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Northern Affairs Program
200 Range Rd.
Whitehorse, Yukon
Y1A 3V1

December 17, 1991

Curragh Resources Inc.
117 Industrial Rd.
Whitehorse, Yukon
Y1A 2T8

Your file / votre référence

Dy file / Notre référence
5510-CS

Dear Mr. Acott,

Re: **EARP Review of the Down Valley Tailings Impoundment
Decommissioning Plan (SRK) and abandonment aspects of the
Water Recycle and Tailings Deposition Plan (Kilbora)**

I am writing to provide you with the Regional Environmental Review Committee (RERC) assessment of the adequacy of the Down Valley Tailings Impoundment Decommissioning Plan and the abandonment aspects of the Water Recycle and Tailings Deposition Plan pursuant to our review under the Environmental Assessment and Review Process Guidelines Order.

The RERC would also like to thank you and Mr. Jilson for attending the RERC meeting on November 14 to provide an overview of the above reports. The presentation was very informative, as was the ensuing discussion.

1. Follow up to RERC discussions

You asked a number of questions at that meeting that I would like to respond to in regard to the status of the EARP review, preparation of a joint outline for a comprehensive abandonment plan, timing of Water Board hearings, and the need for a meeting between Curragh and Government prior to the VTWB hearing.

The RERC met on Tuesday, November 26 and agreed that the preparation of a joint outline for a comprehensive abandonment plan was a useful approach. However in recognition of the short time frame prior to the hearing and the priority that must be given to the discussion of the abandonment plans currently before us, we are not able to commit to working with you on the outline prior to the hearing. Work to prepare a preliminary outline with a rationale, and some key objectives and principles based upon recommendation # 6 in the IN89-001 Amendment Application # 1 EARP screening, is underway and could be one of the subjects of

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discussion at a meeting between Curragh and Government. If we are able to come to an agreement on the rationale we may be able to table this with the Yukon Territory Water Board at the January 15 public hearing. As agreed on December 13, the meeting will take place on Thursday, December 19 at 10:00am in the DIAND boardroom at 200 Range Road.

Postponing the hearing was discussed amongst RERC members and it was recognized that there are benefits to both alternatives, that is, to participate in a hearing in January or wait until the March information is in and discuss it at a later hearing. Our conclusion, based on the information presented prior to December 15, 1991, is that a postponement would not alter the basic EARP decision on these plans. However, information received from Curragh on December 16, from DOE on December 17, and information we understand will be available from Curragh on December 18 has not yet undergone a review and it is not yet clear whether the RERC will be able to finish its review of these new materials prior to the January 3 deadline. Although these documents will not alter the EARP decision, they may place the Federal Government in a position of not having completed EARP prior to YTWB deadline and therefore having to seek a deferment.

2. RERC review of Submission

In regard to the review of the SRK and Kilborn plans, I would like to take this opportunity to thank you for your submissions. Part of the review carried out to date has been on the adequacy of the assessment of costs and risks associated with tailings and pit abandonment. Our preliminary assessment is that you have been very reasonable in your estimate of tailings and pit closure liability and have done a thorough job in comparing the various closure alternatives and stating your reasons for choosing option number five.

Option five would appear, from the information before us now, to be an environmentally sound strategy and the RERC recognizes the merits of this option. It appears that the more tailings put into the pit, and out of the valley bottom, the better. However, RERC has identified several items which are unacceptable as presented and which need to be addressed before a final decision on the acceptability of this proposal can be made. As noted at the November 14, RERC meeting, the EARP screening result will likely be a 12(d). The EARP screening of the SRK and abandonment aspects of the Kilborn plan has to date identified seven key deficiencies which provide the rationale for the 12(d) determination and are as follows:

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- there is a need for a clear commitment to implement the Down Valley Tailings Proposal for decommissioning of current facilities;
- there is insufficient information provided on the feasibility of option five in regard to the ability of the pit to hold water, water treatment implications, limited metallurgical testwork, and the technical viability of reprocessing;
- there is no financial assurance proposal;
- the long term water quality objectives and standards for Rose Creek are unacceptable as proposed;
- there is no information on the extent and scheduling of long term monitoring and maintenance of structural facilities;
- the implications of the SRK and Kilborn plans on other aspects of the abandonment components already in licence are not addressed;
- there is no proposal for a comprehensive integrated abandonment plan.

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The key objectives at this point in our EARP review are to require a sound tailings deposition and decommissioning plan as a condition of licence, to ensure that a clear commitment is in place from Curragh towards a final decommissioning plan; and to ensure that further hearings will take place in regards to financial assurance once the cost of tailings and pit abandonment has been determined. We would also like to put in place a mechanism and schedule to allow us to work together towards an acceptable final Faro mine complex integrated comprehensive abandonment plan.

In closing, the EARP screening carried out to date has been of a fairly general nature and has concentrated on the necessity of an acceptable tailings deposition and decommissioning plan rather than the details of what should be in it. Our review thus far has addressed the broad implications of your deposition and decommissioning proposals only and we may have additional comments upon review of recent information submitted. As you know, the tailings deposition and decommissioning plans cannot be looked at in isolation from the larger issue of abandonment of the Faro mine complex as a whole. A more complete list of information

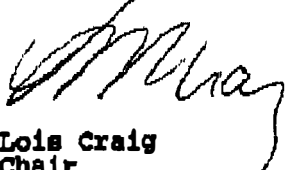
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deficiencies will be prepared as part of the EARP screening of a comprehensive integrated abandonment plan and as more information becomes available.

The attached statement of deficiencies elaborates on the above.

Yours Sincerely,



Lois Craig
Chair
Regional Environmental Review Committee

c.c A.E.Ganske
RERC
Attachment: Information Deficiencies

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**Review of
Down Valley Tailings Impoundment Decommissioning Plan (SRK)
and
Water Recycle and Tailings Deposition Plan (Kilbena)**

Information Deficiencies

- 1.. Lack of commitment to implement the Down Valley Tailings proposal for decommissioning of current facilities.

The information on abandonment alternatives as provided in the SRK report identifies option 5 (reprocessing 2/3 of the tailings, placing reprocessed tailings in pit and covering remaining tailings with water) as the preferred alternative. However, there is no commitment from Curragh Resources to indicate that this preferred option will be carried out until further feasibility analysis is concluded. Further, the economic viability of the project is highly sensitive to metal prices and the bulk concentrate grade.

We note you have stated in the Water recycle and Tailings Deposition plan; Chapter 7.0, that " The alternative to reprocessing would be to deliver the reclaimed slurry direct to the Faro pit. This option would require evaluation if the metallurgical test program is unable to generate a saleable bulk concentrate. In this case the slurry would be pumped directly to the mill tailings system and from there to the Faro Pit. The timing of this would be less dependent upon the status of the existing mine and mill operations." If reprocessing is not economic is a modified option five still Curragh's preferred option ?

Option five (deposition of tailings in the Faro Pit), given the information before us now, appears to be an environmentally sound strategy for secure, long-term disposal. However, the reprocessing component is strongly dependent on metal recoveries and metal prices, both unknowns at this time. It should also be noted that the integrity of the pit and therefore the likelihood of requiring further mitigation or contingency measures will not be known until the water reaches design levels. Further information deficiencies may arise out of the hydrogeological work currently being carried out by Environment Canada.

The RERC considers it is unacceptable that Curragh has not committed to implementation of the DVT Plan, nor has Curragh considered making any of these commitments until 2008, the proposed completion of mining at the site. The plan leaves a very

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high risk and uncertainty with Government because of its dependency on market prices even upon initiation of reprocessing in 2008. Although the RERC is pleased to see an interim measure proposed by Curragh to add lime to exposed tailings from 1992 to 2008 to minimize oxidation and acid generation, Curragh's commitment to undertake some progressive measures prior to 2008 to reduce this risk (eg, possible partial tailings deposition in pit) will be important to Government assessment of security requirements. In requesting such a commitment Government recognizes that improvements may be possible or technological changes to the plan may be required prior to its implementation but finds it imperative that the basic commitment be clearly made.

It should be noted at this point that the preliminary review of option five carried out by PBK Consultants for Northern Affairs has indicated that there is more room available in the pit than indicated by Curragh. The option therefore of placing additional tailings in the pit (i.e. the remaining 1/3) is still a consideration.

2. Insufficient information regarding feasibility of option five.

As limited metallurgical testwork has been carried out on tailings material it is still an assumption that by regrinding and floating residual metal, values can be recovered. In assessing the proposal to recover the tailings for reprocessing using hydro-monitoring, and to deposit these tailings in the Faro Pit, a number of questions arise regarding the technology and the viability of implementing it.

Although research on reprocessing is underway there is no assurance that it is feasible in this situation. What contingency plans does Curragh propose in the event that reprocessing is not a technically viable option? Contingency plans with associated costs should be prepared for both reprocessing and final tailings deposition.

If hydro-monitoring is only possible seasonally, and reprocessing will only occur when the market for bulk lead/zinc concentrate exists, what are the long term implications of many mill start-up / shut-downs during the course of abandonment?

3. Security - there is no financial assurance proposal.

The Government of Canada has the responsibility of ensuring that the mine complex does not become a public liability in the

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interim or upon final closure. What is Curragh's proposal for financial assurance? The risk associated with Curragh's decommissioning plans will be one factor taken into account by the Government of Canada in assessing financial assurance requirements.

4. Water quality objectives for Rose Creek

Government does not support Curragh's long term objective for Rose Creek water quality. Curragh has stated that:

" The objective for receiving water quality will be to ensure that the existing water quality of Rose Creek is maintained at it's current state or improved after decommissioning."

YTG Renewable Resources has stated that the long term objective should be the CCREM guidelines for maintenance of water quality for protection of freshwater aquatic life pending naturally occurring background levels. DFO has stated that the long term objective should be the long term maintenance of the water quality of Rose Creek downstream of the freshwater reservoir to ensure that the aquatic productivity of the creek is restored to and maintained at the pre-mine levels. The Selkirk First Nation similarly wants a return to pre-mine conditions. Northern Affairs is still in discussions with Government agencies on what the long term objectives should be and would hope by January third to have a Federal position on this.

5. Monitoring and Maintenance

In the absence of a comprehensive abandonment plan it is not possible to identify either the extent or scheduling of long term monitoring or maintenance. As part of the rationale the company should state the prime objective of the monitoring and maintenance plan for the DVT in relation to the overall objective of the abandonment plan.

6. Existing Abandonment Plans

Information should be provided on other aspects of the abandonment components already in licence as modified by the provisions and implications of the Kilborn and SRK plans.

7. Need for a comprehensive abandonment plan

It is not possible to properly evaluate the environmental impacts of tailings abandonment in the absence of an integrated

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comprehensive abandonment plan. Although some components are in place, lack of an integrated plan does not allow us to adequately assess overall impact or overall mitigation of impacts. Completion and implementation of an integrated and comprehensive decommissioning plan for the Faro minesite satisfactory to Government will be an EARP recommendation.

With the present information, impacts on Rose Creek can not be adequately assessed. Further information is required on contaminant inputs to the system such as loadings from waste dumps and other elements of the site. Information that links structures with site components is necessary to predict downstream impacts and water quality. The plan must meet the objective of protecting Rose/Anvil Creek fish resources and habitat over the long term. DFO has stated that " the plan must meet the objective of the long term maintenance of the water quality of Rose Creek to ensure that the aquatic productivity of Rose Creek is restored to and maintained at pre-mine levels".

In the interim we would intend to work with you in identifying the rationale, objectives and eventually an outline of a workplan for a comprehensive integrated abandonment plan. As new information is forthcoming and policy develops we will be better able to work with you towards this.