### Louie Azzolini

From:

Chuck\_Blyth@pch.gc.ca

Sent:

Monday, July 30, 2001 5:58 PM

To:

eao1@mveirb.nt.ca

Subject:

IRs EA01-002 & EA01-003



Mac Word 3.0





Mac Word 3.0





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Here are the Parks Canada technical

deficiency & IRs for EA01-002 & EA01-003.

Mac Word 3.0

As discussed only the underground decline IRs are written in "the" format. If you have any questions do not hesitate to call.

(See attached file: CZinc EA Pilot Plant.doc)(See attached file: CZinc EA Exp IR 1.doc)(See attached file: CZinc EA Exp IR 2.doc)(See attached file: CZinc EA Exp IR 3.doc)(See attached file: CZinc EA Drilling.doc)

1

Date:

July 25, 2001

From:

Chuck Blyth, Nahanni National Park Reserve, Parks Canada Agency

Phone: Fax:

(867) 695-3151 (867) 695-2446

Email:

chuck blyth@pch.gc.ca

Subject:

Accidental Releases and Malfunctions

Objective:

To permit a thorough assessment of the procedures and mitigation to be implemented by CZN to ensure that the accidental release of petroleum products does not result in the contamination of Prairie Creek and significant adverse effects to the ecological integrity of the South Nahanni River and Nahanni National Park Reserve.

Time Limits: Information is required as soon as possible to permit review by Parks Canada and other review agencies

Preamble:

The Environment Assessment Report submitted by Canadian Zinc on June 21, 2001 Underground Decline Development and Exploration Drilling (Land Use Permit Application MV2001C0023) states on page 15 that there is a low to medium risk of diesel spill at the exploration site. However, the supply of diesel fuel for operations at the site is the tank farm at the Prairie Creek site. According to the site map for the Prairie Creek site, there are four tanks with a total of 42,800 BBL of fuel oil storage (6,805,200 Litres), 2 tanks with a total of 700 BBL of gasoline (111,300 Litres) and a buried boiler fuel tank of 1000 imperial gallons (4550 Litres). The proponent states that the "fully bermed fuel farm storage area" meet current regulatory requirements for petroleum product storage. Our past records also state that the fuel storage facilities were not equipped with a dyked impervious area complete with an integral recovery pumping system. Of particular concern is the fact that aerial photos of the bermed area show water accumulation inside the berm.

Requests:

Parks Canada requests information on the following fuel storage issues:

 CNZ is asked to provide an indication as to whether or not these tanks comply with existing regulations for the storage of petroleum products both above-ground and below-ground. This is of particular concern to Nahanni NPR since our records indicate that inadequate fuel storage tanks were used in the past and resulted in the accidental release of 24,000 gallons of diesel fuel. The tanks in use were 15-year old bolted style fuel tanks which would not meet current approvals.

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Subject:

Accidental Releases and Malfunctions

- ◆ The proponent is asked to provide information on the existing volume of petroleum product in each of the storage tanks (both above and below ground).
- ◆ CZN is asked to provide evidence that the berm around the fuel farm meets existing regulatory requirements for petroleum product storage (including confirmation of impermeability, a fully functional recovery pumping system and containment sump).
- ◆ Although Canadian Zinc currently has a fuel contingency plan, the items contained in the spill kit would be totally inadequate in the event of the accidental release of one of the larger tanks. CZN is asked to provide evidence of immediate response capability in the event of a significant release of petroleum product.

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Subject:

Cumulative Effects of Infrastructure Use

Objective:

To permit a thorough assessment of the cumulative effects of increasing number of staff using the same facilities for acccomodation, and the use of ancillary facilities including the landing strip.

Time Limits: Information is required as soon as possible to permit review by Parks Canada and other review agencies

Preamble:

The Environment Assessment Report submitted by Canadian Zinc on June 21, 2001 Underground Decline Development and Exploration Drilling (Land Use Permit Application MV2001C0023) states on page 11 that the underground decline development will require 15 persons. The exploration drilling program will involve 14 persons, the operation of the pilot plant will require up to 9 additional staff and the fully operational mine will employ 170 staff plus 60 contractors. There is a lack of consideration in the environmental assessment report of the requirement to use the same infrastructure at the Prairie Creek Mine site. There are other deficiencies in the environmental assessment report with respect to the provision of accommodation at the mine site including solid waste management, human/wildlife interactions and hunting/poaching activity. There is also no discussion in relation to increase air traffic and the use of the airstrip in the section on cumulative effects. CZN has not indicated in the environmental assessment report whether the airstrip is adequate to meet increased use. or if upgrades will be required. If fuel is to be stored at the airstrip, details of storage methods, volumes, etc. should be provided.

In the discussion of water quality in the section "Analysis of Potential Cumulative Impacts, there is a discussion of the water quality assessment program of the South Nahanni River. However, the report fails to mention that the Cantung mine was placed into care and maintenance in 1986.

In the section of cumulative impacts, there is no information on predicted air emissions from the project. There are several sources of atmospheric emissions - diesel power generation will operate the process equipment; an incinerator will be used for solid waste; equipment will be operated; and dust will be generated from various activities.

In addition to the Prairie Creek mine, the Cantung mines and the Howard's Pass development, there are several other developments including

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Subject:

Cumulative Effects of Infrastructure Use

mineral exploration/development and oil and gas exploration that are planned on the boundaries of Nahanni NPR. There is no discussion in the report on how these developments will impact on the ecological integrity of the Nahanni National Park Reserve, on the impact to the wilderness experience of the visitor, and on the status of Nahanni as a World Heritage Site considering the level of industrial development around the park.

Requests:

Parks Canada requests information on the following fuel storage issues:

- CNZ is asked to provide an indication that the wastewater facilities meet current environmental standards.
- CZN is requested to provide a description of solid waste management practices, including need for storage and nuisance animal control.
- ◆ CZN should provide a of human/wildlife interactions, particularly with increasing numbers of staff on site, as well as increased hunting/poaching opportunities, and the mitigation that will be applied.
- Canadian Zinc is requested to provide an estimate of air traffic volume using the airstrip and to describe any impact that this activity may have on wildlife and on the wilderness experience of visitors to Nahanni National Park Reserve.
- ◆ CZN is requested to provide a description of any upgrading, if required, to the airstrip and to describe fuel storage methods, volumes, and associated mitigation measures.
- Canadian Zinc should provide an estimate of the loading to the South Nahanni watershed from the combined operations of the Cantung mine, the Prairie Creek mine and the Howard's Pass prospect. Since the information gathered on the water quality of the South Nahanni River provides good baseline information for any future inputs that could adversely affect water quality in the future, CZN should describe the monitoring program that they will implement to ensure that the

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Subject:

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water quality of the South Nahanni River is not adversely impacted by the operation of its mine.

- CZN is requested to discuss mitigation measures for the control of atmospheric emissions from multiple sources.
- ◆ CZN is asked to include a discussion of the cumulative impact from increased industrial development to the ecological integrity of Nahanni NPR and to the status of Nahanni NPR as a World Heritage Site.

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Subject:

Wastewater Quality

Objective:

To permit a thorough assessment of the procedures and mitigation to be implemented by CZN to ensure that the quality of wastewater discharged to sumps and/or to Harrison Creek does not result in the contamination of Harrison Creek, Prairie Creek and cause significant adverse effects to the ecological integrity of the South Nahanni River and Nahanni National Park

Reserve.

Time Limits: Information is required as soon as possible to permit review by Parks

Canada and other review agencies

Preamble:

The Environment Assessment Report submitted by Canadian Zinc on June 21, 2001 Underground Decline Development and Exploration Drilling (Land Use Permit Application MV2001C0023) states that a sump to act as a finishing pond for mine water prior to release to Harrison Creek will be constructed.

Requests:

Parks Canada requests information on the following water quality issues:

- Canadian Zinc is asked to provide descriptions of their procedures for establishing and locating the sump including the capacity of the sump, location, measures to prevent flooding and overflowing.
- ♦ CZN is requested to describe the monitoring program for the sump (responsible staff, frequency, aspects to be monitored) and include information respecting the water quality sampling program, acceptable levels for various parameters, frequency of discharge and decommissioning activities for the sump.

Parks Canada Agency Review

RE: Canadian Zinc Corporation

**Environmental Assessment Report** 

Phase II Mineral Exploration Drilling Program – Prairie Creek Mine Land Use Application MV 2001C0022; MVEIRB File EA 01-003

# **Environmental Management Plan**

On page 5, in the section "Description of Development", the proponent states that a "sump is always established to retain any return waters to in order to settle out any drill cuttings". However on page 9 in the section Environmental Management Plan, although Canadian Zinc states that they will monitor the drill sumps, they fail to describe any criteria for establishing and locating sumps. Criteria should address factors such as the capacity of the sump, location (Is the sump located so that it does not drain into a water body in the event of rain?), how to backfill sumps, etc. It will not be possible to monitor the sumps unless there is specific guidance for personnel on drill sumps.

# Information Request:

- 1. Canadian Zinc procedures for establishing and locating sumps
- 2. Description of monitoring program for sumps (Responsible staff, frequency, aspects to be monitored)
- For each of the items listed on page 9 under "Aspects to be Monitored", there is no information on what will be monitored. Have procedures been developed and written up for staff so that training can be provided and implementation of procedures monitored? Although some of this information is contained in the detailed project description, this information needs to be re-written into sets of procedures for each of the items. As an example, for extensions of tote roads, there is guidance on clearing, stripping and stock-piling of surficial materials, re-contouring and stabilizing cut banks. It would be fairly straight-forward to write up procedures for this that could then be monitored to make sure that they are implemented. In the absence of procedures that include the mitigation to reduce the significance of environmental effects, monitoring will not be effective in ensuring that the environmental effects are insignificant. In addition, information should be provided on who will be responsible for conducting the monitoring, what exactly will be monitored (will it be compliance with established procedures, and if so, what are the procedures), when it will be conducted (frequency), etc.

- 3. Canadian Zinc procedures for drill rig operation / description of monitoring program / process for implementing remediation
- 4. Canadian Zinc procedures for water pumps and distribution systems / description of monitoring program / process for implementing remediation

- 5. Canadian Zinc procedures for stabilizing drill pad terrain / description of monitoring program / process for implementing remediation
- 6. Canadian Zinc procedures for building exploration roads / description of monitoring program / process for implementing remediation
- 7. Canadian Zinc procedures for managing drain structures/ description of monitoring program / process for implementing remediation
- 8. Canadian Zinc procedures for fuel transfer/ description of monitoring program / process for implementing remediation
- On page 5, the Environmental Assessment Report states that fuel spill kits will be available both at the drill rig and in the main camp. The Prairie Creek Mine Site Safety and Procedures Manual states in Section 6.3 that a spill kit will be kept at the project site and at fuel storage/transfer facilities related to the access road. This needs to be expanded to also include a spill kit at the drill rig.
- The Procedures Manual also should be strengthened in Section 5.0 Action Plan to ensure the adequate protection of aquatic resources. Standard practice is to do refueling at a distance of 100 metres from waterways. Additional guidance that should be in the Action Plan is to ensure that refueling is done with an operator present. Furthermore, transfer of fuel should only be conducted in locations where recovery of spilled material is possible.
- On page 5, it is stated that "Bulk diesel fuel is stored on site in the existing fully bermed fuel farm storage area." According to the site map for the Prairie Creek site, there are four tanks with a total of 42,800 BBL of fuel oil storage (6,805,200 Litres), 2 tanks with a total of 700 BBL of gasoline (111,300 Litres) and a buried boiler fuel tank of 1000 imperial gallons (4550 Litres). Do these tanks comply with existing regulations for the storage of petroleum products both above-ground and belowground? This is of particular concern to Nahanni NPR since our records indicate that inadequate fuel storage tanks were used in the past and resulted in the accidental release of 24,000 gallons of diesel fuel. The tanks in use were 15-year old bolted style fuel tanks which would not meet current approvals. Have these tanks been replaced with modern tanks? Is this information available in the documentation for the environmental assessments that were conducted in 1982 and in 1995?

- 9. Evidence of compliance with current standards for above and below ground petroleum product storage
- ° Considering the potential volume of petroleum products at the site, the accidental release to Prairie Creek has the potential to cause significant adverse effects to the ecological integrity of the Creek and of the South Nahanni River. Does the "fully bermed fuel farm storage area" meet current regulatory requirements for petroleum product storage. Our past records also state that the fuel storage facilities were not equipped with a dyked impervious area complete with an integral recovery pumping system. Of particular concern is the fact that aerial photos of the bermed area show

water accumulation inside the berm. Does the existing installation have a containment sump to collect flows from storm runoff water to ensure that the fully containment capacity of the bermed area is available? Has the impermeable barrier been tested to ensure that it meets regulatory requirements for sustained permeability? This is particularly important for the Prairie Creek site because of the proximity of the site to a waterway flowing into the South Nahanni River.

# Information Request:

- 10. Existing volume of petroleum product in each of the storage tanks (both above and below ground)
- 11. Evidence that the berm around the fuel farm meets existing regulatory requirements for petroleum product storage (including confirmation of impermeability, a fully functional recovery pumping system and containment sump)
- In addition, although Canadian Zinc currently has a fuel contingency plan, the items contained in the spill kit would be totally inadequate in the event of the accidental release of one of the larger tanks.

#### **Cumulative Effects**

There is a lack of consideration in the environmental assessment report of the requirement to use the same infrastructure at the Prairie Creek Mine site. There is no analysis of the cumulative effects of increasing the number of staff using the same facilities for accommodation, and the use of ancillary facilities including the landing strip. The exploration drilling program will involve 14 persons, the operation of the pilot plant will require up to 9 additional staff and the fully operational mine will employ 170 staff plus 60 contractors. Are the wastewater facilities able to meet current environmental standards? The environmental assessment report should answer the following questions: Does the existing wastewater treatment facility meet current standards? What standards are applicable and how are they met?

# Information Request:

- 12. Confirmation that the wastewater facilities meet current environmental standards
- There are other deficiencies in the environmental assessment report with respect to the provision of accommodation at the mine site including solid waste management. Is all garbage incinerated? Is there a requirement to store garbage at any time, and if so, how/where is it stored? Is there a requirement for bear/rodent control?

# Information Request:

13. Description of solid waste management practices, including need for storage and nuisance animal control

• There is also no discussion in relation to increase air traffic and the use of the airstrip in the section on cumulative effects. What will be the air traffic volume? Will this have any impact on wildlife and on the wilderness experience of visitors to Nahanni National Park Reserve? Mitigation could include developing standard procedures for flight lines which will be the least intrusive and minimum flight altitudes.

# Information Request:

- 14. Estimate of air traffic volume using airstrip
- 15. Description of impact to wildlife and visitors from air traffic and mitigation
- Is the airstrip adequate to meet increased use, or will upgrades be required? If fuel is stored at the airstrip, details of storage methods, volumes, etc. should be provided.

- 16. Description of upgrading, if required, to airstrip
- 17. Description of fuel storage methods, volumes, etc. if appropriate
- In the discussion of water quality in the section "Analysis of Potential Cumulative Impacts, there is a discussion of the water quality assessment program of the South Nahanni River. However, the report fails to mention that the Cantung mine was placed into care and maintenance in 1986. Is it possible for Canadian Zinc to estimate the loading to the South Nahanni watershed from the combined operations of the Cantung mine, the Prairie Creek mine and the Howard's Pass prospect, and to further conclude that the effects are expected to remain very low? The information gathered on the water quality of the South Nahanni River provides good baseline information for any future inputs that could adversely affect water quality in the future. Is Canadian Zinc prepared to undertake/continue the monitoring program to ensure that the water quality of the South Nahanni River is not adversely impacted by the operation of its mine?
- In the section on vegetation and wildlife habitat, there is no discussion of habitat fragmentation. The literature on effects of roads on wildlife is extensive. Roads displace species sensitive to disturbance or dependent on forest interior habitat. Species such as grizzly bears, wolves, caribou and elk avoid otherwise suitable habitat near roads. They may modify their home range, and they have been shown to select areas with lower road densities than the average on the landscape. As a result, high-quality habitat becomes effectively unavailable to them. Roads also create barriers to the movement of many species. In particular, small animals will rarely cross roads that become barriers to dispersal, isolating populations on one side of the road from those on the other. How will the road network impact on wildlife in the area of the drilling program and the mine?

- 18. Description of habitat fragmentation and cumulative impact to wildlife from road network
- Road networks have been found by some researchers to increase the frequency and/or magnitude of peak flows, particularly in small basins. Debris slides, resulting in debris flows, were also frequently associated with roads. Considering the topography of the area, what mitigation will Canadian Zinc implement during road construction/operation to ensure that streams and associated riparian vegetation and aquatic communities are not impacted by debris flows?

# Information Request:

- 19. Description of potential for debris flows, possible mitigation and cumulative impact to streams and aquatic life
- There should also be some discussion of human/wildlife interactions, particularly with increasing numbers of staff on site, as well as increased hunting/poaching opportunities.

# Information Request:

- 20. Description of potential human/wildlife interactions, mitigation
- 21. Description of potential increased hunting and poaching and mitigation
- o In the section of cumulative impacts, there is no information on predicted air emissions from the project. There are several sources of atmospheric emissions diesel power generation will operate the process equipment; an incinerator will be used for solid waste; equipment will be operated; and dust will be generated from various activities. There is however no discussion as to the mitigation of emissions.

# Information Request:

- 22. Description of mitigation to minimize atmospheric emissions from various sources
- In addition to the Prairie Creek mine, the Cantung mines and the Howard's Pass development, there are several other developments including mineral exploration/development and oil and gas exploration that are planned on the boundaries of Nahanni NPR. How will these developments impact on the ecological integrity of the park? What will be the impact to the wilderness experience of the visitor? Will the status of Nahanni as a World Heritage Site be compromised as a result of industrial developments around the park?

- 23. Discussion of the cumulative impact to ecological integrity of Nahanni NPR
- 24. Discussion of cumulative impact to the status of Nahanni NPR's World Heritage Site Status

Parks Canada Agency Review

RE: Canadian Zinc Corporation

**Environmental Assessment Report** 

Metallurgical Pilot Plant Project - Prairie Creek Mine

Water Licence Application MV 2001L2-0003; MVEIRB File EA 01-002

# **Environmental Considerations in the Development Design**

On page 18, the proponent states that all process water will be tested prior to discharge into the existing tailings pond. There is no information provided on the parameters that will be tested, nor on the levels that will need to be met before the process water is suitable for discharging to the tailings pond. Furthermore, there is no information on what remediation will be followed if the process water fails to meet the acceptable limits. What is the existing quality of the water in the tailings pond before any additional discharges are made?

### Information Request:

- 1. Parameters to be tested for the process water and acceptable limits for discharge to the tailings pond.
- 2. Remediation for process water if limits are exceeded.
- 3. Baseline information on the existing water quality of the tailings pond.
- On page 18, it is stated that "All tailings solids will be retained in the mill thickeners". The report does not elaborate on what will be done with the tailings solids over the longer term. This needs to be addressed for two different scenarios: firstly, if the mine development proceeds, and secondly, if the mine development does not proceed.

#### Information Request:

4. Description on how the tailing solids will eventually be disposed of if the mine proceeds to development and if not.

#### **Accidents and Malfunctions**

Although the Safety and Procedures Manual addresses fuel spills, there is no mention of response plans for the reagents that will be used in the processing of the ore.

#### Information Request:

5. Procedures for responding to accidental spills of reagents to ensure that materials are recovered and do not migrate off-site.

It is stated on page 21 that on-site generators will supply power. The same concern that was raised for the exploration program regarding the storage of fuel for power generation also applies with respect to the pilot plant proposal. Specifically, according to the site map for the Prairie Creek site, there are four tanks with a total of 42,800 BBL of fuel oil storage (6,805,200 Litres), 2 tanks with a total of 700 BBL of gasoline (111,300 Litres) and a buried boiler fuel tank of 1000 imperial gallons (4550 Litres). Do these tanks comply with existing regulations for the storage of petroleum products both above-ground and below-ground? This is of particular concern to Nahanni NPR since our records indicate that inadequate fuel storage tanks were used in the past and resulted in the accidental release of 24,000 gallons of diesel fuel. The tanks in use were 15-year old bolted style fuel tanks which would not meet current approvals. Have these tanks been replaced with modern tanks? Is this information available in the documentation for the environmental assessments that were conducted in 1982 and in 1995?

#### Information Request:

- 6. Evidence of compliance with current standards for above and below ground petroleum product storage
- Considering the potential volume of petroleum products at the site, the accidental release to Prairie Creek has the potential to cause significant adverse effects to the ecological integrity of the Creek and of the South Nahanni River. Does the "fully bermed fuel farm storage area" meet current regulatory requirements for petroleum product storage. Our past records also state that the fuel storage facilities were not equipped with a dyked impervious area complete with an integral recovery pumping system. Of particular concern is the fact that aerial photos of the bermed area show water accumulation inside the berm. Does the existing installation have a containment sump to collect flows from storm runoff water to ensure that the fully containment capacity of the bermed area is available? Has the impermeable barrier been tested to ensure that it meets regulatory requirements for sustained permeability? This is particularly important for the Prairie Creek site because of the proximity of the site to a waterway flowing into the South Nahanni River.

- 7. Existing volume of petroleum product in each of the storage tanks (both above and below ground)
- 8. Evidence that the berm around the fuel farm meets existing regulatory requirements for petroleum product storage (including confirmation of impermeability, a fully functional recovery pumping system and containment sump)
- In addition, although Canadian Zinc currently has a fuel contingency plan, the items contained in the spill kit would be totally inadequate in the event of the accidental release of one of the larger tanks.

#### **Air Quality and Climate**

There is no discussion of air emissions (dust) from the crushing and grinding processes.

### Information Request:

9. Description of emissions, if any, and how they will be controlled.

#### **Water Quality and Quantity**

- The tailings pond is located in a flood plain. What is the likelihood of flooding of the tailings pond considering the occurrence of frequent, intense summer rain storms? Past information also indicated that the design of the tailings pond dykes needed to consider channel stability in Prairie Creek and flood episodes. The Department of Environment had recommended that the tailings impoundment dam should be constructed to an elevation sufficient to withstand the maximum possible flood.
- Past flood events in the 1970's resulted in the deposition of debris, mining rubble and tailings to the Prairie Creek alluvial fan.

#### Information Request

- 10. Information regarding precipitation events in Prairie Creek and predictions / modelling of flood frequency.
- 11. Evidence that the tailings impoundment dam has been constructed to an appropriate elevation, or alternately, a commitment by Canadian Zinc to undertake remediation of the dam. Evidence that the tailing dikes have been inspected to ensure that breaches of dikes will not occur.
- 12. Procedures and commitment from Canadian Zinc that they will implement to clean-up debris transported downstream of their site in the event of flooding.
- Past documentation indicates that the tailing pond seepage was up to 500 cubic feet per year into the Prairie Creek system.

# Information Request

13. Evidence that as an impervious liner been installed in the tailings pond to prevent seepage into Prairie Creek.

### **Cumulative Effects**

There is a lack of consideration in the environmental assessment report of the requirement to use the same infrastructure at the Prairie Creek Mine site. There is no analysis of the cumulative effects of increasing the number of staff using the same facilities for accommodation, and the use of ancillary facilities including the landing strip. The exploration drilling program will involve 14 persons, the operation of the pilot plant will require up to 9 additional staff and the fully operational mine will employ 170 staff plus 60 contractors. Are the wastewater facilities able to meet current environmental standards? The environmental assessment report should

answer the following questions: Does the existing wastewater treatment facility meet current standards? What standards are applicable and how are they met?

#### **Information Request:**

- 14. Confirmation that the wastewater facilities meet current environmental standards
- There are other deficiencies in the environmental assessment report with respect to the provision of accommodation at the mine site including solid waste management. Is all garbage incinerated? Is there a requirement to store garbage at any time, and if so, how/where is it stored? Is there a requirement for bear/rodent control?

#### Information Request:

- 15. Description of solid waste management practices, including need for storage and nuisance animal control
- There is also no discussion in relation to increase air traffic and the use of the airstrip in the section on cumulative effects. What will be the air traffic volume? Will this have any impact on wildlife and on the wilderness experience of visitors to Nahanni National Park Reserve? Mitigation could include developing standard procedures for flight lines, which will be the least intrusive and minimum flight altitudes.

# Information Request:

- 16. Estimate of air traffic volume using airstrip
- 17. Description of impact to wildlife and visitors from air traffic and mitigation
- Is the airstrip adequate to meet increased use, or will upgrades be required? If fuel is stored at the airstrip, details of storage methods, volumes, etc. should be provided.

- 18. Description of upgrading, if required, to airstrip
- 19. Description of fuel storage methods, volumes, etc. if appropriate
- In the discussion of water quality in the section "Analysis of Potential Cumulative Impacts, there is a discussion of the water quality assessment program of the South Nahanni River. However, the report fails to mention that the Cantung mine was placed into care and maintenance in 1986. Is it possible for Canadian Zinc to estimate the loading to the South Nahanni watershed from the combined operations of the Cantung mine, the Prairie Creek mine and the Howard's Pass prospect, and to further conclude that the effects are expected to remain very low? The information gathered on the water quality of the South Nahanni River provides good baseline information for any future inputs that could adversely affect water quality in the future. Is Canadian Zinc prepared to undertake/continue the monitoring program to ensure

that the water quality of the South Nahanni River is not adversely impacted by the operation of its mine?

 There should also be some discussion of human/wildlife interactions, particularly with increasing numbers of staff on site, as well as increased hunting/poaching opportunities.

### Information Request:

- 20. Description of potential human/wildlife interactions, mitigation
- 21. Description of potential increased hunting and poaching and mitigation
- o In the section of cumulative impacts, there is no information on predicted air emissions from the project. There are several sources of atmospheric emissions diesel power generation will operate the process equipment; an incinerator will be used for solid waste; equipment will be operated; and dust will be generated from various activities. There is however no discussion as to the mitigation of emissions.

### Information Request:

- 22. Description of mitigation to minimize atmospheric emissions from various sources
- In addition to the Prairie Creek mine, the Cantung mines and the Howard's Pass development, there are several other developments including mineral exploration/development and oil and gas exploration that are planned on the boundaries of Nahanni NPR. How will these developments impact on the ecological integrity of the park? What will be the impact to the wilderness experience of the visitor? Will the status of Nahanni as a World Heritage Site be compromised as a result of industrial developments around the park?

#### Information Request:

- 23. Discussion of the cumulative impact to ecological integrity of Nahanni NPR
- 24. Discussion of cumulative impact to the status of Nahanni NPR's World Heritage Site Status

### **Abandonment and Restoration**

There is no description on how the tailings pond will be decommissioned.

# Information Request:

25. Information on how the tailings pond will be decommissioned.

### **Environmental Management Plan**

For each of the items listed on page 46 under "Aspects to be Monitored", there is no information on what will be monitored. Have procedures been developed and written up for staff so that training can be provided and implementation of procedures monitored? Although some of this information is contained in the detailed project description, this information needs to be re-written into sets of procedures for each of the items. In the absence of procedures that include the mitigation to reduce the significance of environmental effects, monitoring will not be effective in ensuring that the environmental effects are insignificant. In addition, information should be provided on who will be responsible for conducting the monitoring, what exactly will be monitored (will it be compliance with established procedures, and if so, what are the procedures), when it will be conducted (frequency), etc. This information is particularly important from Nahanni NPR's perspective since many of the aspects, in the absence of a good environmental management plan, could result in adverse impacts to water quality in Prairie Creek and resulting adverse impacts to the ecological integrity of Nahanni NPR.

### Information Request:

26. Canadian Zinc procedures for each of the aspects to be monitored / a description of monitoring program / the process for implementing remediation