. The Chair and the other Panel members can be confident that the Grassy Mountain Project is in the public interest, and that Benga will continue to be a responsible developer, producer, and operator, in bringing this Project to life.