Federal Authority Advice Record (FAAR)
FAAR Response must be submitted by October 11, 2024
Rocky Creek Metallurgical Coal Project – CTI Plus Resources Ltd.
Registry File: [88867]

Department/Agency	Natural Resources Canada
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1. a) Is it probable that your department or agency may be required to exercise a power or perform a duty or function related to the project to enable it to proceed?

   If yes, specify the Act of Parliament and that power, duty or function.

   Based on the information provided to date, the project would require the manufacturing and the storage of explosives on the site, which would require an authorization under the Explosives Act. NRCan, through its role in the administration of the Explosives Act, may exercise a power or perform a duty or function that would enable the project to proceed.

   b) Please describe any Indigenous or public consultation that will be undertaken in relation to the exercise of that power, duty or function, including when it would take place.

   Should the project require authorization for the storage of explosives on the site, NRCan may be required to issue an authorization for explosives magazines as per the *Explosives Act* and regulations. Should an application be submitted, NRCan's Explosives Regulatory Division may undertake Indigenous or public consultation.

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2. Is your department or agency in possession of specialist or expert information or knowledge in its area of expertise that may be relevant to the conduct of an impact assessment of the Project?

   Specify the specialist or expert information or knowledge.

   NRCan possesses the following expertise that may be relevant to the review of an impact assessment for this Project:

   Geosciences

- Hydrogeology (i.e., groundwater quantity, dynamics and flows)
- Seismicity and terrain hazards

Mining Waste
- Passive and active treatment of mining effluent containing selenium
- Source term characterisation
- Adverse effects of selenium to aquatic environment (food chain transfer, benthic invertebrate and impacts to fish)
- Mine material management
- Treatment technologies needed to mitigate acid rock drainage and metal(loid) leaching including selenium risks.
- Geochemistry of mine waste, including:
  - Development of source terms required to determine the contaminant loading of the surrounding aquatic ecosystem
  - Characterization of disturbed geological material (e.g., pit walls, excavated geological materials, mine and ore processing waste) required to determine the likelihood of metal and metalloid (including selenium) leaching and acid rock drainage
  - Assessment of the toxicity of metals and metalloids (including selenium) from contaminant presence in water and sediments

Explosives
- Security and safety of explosives manufacturing and storage.

- Information on the application of the Explosives Act and its regulations.

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3. Has your department or agency considered the project; exercised a power or performed a duty or function under any Act of Parliament in relation to the Project; or taken any course of action that would allow the Project to proceed in whole or in part?

   Specify.

   NRCan has not taken any course of action, or exercised a power or performed a duty or function that would allow the Project to proceed.

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4. Has your department or agency had previous contact or involvement with the proponent or other party in relation to the Project? (for example: an enquiry about methodology, guidance, or data; introduction to the project)

   Provide an overview of the information or advice exchanged.

   NRCan has not had previous contact or involvement with the proponent regarding this project.

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5. Does your department or agency have additional information or knowledge on the project not specified above, including information on the geographic, environmental, economic or social context of the project? (e.g. location of protected or sensitive areas, previous history between local communities and proponent or similar projects, local or regional social or economic concerns)?

   Specify as appropriate.

   Based on the information available, NRCan does not possess any additional information or knowledge that has not been specified in this document.

6. Based on the mandate and area(s) of expertise of your department or agency, what are the key issues related to the project?

   For each key issue:

- Describe the potential effect or the nature of the issue, including any relevant context;
- Provide the rationale and/or evidence for why it is a key issue;
- Provide advice on how to address the issue, including any information or studies that should be required in the Tailored Impact Statement Guidelines, potential mitigation measures, and/or regulatory requirements relevant to the issue;
- Provide a concise, plain-language summary of the issue for inclusion in the Summary of Issues.

The information provided will be considered by IAAC and may be used to inform its decision on whether an impact assessment is required and, where appropriate, for next steps in the impact assessment process including to develop project-specific draft Tailored Impact Statement Guidelines.

Please use Table 1 to respond to this question.

From the perspective of NRCan's mandate, areas of expertise, and the related issues that should be addressed in the impact assessment of the Project are summarized below:

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7. Where possible, identify any additional information the proponent could include in their response to the Summary of Issues, and, if IAAC requires it, in their Detailed Project Description, that would:
   - Give confidence that minor issues or effects could be addressed and managed by clear measures, existing guidelines, other regulatory processes, or other existing tools;
   - Inform the decision as to whether an impact assessment is required; or
   - Aid in tailoring the Tailored Impact Statement Guidelines, if IAAC decides an impact assessment is required.

   These clarifications and additional information will be included as specific questions in the Summary of Issues provided to the proponent.

   Please use Table 2 to respond to this question.

Name of Departmental / Agency Responder

Title of Responder

Date

Table 1: Key Issues to inform the impact assessment process

IAAC asks that federal authorities align expert advice with IAAC's approach to tailoring by project, which focuses on key project issues, clearly focused on the prevention of adverse effects within federal jurisdiction. In identifying key issues, federal authorities should be mindful of the project's context (size, scope, location), Indigenous Knowledge and perspectives, and public concerns. Key issues that may be relevant to the decision include:

- adverse effects within federal jurisdiction and direct or incidental adverse effects that may be to some extent significant, based on federal experts' knowledge and experience with past projects;
- potential impacts on Indigenous Peoples and their rights, based on Indigenous Knowledge and perspectives or experience with past projects;
- effects on key species or habitats (e.g. at risk, important to Indigenous communities, commercial importance, provide important ecosystem function);
- issues or effects that may result from novel project activities, components, or technology;
- effects with large uncertainties, including in the effectiveness of mitigation measures;
- adverse effects within federal jurisdiction or direct or incidental adverse effects where mitigation measures are limited;
- positive effects, including where project may support other governmental priorities, including reconciliation with Indigenous Peoples; and
- key concerns raised by Indigenous groups or local communities.

Effects that are anticipated to be minor or which can be managed using well understood mitigation, existing guidance, and/or other regulatory processes may have simplified information requirements or may be removed entirely. Measured advice from federal authorities on key issues and solutions —and on the scope and detail of any required information and studies — will enable IAAC to focus assessments on issues that are important to participants and to decision-makers.

Comment ID	Relevant section of the Initial Project Description	Valued Component or Factor to Consider	Description of Key Issue (Context and Rationale)	Advice	Plain language summary for inclusion in Summary of Issues
Please identify comments by organization and comment number. *e.g.: IAAC-01*	*If the comment is related to a specific section of the Initial Project Description, please include that reference.*	*Identify valued component(s) or factor to consider—within the mandate of your department or agency—to which the potential effect or issue applies.*	*Provide a brief description of the issue and rationale for being a key issue.* *Include, where relevant,:* • *the pathway of effects;* • *relevant context on why it is a key issue;* • *key uncertainties that should be addressed in the impact assessment;* • *Indigenous or public concerns or perspective;* • *potential for differential effects among diverse subgroups;* • *scientific evidence or Indigenous Knowledge, including from past project experience, which supports inclusion as a key issue.*	*Where applicable, briefly provide solutions on how to address the potential issue or effects including:* • *Information or studies required to describe and characterize the potential effect; including any guidance for data collection and/or analysis or existing data sources to inform the assessment;* • *Any means, including any powers, duties or functions, that your department or agency has that may mitigate, manage, or set conditions related to the issue or effect;* • *Guidance or policies for mitigating effects or any standard and well-understood mitigation measures that would address the effect, including follow-up monitoring activities; and/or* • *Commitments the proponent could make to respond to the issue.* *Where available, please refer to existing text in the Tailored Impact Statement Guidelines template.*	*For issues to be included in the Summary of Issues, provide a concise, plain language synopsis of the key issue and any questions or directions for the proponent.*
NRCan-01	Sections 3.5.1 Geochemistry and 4.1.4 Material Waste Management	Fish and Fish Habitat	Potential effects to fish and fish habitat from potential acid rock drainage and the release of metals and metalloids, including selenium, from the site to the receiving environment due to disturbance of geological material during mining. This includes potential negative effects on fish populations and water quality. A primary pathway for acid rock drainage and metal(loid) release from the site is via effluent that has interacted with geological material, that has been disturbed by the mining process.	NRCan recommends a thorough and representative sampling and characterization program of all geological material that will be disturbed, material that is generated during mining and mineral processing, and any material that is transported to the site (e.g., borrow sources, ore from other sites), is needed to develop an informed and effective mine waste management program. Representative sampling and characterization are also essential to developing a sound testing program that is used in the prediction of the effluent chemistry of any water that comes into contact with disturbed geological materials (e.g., pit walls, waste rock, coal process rejects, stockpiled materials). The quality and completeness of the testing programs occurring during all stages of mine development are foundational to the prediction and reduction of metal	There are potential effects to fish and fish habitat from the release of metals and metalloids, including selenium, and potential acid rock drainage from the site to the surrounding environment due to disturbance of geological material during mining. This includes potential negative effects on fish populations and water quality. A primary pathway for metal and metalloid release from the site and the generation of acid rock drainage is via water, that has interacted with geological material, that has been disturbed by the mining

				and metalloid leaching and acid rock drainage entering the receiving environment. The Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials (MEND Report 1.20.1) and the international GARDGuide are recommended as additional guidance in the design of the geochemical characterization program.	process, which would then be treated before being released to the environment. A thorough and representative sampling, characterization, and testing program is needed to predict any potential effects on water quality and to inform the development of effective mine waste and effluent management programs that minimizes the generation of acid rock drainage and metal and metalloid release to the environment.

Please insert additional rows as necessary.

Table 2. Clarifications or additional information the Proponent could include in the response to Summary of Issues

Comment ID	Relevant section of the Initial Project Description	Description of Issue, Concern or Uncertainty	Clarification or additional information	Plain language summary for inclusion in Summary of Issues
Please identify comments by organization and comment number. *e.g.: IAAC-01*	*If the comment is related to a specific section of the Initial Project Description, please provide a reference.* *You may also choose to copy the relevant text here.*	*Provide a description of the issue, concern or uncertainty the proponent could address in their response to Summary of Issues and, if IAAC requires it, in their Detailed Project Description that would give confidence that the issue will be addressed and managed, by clear measures, existing guidelines, regulatory processes or other existing tools, and thus be the subject of simplified information requests in the guidelines, or simply be removed.*	*Provide recommended clarification or additional information to be included in their response to the Summary of Issues and, if IAAC requires it, in their Detailed Project Description to address the issue, concern or uncertainty, for example:* • *Clarifications to elements of the project description (e.g. components, activities, locations or alternatives);* • *Proposed project design changes that could avoid effects;* • *Evidence that could be presented to demonstrate there is no effect pathway of effect or that effects would be negligible;* • *Evidence that standard mitigations will address potential effects* • *Commitments the proponent could make to respond to the issue, including the implementation of federal operational policies or guidance documents.*	*For issues to be included in the Summary of Issues, provide a concise, plain language synopsis of the issue and of the question or direction for the proponent.*
NRCan-01	Initial Project Description (IPD 28 August 2024), 3.5 geology.	The proponent has mentioned about the geology and mineralization in section 3.5 of the IPD. Similar, to the other IPDs, further details should be provided on surficial and bedrock geology, fractures, soils, and terrain under section 7 “existing physical, biological, and human environment”. This subtitle has not been listed under section 7 of the IPD.	NRCan recommends this to be included in the DPD (detailed project description).	NRCan recommends the addition of a subtitle under section 7 for “geology, soils and terrain”. NRCan anticipates information on surficial and bedrock geology (maps/soil assessment etc.) in the DPD.
NRCan-02	Section 3.5.1 Geochemistry	The disturbance of geological material has the potential to result in the release of metals and metalloids (metal(loid)s) to the environment and the generation of acid rock drainage. Selenium in particular is known to be elevated in the formation of interest at this site. Section 3.5.1 of the IPD identifies that a geochemical characterization program is underway and utilizes drill-core samples and other materials from the 2020 exploration program. The section identifies that the geochemical testing results will be used in the development of geochemical source terms to be inputted in the site-wide water and load balance model presented in the EIS. The quality of the testing programs underpins the prediction and reduction of metal(loid) leaching and acid rock drainage which informs effluent and mine waste management programs. A sound testing program relies on sample selection being representative, the appropriate selection of testing methods, and the valid interpretation of results.	NRCan recommends clarification of the quality and completeness of the testing program and the validity of the conclusions and decisions drawn from it. The EIS needs to demonstrate that sample selection is complete and representative of all geological material to be disturbed, generated, and transported to the site. When drill-core is used, aerial and cross-section maps with the sample source locations labelled along with mine components and site geology is highly recommended. The EIS also needs to fully describe and justify the selection of geochemical tests, as well as ensuring that kinetic tests capture both the likely and worst-case scenarios. The use of consistent sample labels and geological unit names throughout the EIS helps ensure that the quality of the testing program is evident. The Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials (MEND Report 1.20.1) and GARDGuide are recommended as additional	The disturbance of geological material has the potential to result in the release of metals and metalloids to the environment and the generation of acid rock drainage. Selenium in particular is known to be elevated in the formation of interest at this site. Section 3.5.1 of the IPD identifies that a geochemical characterization program is underway and utilizes drill-core samples and other materials from the 2020 exploration program. The section identifies that the geochemical testing results will be used in the development of a site-wide water and load balance model, which predicts water quality generated on the site, to be presented in the EIS. The quality of the testing programs underpins the reliability

			guidance in the design of the geochemical characterization program.	of the model and the effluent and mine waste management plans for the site. It is therefore essential that the Proponent demonstrates the quality of the geochemical testing program in the EIS. NRCan has provided advice on what to include in the EIS to demonstrate that the testing program is thorough and of high quality.
NRCan-03	Initial Project Description (IPD 28 August 2024), 10.1 Effects of the Environment on the Project	Specific Information on the landslides, slope failures is not included under section 10.1. The section indicates “natural hazards”, therefore, it is expected that it will include landslides/slope stability issues.	NRCan recommends including information on landslides/stability in the DPD.	NRCan recommends including information on landslides/stability issues in the DPD.
NRCan-04	Initial Project Description (IPD 28 August 2024), 10.1 Effects of the Environment on the Project	A scope of what will be included as part of the seismic hazard assessment should be included under section 10.1	The proponents should provide an “earthquake hazard assessment” that includes a description of local and regional faults, potential/expected ground shaking, earthquake sources, design, and mitigation methods, etc. in the EIS.” NRCan recommends including a discussion of potential effects from induced earthquakes in the region. The National Building Code Seismic Hazard Tool can be used to obtain seismic hazard design values for various editions of the National Building code. It is the responsibility of the proponent to determine the appropriate site class, and which version of the seismic hazard tool is applicable to the Project’s location at the time of design.	NRCan recommends the proponent include in section 10.1 a description of local and regional faults, potential/expected ground shaking, earthquake sources, design and mitigation methods, and a discussion of potential effects from induced earthquakes in the region.
NRCan-05	Initial Project description (IPD August 28, 2024), 3.1.3; 7.1.3	Little information on groundwater is provided as currently baseline information is being collected.	The proponent is collecting baseline groundwater information, and it is expected that this information would be made available upon completion. In general, the hydrogeological information/conditions, dewatering impacts, domestic, communal, or municipal water wells, sources of potable groundwater, groundwater characterization, faults and fractures, groundwater flow, groundwater divides, and relevant groundwater data should be included. Additional details specific to the site should also be included. There is no mention about the pumping tests (or slug tests) in the 16 monitoring wells to estimate hydraulic conductivity and storage coefficient values. These data would be very important to predict if dewatering of the open pits will affect nearby streams (or water wells, but there does not seem to be any in the area). A few long-term (72 h) pumping tests in targeted wells, which would include the monitoring of observation wells and streams, would provide very important information. Will a numerical model be developed to predict the extent of drawdown due to dewatering of the open pits?	NRCan looks forward to the information on baseline groundwater to help understand the impacts on groundwater following the project activities. NRCan recommends including the data collected and results of the sampling, water levels and pumping tests, as well as any additional information on the field work undertaken and their results in the next stage of the EA process e.g., DPD (detailed project description). NRCan recommends the proponent include information on the type of aquifer (confined/unconfined), hydrogeological property and recharge values, fracture orientation, and groundwater-surface water interactions and expected impacts.

			There is no mention either of well hydrographs or aquifer recharge. Have dataloggers (pressure transducers) been installed in the 16 wells? These would also provide important information, such as whether the aquifer is confined or unconfined. If the aquifer is under unconfined conditions, it could be used to estimate recharge. The latter will be very valuable for estimating the amount of water to be pumped each year for dewatering and must be considered when estimating how much water (across the site) will need to be redirected and/or treated. NRCan suggests the proponent identify what methods will be used to estimate recharge. The literature recommends using several methods, as its value can vary widely according to the approach/method used. The elements/compounds to be analysed in groundwater samples are not specified either. The proponent should clarify if tritium will be analysed. This could be useful as a complement to other data and information, to see if the water is young and therefore if the aquifer is vulnerable to activities at the surface.	NRCan requests the proponent to provide a representative cross-section across the open pits, including stratigraphy, a few wells, the open pit in its final stage, nearby streams, the initial water table, and the predicted drawdown. NRCan anticipates that an appropriate 3D numerical model (section 7.1.3 – IPD 2023) will be developed to adequately assess the impacts of the project activities.

Please insert additional rows, as necessary.