



January 23, 2024

Authorization Number: 107517

VIA EMAIL: Matthew.Gay@teck.com

Teck Coal Limited  
3300-550 Burrard St  
Vancouver, BC V6C 0B3

Dear Teck Coal Limited:

**Re: Elk Valley Human Health Risk Assessment Submission**

The Ministry of Environment and Climate Change Strategy (ENV) has received the *Second Revised Final Human Health Risk Assessment Supporting the Elk Valley Water Quality Plan* (the HHRA) prepared by Ramboll and submitted by Teck on October 20, 2023. Multiple iterations of the HHRA have undergone extensive review by the Human Health Working Group, including the draft report in January 2022, a final report in July 2022, a submission in July 2023 and the final submission in October 2023. Based on the outcomes of this extensive review process, the *Second Revised Final Human Health Risk Assessment Supporting the Elk Valley Water Quality Plan* (October 2023) is satisfactory to the Director.

Section 8.10 of *Environmental Management Act* Permit 107517 requires Teck Coal Limited (Teck) to submit a Human Health Risk Assessment (HHRA) developed in consultation with the Environmental Monitoring Committee (EMC) to examine the potential human health effects of mine-related parameters of concern in the Designated Area.

The purpose of the HHRA is to determine exposure pathways and potential human health risks from selenium and other mine-related parameters of concern which may be present in vegetation, fish and wildlife that are potentially used for food or medicinal sources, or present in currently known potable water sources using data from established monitoring programs, or additional sampling programs if necessary for the assessment. The HHRA must consider First Nations consumption patterns and risk sensitivities and its findings must include mitigation actions to address risks which are to be included in the Adaptive Management Plan.

The requirement for an HHRA in Permit 107517 was the result of outstanding uncertainties following completion of the Elk Valley Water Quality Plan. Completion of the Elk Valley HHRA marks a significant milestone in the advancement of our shared understanding of human health risk associated with exposure to mine-related parameters of concern via water-based

pathways. In addition, the incorporation of more comprehensive Ktunaxa perspectives has greatly increased the local relevance of the assessment.

While the comprehensive HHRA is complete, work to refine understanding of human health risk and communicate that risk will continue through the efforts of the Human Health Working Group. With submission of the HHRA, the focus of the Working Group should shift to application of its learnings. As such, focused screening of key consumption-based exposure pathways identified in the HHRA, and evaluation, reporting, and public communication of results are top priorities.

After reviewing the HHRA report and consulting with Interior Health (IH) and the Ktunaxa Nation Council (KNC), ENV has the following recommendations:

1. Communicate results of the HHRA and next steps publicly using accessible language.
2. Reduce uncertainty in the fish tissue data set. The HHRA relied on fish tissue data collected for the purpose of aquatic health impact assessment, not specifically for human health assessment. For this reason, a key next step in refining our understanding of risk to human health is the assessment of fish tissue from species and locations preferred by consumers of fish.
3. Continue monitoring all contaminants of potential concern identified in the HHRA within the Designated Area to assess human health risk.
4. Improve understanding of the potential risks associated with the inhalation exposure pathway. The HHRA permit requirement was scoped to water-related exposure pathways. Understanding exposure risks resulting from the inhalation pathway would provide a more fulsome understanding of human health risks from mine-related parameters via all exposure routes.
5. Evaluate the efficacy of current mitigation strategies at reducing risks to human health.

In consideration of the above and pursuant to Section 16 of the *Environmental Management Act*, Permit 107517 Section 8.10 (HUMAN HEALTH RISK ASSESSMENT) is hereby amended to remove all existing language and replace it with the following;

## 8.10 HUMAN HEALTH EVALUATION

### 8.10.1 HUMAN HEALTH DATA EVALUATION PROGRAM

The permittee must develop and implement a Human Health Data Evaluation Program. The program must be developed in consultation with the Human Health Working Group and be designed so that data relevant to the assessment of human health risk are regularly compared to human health-based screening values and reported out. Data gaps and recommendations identified in the HHRA must be addressed by the program.

#### 8.10.1.1 FISH ASSESSMENT PROGRAM

As part of the Human Health Data Evaluation Program the permittee must develop and implement a Human Health Fish Assessment Program to assess the human health risk associated with the consumption of fish potentially influenced by the permittee's operations, from locations and species within the Designated Area that are typically used and preferred by people that harvest fish. Data must be screened against relevant human health-based screening values. The program must be developed in consultation with the Human Health Working Group and incorporated into the overall Human Health Data Evaluation Program.

The following timeline applies:

The Human Health Data Evaluation Program must be reviewed by the Human Health Working Group and submitted to the director for approval by November 30, 2024.

#### 8.10.2 PARTICULATE MATTER INHALATION AND DEPOSITION PATHWAY SCOPING STUDY

The permittee must undertake a Particulate Matter Inhalation and Deposition Pathway Scoping Study to improve understanding of exposure and human health risks associated with air quality influenced by the permittee's mining operations within the Designated Area. The study must be developed in consultation with the Human Health Working Group.

The following timeline applies:

A Terms of Reference for the study must be submitted to the Human Health Working Group and director by June 30, 2024, and must include proposed submission dates for a study design and written report.

In addition to the above, the following requirements are added to Sections 9 and 10 of Permit 107517:

#### 9.12 HUMAN HEALTH DATA EVALUATION PROGRAM

The permittee must prepare written summary reports for the Human Health Data Evaluation Program that include results from the Human Health Fish Assessment Program, as per Section 8.10.1. The first report covering calendar years 2021-2025 must be compiled and submitted to the Human Health Working Group and director by November 30, 2026. Subsequent reports must be submitted every three years thereafter, for data from the previous three calendar years.

## 10.1 HUMAN HEALTH RELATED ADAPTIVE MANAGEMENT PLAN UPDATE

The next Management Question 6 Evaluation Report must include actions initiated and planned to reduce risks to human health in consideration of the results of the HHRA. The report must evaluate how the most recent Implementation Plan contributes to reducing risks to human health.

In consultation with the Human Health Working Group, the 2024 Adaptive Management Plan Update must use the HHRA results to revise and refine Management Question 6 and associated Key Uncertainties and Underlying Uncertainties. This must include, but is not limited to, the addition of a Key Uncertainty pertaining to where and what foods the Ktunaxa are harvesting, and would prefer to harvest, so that potential risks to human health can be sufficiently assessed. Evaluation of this Key Uncertainty must consider Ktunaxa knowledge interests.

Quarterly updates on the progress and status of the HHRA, as per ENV's December 21, 2018 letter, are no longer needed.

Please note that although a revised permit has not been produced at this time, a copy of this letter is being placed on the permit file, as an addendum to the permit. All other terms and conditions detailed in the *Environmental Management Act* Permit 107517 remain in effect.

This authorization does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the permittee. This permit is issued pursuant to the provisions of the *Environmental Management Act* to ensure compliance with Section 120(3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization. It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464. Administration of this permit will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the director, designated officer, or as further instructed. Should you have any questions concerning this amendment letter, please contact Alison Neufeld at [Alison.Neufeld@gov.bc.ca](mailto:Alison.Neufeld@gov.bc.ca).

Yours truly,



A.J. Downie, M.Sc., P.Ag.  
for Director, Environmental Management Act

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