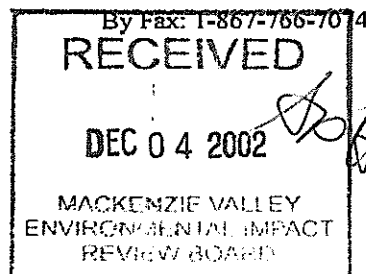




December 04, 2002

Mr. Louie Azzolini  
Environmental Assessment Officer  
Mackenzie Valley Environmental Impact Review Board  
PO Box 938, 200 Scotia Centre, 5102 – 50<sup>th</sup> Ave.  
Yellowknife, NT  
X1A 2N7



Dear Mr. Azzolini:

**Re: Historical Water Quality of the Prairie Creek Project Area  
Indian and Northern Affairs Canada – July, 2002**

Canadian Zinc received a copy of the above noted report under cover of a letter from Mr. Edward R. Hornby, District Manager, dated October 1, 2002. The original data upon which the report was based was subsequently received by email from Mr. Bob Reid of Water Resources on October 11, 2002.

We understand that this report was subsequently forwarded to the MVEIRB as well, ostensibly in connection with Canadian Zinc's applications for the Underground Decline/Exploration Drilling and Metallurgical Pilot Plant Programs which are currently before the Board, and that the report, as reported in the press, "is one of the many factors the board will consider in making its decision."

Accordingly, we are attaching for the Board's information and consideration Canadian Zinc's response to Indian and Northern Affairs dated November 18, 2002 on the report and its findings. As you will note, there is considerable discrepancy in the interpretation of the data and the conclusions which may be drawn therefrom. Contrary to the impressions given by the report, Canadian Zinc's findings suggest that there have been no or, at most, very infrequent exceedances of applicable discharge standards, and no significant impacts on downstream water quality in Prairie Creek or the South Nahanni River.

As clearly demonstrated in our response to MVEIRB IR#1, Canadian Zinc is confident that its proposed water management strategy will ensure that discharges from the property to the receiving environment will continue meet Metal Mining Effluent Regulations standards and that Canadian Water Quality Guidelines for the Protection of Aquatic Life will continue to be met downstream of the minesite in Prairie Creek.

Should you have any questions or require any additional information please feel free to contact me at your convenience.

Yours very truly,

CANADIAN ZINC CORPORATION

A handwritten signature in dark ink, appearing to read 'Peter Campbell', written over a horizontal line.

J. Peter Campbell  
A/VP Project Affairs

Encl.

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November 18, 2002

Mr. Edward R. Hornby  
District Manager, South Mackenzie District  
Indian and Northern Affairs Canada  
#16 Yellowknife Airport  
Yellowknife, NT  
X1A 3T2

By fax: 1-867-669-2720

Dear Mr. Hornby:

**Re: Historical Water Quality of the Prairie Creek Project Area**

Thank you for providing us with a copy of the report entitled Historical Water Quality of Prairie Creek Project Area (July 2002) under cover of your letter dated October 1, 2002. We also appreciate having subsequently received the original data upon which the report was based by email from Mr. Bob Reid on October 11, 2002.

The report provides a good summary of water quality data collected over the last 20 years in and around the Prairie Creek property, including a number of data points which were not in Canadian Zinc's files. We have noted as well, a number of data points in our records which do not show up in the Report which we will be pleased to pass on to Water Resources so that all parties have as complete a database as is available. The data will certainly be useful for comparative evaluation of predicted impacts as we move forward with the development of the property.

As we have now had an opportunity to review the report and the original data, we would like to take this opportunity to respond to your letter. As well, we have appended a separate sheet to comment generally on certain aspects of the report. If warranted, we will entertain a more detailed review of the statistical analysis undertaken in the Report at some time in the future.

In your letter, you refer to the report detailing "frequent occurrences of metal concentrations exceeding the expired water licence discharge limits, and in some instances, the Metal Mining Liquid Effluent Regulations limits", and "the need to bring mine water discharge from the 870 portal to, as a minimum, the discharge limits authorized by the now expired water licence.

Our review of the Report and the data upon which it is based suggests quite the opposite conclusion. Since Canadian Zinc's involvement with the property in 1991 the discharge from the settling pond to Harrison Creek has never exceeded the MMLER maximum grab sample limit for any element and has only exceeded the expired Water Licence maximum grab sample limit on a single occasion, that being for zinc (0.851 mg/l) on October 18, 1994.

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The results also suggest that water quality in Prairie Creek downstream of the minesite has not been significantly impacted as compared to upstream water quality, and in the majority of cases consistently meets Canadian Water Quality Guidelines for the Protection of Aquatic Life. Similarly, the data indicates that water quality at the mouth of Prairie Creek remains unaffected and has no potential for impacting on the South Nahanni River.

We believe much of the reason for this confusion in interpretation lies in the many comparisons made in the Report to guidelines and limits which are not relevant or do not apply to a given location.

For example, throughout the Report, levels at the 870 portal are compared to the expired Water Licence and MMLER limits. However, both the expired Water Licence and the MMLER limits specifically address discharges to the receiving environment. The mine water drainage from the 870 portal reports to the settling pond, not to Harrison Creek, and as such does not constitute a discharge to the receiving environment and should not be interpreted as being subject to the referenced discharge limits. The settling pond represents the last point of control for all flows on the property and as such represents the single point source discharge to the receiving environment from the property to which discharge limits may be compared.

Similarly, comparisons are constantly made of levels seen at the 870 portal flow and settling pond discharge to Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life, which have been formulated to reflect optimum receiving environment water quality, as opposed to discharge or effluent water quality, and should therefore be restricted to evaluating the effects on Prairie Creek downstream of the minesite. This is very evident, for example, in the discussions on ammonia where, in the "conclusions" section, the report dwells on exceedances of the CPFAL Guidelines in the 870 portal flow and settling pond discharge, but ignores the facts detailed in the text of the Report that there were no exceedances of the original water licence limits and no exceedances of CPFAL Guidelines in Prairie Creek downstream of the mine.

In order to avoid such confusion, it is critical that the Report clearly differentiate between discrete flows within the property boundary and discharges to the receiving environment, and the application of the respective discharge limits and water quality guidelines.

Despite the foregoing, which indicates to us that there is no pressing need to mitigate the historical minewater flow from the 870 portal, as the settling pond discharge from the property appears to be having minimal effect on the receiving environment and is meeting the intent of current regulations, we remain committed to operating the property in an environmentally responsible manner that meets or exceeds current regulatory standards. To this end, we have recently presented a water treatment plan to the MVEIRB in association with our applications for operating a metallurgical pilot plant and underground decline which would see treatment of the 870 portal minewater flow in conjunction with the increased site activity which would accompany these programs.

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- 3 -

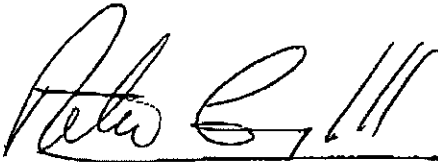
As you are aware Canadian Zinc has been proceeding diligently and in good faith over the last two years with plans for additional advanced exploration activity on the property which would hopefully see the mine move towards production in the near future. As is generally the case, the best solution for addressing historic issues on a site such as Prairie Creek is an increased level of activity and site presence. Unfortunately, our efforts in this regard have been continually hampered by regulatory delay. This has had the added effect of restricting the Company's ability to raise money, particularly at a time when metal prices are at a low point in the cycle, which has in turn hampered the Company's ability to proceed with development of the property in an organized manner, including addressing some of the outstanding issues characteristic of an old property such as Prairie Creek.

As we have stated, the Company is prepared to implement its site water management strategy as proposed in conjunction with planned activity for which it has made application and for which it holds valid tenure and has legitimate expectations to be able to carry out.

Solutions to issues such as those being raised in respect of the Prairie Creek property require the cooperative effort of all parties. Please be assured that Canadian Zinc on its part is committed to working with your department to ensure that all such issues are addressed as warranted and the needs of your department are met. We trust this letter and our submission to the MVEIRB, to which we assume you have access, will satisfactorily achieve these objectives. Should have any questions or require any additional information we would be pleased to discuss them with you at your convenience.

Yours very truly,

**CANADIAN ZINC CORPORATION**



J. Peter Campbell  
A/Vice President, Project Affairs

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## CANADIAN ZINC CORPORATION

**Historical Water Quality of the Prairie Creek Project Area (July, 2002)****General Comments:**

- It is inappropriate and misleading to include detection limit values as real numbers when performing statistical calculations when dealing with older detection limits that are orders of magnitude higher than current detection limits or actual recorded values. This is particularly evident for Prairie Creek upstream and downstream for elements such as As, Cd, Cr, Cu, Pb and Hg.
- The entire data set of zinc from the June 16, 1982 suite of samples were elevated; this is highly suggestive of laboratory error and should be highlighted accordingly and possibly eliminated from statistical calculation; note that copy of the laboratory results sheet in Canadian Zinc's files has an asterisk next to these values and "lab error" hand written on the sheet
- A number of the 870 portal data were identified on the sample collection sheets as being collected from the "tailings containment sump" and while identified as 932-9 should not be included in the 870 portal data set
- In Table A2, the stated exceedances of the CPFAL Guideline for Cadmium are misleading; the CPFAL guideline of 0.063 ug/l is exceeded 100% of the time at all locations, including not only on the minesite, but also upstream and downstream of the minesite in Prairie Creek, and in the South Nahanni River as well; in this case, it is inappropriate and misleading for the report to assume that levels below detection limits ranging from 0.1 to 10 ug/l meet the Guideline
- References to the MMLER should likely be to the MMER which were promulgated in June 2002 superceding the MMLER
- Where applicable, figures, such as Figure 19, should show the MMER limits in addition to those of the expired Water Licence
- Elevated zinc levels of 216 and 167 ug/l in Prairie Creek downstream recorded Aug.7/91 and Jun 30/92, respectively, are significantly higher than levels recorded from samples collected from the settling pond on the same date (6.0 & 20.0 ug/l); comparisons of other measured parameters such as calcium, magnesium, hardness and alkalinity indicate that levels recorded from the settling pond are generally more typical of downstream Prairie Creek water quality and vice versa, suggesting that the settling pond and Prairie Creek downstream samples may have been mixed up on these sampling occasions; other obvious outliers such as the zinc value of 128 ug/l on Sept. 24/85 should also be checked carefully for such discrepancies (Note: the results of the Sept. 24/85 samples are not in CZN files); elimination of such outliers will reduce the statistical significance of differences in upstream and downstream zinc levels
- In many case conclusions are based on "old" data that are not reflected in more recent data; for example, many of the reported highest recorded values are from one sample collected May 12, 1982 which are in many cases an order of magnitude higher than the sample collected a month later and every sample collected since; clearly the reliability and significance of such older data must be questioned and its relevance pointed out in the Report; it is critical that the Report clearly distinguish between older data and data which reflects current conditions.
- It is inappropriate and misleading to draw conclusions about existing conditions based on old data; for example, there is no data in the report on the final discharge from the settling pond to Harrison Creek since 1995; similarly, for specific elements the most recent data is often even older, for example, the most recent ammonia data for the SNP stations dates back to 1988.

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