

Facsimile

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Pages: 25 including this cover

Date: Friday, May 25, 2001

File: EA01-002

Subject: Canadian Zinc Corporation Decline and Pilot Plant EA

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Our File EA01-002

May 25, 2001

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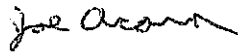
RE: Canadian Zinc Decline and Pilot Plant EA

The Review Board decided at its May 18th meeting to assess Canadian Zinc's decline and pilot plant developments together in a single EA process with Canadian Zinc's Phase II drilling development assessed in a separate EA process.

Attached to this letter is the revised Draft Work Plan and Terms of Reference for the Decline and Pilot Plant EA. Comments on this draft are due at the Review Board by May 29th. Given that the opportunity has already been provided to comment on the May 4th draft, we are assuming that additional time is not required.

If you have any questions, require additional information or cannot meet the deadline for comments, please call me at 873-9193.

Sincerely,



Joe Acorn
Environmental Assessment Officer

Att.

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Draft Work Plan and Terms of Reference

for the

Environmental Assessment

of the

Canadian Zinc Corporation

***Underground Decline and Drilling and
Metallurgical Pilot Plant Developments***

May 25, 2001

Issued By:

Mackenzie Valley Environmental Impact Review Board

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1 INTRODUCTION

On March 5, 2001, CZN submitted separate applications to the Mackenzie Valley Land and Water Board (MVLWB) for the following developments:

1. Surface exploration of up to 60 drill holes - Land User Permit Application MV2001C0022.
2. Portal and underground decline - Land User Permit Application MV2001C0023.
3. Metallurgic plant operation - Water Licence Application MV2001L2-0003.

On April 11, 2001, the *Nahanni National Park Reserve* (NNPR) referred the three development applications to the Mackenzie Valley Environmental Impact Review Board (Review Board) for an environmental assessment (EA), in accordance with ss.126(2)(a) of the Mackenzie Valley Resource Management Act (MVRMA), citing the following reasons for the referral:

"Nahanni National Park Reserve is of the opinion that these proposed projects have the potential to impact the ecological integrity of the park reserve. These potential impacts include effects on transboundary wildlife such as grizzly bears, dall's sheep and woodland caribou, and effects on water quality and fish habitat in both Prairie Creek and the South Nahanni River."

On April 15, 2001, the Pehdzeh Ki First Nation sent a letter to the MVLWB, citing Section 126(2)(c) of the MVRMA, to have the developments referred to the Review Board for an environmental assessment due to

"...significant environmental and public concern. The Settlement of Wrigley expects a full environmental impact review regarding the cumulative effects of an eventual full mine operation. The water quality downstream will be significantly impacted and eventually affect the Settlement of Wrigley."

The Review Board is required by s.126 of the MVRMA to conduct an EA of the developments in accordance with Part 5 of the MVRMA.

On May 4, 2001, the Review Board issued a draft document (work plan and terms of reference) that combined the three developments into a single EA process. On May 18, 2001, the Review Board decided that:

- the drilling development could be assessed on its own merits in a separate EA process;
- the decline development and pilot plant development should remain in the same EA process; and
- a draft work plan and terms of reference for each of the two EAs should be issued.

This draft document describes the work plan and terms of reference that will be used to conduct the EA on the decline and pilot plant developments. This document contains:

- A description of the developments;
- A description of the roles and responsibilities of those parties involved in the EA;
- An outline of the general approach to completing the EA, including milestones and a schedule;
- The scope of the developments;
- The scope of the assessment;
- Directions to the developer; and
- Directions to other parties involved in the EA.

Attached in Appendix 1 are legal premises and definitions relevant to completing an environmental assessment.

2 DEVELOPMENT DESCRIPTIONS

This section provides generalized descriptions of the proposed developments based on the project descriptions submitted by CZN in support of their land use permit and water license applications.

The **Underground Decline** development includes:

- Airlifting the pieces of the jumbo drill to the mine, reassembling the drill at the mine and transporting the drill to the decline location using existing roads;
- Use of water from Harrison Creek during drilling;
- Use, transport and storage of explosives;
- Opening a portal at the 905 m elevation about 600 m north of the existing mill facility;
- Excavating a 600 m long 3 m wide and 2.3 m high decline at a 15% down gradient;
- Driving the decline using a two-boom air jumbo drill;
- Removing the rock from the decline using 2-yard scoop trams;
- Transporting the rock to a location within the plant site area using a loader and truck;
- Cutting out 9 drill "cutouts" along the decline in support of an underground drill program;
- Drilling in the cutouts using a Boyles electric or hydraulic diamond drill;
- Dewatering the decline and cutouts using sumps and pumps;
- Creating a sump settling pond at the mouth of the portal; and
- Release of water from the settling pond into Harrison Creek.

The **Metallurgical Pilot Plant** development includes:

- Transporting and assembly of a "pilot plant" to the minesite and assembling it in the existing mill building;
- Operation of the pilot plant at about 1.5 tonnes per hour;
- Processing a total of 1000-2000 tonnes of rock taken from the surface or stockpile and possibly rock from the decline development;
- Using between 2000-4000 m³ of water of which half will come from an on-site aquifer using existing on-site wells;
- Release of mine water into the tailings pond;
- Storage of tailings in one of two thickeners inside the mill building; and,
- Removal of the concentrated rock in 2 tonne bags by air.

3 ROLE AND RESPONSIBILITIES

The roles and responsibilities of the Review Board, Review Board's staff and other parties in the EA is explained in the following sections.

3.1 Review Board

The Review Board is required to undertake the following in relation to this EA:

- conduct the EA in accordance with ss.126(1) of the MVRMA;
- take into account any previous screening or assessment report made in relation to the developments, in accordance with s.127 of the MVRMA;
- determine the scope of the developments, in accordance with ss.117(1) of the MVRMA;
- consider several factors, in accordance with ss.117(2) of the MVRMA;
- make a determination regarding the environmental impacts and public concern of the developments, in accordance with ss.128(1) of the MVRMA;
- report to the federal Minister in accordance with ss.128(2) of the MVRMA; and,
- identify areas and extent of effects, within or outside the Mackenzie Valley in which the developments are likely to have a significant adverse impact or be a cause of significant public concern, in accordance with ss.128(4) of the MVRMA.

3.2 Review Board Staff

The Review Board's Executive Director and staff are the primary contacts for the developer, government bodies (federal, territorial and municipal), non-government organizations (NGOs), First Nations, expert advisors (these are non-governments experts contracted directly by the Review Board), the public and other interested parties. This does not limit or preclude CZN's contact with other parties in the EA process.

The staff member coordinating and facilitating the EA is Mr. Louie Azzolini.

3.3 Other Parties

Government bodies may be involved in the EA process as:

- a Regulatory Authority (RA) to provide advice on regulatory matters;
- a pool of experts to assist the Review Board and provide advice related to environmental and socio-economic impacts; or
- both roles simultaneously.

Regulatory Authorities are those government bodies, such as Indian and Northern Affairs Canada (INAC) or Fisheries and Oceans Canada (DFO) that provide licenses or permits that are required by a development. INAC and DFO would likely provide both regulatory advice in their roles as RAs and they would also provide technical expertise on specific aspects of a development. Other government bodies such as Environment Canada (EC) or Resources, Wildlife and Economic Development (RWED) would likely just provide technical expertise due to their limited regulatory role.

In addition to the pool of experts available within government, the Review Board may choose to hire expert advisors to provide high quality technical expertise on specific aspects of the EA.

First Nations, NGOs, the public and other interested parties may provide the Review Board with information relevant to the EA of their own volition, or they may be asked by the Review Board to provide any relevant information they may have.

The developer may present additional information to the Review Board during any portion of the EA process

prior to the closure of the public registry. The Review Board also encourages the developer to continue consulting all affected communities and organizations. The Review Board will request the developer to provide a written record verifying consultations, including how the consultations may have influenced the design of any part of the development. The developer is expected to respond in a suitable and timely course to the EA Terms of Reference that will be issued by the Review Board.

All submissions received from all sources will be considered during the Review Board's decision-making process on the environmental assessment. These submissions will be public documents and will be posted on the Review Board's Public Registry. Submissions should be in a format that is easily available to all stakeholders.

Although any submissions related to the EA will be accepted by the Review Board, for these submissions to be effectively considered, it would be preferable if they were in a form that would be of most value to the Review Board. These submissions should:

- identify the development activity being examined;
- identify the potential impacts of this activity (along with any supporting evidence);
- propose mitigative measures (along with evidence that the mitigative measures will work); and
- predict residual impacts that cannot be mitigated.

4 EA PROCESS

This section summarizes the process for the completion of an EA, in general, and this EA specifically.

4.1 *Milestones and Responsibilities*

Once a development proposal has been referred to the Review Board for an EA, the following milestones are established:

- Start-up of the EA;
- Advance consultation;
- Development description requirements;
- Work Planning;
- EA Terms of Reference;
- Developer's EA Report;
- Conformity Check;
- Deficiency Statement;
- Technical Analysis;
- Information Requests;
- Consultation; and
- EA Decision.

When a hearing is held, it complements and augments the written hearing process conducted using Information Requests.

The time allocations and the information requirements for each milestone will vary with each EA, and will depend upon the complexity, location and duration of the development. These will also vary depending upon the reasons for decision provided by the preliminary screener(s), and upon the information provided by the developer.

The EA process is outlined in Table 1, showing appropriate milestones and responsibility assignments.

Table 1 - Milestones and Responsibility Assignments for Steps in the EA

| Milestone | Developer | Government Bodies | Other Parties | Staff | Board |
|--|------------------|--------------------------|----------------------|--------------|--------------|
| Start-up of the EA | | | | ● | |
| Complete development description submitted | ● | | | | |
| Advance consultation | ● | | | ● | |
| Prepare draft Work Plan | | | | ● | |
| Review draft Work Plan | ● | ● | ● | ● | |
| Approve final Work Plan | | | | | ● |
| Prepare Draft Terms of Reference (ToR) | | ● | | ● | |
| Review draft ToR | ● | ● | ● | ● | |
| EA ToR approved and issued | | | | | ● |
| Preparation and submission of EA Report | ● | | | | |
| Conformity check | | ● | ● | ● | |
| Deficiency statement | | | | | ● |
| EA analysis | | ● | ● | ● | |
| EA decision | | | | | ● |
| Consultation - throughout / as required | ● | ● | ● | ● | ● |

Note: The Work Plan and Terms of Reference have been combined into a single document for this EA.

4.1.1 Start-up of the EA

At the start of the EA, the developer, government bodies, NGOs, First Nations, expert advisors, the public and other interested parties are informed of the referral. The notification lets people know that while the development is in the EA process, no licence, permit or other authorization can be issued by government. As part of the referral, staff starts a public registry on the development and start tracking development issues.

Notification of the referral is done by:

- Written notification;
- News release; and
- Newspaper advertising.

Tasks involved in starting the environmental assessment are:

- Open case file;
- Open public registry and registry log;
- Public notification of referral;
- Notify regulatory authorities of the referral; and
- Review Board notifies the developer of the referral.

Deliverable: Public registry, public notification, government notification, developer notification, issue tracking, expert advisor identification, responsible authority self-identification.

4.1.2 Advance Consultation

Advance consultation is used to identify and inform stakeholders about the EA process and also to identify potential impacts, both environmental and socio-economic, that may need to be examined. Staff may conduct public information sessions and the developers would be asked to participate in these sessions to provide information about their development proposal. A stakeholder notification list is prepared and can include any of the following:

- Communities;
- NGOs;
- First Nations;
- Government;
- Developer; and
- Other interested parties such as businesses or members of the public.

Advance consultation would parallel the developer submitting additional information as required by the Review Board for work planning purposes. Development of the draft EA Work Plan by Review Board staff would also occur concurrently with advance consultation.

Advance scoping meetings and discussions with government bodies and experts may be held to review the referral, the development description, and other supporting information provided by the developer. Potential environmental and socio-economic impacts due to the development are also discussed.

The Review Board may choose to participate in a site visit if it is felt necessary. This will be arranged with the developer and a general notification of the site visit will be issued to the public.

Deliverable: Awareness of the Review Board, the EA process and the development proposal. Any relevant issues raised by the public and stakeholders during this advance consultation step would be noted and brought to the attention of the Review Board for possible inclusion in the EA Terms of Reference.

4.1.3 Development Description Requirements

The Review Board may require a more detailed and complete description of the proposed development from the developer. This would enable the Review Board to determine a proper scope of development and issue a complete set of EA Terms of Reference that address all phases and components of the development. The developer is responsible for providing a development description that is suitable for consultation with Aboriginal, public and government stakeholders.

The Review Board would inform stakeholders of its direction to the developer using the following involvement methods:

- Fax out of Review Board's direction to the developer;
- News release to media; and
- Newspaper advertising informing people of the overall EA process and the Review Board's direction to the developer.

The developer will be responsible for providing its final development description to all identified stakeholders.

Deliverable: A complete description of the proposed development provided by the developer to the Review Board and identified stakeholders.

4.1.4 Work Planning and Time Frames

A work plan for completing the EA will be developed by staff, in consultation with stakeholders. Each work plan is unique as is every development proposal referred to EA. For example, if the developer completed and submitted a detailed EA Report along with any application(s) that triggered the EA, that information could affect the length of time and level of effort spent on a particular step in the EA process. This would be reflected in the draft Work Plan. An estimate of resource requirements for completing the EA would also be developed. This draft Work Plan would be developed concurrently during the advance consultation phase.

Once the advance consultation phase is completed, the draft Work Plan would be presented to the Review Board for its approval. The draft Work Plan would then be released for review by other stakeholders. The draft Work Plan may be amended based upon comments received from the review. The amended Work Plan would then be presented to the Review Board for final approval and adoption of the Work Plan.

Deliverable: An approved Work Plan, including an estimate of resource requirements, for completing the EA.

4.1.5 EA Terms of Reference and Scope of Development Determination

The EA Terms of Reference (ToR) are the Review Board's instructions to the developer and are designed to ensure that the appropriate information is provided to understand the environmental consequences and the benefits of the proposed development. The ToR are prepared based on the development description provided by the developer and any other relevant information. The ToR also provide the scope of the development¹ and scope of assessment¹ determination of the Review Board.

Staff will coordinate the preparation of the draft ToR for consultation with other parties. After the Review Board's consideration and approval of the ToR, they are issued to the developer and others as required.

Deliverable: Draft and final Terms of Reference, direction to the developer including confirmed scope of development and associated scope of assessment, identification of key issues, effects, baseline data requirements, and desired results of research, and suggested environmental assessment report table of contents.

4.1.6 Preparation and Submission of the EA Report

The developer will use the EA Terms of Reference to complete its EA report and tell the story of how people and the natural world could be changed by the proposed development and what is to be done about these changes.

To properly execute its duties under the MVRMA, the Review Board should have the following information on the proposed development:

- Title (of the development proposal);
- Executive summary (translated into appropriate aboriginal languages, if requested);
- Corporate and development information including an environmental record;
- Description of the development (e.g., phases, timetables, location, maps, photos, technology used, alternatives to the development, development design details taking into account the environment);
- Description of the existing environment, including environmental interactions (e.g., natural and human setting);
- Impact of the development on the environment, including those caused by accidents or malfunctions, and any cumulative impact(s);

¹Defined in Appendix 1.

- List of potential impacts and the proposed mitigation or remedial measures;
- Identification and description of the residual impacts following mitigation or remedial measures;
- Results and summary of issues from public and community consultation, including any concerns and mitigation;
- Plans for any environmental management plan, follow-up and monitoring;
- List of supporting evidence and information sources, including previous environmental assessments; and
- List of the required licences, permits and other authorizations, if relevant.

Deliverable: An EA report from the developer that addresses the requirements of the EA Terms of Reference, and additional information from other sources as directed by the Review Board.

4.1.7 Conformity Check

After receiving the developer's completed EA report the Review Board will ensure the developer has provided the information requested in the Terms of Reference. Opportunity is provided for parties having expressed an interest to be involved in the EA to contribute to this stage. **Note:** *This conformity check determines whether or not the developer has responded to what was asked for in the EA Terms of Reference; it does not reflect the technical adequacy of the information provided by the developer. Any additional technical information, or further explanation, required would be requested through information requests (IR's). IR's would facilitate the technical analysis of the development.*

Where a developer has submitted a satisfactory EA report with the original application (e.g., at preliminary screening or at the start of the EA), this conformity check would likely occur shortly after the Review Board's approval and release of the EA Terms of Reference.

The Review Board will decide conformity and, where required, issue a deficiency statement if needed.

Deliverable: Review Board issues deficiency statement on the developer's EA report.

4.1.8 Technical Analysis

The Review Board's staff will coordinate the analysis of the EA. The aim is to provide opportunities for RA's, federal and territorial governments, First Nations, the public and other interested parties to participate in the EA process and express their ideas, and present their information (e.g., traditional knowledge holders and scientific experts) to the Review Board. The more complete the analysis, the better the EA. This is a critical stage in the EA process where the key issues and impacts are identified and opportunities for public input in a public forum are possible.

The analysis identifies unresolved issues and environmental impacts, and provides possible suggestions for addressing the issues and impacts. Where unresolved or unclear issues or impacts are identified, the developer, and other appropriate parties (e.g., RAs, experts) will have the opportunity of responding. The developer can formally provide and present its views on the information brought to the Review Board's attention after submission of its environmental assessment report including any proposed amendments, additions or refinements to the development or the environmental assessment.

The Review Board tries to secure a sound technical analysis and where warranted will conduct public meetings and hearings. At public meetings or hearing, it is important that those that want to speak have an opportunity to speak and to listen to others speak.

Deliverable: Technical reports from participants that clearly state the reviewer's conclusions, recommendations and supporting rationales.

4.1.9 Information Requests

Throughout the Conformity Check and Technical Analysis phases of the EA, the Review Board and stakeholders may have additional information needs for technical analysis of the developer's environmental assessment report. This information would be requested through the use of IRs. These IRs and responses would form part of the public registry and body of evidence or information the Review Board would consider.

The IRs represent very specific and focused requests for clarification or additional information, required in order for the party or parties requesting the information to complete its analysis and reach a conclusion about the developer's EA report and proposed development.

The Review Board in its Work Plan would identify milestone dates for the submission of IR's and also identify response dates. Depending on the technical adequacy of the information submitted in the developer's EA Report, there could be two rounds of IRs during an EA. If a third round were required, then the Work Plan would be revised after the developer and other interested participants were informed and provided an opportunity to comment on the proposed work plan amendment.

Deliverable: Responses to Information Requests are placed on the public registry and circulated to all stakeholders to assist in their analysis of the environmental assessment report.

4.1.10 Consultation

The Review Board may decide a round of public hearings is warranted to discuss the developer's EA report and stakeholder responses. This consultation could take one of two forms:

- a forum where people make their presentations about the development proposal to the Review Board; or
- a formal hearing where people could, under certain rules developed by the Review Board, ask questions to any other stakeholder².

Deliverable: A public hearing for the Review Board to listen to and get additional information about the EA, the development proposal and the conclusions reached by stakeholders in filed documents.

4.1.11 EA Decision and Written Reasons

The Review Board will prepare its determination after considering the EA Report, its analysis, and the information on the Public Registry. The Review Board will then prepare its written reasons. The Review Board will give the Minister of DIAND, and when required the NEB, its written reasons. The Minister of DIAND, and the NEB when required, will distribute them to every responsible minister. The referring bodies and the developer also receive copies of the Review Board's written reasons.

Staff would work with the Review Board in the preparation of its Report of EA and written reasons.

Deliverable: Report of the Review Board on the EA, with decision and written reasons.

²See Appendix 1 for a definition of the right to be heard.

4.2 EA Work Plan Schedule

Table 2 provides an estimated timeline for completing each indicated milestone in the EA process. The Review Board may amend the milestone dates at its discretion.

Table 2 - Milestone Completion Timetable

| MILESTONE | Date |
|---|----------------|
| Start-up of the EA | April 17, 2001 |
| Complete development descriptions submitted | April 17 |
| Draft Work Plan and Terms of Reference approved and issued | May 4 |
| Revised Draft Work Plan and Terms of Reference approved and issued | May 25 |
| Final Work Plan and Terms of Reference approved and issued | May 31 |
| Preparation and submission of EA Report by Developer | June 21 |
| Conformity check | June 27 |
| Deficiency statement | As required |
| Last day for Submission of Information Requests | July 4 |
| Submission of IR responses | July 11 |
| Submission of RA and others technical reports | July 25 |
| Closure of Public Registry | August 1 |
| EA decision | By August 15 |
| Federal Minister's response to the Review Board's Report of EA, if required | - |
| Consultation – throughout / as required | - |

5 SCOPE OF THE DEVELOPMENT

The Review Board is required to provide a scope of the development determination according to ss.117(1) of the MVRMA. This section describes what the Review Board considers to be the scope of the developments.

5.1 *Principal Developments*

The two principal developments are:

- An underground decline about 600 m in length and underground exploration drilling; and
- Operation of a metallurgical pilot plant.

5.2 *Accessory Developments and Activities*

The accessory undertakings associated with the principle development include:

Underground Decline and Drilling

- Airlifting the pieces of the jumbo drill to the mine, reassembling the drill at the mine and transporting the drill to the decline location using existing roads;
- Use of water from Harrison Creek during drilling;
- Use, transport and storage of explosives;
- Use of area at the portal at the 905 m elevation about 600 m north of the existing mill facility;
- Excavating a 600 m long 3 m wide and 2.3 m high decline at a 15% down gradient;
- Driving the decline using a two-boom air jumbo drill;
- Removing the rock from the decline using 2-yard scoop trams;
- Transporting the rock to a location within the plant site area using a loader and truck;
- Cutting out 9 drill "cutouts" along the decline in support of an underground drill program;
- Drilling in the cutouts using a Boyles electric or hydraulic diamond drill;
- Dewatering the decline and cutouts using sumps and pumps;
- Creating a sump settling pond at the mouth of the portal; and
- Release of water from the settling pond into Harrison Creek.

Metallurgical Pilot Plant

- Transporting and assembly of a "pilot plant" into the existing mill building;
- Operation of the pilot plant at about 1.5 tonnes per hour;
- Processing a total of 1000-2000 tonnes of rock taken from the surface stockpile and possibly rock from the decline development;
- Using between 2000-4000 m³ of water of which half will come from an on-site aquifer using existing on-site wells;
- Release of mine water into the tailings pond;
- Storage of tailings in one of two thickeners inside the mill building; and
- Removal of the concentrated rock in 2 tonne bags by air.

Logistical Support

- Use of existing mine site facilities at Prairie Creek as base camp for operations;
- Use of existing trucking and mining equipment to support the decline, drill and testing development;
- Aircraft (largely expected to be fixed wing) support for safety, equipment and personnel transport as required; and
- Permanent storage of mined and milled rock at mine site.

6 SCOPE OF THE ASSESSMENT

The scope of the assessment consists of those items listed in the first column of Table 3. Using information already available, the Review Board undertook an evaluation to determine which items in the scope the developer has already adequately addressed and which items will need to be addressed.

The information used for this evaluation consisted of the following:

- Project descriptions submitted by CZN to the MVLWB in support of its Land Use Permit and Water License Applications.
- The Terms of Reference, EA Report and EA Decision Report from the environmental assessment of CZN's Phase I drilling development (Review Board File EA00-002).

Table 3 summarizes the Review Board's evaluation of the available environmental information. A "Yes" indicates that the Review Board has adopted available environmental information to satisfy its ss.117(2) requirements. A "No" indicates that CZN shall address the relevant 117(2) requirement in its submission to the Review Board.

Table 3 – Summary Evaluation of Available Environmental Information

| Scope of the Assessment | Existing Information Acceptable? | |
|--|-------------------------------------|-------------|
| | Decline | Pilot Plant |
| | | |
| Environmental Assessment Methodology | No | No |
| Public Consultation | Yes | Yes |
| Environmental Considerations in the Development Design | No | No |
| Accidents and Malfunctions | No | No |
| Alternatives | No | No |
| Existing Environment | | |
| • Air Quality and Climate | Yes | Yes |
| • Terrain including Soil and Bedrock | Yes | Yes |
| • Vegetation and Plant Communities | Yes | Yes |
| • Water Quality and Quantity | Yes | Yes |
| • Aquatic Resources and Habitat | Yes | Yes |
| • Wildlife and Wildlife Habitat | Yes | Yes |
| • Cultural and Heritage Resources | Yes | Yes |
| • Socio-Economics | Yes | Yes |
| • Land and Resource Use | Yes | Yes |
| • Noise | Yes | Yes |
| • Visual and Aesthetic | Yes | Yes |
| Potential Impacts and Predicted Residual Impacts after Mitigation | | |
| • Air Quality and Climate | No | No |
| • Terrain including Soil and Bedrock | No | No |
| • Vegetation and Plant Communities | No | No |
| • Water Quality and Quantity | No | No |
| • Aquatic Resources and Habitat | No | No |
| • Wildlife and Wildlife Habitat | No | No |
| • Cultural and Heritage Resources | No | No |
| • Socio-Economics | No | No |
| • Land and Resource Use | No | No |
| • Noise | No | No |
| • Visual and Aesthetic | No | No |
| Cumulative Impacts | | |
| • Natural Environment | No | No |
| • Socio-Economic and Cultural Environment | No | No |
| Abandonment And Restoration | No | No |
| Environmental Management Plan | No | No |

7 DIRECTION TO CANADIAN ZINC

To properly execute its duties under the MVRMA, the Review Board should have the following information on the proposed development:

1. Title (of the development proposal);
2. Executive Summary (translated into appropriate aboriginal languages, if requested);
3. Corporate and development information including an environmental record;
4. Description of the development (e.g., phases, timetables, location, technology used, alternatives to the development, development design details taking into account the environment);
5. Description of the existing environment potentially impacted by the proposed development, (e.g., natural and human setting);
6. Impact of the development on the environment, including those caused by accidents or malfunctions, and any cumulative impact(s);
7. List of potential impacts and the proposed mitigation or remedial measures;
8. Identification and description of the residual impacts following mitigation or remedial measures;
9. Results and summary of issues from public and community consultation, including any concerns and mitigation;
10. Plans for any environmental management plan, including monitoring during the development as well as follow-up monitoring;
11. List of supporting evidence and information sources, including previous environmental assessments; and
12. List of the required licences, permits and other authorizations, if relevant.

The information listed above is normally supplied by the developer to the Review Board in the form of a single EA Report. However, for this EA the Review Board has adopted existing documentation to address some of the items in the above list. As such, the submission from the developer in response to these Terms of Reference will only need to address those items listed in the remainder of this section.

To address the deficiencies identified in Table 3 with the existing documentation, as well as provide the information required by the above list, CZN shall provide the Review Board with a submission that provides the information requested in Sections 7.1 to 7.19.

In preparing its submission, CZN shall ensure that the following information is provided when discussing development impacts:

- Identify the development activity;
- Identify the potential impacts of this activity (with supporting evidence) and identify any uncertainties;
- Propose mitigative measures with evidence that the mitigation will work; and
- Predict, with reasoning, the significance of residual impacts that cannot be mitigated.

7.1 *Executive Summary*

CZN shall provide an Executive Summary that encompasses the contents of the existing documentation and the information submitted in response to these Terms of Reference.

7.2 *Environmental Assessment Methodology*

CZN shall provide a description of the methodology they used during the preparation of their EA Report. This should include, but not be limited to:

- A description of and the reasoning behind the setting of the spatial and temporal boundaries used; and
- A description of how significance was determined.

7.3 *Environmental Considerations in the Development Design*

CZN shall describe how environmental considerations were incorporated into the design of the developments.

7.4 *Accidents and Malfunctions*

CZN shall report on the probability, potential magnitude, potential environmental impacts and contingencies to deal with possible development accidents and malfunctions.

7.5 *Alternatives*

CZN shall provide an explanation and evaluation of the alternatives to the principal and accessory parts of the developments. This evaluation should include the "do nothing" scenario. This evaluation should also include a thorough discussion of the comparative impacts of the alternatives along with the rationale for selecting the proposed developments.

7.6 *Air Quality and Climate*

CZN shall report the impacts on air quality. This will include a discussion of measures considered to minimize the release of air contaminants (such dust, exhaust fumes, pilot plant emissions and other air contaminants).

7.7 *Terrain*

CZN shall report the impacts on the environment when surficial geology, bedrock or soils are disturbed, or used for construction purposes.

7.8 *Vegetation and Plant Communities*

CZN shall report the impacts on local plant communities, highlighting rare or highly valued species, and long-term, direct and indirect, habitat loss or alteration.

7.9 *Water Quality and Quantity*

CZN shall report the impacts on the quality and quantity of surface and ground waters. This analysis shall include predictions of the chemical, physical and toxic characteristics of any discharges that may effect the immediate or downstream environment.

7.10 *Aquatic Resources and Habitat*

CZN shall report the impacts on aquatic organisms and their habitat, taking into account predicted water quality and quantity impacts.

7.11 *Wildlife and Wildlife Habitat*

CZN shall report on the impacts (both direct and indirect) on wildlife and wildlife habitats, including migratory birds. Special consideration shall be given to species listed as vulnerable or endangered on the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) list. This analysis shall include a discussion of habitat fragmentation resulting from the developments and associated impacts.

7.12 *Cultural and Heritage Resources*

CZN shall report the impacts on cultural and heritage resources.

7.13 *Socio-economics*

CZN shall report the impacts on the economy, having regard to direct, indirect and induced impacts on income and employment.

7.14 *Land and Resource Use*

CZN shall report the impacts on the use of land, water and renewable resources, including:

- Traditional land use and occupation;
- Existing land use and occupation;
- Hunting, trapping, and outfitting;
- Recreational, commercial and sport fishing;
- Availability, abundance and quality of wildlife, fishing, gathering, recreational;
- Commercial land and water-based areas; and
- Protected areas.

7.15 Noise

CZN shall report the impacts on the environment resulting from changes to ambient noise levels, including both continuous and acute exposure.

7.16 Visual and Aesthetic Resources

CZN shall report the impacts on visual and aesthetic resources.

7.17 Cumulative Impacts

CZN shall provide a cumulative impacts assessment. This should include, but not be limited to:

- An identification of cumulative impacts as well as a determination of significance;
- Methods used for the cumulative impacts assessment;
- Time and spatial boundaries and supporting rationale;
- Location and timing of all projects included in the assessment;
- Discussing and attempting to quantify the potential cumulative impacts, including a determination of significance;
- Discussing uncertainties in the assessment; and
- Identifying mitigation measures that will be applied.

CZN is reminded that socio-economic impacts as well as environmental impacts are to be included in the cumulative impacts assessment.

7.18 Abandonment and Restoration

CZN shall describe and evaluate the abandonment and restoration methods that will be employed for the proposed developments. This should include a discussion of incremental abandonment and restoration costs resulting from the proposed developments.

7.19 Environmental Management Plan

CZN shall describe their environmental management plan, including monitoring undertaken during the development as well as follow-up monitoring. This submission should include, but not be limited to:

- Objectives;
- Schedule;
- Aspects to be monitored;
- Frequency, duration and geographic extent of monitoring;
- Approaches and methods for analysis; and
- Reporting and response mechanisms for adjusting the project design or implementing mitigation/remedial measures, if necessary, based on monitoring results.

8 Direction to Others

The Review Board may request information from expert advisors, RA's, or others, through the issuance of information requests (IR's). Information requested and received through the IR process would assist the Review Board in completing the EA and reaching an EA decision. Parties receiving an IR should provide clear rationale for statements made, conclusions reached and any recommendations provided to the Review Board. With an anticipated EA decision date of July 13, all responses to IR's and any other information parties wish to provide to the Review Board should be submitted as soon as possible, and certainly before the closure of the public registry.

APPENDIX 1

1.0 Review Board Legal Context for Environmental Assessment

The Review Board, in exercising its authority is guided by the following legal principles and by definitions, purposes and factors found in the MVRMA. This context provides the developer, RA's, the DRA (NEB) as required, federal and territorial governments, First Nations, expert advisors, and other affected or interested parties the framework within which the EA will be conducted.

1.1 Legal Principles

The Review Board is governed by the rules of natural justice and procedural fairness. This essentially means that fair play is required when exercising decision making functions. Three of the basic elements are:

(i) *The right to be heard* - means providing fair opportunity for parties to prepare and state their case, and to correct or contradict relevant statements prejudicial to their position;

(ii) *The rule against bias* - is a rule against prejudging a case; addressing not only actual bias but also any reasonable apprehension of bias; and,

(iii) *Fettering of discretion* - means the Review Board is governed by the common law principle which requires that As/he who hears must decide. This means that the Board members who hear or review the evidence in an EA must be the decision makers. Members who did not participate can play no role in the decision. The law also requires that the Board and its members must be free to exercise their full authorities under the statute. The Board must decide each case on its own merits.

1.2 Definitions

The context within which the Review Board conducts an EA is based on following definitions and indicated sections from the MVRMA.

Development - means any undertaking, or any part of an undertaking, that is carried out on land or water and, except where the context otherwise indicates, wholly within the Mackenzie Valley, and includes measures carried out by a department or agency of government leading to the establishment of a national park subject to the National Parks Act and an acquisition of lands pursuant to the Historic Sites and Monuments Act.

Environment - means the components of the Earth and includes

- Land, water and air, including all layers of the atmosphere;
- All organic and inorganic matter and living organisms; and
- The interacting natural systems that include components referred to in paragraphs (a) and (b).

Follow-up program - means a program for evaluating

- the soundness of an environmental assessment or environmental impact review of a proposal for a development; and
- the effectiveness of the mitigative or remedial measures imposed as conditions of approval of the

proposal.

Harvesting - in relation to wildlife, means hunting, trapping or fishing activities carried on in conformity with a land claim agreement or, in respect of persons and places not subject to a land claim agreement, carried on pursuant to aboriginal or treaty rights.

Heritage resources - means archaeological or historic sites, burial sites, artifacts and other objects of historical, cultural or religious significance, and historical or cultural records.

Impact on the environment - means any effect on land, water, air or any other component of the environment, as well as on wildlife harvesting, and includes any effect on the social and cultural environment or on heritage resources.

Mitigative or remedial measure - means a measure for the control, reduction or elimination of an adverse impact of a development on the environment, including a restorative measure.

Scope of assessment - the components of the environment that will be evaluated for impacts from the proposed development.

Scope of development - a description of the development and associated parts as determined by the Review Board.

s.114 The purpose of this Part is to establish a process comprising a preliminary screening, an environmental assessment and an environmental impact review in relation to proposals for developments, and

- to establish the Review Board as the main instrument in the Mackenzie Valley for the environmental assessment and environmental impact review of developments;
- to ensure that the impact on the environment of proposed developments receives careful consideration before actions are taken in connection with them; and
- to ensure that the concerns of aboriginal people and the general public are taken into account in that process.

s.115 The process established by this Part shall be carried out in a timely and expeditious manner and shall have regard to

- the protection of the environment from the significant adverse impacts of proposed developments; and
- the protection of the social, cultural and economic well-being of residents and communities in the Mackenzie Valley.

ss.117(1) Every environmental assessment of a proposal for a development shall include a determination by the Review Board of the scope of the development, subject to any guidelines made under section 120.

ss.117(2) Every environmental assessment and environmental impact review of a proposal for a development shall include a consideration of:

- The impact of the development on the environment, including the impact of malfunctions or accidents that may occur in connection with the development and any cumulative impact that is likely to result from the development in combination with other developments;
- The significance of any such impact;
- Any comments submitted by members of the public in accordance with the regulations or the rules of practice and procedure of the Review Board;
- Where the development is likely to have a significant adverse impact on the environment, the imposition of mitigative or remedial measures; and
- Any other matter, such as the need for the development and any available alternatives to it, that the Review Board or any responsible minister, after consulting with the Review Board, determines to be relevant.