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Your file - Votre référence

MV2001L2-0003

Our file - Notre référence

N1L2-0932

April 19, 2001

Mr. Greg Smith
Regulatory Officer
Mackenzie Valley Land and Water Board
4910 50th Avenue
Yellowknife, NT X1A 2P6

Mackenzie Valley Land
& Water Board

File

APR 20 2001

Application # MV2001L2-0003

Copied To MS IGS Reg

Dear Mr. Smith:

RE: CANADIAN ZINC CORPORATION - PRAIRIE CREEK MINE

I have reviewed Canadian Zinc Corporation's Water Licence and Land Use Permit Applications for the Prairie Creek Mine dated March 5, 2001. Upon review of the applications, there appeared to be a lack of supporting information, specifically for the engineered structures, water quality data of the water sources, and on the sewage ex-filtration system. These concerns were expressed verbally to the Regulatory Officer of the Mackenzie Valley Land and Water Board, for which written comments were to follow, and were to be submitted by April 16, 2001. Unfortunately, these concerns were forwarded to the Canadian Zinc Corporation prior to the complete review of the applications and prior to the closing date for comments. This course of action has resulted in Canadian Zinc Corporation providing information to the South Mackenzie District Office to address these concerns. The Canadian Zinc Corporation requested that this information not be distributed without their consent. It is of the opinion of the South Mackenzie District that the concerns raised prior to the submission of our written comments should not have been forwarded to Canadian Zinc Corporation. The concerns listed below reflect those made prior to receiving the additional information that was provided by the Canadian Zinc Corporation, and are as follows:

In general, the Water Licence Application is lacking in technical information. Although baseline information may have been submitted when the Prairie Creek development was first proposed in the late 70's and early 80's, Canadian Zinc Corporation should have provided either current or existing water quality data from the associated water sources as well as current geotechnical information of the tailings impoundment facilities.

According to the observations made during site inspections, it appears that the synthetic liner in the tailings pond has deteriorated. Since some of these structures are intended to be used for the proposed activities, it is imperative that the facilities that are designed to contain, withhold, divert or retain water or waste be certified by a qualified geotechnical engineer prior to being commissioned.

Canada

Other concerns regarding the water Licence and the Land Use Permit Applications are as follows:

1. Water Use

Although the Water Licence Application states that water use is expected to be up to 75 m³ per day (based on processing at a rate of 3 m³ per hour), the total water used for all activities associated with the undertaking should be reflected in the volume of water to be used under the Water Licence application, rather than be separated between the Water Licence and the Land Use permits.

It is also stated that minewater to be encountered is hydraulically connected to the aquifer, which is presumed to be same aquifer used for drinking water purposes (untreated). The water source has the potential to be contaminated. However, there is no data provided to verify this assumption.

2. Sewage

It is stated, on Page 7 of the Water Licence Application, that sewage is discharged to an ex-filtration sump. Canadian Zinc should supply detailed information regarding these disposal facilities, including the location of the sump, its proximity to any water sources, anticipated effluent quality, and proposed monitoring. Since freshwater is stated as being untreated, the location of the ex-filtration sump in relation to the freshwater well, if in the same aquifer, may need to be considered.

3. Decline

It is stated, in Land Use Permit application MV2001C0023 question #7, that since the development is a decline, no discharge of water is expected from the portal. However, during an inspection in August 1999, minewater was observed coming from the 870 m portal. It is also stated elsewhere in the applications that the anticipated minewater to be encountered is hydraulically connected to the Prairie Creek Valley Aquifer. If minewater was observed flowing from the portal at 870 m, would it not be likely to be coming out at 905 m, especially if the stratabound deposits are located around the 600-650 m elevation, which is 400 m below the surface of the ground?

Canadian Zinc does not provide information regarding the capacity of the sump to be developed at the mouth of the portal. The sump is intended to act as a settling pond for minewater prior to release to Harrison Creek. Considering that the proposed portal is approximately 20 m from the creek, Canadian Zinc should provide some assurance that the water will be tested prior to its release, and that the sump will have sufficient capacity should excess minewater be encountered. It is anticipated that the minewater will be high in ammonia, total suspended solids, total dissolved solids and in total and dissolved metals.

4. Waste Rock

Under the Land Use Permit Application MV2001C0023, Canadian Zinc states that the development of the decline will produce approximately 5,200 m³ of rock which is presumed to be waste rock.

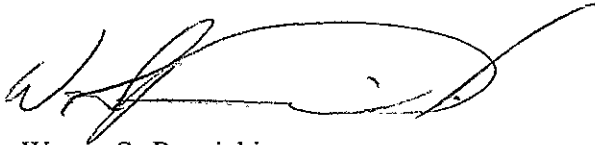
This rock will be trucked and stockpiled within the existing plansite area, either adjacent to the existing ore stockpile, or in the storage yard along the toe of the tailings impoundment dam. Canadian Zinc should provide information as to how waste rock and ore stockpiles will be managed. Placing the rock at the toe of the dam may interfere with efforts to restore the tailings facility to acceptable standards and also in the control of runoff.

5. Tailings Solids

The Canadian Zinc Corporation states, in question #10 of the Water Licence Application, that tailings solids will be retained in the mill thickener. Since these facilities were never commissioned, it is unknown as to the condition of thickener and if it is still able to function as designed. It is also unlikely that the tailings will be permanently contained in the thickener.

Should you require clarification or wish to discuss any of the above comments, please do not hesitate to contact me at 669-2768.

Sincerely,



Wayne S. Puznicki
Water Resource Officer/
Inspector under the NWT Waters Act
South Mackenzie District
e-mail: puznickiw@inac.gc.ca

cc: DIAND - Water Resources Division
DIAND - Fort Simpson



#16 Yellowknife Airport
YELLOWKNIFE NT X1A 3T2

FAXED
APR 20 2001

April 20, 2001

Mackenzie Valley Land and Water Board
7th Floor, 4910-50th Avenue
YELLOWKNIFE NT X1A 2P6

Your file - Votre référence

Our file - Notre référence

**Mackenzie Valley Land
& Water Board**

File _____

Attention: Mr. Greg Smith

Dear Sir:

Re: Land Use Applications MV2001C0022, MV2001C0023

APR 23 2001
Application # MV2001C0023
Application # MV2001C0022
Copied To MS/IGS/Reg

I have reviewed the above applications, and I have not identified any potential significantly adverse environmental impacts likely to result from these operations. I do recommend the following land use permit operating conditions to minimize any lesser impacts which could result:

- A.
 - 1.1 Plans
 - 1.4 Parallel Roads
 - 1.7 Remove Waste Material
 - 1.10 Existing Camp Location
 - 1.14 Existing Roads

- B.
 - 2.1 Contact Inspector Fort Simpson 695-2626
 - 2.2 Reports Before Removal - 10 days
 - 2.4 Backfilling Notification
 - 2.15 Re-establish Vegetation
 - 2.16 Clean-up

- C.
 - 3.1 Only Approved Equipment
 - 3.3 Incinerators
 - 3.5 Garbage Containers (add bear proof covered metal container)

- D.
 - 4.4 Plug Holes (Bore)
 - 4.10 Waste Material Piles
 - 4.16 Removal of Drill Casings

- E.
 - 5.1 Sumps from Water
 - 5.3 Backfill Sumps
 - 5.7 Clean Work Area

- F. 6.1 Plug Artesian Wells (reported to the inspector)
- 6.2 Natural Drainage
- 6.3 Stream Banks
- 6.7 Stream Beds Access
- 6.14 Erosion Control When
- 6.16 Prevention of Rutting

- G. 7.1 Approval of Chemicals
- 7.5 Drill Waste Disposal
- 7.7 Drill Waste Containment
- 7.8 Garbage Disposal
- 7.10 Remove Garbage - delete "to a disposal site approved in writing by a Land Use Inspector"
- 7.12 Waste Petroleum Disposal
- 7.15 Report Chemical and Petroleum Spills

- K. 11.2 Fuel By Stream (30m.)
- 11.4 Fuel Containment

- L. 12.9 Brush Disposal Timing

- M. 13.5 Display Permit
- 13.7 Identify Agent
- 13.13 Waste Rock/Ore Storage (submit to the inspector)

Add New Condition: "the Permittee shall review and update the existing contingency plan, for approval by the Inspector."

Yours truly,



Edward Hornby
Acting District Manager
South Mackenzie District



Memo

CC: Rmo - 74 Simp.
Your file / Votre référence
Our file - Notre référence

GT-0001

To: Char Coe
From: Greg Cook
Date: March 27, 2001
Subject: LUP;'s MV2001C0022 & MV20001C0023 - Canadian Zinc Corporation
-Prairie Creek Mine - mineral exploration and underground decline

Char,

On behalf of the Department of Indian Affairs and Northern Development, Water Resources Division, I have reviewed the above mentioned land use applications for surface and underground work at the existing, but closed, Prairie creek mine site. I have found that there are water-related concerns with this project, which will be addressed through a more thorough review of the accompanying water licence application and project description. Technical and screening related comments will be provided directly to the MVLWB, and copied to the South Mackenzie District. I gather that no referral or environmental assessment for this phase of the project has yet been determined or agreed to, based on a brief conversation with Greg Smith at the MVLWB. The current Phase 1 drilling program I gather is still wrapped up in an EA process. Environmental assessment of this project should not be done in a piecemeal fashion.

I will mention this as well to the MVLWB, but the overall mine development underwent a full level 2 DIAND environmental assessment under the old EARPGO back around 1980. The company here has not mentioned the earlier owners (Cadillac Mines and Procan) which were permitted and licensed for mining following an environmental and technical review. There are several studies around from this earlier permitting period, which may provide the Board with valuable data.

As mentioned, more detailed comments will be forthcoming, depending on comments from others. Obvious areas to comment on may be the licensing requirements for testing and disposal of underground mine water or groundwater, updated contingency plans, identification of water sources and quantities, more information on waste rock chemistry, and location, monitoring of waste rock piles etc.

Please recommend standard permit clauses to address all other general/environmental concerns.

-2-

If you have any questions, please feel free to call at 669-2656.

Sincerely,

Greg Cook
Environmental Assessment Coordinator

From: Sandra Bradbury
To: Charlene Coe
Date: 3/30/01 11:27AM
Subject: Comments on applications

MV2001C0022 - No COncerns they are the holder of the Mineral Lease

MV2001C0023 - No Concerns - as above

From: Wayne Starling
To: Coe, Charlene
Date: 3/23/01 4:41PM
Subject: Re: Candian Zinc Corp- LUPA MV2001C0022 - Surface expl. - Phase II

Hi Char:

I have reviewed the fax and email information regarding this and C0023 (Decline Development), and they look like pretty straight forward operations to me. I don't have any specific comments or recommendations other than standard conditions for this work. The package notes several meetings with DIAND and other Gov't agencies as well as MVLWB, and there is no application or mention of a Water Licence for these projects, so I'm assuming the volumes and handling are below the minimum requirements???

Take care,

Wayne