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Citation: North American Tungsten Corporation Ltd. v. Mackenzie Valley Land and Water Board,

2003 NWTCA 5 (CanLII)

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Date: 2003-05-01

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[Noteup] [Cited Decisions and Legislation]

North American Tungsten Corporation Ltd. v. Mackenzie Valley Land and Water Board, 2003 NWTCA 5

Date:

20030501

2003000001

Docket: A-0001-AP-

IN THE COURT OF APPEAL OF THE NORTHWEST TERRITORIES

THE COURT:

THE HONOURABLE CHIEF JUSTICE FRASER
THE HONOURABLE MADAM JUSTICE CONRAD
THE HONOURABLE MADAM JUSTICE PICARD

IN THE MATTER OF AN APPLICATION FOR THE RENEWAL OF WATER LICENCE N3L2-0004 BY NORTH AMERICAN TUNGSTEN CORPORATION LTD.

BETWEEN:

NORTH AMERICAN TUNGSTEN CORPORATION LTD.

**APPELLANT** 

(APPLICANT)

# MACKENZIE VALLEY LAND AND WATER BOARD

RESPONDENT (RESPONDENT)

Appeal from the whole of the Judgment of The Honourable Justice Virginia Schuler Dated January 9, 2003

MEMORANDUM OF JUDGMENT

#### **COUNSEL:**

D.J. Cowper, Q.C. For the Appellant

J.J.P. Donihee

For the Respondent Mackenzie Valley Land and Water Board

H.L. Potter

For the Intervener Justice Canada

R.L. Christensen

For the Interveners Canadian Arctic Resources Committee and Canadian Parks and Wilderness Society

#### MEMORANDUM OF JUDGMENT

#### **SUMMARY**

- [1] Given the urgency surrounding this matter, this Court heard this appeal in Edmonton at a special sitting of the Northwest Territories Court of Appeal. To avoid further delays, we provided counsel with our decision at the conclusion of the appeal and indicated that we would amplify our reasons. These are those reasons.
- [2] This is an appeal from a decision of a chambers judge dismissing an application for judicial review of a decision by the Mackenzie Valley Land and Water Board (Board). The Board held that Part 5 of the *Mackenzie Valley Resource Management Act*, S.C. 1998, c.25 (*MVRMA*) applied to the application by North American Tungsten Corporation (Tungsten) to renew its water licence number N3L2-0004. The chambers judge upheld the Board's decision on the basis that s.157.1 of the *MVRMA* did not exempt Tungsten from the application of Part 5. Tungsten now appeals this decision.
- [3] The Canadian Arctic Resources Committee (Arctic Committee) and the Canadian Parks and Wilderness Society (Wilderness Society), together with the Attorney General of Canada (Attorney General), sought and were granted intervener status on this appeal.

#### **FACTS**

- [4] Under the Northwest Territories Waters Act, S.C. 1992, c. 39 (Waters Act), no person can use water or deposit waste in specific areas in the Northwest Territories without a licence to do so: ss.8 and 9. Section 102 of the MVRMA provides that it is the Board which has jurisdiction with respect to all uses of water and deposits of waste in the area for which a licence is required under the Waters Act. Accordingly, the Board may issue, amend, renew and cancel licences in accordance with the Waters Act and exercise any other power of the Northwest Territories Water Board under the Waters Act: see ss.102 and 60(1) of the MVRMA.
- [5] Tungsten operates the Cantung Tungsten Mine on the Flat River in the Mackenzie Valley. That Mine has been in place since 1962. Tungsten's predecessor was first granted a water licence for this undertaking in 1975. Tungsten renewed this licence in 1978, 1983, 1986, 1988 and 1995. In early 2002, Tungsten applied to the Board for a renewal of its 1995 licence. The Board held that Tungsten's licence application was not exempt from Part 5 of the *MVRMA*.

- [6] Part 5 requires that any "proposals for development" comply with an environmental assessment process consisting of a preliminary screening by the regulatory authority and, if applicable, an environmental assessment and an environmental impact review by the Mackenzie Valley Environmental Impact Review Board established under the *MVRMA*. For the purposes of Part 5, "development" is defined as "any undertaking, or any part of an undertaking, that is carried out on land or water and ... wholly within the Mackenzie Valley": s.111. This would arguably include a proposal regarding the proposed use of water for which Tungsten now seeks a renewal of its licence. However, s.157.1 of the *MVRMA* as follows provides for an exemption from Part 5 in certain circumstances:
- Part 5 does not apply in respect of any licence, permit or other authorization related to an undertaking that is the subject of a licence or permit issued before June 22, 1984, except a licence, permit, or other authorization for an abandonment, decommissioning or other significant alteration of the project.
- [7] The Board focused mainly on whether Tungsten's current water licence was a continuation of a licence issued before June 22, 1984. It concluded that a renewed licence was in effect a new licence and thus, the exemption under s.157.1 did not apply. Tungsten applied to the Northwest Territories Supreme Court for judicial review of the Board's decision: s.32 of the MVRMA.
- [8] On judicial review, Tungsten and the Attorney General, as intervener, argued that s.157.1, read in its statutory context and in light of s.74(4) of the *Canadian Environmental Assessment Act*, S.C. 1992, c.37 (*CEAA*), exempted Tungsten's application for renewal of its water licence from the environmental assessment required under Part 5. Both submitted that an exemption is not lost even though a licence issued before June 22, 1984 has been subsequently renewed. The interveners, the Arctic Committee and the Wilderness Society, contended that the exemption only applies where an undertaking is subject to a current licence issued before June 22, 1984 and that licence remains outstanding. Since a renewed licence is not a continuation of the original licence, it followed that in their view, Tungsten's application must fail.
- [9] The chambers judge dismissed Tungsten's application. The chambers judge agreed with the Board that s.157.1 exempts an undertaking only where its current licence, which is the subject of a renewal application, is dated prior to June 22, 1984. As the chambers judge concluded:

Since s.157.1 speaks in the present tense, it seems to me that the question is whether [Tungsten's] mining operation is now the subject of a water licence issued before June 22, 1984, not whether it has ever been the subject of a water licence issued before June 22, 1984. Therefore s.157.1 will apply only if the water licence which [Tungsten] currently holds (that is the licence issued in 1995) can be said to be "issued before June 22, 1984".

[10] The chambers judge agreed with the Board that a renewal of a licence creates a new licence and does not continue a previous one. Therefore, since Tungsten's 1995 renewed water licence was not a continuation of its 1975 licence, it had not continuously held a licence issued before June 22, 1984. This being so, the chambers judge concluded that Tungsten's application for renewal of its water licence did not fall within the s.157.1 exemption.

### **ISSUE**

- [11] Resolution of this appeal turns on the interpretation of s.157.1 of the MVRMA and in particular the scope of that statutory exemption. Put simply, the question is this: is Tungsten's application for a renewal of its water licence exempt from Part 5 if the subject undertaking held a water licence issued prior to June 22, 1984, regardless of whether that licence is now outstanding? In essence, this comes down to whether s.157.1 of the MVRMA grandfathers a licence issued prior to June 22, 1984 or an undertaking licenced prior to June 22, 1984.
- [12] We have concluded that it is the latter. This being so, it is not necessary for this Court to deal with the alternative argument, namely that Tungsten's existing water licence for its undertaking is a continuation of the pre-1984 water licence.

### STANDARD OF REVIEW

- [13] The standard of review applicable to the Board's decision depends upon the application of a pragmatic and functional analysis: *Pushpanathan v. Canada (Minister of Citizenship and Immigration)*, 1998 Canlli 778 (S.C.C.), [1998] 1 S.C.R. 982. This analysis requires a consideration of the purpose of the grant of jurisdiction and the specific provisions at issue, the presence or absence of a privative clause, the Board's expertise and the nature of the question the Board considered.
- [14] The Board is appointed pursuant to Part 4 of the MVRMA. The purpose of the MVRMA, as stated in its Preamble, is to provide an integrated and coordinated system of land and water management in the Mackenzie Valley, including the settlement areas referred to in the Comprehensive Land Claim Agreement made between Her Majesty the Queen in right of Canada and the Gwich'in as represented by the Gwich'in Tribal Council, signed on April 22, 1992 and given effect by the Gwich'in Land Claim Settlement Act, S.C. 1992, c.53 (Gwich'in Ageement) and the Comprehensive Land Claim Agreement made between Her Majesty the Queen in right of Canada and the Sahtu Dene and Metis as represented by the Sahtu Tribal Council, signed on September 6, 1993 and given effect by the Sahtu Dene and Metis Land Claim Settlement Act, S.C. 1994, c.27 (Sahtu Agreement).
- [15] Tungsten's undertaking is located on lands outside of the designated settlement areas but within that part of the Northwest Territories covered by the MVRMA. As noted,

- s.102 grants the Board the jurisdiction to deal with all uses of water in the Mackenzie Valley for which a licence is required under the *Waters Act*. This includes any application for the use of waters outside any settlement area: s.103.
- [16] Board decisions are not protected under the *MVRMA* by a privative clause and s.32 specifically provides for judicial review of Board decisions. Further, there is nothing suggesting that the Board has any particular expertise regarding the statutory interpretation issue before this Court. That involves the scope of the exemption under s.157.1. Thus, we have concluded that in all the circumstances, the applicable standard of review on this issue is one of correctness: *Pushpanathan*, *supra*. Indeed, no one argued otherwise.

#### **ANALYSIS**

- [17] Tungsten and the Attorney General agree on the interpretation of s.157.1. They contend that s.157.1 grandfathers undertakings in respect of which a licence had been issued prior to June 22, 1984. In their view, there is no requirement that an undertaking's current licence, which is the subject of a renewal application, have subsisted without renewal since prior to June 22, 1984. They argue that this interpretation is consistent with the purpose of the MVRMA. In particular, long-term established projects were not intended to be subjected to Part 5 environmental assessments unless an application for a licence related to an abandonment, decommissioning or other significant alteration of the subject project.
- [18] They also point to s.74(4) of *CEAA* as follows in support of their position:

Where the construction or operation of a physical work or the carrying out of a physical activity was initiated before June 22, 1984, this Act shall not apply in respect of the issuance or renewal of a licence, permit, approval or other action under a prescribed provision in respect of the project unless the issuance or renewal entails a modification, decommissioning, abandonment or other alteration to the project, in whole or in part.

[19] It has been determined that the purpose of s.74(4) of *CEAA* is to exempt projects from environmental assessment when significant resources have already been expended towards them: *Hamilton-Wentworth (Regional Municipality) v. Canada (Minister of the Environment) et al.* (2001), 204 F.T.R. 161 (T.D.), aff'd (2001) 213 F.T.R. 57 (C.A.). Both the Attorney General and Tungsten argue that in the absence of a clear and explicit Parliamentary intent to withdraw this exemption from established projects (such as Tungsten's), s.157.1 of the *MVRMA* should be interpreted in a manner consistent with s.74(4). In other words, in their view, Parliament intended that projects which pre-date June 22, 1984 as defined by these statutes would be exempt from environmental assessments.

- [20] The Arctic Committee and Wilderness Society take a contrary position. They submit that the difference in wording between s.157.1 of the MVRMA and s.74(4) of CEAA signals a Parliamentary intention to broaden the scope of projects now subject to a full environmental assessment under the MVRMA. Parliament has accomplished this, in their view, by limiting the exemption under s.157.1 to those undertakings subject to "a licence or permit issued before June 22, 1984" at the time of renewal of the licence or permit.
- [21] Principles of statutory interpretation require that the words of a statute should be read in their entire context, and in their grammatical and ordinary sense, harmoniously with the scheme of the Act, the object of the Act and the intention of Parliament: R. Sullivan, Sullivan and Driedger on the Construction of Statutes, 4<sup>th</sup> ed. (Markham: Butterworths, 2002) at 2; see also Re Rizzo and Rizzo Shoes, 1998 Canlii 837 (S.C.C.), [1998] 1 S.C.R. 27; Bell Express Vu Limited Partnership v. Rex 2002 SCC 42 (Canlii), (2002), 212 D.L.R. (4<sup>th</sup>) 1 (S.C.C.).
- This is often described as a purposive and contextual approach to statutory interpretation. The purposive dimension of this interpretive exercise requires courts to assess legislation in light of its purpose and with due regard to the legislative scheme of which it forms a part. The contextual dimension requires that the words chosen be interpreted in the entire context in which they have been used: see *Love v. Flagstaff (County of) Subdivision and Development Appeal Board*, 2002 ABCA 292 (CanLII), 2002 ABCA 292, [2002] A.J. No. 1516 (QL).
- [23] Dealing first with the overall legislative scheme, as noted, the MVRMA is designed to implement the Gwich'in Agreement and the Sahtu Agreement (collectively the "Comprehensive Agreements") by providing for an integrated system of land and water management in the Mackenzie Valley. Under the Comprehensive Agreements, land use planning boards and land and water boards must be established for the settlement areas referred to in those Agreements. In addition, an environmental impact review board must be established for the Mackenzie Valley along with a land and water board for an area extending beyond the settlement areas. These boards are charged with regulating all land and water uses, including deposits of waste, in the areas in the Mackenzie Valley under their jurisdiction. The purpose of establishing these boards, including the Board, is to "enable residents of the Mackenzie Valley to participate in the management of its resources for the benefit of the residents and of other Canadians": s.9.1, MVRMA.
- [24] However, both the Comprehensive Agreements and the MVRMA also clearly recognize that a full scale environmental review will not be appropriate in respect of certain existing permits, projects and licences. Instead, both reflect that some grandfathering of existing developments is required to balance competing interests. Those interests include the legitimate goal of protecting land and water resources in the Mackenzie Valley for the benefit of its citizens, on the one hand, while, at the same time, exempting from the full force of new environmental legislation undertakings developed under an earlier legislative regime. For example, the Comprehensive Agreements explicitly protect certain mineral interests, and arguably rights associated therewith, in

existence as of the date of the settlement legislation: see Gwich'in Agreement, s.18.5.2; and Sahtu Agreement, s.19.5.2.

- [25] This respect for vested interests is reflected in the MVRMA. Part 7 contains a number of transitional provisions designed to preserve and protect existing rights and interests. For example, s.151 provides that certain existing permits continue in effect despite the implementation of the new legislation. Section 152 protects all existing rights to the use of any lands under any lease, easement or other interest granted under any territorial law, again despite what would otherwise have been the impact of the new legislation on such interests. Section 153 provides that any water licences issued under the Waters Act continue in effect and are deemed to be licences within the meaning of Part 3 or Part 4 of the MVRMA, as the case may be. In Tungsten's case, the water licence Tungsten is seeking to renew would, given the location of Tungsten's undertaking, be deemed to be a licence within the meaning of Part 4.
- [26] Further confirmation that Parliament did not intend the MVRMA to interfere with existing rights can be seen in the fact that even pending applications for permits and licences are to be dealt with under the prior applicable legislation and not under the MVRMA: see for example, s.154 (dealing with certain pending permit applications); and s.155 (dealing with certain pending licence applications, including those under the Waters Act).
- [27] These provisions collectively reflect that Parliament did not intend to impose an entirely new environmental review process on every project in the Mackenzie Valley irrespective of the status of that project at the time the MVRMA came into effect. Instead, the MVRMA grandfathered certain projects and provided that others yet would be dealt with under prior applicable legislation. In interpreting s.157.1, therefore, one must recognize that it is designed to grandfather certain undertakings which predate June 22, 1984. Accordingly, this section must be interpreted in a manner which best comports with its intended purpose.
- [28] It is against this general statutory backdrop that we turn to the specific wording of s.157.1. In our view, this section is designed to generally parallel the scope of the statutory exemptions granted to projects pre-dating June 22, 1984 under s.74(4) of CEAA. CEAA exempts from environmental requirements any licence issuance or renewal where the "construction or operation of a physical work or the carrying out of a physical activity was initiated before June 22, 1984." By contrast, s.157.1 of the MVRMA ties the exemption to a licence related to an undertaking that is "the subject of a licence or permit issued before June 22, 1984".
- [29] However, this difference in wording does not reflect a Parliamentary intention to expand the reach of the *MVRMA* by narrowing the category of projects pre-dating June 22, 1984 that are exempt from full scale environmental assessments. The approach taken under the *MVRMA* is complementary to that taken under *CEAA* and intended to be so.

Both Acts exempt projects which pre-date the same date, namely June 22, 1984. That is the date on which the Environmental Assessment and Review Process Guidelines Order, SOR/84-467, the predecessor to CEAA, came into effect. The selection of this common date under both CEAA and the MVRMA reflects Parliament's continuing intention that projects which pre-date June 22, 1984 (as defined under both statutes) are to be subjected to a full scale environmental assessment as prescribed under the applicable legislation only if they depart significantly from their approved mode of operation and engage in, for example, decommissioning, abandonment or significant alteration of the project.

- [30] What the change in wording does reflect is an attempt to overcome the interpretive difficulties which have arisen concerning what is meant by the word "initiated" under CEAA: see Hamilton-Wentworth (Regional Municipality), supra. To avoid this factually driven interpretive issue, Parliament chose to refer in s.157.1 to an event which could be easily and conclusively established for a given project without litigation that is, the actual date on which a licence or permit had been issued. In fact, the scope of the MVRMA exemption may be broader than that under CEAA since the MVRMA exemption applies as long as the relevant licence or permit was issued prior to June 22, 1984 regardless of whether physical work on the project had been initiated by that date.
- [31] The exceptions to the exemptions under both legislative schemes reinforce the similarity between them. Both *CEAA* and the *MVRMA* require projects pre-dating June 22, 1984 to be subjected to a full scale environmental review if the licence renewal involves a decommissioning, abandonment or alteration to the project. While *CEAA* provides that a review is triggered by any alteration to the project, by contrast, the *MVRMA* provides that a review is required only if the licence involves a significant alteration to the project. Thus, in this sense too, the environmental reach of the *MVRMA* may not be as great as *CEAA*. Accordingly, the *MVRMA* does not signal Parliament's intention to expand the scope of those projects pre-dating June 22, 1984 that are subject to full scale environmental assessments.
- The specific wording of s.157.1 supports this interpretation. Under s.157.1, the primary focus is on the undertaking itself. To determine whether an application to renew a licence relating to that undertaking is exempt from the application of Part 5, one must first have regard to whether the undertaking meets the requirements of the section. To do so, the undertaking must be the subject of a licence or permit issued before June 22, 1984. These words modify the word "undertaking" and in this context, the key words are "the subject of". It is noteworthy that the MVRMA does not state that the undertaking must be subject to a licence issued prior to June 22, 1984, but merely that it be the subject of a licence issued prior to June 22, 1984. In other words, to fall within the scope of the exemption under s.157.1, one of the qualities or characteristics of the undertaking is that it must have had a licence issued as of June 22, 1984. Tungsten's undertaking did.
- [33] Further, under the grammatical and ordinary sense of the words used in s.157.1, there is no requirement that the undertaking be operating today under an original licence

issued before June 22, 1984. Nor is there a need for the licence which is the subject matter of the renewal application to be the same licence issued before June 22, 1984. Instead, the focus is on the undertaking and whether it, and not its current licence, predated June 22, 1984. The French version of s.157.1 is consistent with this interpretation referring as it does to: "une activiteé viseé par un permis délivré avant le 22 juin 1984". To put it another way, the licence renewal application must relate to the same undertaking that was issued a licence before June 22, 1984.

- [34] It has been argued that if Tungsten's undertaking, and others, were exempt from Part 5, they would enjoy an absolute exemption from environmental monitoring on any basis and this could not have been Parliament's intention. However, the assumption underlying this argument is incorrect. One must distinguish between conditions imposed before a project is built (facility compliance) and operational standards applicable to existing projects (operational compliance). Simply because an undertaking may be exempt from the full panoply of environmental assessments under Part 5 of the MVRMA does not mean that the undertaking is exempt from applicable regulatory standards. Tungsten acknowledges that it has no right to an automatic renewal of its water licence and that if the Board decides to grant the same, the Board may impose whatever conditions it considers appropriate in the circumstances in the exercise of its jurisdiction.
- [35] We also note that the MVRMA contains numerous sections dealing with "proposals for development" in the context of environmental assessments. The MVRMA explicitly recognizes the need to undertake and complete environmental assessments early in the development process. In this regard, s.114(b) provides for the assessment to be done to ensure that the impact on the environment receives "careful consideration" before actions are taken in respect of proposed developments. Hence, this too supports the conclusion that Parliament did not intend a full environmental assessment for licence renewal applications affecting undertakings in respect of which a licence or permit had been issued prior to June 22, 1984 unless the application falls within the exception to the statutory exemption under s.157.1.
- [36] Moreover, if the interpretation of Arctic Committee and Wilderness Society were correct, then as of June 22, 2009, there would be no undertakings requiring water licences grandfathered under the *MVRMA* since the longest water licence possible under the *Waters Act* is 25 years. That cannot have been the intent of Parliament or it would have been clearly stated. An interpretation of s.157.1 which required all water licence renewals to be subject to a full scale environmental review under Part 5 would be inconsistent with the concept of grandfathering and would strip s.157.1 of certainty, of fairness and, ultimately, of effect. Without some clear Parliamentary intention to the contrary, grandfathering is not a passing state under the *MVRMA*.

#### CONCLUSION

[37] Accordingly, we have concluded that "an undertaking that is the subject of a licence or permit issued before June 22, 1984" means an undertaking in respect of which

a licence or permit had been issued before June 22, 1984. We do not find it necessary to determine whether the licence issued before June 22, 1984 must have some relationship in terms of subject matter, substance and direct linkage to the licence in respect of which a renewal application has been filed. In this case, Tungsten's application for renewal of its water licence does and thus, we leave that issue for another day.

[38] The appeal is therefore allowed. The order of the chambers judge is vacated; the Board order is quashed and the matter is remitted to the Board for reconsideration in light of these reasons.

APPEAL HEARD on March 31<sup>st</sup>, 2003 AT EDMONTON, ALBERTA

MEMORANDUM FILED at YELLOWKNIFE, NORTHWEST TERRITORIES this 1st day of May, 2003

	FRASER
C.J.N.W.T.	A 4 4
J.A.	CONRAD
J.A.	PICARD

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This document: 2005 NWTSC 48 (CanLil)

Citation: Can. Zinc Corp. v. Mackenzie Valley Land & Water Bd., 2005 NWTSC 48

(CanLII)

Date: 2005-05-06

Docket: S-0001-CV2004000236

[Noteup] [Cited Decisions and Legislation]

Can. Zinc Corp. v. Mackenzie Valley Land & Water Bd., 2005 NWTSC 48

Date: 2005 05 06 Docket: S-0001-

CV2004000236

#### IN THE SUPREME COURT OF THE NORTHWEST TERRITORIES

#### BETWEEN:

### CANADIAN ZINC CORPORATION

**Applicant** 

-And-

#### MACKENZIE VALLEY LAND AND WATER BOARD

Respondent

#### -AND-

# CANADIAN PARKS AND WILDERNESS SOCIETY AND THE DEHCHO FIRST NATIONS

Intervenors

### REASONS FOR JUDGMENT

This is an application for judicial review of a decision of the [1]Mackenzie Valley Land and Water Board (the "Board"). The Board held that Part 5 of the Mackenzie Valley Resource Management Act, S.C. 1998, c.

- 25 (MVRMA) applies to the application by Canadian Zinc Corporation ("CZC") for a permit for the rehabilitation and use of a winter access road to the Prairie Creek Mine and that the exemption in s. 157.1 of the MVRMA is not applicable.
- [2] The Canadian Parks and Wilderness Society and the Dehcho First Nations were granted intervener status on this application.

# Preliminary issue:

[3] On this application, CZC filed an affidavit of Alan Taylor setting out a history of the Prairie Creek Mine's ownership. Opposing counsel objected to the affidavit because it was not part of the record before the Board. I agree that this extrinsic evidence about ownership is not admissible. My purpose is not to consider the matter anew, but simply to review the Board's decision on the basis of the material that was before it. Since there was material before the Board on the issue of ownership, the record should not be supplemented with further evidence: *Brouwer v. British Columbia (Minister of Energy, Mines and Petroleum Resources)*, [2000] B.C.J. No. 2655 (B.C.S.C.); *Quality Control Council of Canada v. International Radiography & Inspection Services (1976) Ltd.* (1990), 114 A.R. 334 (Q.B.).

# Background:

- [4] According to the evidence that was before the Board, the Prairie Creek Mine was originally owned by Cadillac Explorations Ltd., which was granted a land use permit for construction and use of a winter access road from the mine to the Liard Highway in 1980. The one year permit was extended twice, for a one year period each time, and ultimately expired in June 1983.
- [5] In May 1983, Cadillac went into receivership. At that time, it held a 60% interest in the mine, with the other 40% held by Procan Exploration Company as part of a joint venture agreement between the two corporations. Eventually, Procan acquired Cadillac's interest in the mine. In 1991, Procan

amalgamated with Nanisivik Mines Ltd. and continued under that name. In 1993, Nanisivik transferred the mine assets to San Andreas Resources Corporation. The latter company changed its name to CZC in 1999.

- [6] CZC has been engaged in redeveloping the mine property since 1991. In May 2003, CZC applied to the Board for a land use permit to use the same winter access road for which Cadillac had received the permit that expired in 1983. Some portions of the road were used in the mid-1990's pursuant to a land use permit issued in 1995, but the entire road has not been used since the early 1980's.
- [7] Land use in the Mackenzie Valley is now regulated by the MVRMA. Part 5 of that Act requires that any "proposals for development" comply with an environmental assessment process consisting of a preliminary screening by the regulatory authority and, if applicable, an environmental assessment and an environmental impact review by the Mackenzie Valley Environmental Impact Review Board established under the MVRMA. For purposes of Part 5, "development" is defined as "any undertaking, or any part of any undertaking, that is carried out on land or water and ... wholly within the Mackenzie Valley": s. 111. The term "undertaking" is not defined in the Act.
- [8] CZC's proposal to use the winter access road would *prima facie* require compliance with Part 5. However, s. 157.1 of the MVRMA provides an exemption in certain circumstances:
  - s. 157.1 Part 5 does not apply in respect of any licence, permit or other authorization related to an undertaking that is the subject of a licence or permit issued before June 22, 1984, except a licence, permit or other authorization for an abandonment, decommissioning or other significant alteration of the project.
- [9] CZC submitted to the Board that it should have the benefit of the s. 157.1 exemption because Cadillac had a permit issued for the road before June 22, 1984.

#### The Board's decision:

- [10] The Board held that CZC's application was not for a permit for an abandonment or significant alteration of the project. It considered that the real issue was the relationship between the undertaking that was the subject of the permit issued to Cadillac and the undertaking proposed by CZC. It decided that the undertaking is the whole arrangement under which the road is to be used and that it includes the whole enterprise proposed by CZC. The Board concluded that CZC is involved in a different undertaking than that which Cadillac was involved in before June 22, 1984 and that the permit sought by CZC "is not in respect of the undertaking originally permitted to Cadillac".
- [11] In coming to that conclusion, the Board emphasized four factors:
- 1. The original land use permit expired and was not renewed;
- 2. The only connection between Cadillac's original use of the road and CZC's undertaking seems to be the plan to use the same right of way;
- 3. Although portions of the road near the mine may have been used in 1995 to support diamond drilling, the large majority of the road alignment has not been used since about 1983;
- 4. CZC's relationship to Cadillac's undertaking seems tenuous since the corporate antecedents of CZC secured their interest in the mine by way of assets purchase. CZC is a different corporate entity from the bankrupt Cadillac.
- [12] The Board also deemed it "not compelling" that CZC wants a permit to operate the same road for which Cadillac had the permit. It found that to qualify for the exemption in s. 157.1, the undertaking must have a sufficient connection to the one that was there before 1984.
- [13] In the result, the Board decided that CZC's application for the land use permit is not exempt from preliminary screening under Part 5 of the MVRMA.

Positions of the parties on the judicial review application:

- [14] On this application, CZC argued that the Board erred in its interpretation of "undertaking". CZC took the position that the undertaking is the winter access road and not the larger enterprise CZC is engaged in. It also argued that the Board erred in focussing on two factors, which CZC says are irrelevant: the fact that the original land use permit was not renewed and the fact that CZC is a different corporate entity than Cadillac.
- [15] The interveners argued that the Board was correct in its interpretation of "undertaking" and that it correctly took into account the expiry of the original land use permit and the change in ownership, among other factors, to find that s. 157.1 does not exempt CZC's permit application from Part 5.
- [16] Counsel for the Board directed her submissions to the chronology of events and the standard of review only.

### Issue:

[17] The issue is the interpretation and application of s. 157.1. In *North American Tungsten Corp. Ltd. v. MacKenzie Valley Land and Water Board*, 2003 NWTCA 5 (CanLII), [2003] N.W.T.J. No. 28; 2003 NWTCA 5, the Northwest Territories Court of Appeal held that s. 157.1 grandfathers an undertaking licensed (or permitted) prior to June 22, 1984. In the circumstances of that case, the Court did not have to decide whether the licence issued before June 22, 1984 must have some relationship in terms of subject matter, substance and direct linkage to the licence in respect of which a renewal application has been filed. It left that issue for decision another day. This case invokes that very issue. The question is whether the fact that Cadillac held a permit for the winter access road before June 22, 1984 is sufficient to bring CZC within s. 157.1 even though that permit has long expired and Cadillac is no longer in the picture.

### Standard of Review:

- [18] In *Tungsten*, the Court of Appeal held that the scope of the exemption under s. 157.1 is a matter of statutory interpretation and that the standard of review is one of correctness. No one disputed that on this application.
- [19] As to the standard of review for the Board's application of the law to the facts before it, *Pushpanathan v. Canada (Minister of Citizenship and*

Immigration), 1998 CanLII 778 (S.C.C.), [1998] 1 S.C.R. 982, requires that a pragmatic and functional approach be taken to determine the appropriate standard. That approach requires consideration of four contextual factors: (1) the presence or absence of a privative clause or statutory right of appeal; (2) the expertise of the tribunal relative to that of the reviewing court on the issue in question; (3) the purpose of the legislation and the specific provision in question; (4) the nature of the question - whether it is law, fact or mixed law and fact. After consideration of all those factors, the reviewing court must determine what degree of deference, if any, should be accorded the tribunal's decision and whether the corresponding standard is correctness, reasonableness or patent unreasonableness.

[20] CZC submitted that the application of s. 157.1 to the facts is a question of law and the standard is correctness. The Board took the position that the issue is one of fact and the standard is patent unreasonableness. The interveners submitted that the issue is one of mixed law and fact, mandating a standard of reasonableness.

## Presence or absence of a privative clause:

- [21] The first factor to consider is the presence or absence of a privative clause. In *Tungsten*, the Court of Appeal noted that Board decisions are not protected under the MVRMA by a privative clause and that s. 32 specifically provides for judicial review. On this application, counsel for the interveners submitted that it appears the Court in *Tungsten* was not referred to s. 67 of the MVRMA. Section 67 provides that, subject to sections 32 and 81 (the latter inapplicable to this case), every decision or order of the Board is final and binding.
- [22] Since s. 67 is explicitly made subject to s. 32, it is clearly not the full privative clause described by Bastarache J. in *Pushpanathan*. That and the absence of any mechanism for appeal in the MVRMA leads to the conclusion that s. 67 is best described as a partial privative clause. This means that some level of deference is likely appropriate, depending on whether the issue is one of law or fact or both, and the interplay of the other *Pushpanathan* factors.

# Expertise of the tribunal:

- [23] If a tribunal has been constituted with a particular expertise relevant to the aims of its governing legislation, then greater deference is to be shown to it. That expertise may arise from specialized knowledge of the tribunal's members or special procedure or non-judicial means of implementing the legislation.
- [24] In *Pushpanathan*, the Court said that making an evaluation of expertise has three dimensions: the court must characterize the expertise of the tribunal in question; it must consider its own expertise relative to that of the tribunal; and it must identify the nature of the specific issue before the tribunal relative to this expertise.
- [25] The Court of Appeal has already held in *Tungsten* that there is nothing in the MVRMA suggesting that the Board has any particular expertise regarding the statutory interpretation issue of the scope of the exemption under s. 157.1.
- [26] In terms of what might be called factual expertise, nothing in the MVRMA indicates that the legislators recognized the need for any particular expertise for appointment to the Board. The Act does, however, provide for first nations' involvement in appointments to the Board: ss. 11 and 99.
- [27] The Board has responsibility for carrying out a relatively complex statutory scheme for land use permitting and has been engaged in that task for approximately five years now. Logically, it will have developed some expertise in assessing and determining licence and permit applications. However, the interpretation of a statutory provision relating to the grandfathering of undertakings and an exemption from an aspect of the legislation the Board deals with is not something about which the Board can be said to have more expertise relative to a court. On this aspect of the test, no or very little deference is justified.

# Purpose of the MVRMA as a whole and s. 157.1 in particular:

[28] In *Pushpanathan*, Bastarache J. said that where the purposes of the statute and of the decision maker are conceived not primarily in terms of establishing rights as between parties, or as entitlements, but rather as a delicate balancing between different constituencies, then the appropriateness of court supervision diminishes and the level of deference increases. While

some of the functions exercised by the Board can be said to involve consideration of "polycentric" issues, the question of transitional grandfathering under s. 157.1 is not such an issue. It does not involve the Board fulfilling its mandate of public participation in the management of the Mackenzie Valley's resources, but rather the specific question whether CZC comes within the exemption provided by s. 157.1. This is not a discretionary issue. All of this suggests very little deference.

# The nature of the problem:

- [29] Generally, deference is accorded to a tribunal on questions of fact, but less so on questions of law. Sometimes, the distinction is not so clear and a tribunal is called upon to make findings of both fact and law.
- [30] Bastarache J. said in *Pushpanathan* that the generality of the proposition to be decided will indicate a correctness standard, although this may be contradicted when all four factors relevant to the standard of review are considered.
- [31] In Dr. Q. v. College of Physicians and Surgeons of British Columbia, 2003 SCC 19 (CanLII), [2003] 1 S.C.R. 226, [2003] S.C.J. No. 18, the Supreme Court of Canada said that with regard to questions of mixed fact and law, more deference is called for if the question is fact-intensive and less deference if it is law-intensive.
- [32] As I have pointed out, the nature of the problem is the correct interpretation of s. 157.1. That is a matter of statutory interpretation on which little or no deference is due and indicates a correctness standard as per *Tungsten*. Once s. 157.1 is properly interpreted, its application to the facts before the Board is a question of mixed law and fact: *Housen v. Nikolaisen*, [2002] S.C.J. No. 31. Although the Board should be accorded more deference on what it accepts as fact, it is to be accorded less deference on what the legal significance of the facts is. For the latter, therefore, the standard should be correctness.
- [33] Balancing all of the factors leads me to conclude that very little deference is indicated for the Board's application of s. 157.1 to the facts. The Board's decision on that issue must therefore be reviewed on a standard of correctness.

### Analysis:

- [34] Much of the argument on this application centred on what the Court of Appeal said in *Tungsten* and the significance of some of the Court's comments for this case. A detailed consideration of *Tungsten* is therefore appropriate.
- [35] In *Tungsten*, the question before the Court of Appeal was "whether s. 157.1 of the MVRMA grandfathers a licence issued prior to June 22, 1984 or an undertaking licensed prior to June 22, 1984". The Court concluded that it was the latter. Although the meaning of "undertaking" was not squarely before the Court, the reasons for judgment in *Tungsten* indicate that it considered as the "undertaking" the mine or mining operation of the applicant in that case.
- [36] In *Tungsten*, the Court applied a purposive and contextual approach to the statutory interpretation question and reviewed the background of the MVRMA. It noted that the MVRMA is designed to implement the Gwich'in and Sahtu land claims agreements by providing for an integrated system of land and water management in the Mackenzie Valley. The MVRMA provides for the establishment of an environmental impact review board and a land and water board, which are charged with regulating land and water use in certain areas in the Mackenzie Valley. The purpose of the boards, including the Board whose decision is now under review, is to "enable residents of the Mackenzie Valley to participate in the management of its resources for the benefit of the residents and other Canadians": s. 9.1 MVRMA.
- [37] The Court held that the relevant land claims agreements and the MVRMA clearly recognize that a full scale environmental review will not be appropriate in respect of certain existing permits, projects and licences and they reflect that some grandfathering of existing developments is required to balance competing interests. It noted that, "Those interests include the legitimate goal of protecting land and water resources in the Mackenzie Valley for the benefit of its citizens, on the one hand, while, at the same time, exempting from the full force of new environmental legislation undertakings developed under an earlier legislative regime".

- [38] The Court reviewed certain transitional and other sections of the MVRMA and found that they reflect that:
  - ... Parliament did not intend to impose an entirely new environmental review process on every project in the Mackenzie Valley irrespective of the status of that project at the time the MVRMA came into effect. Instead, the MVRMA grandfathered certain projects and provided that others yet would be dealt with under prior applicable legislation. In interpreting s. 157.1, therefore, one must recognize that it is designed to grandfather certain undertakings which predate June 22, 1984. Accordingly, this section must be interpreted in a manner which best comports with its intended purpose.
- [39] The Court also compared the MVRMA and the Canadian Environmental Assessment Act, S.C. 1992, c. 37 (CEAA). Both Acts exempt projects which pre-date June 22, 1984. The Court found that the selection of this common date reflects Parliament's continuing intention that projects which pre-date June 22, 1984 are to be subjected to a full scale environmental assessment under the applicable legislation only if they depart significantly from their approved mode of operation and engage in, for example, decommissioning, abandonment or significant alteration of the project. The Court also noted that it has been determined that the purpose of s. 74(4) of the CEAA is to exempt projects from environmental assessment when significant resources have already been expended towards them, citing Hamilton-Wentworth (Regional Municipality) v. Canada (Minister of the Environment) et al. (2001), 204 F.T.R. 161 (T.D.), aff'd (2001) 213 F.T.R. 57 (C.A.).
- [40] In comparing the MVRMA and the CEAA, the Court held that s. 157.1 "is designed to generally parallel the scope of the statutory exemptions granted to projects pre-dating June 22, 1984 under s. 74(4) of CEAA. CEAA exempts from environmental requirements any licence issuance or renewal where the "construction or operation of a physical work or the carrying out of a physical activity was initiated before June 22, 1984"." By contrast, the Court of Appeal noted, s. 157.1 of the MVRMA ties the exemption to a licence related to an undertaking that is "the subject of a licence or permit issued before June 22, 1984".
- [41] The Court of Appeal held that the difference in wording between the two Acts does not reflect a Parliamentary intention to expand the reach of

the MVRMA, but rather, as indicated above, an intention that projects which pre-date June 22, 1984 are to be subjected to a full scale environmental assessment as prescribed under the applicable legislation only if they depart significantly from their approved mode of operation. The Court found that the change of wording reflected an attempt to overcome the difficulties of interpretation of the word "initiated" under the CEAA by referring in the MVRMA to an event which could be easily and conclusively established for a given project without litigation - that is, the actual date on which a licence or permit had been issued. The Court went on to say that the scope of the MVRMA exemption may be broader than that under the CEAA since the MVRMA exemption applies as long as the relevant licence or permit was issued prior to June 22, 1984 regardless of whether physical work on the project had been initiated by that date.

- [42] CZC argued that the correct interpretation of "undertaking" in s. 157.1 is the winter access road, while the interveners argued that it is the larger enterprise engaged in by CZC. Both rely in part on *Tungsten* to support their positions.
- [43] I note that in *Tungsten*, the Court uses the terms "undertaking" and "project" seemingly interchangeably throughout its decision. Indeed, s. 157.1 only makes sense if those words mean the same thing, since its intent must logically be that Part 5 does not apply in respect of any permit related to a qualifying undertaking except a permit for an abandonment, decommissioning or other significant alteration of the undertaking. This conclusion is consistent with the French version of s. 157.1, in which the phrase "un ouvrage ou une activité" are used where, in the English version, both "undertaking" and "project" are found.
- [44] The interveners argued that the term "undertaking" is used in *Tungsten* in the wider sense of a business or the whole arrangement under which the licence holder in that case operated. I agree that some of the language in *Tungsten* can be read that way. For example, the Court referred to "if the subject undertaking held a water licence", "Tungsten's existing water licence for its undertaking", "given the location of Tungsten's undertaking", and "undertakings requiring water licences". It also said:

Tungsten operates the Cantung Tungsten Mine ... in the Mackenzie Valley. That Mine has been in place since 1962. Tungsten's predecessor was first granted a water licence for this undertaking in 1975.

- [45] The quoted excerpts suggest that the Court considered the mine or the mining operation to be the undertaking.
- [46] In *Tungsten*, the licence sought was for the use of water for the mining operation. The only undertaking that was relevant was, therefore, the entire mining operation. In this case, however, the permit is specifically for the winter access road. It seems to me that there are three possible meanings of "undertaking" in this context: the road itself, or the road and its operation and use, or the mining operation.
- [47] Apart from the wording referred to above in *Tungsten*, the Board also relied on various definitions of "undertaking". For example, "Undertaking" is not a physical thing but is an arrangement under which of course physical things are used: *Capital Cities Communications Inc. v. Canada (C.R.T.C.)*, 1977 CanLII 12 (S.C.C.), [1978] 2 S.C.R. 141. It also referred to an analysis by Professor Peter Hogg in his text, *Constitutional Law of Canada*, in which he concluded that "undertaking" seems to be equivalent to "organization" or "enterprise", and distinguished between a "work" which he characterized as a tangible thing and an "undertaking" which he characterized as an intangible arrangement, organization or enterprise.
- [48] In *Union des employés de service, local 298 v. Bibeault*, 1988 CanLII 30 (S.C.C.), [1988] 2 S.C.R. 1048, Beetz J., referring to other jurisprudence, concluded that an undertaking consists in an organization of resources that together suffice for the pursuit, in whole or in part, of specific activities.
- [49] "Undertaking" can, however, have a more restricted meaning. In *The Concise Oxford Dictionary* (Clarendon Press, Oxford), 1995, one finds it defined as "work, etc. undertaken, an enterprise (a serious undertaking)".
- [50] CZC argued that the "undertaking" must be the winter access road and not the larger mining operation. Relying on *Tungsten* and the Court's holding that the MVRMA and the CEAA are meant to complement each other, CZC pointed out that the CEAA refers to and focuses on work or activity in its exemption section 74(4):

- s. 74(4) Where the construction or operation of a physical work or the carrying out of a physical activity was initiated before June 22, 1984, this Act shall not apply in respect of the issuance or renewal of a licence, permit, approval or other action under a prescribed provision in respect of the project unless the issuance or renewal entails a modification, decommissioning, abandonment or other alteration to the project, in whole or in part.
- [51] "Project" is defined as "in relation to a physical work, any proposed construction, operation, modification, decommissioning, abandonment or other undertaking in relation to that physical work": s. 2(1) CEAA.
- [52] The focus on work or activity in the CEAA is more consistent with the French version of s. 157.1 MVRMA, referring to "un ouvrage ou une activité" for undertaking, than the wider meaning of undertaking proposed by the interveners.
- [53] In my view, to be consistent with the CEAA and the context and purpose of the legislation as described in *Tungsten*, the definition of undertaking must parallel the wording used in the CEAA and not focus solely on the physical "thing", that is, the winter access road. It must include the proposed operation of the road. The undertaking is not merely the winter access road, but includes the activity for which the road will be used and the circumstances surrounding its use. It is not, however, the complete operation carried on by CZC.
- [54] If the MVRMA and CEAA are meant to be complementary pieces of legislation, one would not expect the legislators to change the focus from a physical work or activity under CEAA to the larger business or enterprise within which that physical work or activity takes place under MVRMA, in determining whether a project is grandfathered and exempt from environmental assessment. This interpretation also fits better with the French version of s. 157.1.
- [55] As I have already noted, the definition of "undertaking" was not the issue in *Tungsten* and the wording used by the Court of Appeal in its decision must be seen in that light. The wording used by the Court of Appeal in dealing with what was meant to be grandfathered under the MVRMA, although suggestive of the wider enterprise, the mine in that case,

does not rule out an interpretation of "undertaking" as a more restricted activity for which a permit is sought, such as the operation of the winter access road in this case.

# [56] The Board's decision was that:

... the undertaking referred to is more than the physical work or the winter road or the right of way which the company proposes to use again. The undertaking is the whole arrangement under which the physical thing (winter road right of way) is proposed to be used. It includes the whole enterprise proposed by Canadian Zinc.

[57] It appears to me from the Board's decision, that by "whole enterprise" it meant the mining operation carried on by CZC at the Prairie Creek minesite. I say that because the Board also made the following comments and findings:

That the Applicant wants a permit to operate the same road is not compelling. The real issue is whether the application is for a permit related to the same undertaking that was in place before June 22, 1984. It seems to the MVLWB that there must be a positive connection between the two. If no such connection were required, any licence, permit or authorization issued before June 22, 1984, would be sufficient grounds for any subsequent unrelated activity at the same site to be exempted from the application of Part 5 of the MVRMA. The Board accepts Parliament's intention, as interpreted by the Court of Appeal, to ensure that activities permitted before June 22, 1984, for which there is sufficient continuity to continue without the need for preliminary screening, since such statutory requirements did not exist before 1984. The effect of this exemption can not be unbounded however. To qualify for the exemption in s.157.1, the undertaking must have a sufficient connection to the one that was there before 1984.

Having considered all the evidence, argument and the facts in this case, the Board is of the view that Canadian Zinc is involved in a different undertaking than that which was present before 1984. It is thus the Board's view that the Tungsten decision does not apply in this case and that Canadian Zinc is subject to Part 5 of the MVRMA.

[58] In my view, the Board erred in considering the undertaking to be CZC's whole enterprise, its mining operation.

- [59] Having concluded that the undertaking is the operation of the winter access road, the question is then whether that undertaking had a permit issued before June 22, 1984.
- [60] Determination of this issue involves the question left open by the Court of Appeal in *Tungsten*. That is, for purposes of this case, whether the permit issued to Cadillac before June 22, 1984 must have "some relationship in terms of subject matter, substance and direct linkage" to the permit for which CZC has applied.
- [61] Here, there is clearly a relationship in terms of subject matter because both permits are for some physical work on and the operation of the same winter access road. The Board also accepted that CZC intends no significant alteration of the project. I take that as a finding of fact and no one on this application challenged it.
- [62] There are differences in substance between the two permits. For example, the permit held by Cadillac was for a one year term, twice renewed. However, the permit sought by CZC is for a five year term with a two year renewal term. In my view, that is not significant because the term of the permit is up to the Board in any event. There is evidence that there are some differences between the type of materials and equipment Cadillac hauled on the road and what CZC intends to haul on the road. The major difference is that CZC intends to remove certain chemicals from the minesite via the road. I will comment on that below. Basically, however, the activity on the road, both under Cadillac's permit and CZC's proposed permit, involves hauling materials and equipment from the mine to the highway and vice versa.
- [63] The "direct linkage" issue is more problematic. Cadillac's permit was both obtained and expired prior to June 22, 1984. There was accordingly a 20 year gap before CZC applied for its permit and no linkage by way of successive renewals as was the case in *Tungsten*, although there was a permit for part of the road in the mid-1990's.
- [64] Although the Court of Appeal left open the question whether there needs to be some direct linkage between the two permits, the wording of s. 157.1 does not require such linkage. And the reasoning in *Tungsten* appears to apply squarely to the circumstances of CZC's permit application. The

Court referred to the legislative intention that projects which pre-date June 22, 1984 are to be subjected to a full scale environmental assessment only if they depart significantly from their approved mode of operation and engage in decommissioning, abandonment or significant alteration of the project. The project in this case, the operation of the winter access road, pre-dates June 22, 1984. As found by the Board, the permit sought by CZC is not based on any intention to significantly alter that project or to abandon or decommission it.

- [65] In *Tungsten*, the Court of Appeal suggested that the interpretive difficulties with the term "initiated" used in s. 74(4) of the CEAA resulted, under s. 157.1 of the MVRMA, in the exemption being tied to the date a licence or permit was issued. Bearing in mind that the approach under the MVRMA is meant to be complementary to that under the CEAA, it would be inconsistent if under the CEAA a project simply had to be initiated before June 22, 1984 (and the *Hamilton-Wentworth* case indicates that a very broad range of steps can qualify as initiating steps) to qualify for exemption from the environmental assessment regime, but under the MVRMA a project, even though completed under an appropriate permit before June 22, 1984, would not qualify if permits had not been sought on a continuing basis.
- [66] It is also noteworthy that s. 157.1 does not refer to renewals of licences or permits and therefore does not, by its wording, apply only to renewals of existing permits or licences. If the intention of Parliament was that only undertakings for which a permit had been continually maintained would be grandfathered, surely the legislation would have spelled that out.
- [67] Nor does s. 157.1 appear to require any particular linkage as to the identity of the holder of the permit. One would think that if that were the legislative intent, it would have been simple enough to set it out clearly in the statute.
- [68] If a purpose of the CEAA and the MVRMA is to exempt projects from environmental assessment when significant resources have already been expended towards them, it would seem to follow that when such a project has been taken over by a new owner, one which has also expended significant resources to acquire the project, the exemption follows the project. In other words, it is the project or undertaking that is exempt from s. 157.1, not the owner or the permit holder.

- [69] I find that in this case there is sufficient connection in terms of subject matter and substance between CZC's proposed undertaking the operation of the winter access road and Cadillac's undertaking. I find there is no requirement under the legislation that there be continuity as to the owner of the undertaking and no requirement that the pre-June 22, 1984 permit had been continued by successive renewals after that date.
- [70] The permit sought by CZC is related to the operation of the winter access road. A permit had been issued to Cadillac before June 22, 1984 in respect of that same undertaking. Therefore, s. 157.1 governs and Part 5 does not apply.
- [71] The environmental concerns raised by the interveners and by others before the Board are serious and worthy of consideration. The fact that CZC's permit application is exempt from Part 5 does not make those concerns any less significant.
- [72] In *Tungsten*, the Court of Appeal distinguished between conditions imposed before a project is built (facility compliance) and operational standards applicable to existing projects (operational compliance). The Court noted that, "Simply because an undertaking may be exempt from the full panoply of environmental assessments under Part 5 of the MVRMA does not mean that the undertaking is exempt from applicable regulatory standards." Applicable regulatory standards in this case may well include standards with respect to the materials, such as any chemicals, that CZC intends to transport on the road; I need not decide anything about that as it was not argued before me. In any event, CZC has acknowledged that the Board may impose conditions within its jurisdiction on the granting of the permit. The concerns raised by the interveners can and should be addressed, as the Board sees fit, in the Board's determination as to whether or what terms and conditions should be attached to the permit sought.

# Conclusion:

- [73] Accordingly, the application for judicial review is granted. The order of the Board is quashed and the matter is remitted to the Board for continuation in accordance with this decision.
- [74] None of the parties sought to speak to costs at the time of the application. If costs are an issue, counsel may arrange to address them by contacting the registry within 30 days of the date these reasons for judgment are filed.

V.A. Schuler J.S.C.

Dated at Yellowknife, NT this 6th day of May, 2005.

applicant: D. Geoffrey Cowper, Q.C.

and Kevin G. O'Callaghan

tespondent:

Ms. Jennifer Bayly-Atkin

rs:

Mr. Devon Page





canada >> Federal Court of Canada >>

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Date: 1997-11-07

Docket: T-729-97;T-734-97

[Noteup] [Cited Decisions and Legislation]

T-729-97

Dan Bowen and Bryn Thomas (Applicants)

V.

The Attorney General of Canada and the Minister of Canadian Heritage (Respondents)

T-734-97

Civil Air Rescue Emergency Services (Banff Chapter), Canadian Owners and Pilots Association, the Banff Flying Club, Bernie Schiesser and Howard Srigley (Applicants)

V.

The Minister of Canadian Heritage, the Minister of Transport, the Attorney General of Canada, and the Superintendent, Banff National Park (Respondents)

Indexed as: Bowenv. Canada (Attorney General) (T.D.)

Trial Division, Campbell J. Edmonton, October 9; Ottawa, November 7, 1997.

Environment " Closing of airstrips in Banff, Jasper National Parks " Airstrips under Parks Canada jurisdiction " Comprehensive environmental assessment required prior to decommissioning of either airstrip.

Air law " Closure of airstrips at Banff, Jasper National Parks " Flying club members argue for retention for emergency landings " Parks Canada argues modern advances in aviation rendered emergency landing strips obsolete " Decommissioning prohibited pending completion of comprehensive environmental studies.

In October 1996, the Minister of Canadian Heritage announced the decision to close the grass field airstrips in the Banff and Jasper National Parks. The matter had been under discussion for the past ten years. The airstrips are operated by Parks Canada, a department of the Ministry of Canadian Heritage responsible for National Parks, but have minimal services, facilities and maintenance. The users"flying club members who keep their private planes at these airstrips"submitted the airstrips should remain open for aviation safety. Parks Canada wants them closed in the name of park enhancement. Modern airports with all-weather facilities and paved runways exist in Alberta at Springbank and Hinton, a short distance outside of Banff and Jasper National Parks respectively. The necessity for emergency landing strips had been rendered obsolete by advances in aviation.

In the Regulatory Impact Analysis Statement (RIAS) for the *National Parks* Aircraft Access Regulations dated April 2, 1997, it was stated that "Based on the recommendations of the Banff Bow Valley Study, the airstrip in Banff National Park will be closed . . . . For purposes of consistency, the airstrip in Jasper National Park will also be closed".

This was an application for judicial review to question the validity of the authority apparently exercised in making and ratifying the decision, the fairness of the process used in reaching the decision, and whether the decision was made in compliance with the *Canadian Environmental Assessment Act* (CEAA).

Held, any decision made by the respondents to decommission either the Banff or Jasper airstrip is quashed and the respondents are prohibited from making any decision to decommission either until separate comprehensive environmental studies are completed on each.

Any landing or take-off of aircraft, and any facility for this purpose, including the Banff and Jasper airstrips, are properly within a Parks Canada concern, and appropriately under Parks Canada jurisdiction.

On the evidence, no expectations of more consultation were created with respect to Banff. But regarding Jasper, the decision announced in October 1996 is substantively unrelated to the Jasper airstrip. Thus the statements made by the Minister at that time did create a legitimate expectation that, as far as Jasper is concerned, the process she outlined would be followed regarding any decisions with respect to that airstrip. The decision to close both the Banff and Jasper airstrips was tied to the tabling of the Banff-Bow Valley Study which relates to Banff only. The RIAS referred to above cited "for purposes of consistency" as the reason for closing the Jasper airstrip. There was no suggestion in the evidence that the rationale for the decision to close the Banff airstrip (because of its

placement in an important wildlife corridor) applied to the Jasper airstrip. Thus Parks Canada did not meet its due process obligations.

A review of the applicable provisions revealed that a decision by the Governor in Council only triggers an assessment, albeit a comprehensive assessment, when certain action is taken "in relation to a physical work", and also only when such action is contrary to the national park's management plan. First, the critical decision maker herein was the Governor in Council. As a matter of law, the decision to change the National Parks General Regulations to give effect to the Minister's decision was the Governor in Council's, and without it, no change can occur. Accordingly, the decision made here was outside the purview of subsection 5(1) and within subsection 5(2) of the CEAA. Second, the decision is "in relation to a physical work". It is true that the decision to close the airstrips is a land use decision, not one in relation to a physical work. But the decision to decommission the airstrip is action in relation to physical work, being the removal of structures and placing markings on the runway indicating that it has been decommissioned. While the land use change is a matter for the Governor in Council, the decommissioning dependant thereon was not. Thus subsection 5(1) governed and applied to Parks Canada which was the proponent of decommissioning. Under the Comprehensive Study List in SOR/94-638, since each decommissioning is in relation to a physical work in a national park, a comprehensive study is required, but only if the decommissioning is contrary to the management plan for the park. Since each of the Banff and Jasper management plans provided that the "airstrip will be retained solely for emergency/diversionary landing purposes", the decommissioning of the airstrips had the potential to change the status set out in each management plan, and there was, therefore, a conflict between the management plan and the proposed decommissioning of each airstrip. A comprehensive study was therefore required respecting any decision to decommission either the Banff or Jasper airstrips. And it must be done before any decision is made to decommission. The environmental effect to be considered encompasses "the effect of any such change in health and socio-economic conditions" in the VFR flight corridor that the airstrip serves between Alberta and British Columbia. Thus there needs to be considered whether the unavailability of the airstrip for emergency or diversionary use creates a significant adverse effect on public health and safety, by increasing the risk of accidents and consequently affecting the health and safety of VFR pilots and passengers who fly through the Banff area.

There was no purpose in acting to reverse the decision-making process which has taken place on the basis of a failure to meet the legitimate expectation identified. Such action would only result in yet another opportunity to make the representations which have been rejected in the past and would be rejected again.

However, discretion was exercised under subsection 18.1(3) of the *Federal Court Act* to enforce the legal requirement to complete a comprehensive environmental

assessment prior to the decommissioning of either the Banff or Jasper airstrip. Any decision that might already have been made was made without jurisdiction to do so.

statutes and regulations judicially considered

Aeronautics Act, R.S.C., 1985, c. A-2.

Canadian Aviation Regulations, SOR/96-433, s. 301.04(1),(4).

Canadian Environmental Assessment Act, S.C. 1992, c. 37, ss. 2(1) "environmental assessment", "environmental effect", "federal authority", "project", 4(a), 5, 11, 16(1),(2), 59(g).

Comprehensive Study List Regulations, SOR/94-638, s. 3, Sch., s. 1.

Federal Court Act, R.S.C., 1985, c. F-7, s. 18.1(3) (as enacted by S.C. 1990, c. 8, s. 5).

National Parks Act, R.S.C., 1985, c. N-14, s. 7(1)(00) (as enacted by R.S.C., 1985 (4th Supp.), c. 39, s. 5).

National Parks Aircraft Access Regulations, SOR/97-150, ss. 3(1),(4), 6.

National Parks General Regulations, SOR/78-213.

Regulations Amending the National Parks General Regulations, SOR/97-149.

cases judicially considered

applied:

Reference re Canada Assistance Plan (B.C.), 1991 CanLII 74 (S.C.C.), [1991] 2 S.C.R. 525; (1991), 83 D.L.R. (4th) 297; [1991] 6 W.W.R. 1; 58 B.C.L.R. (2d) 1; 127 N.R. 161.

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APPLICATION for judicial review of the decision to close the airstrips in Banff and Jasper National Parks. Any decision already made by to decommission either airstrip is quashed, and the respondents are prohibited from making any decision to decommission either airstrip until separate comprehensive environmental studies are completed on each.

### counsel:

Robert W. Hladun, Q.C. and Eric Lund for applicants Dan Bowen et al.

Simon M. Renouf for applicants Civil Air Rescue Emergency Services et al.

Kirk N. Lambrecht for respondents (both files).

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Hladun & Co., Edmonton, for applicants Dan Bowen et al.

Pringle, Renouf & Associates, Edmonton, for applicants Civil Air Rescue Emergency Services et al.

Deputy Attorney General of Canada for respondents (both files).

The following are the reason for order rendered in English by

Campbell J.: In the spring of this year, the Honourable Sheila Copps, Minister of Canadian Heritage, decided to close the airstrips in the Banff and Jasper National Parks. This decision is a seminal event in a long-standing dispute over the propriety of doing so. The applicants<sup>1</sup> have a direct interest in this decision as users of the airstrips involved, and, accordingly, have brought judicial review application to question the validity of the authority apparently exercised in making and ratifying the decision, the fairness of the process used in reaching the decision, and whether the decision was made in compliance with the *Canadian Environmental Assessment Act* [S.C. 1992, c. 37].<sup>2</sup>

### Background

The airstrips in Banff and Jasper National Parks are naturally occurring grass fields in montane habitat on public lands in the Banff-Bow and Athabasca River valleys, respectively. The airstrips are operated by Parks Canada, which is a department of the Ministry of Canadian Heritage responsible for National Parks, but have minimal services, facilities and maintenance. Neither airstrip is certified as an airport or operated by the Department of Transport.

In recent times the grass field airstrips have primarily been used by the members of the Banff and Jasper Flying Clubs, which are comprised of individuals, including the applicants, who keep their private planes at these airstrips free of charge without lease or licence of occupation from Parks Canada. From time to time some of these users may use their aircraft to participate in routine search and rescue training flights or in search activity for those who may be lost in areas located outside of the national park boundaries.

For more than ten years a fundamental conflict has existed between the users and Parks Canada as to whether the Banff and Jasper airstrips should be closed. The conflict arises from the very different perspective that each has about the airstrips. The users' perspective is that they should be kept open for aviation safety. The Parks Canada perspective is that they should be closed in the name of park enhancement. During the ten years preceding the decision being taken to close the airstrips, each has tried to see the other's perspective with no success. There is no question that each perspective is honestly held as being in the interests of the public at large. Thus, this case concerns a question of public, not private, interest.

While the applications under consideration here are not about the merits of each perspective, but whether a legal error was made in the implementation of the Park's perspective, the following description of the conflict helps to set the stage for the decision-making process which occurred.

## A. The Parks Canada perspective<sup>3</sup>

The four contiguous mountain parks (Banff, Jasper, Yoho and Kootenay) together with three contiguous provincial parks in British Columbia, are designated as the UNESCO Rocky Mountain World Heritage Site. Parks Canada attempts to administer the mountain parks under its jurisdiction as a single ecological unit and has particular regard to the montane ecoregion.

In the Parks Canada 1986 report, *In Trust for Tomorrow: A Management Framework for Four Mountain Parks*, it was determined that:

... the Banff and Jasper airfields are anomalous facilities, and it is not appropriate to retain them. They will be removed or, if there is demonstrable need for emergency use, retained for that purpose only.<sup>4</sup>

The airstrips in Banff and Jasper National Parks originated in an earlier period of aviation technology in Canada. Modern airports with all-weather facilities and paved runways now exist in Alberta at Springbank and Hinton, a short distance by major highway outside of Banff and Jasper National Parks respectively. Springbank airport, as distinct from the Calgary International Airport, is located west of Calgary some 44 nautical miles by air from the Banff airstrip; Hinton airport is 22 nautical miles from the Jasper airstrip. Search and rescue activities

conducted by the users, including routine training flights, can be conducted year round from either the Springbank or Hinton airports.

Parks Canada does not make use of the airstrips in Banff and Jasper National Parks for the administration of the national parks. Fixed-wing aircraft used for general park purposes such as game monitoring are based at the Springbank or Hinton airports. Helicopters used for search and rescue activities within the parks are not based at the airstrips in issue. Medical evacuation takes place in both parks by helicopter landing at the modern hospitals in the towns of Banff and Jasper. Where a fixed-wing aircraft is used for medical evacuation in Jasper National Park the nearby Hinton airport outside of the park boundary is used as the base for the aircraft.

The airstrips are not necessary for aviation and public safety or for search and rescue activities. Search and rescue activities can easily be conducted from the modern airports at Springbank or Hinton. With respect to aviation and public safety, Canada, as well as most other nations, does not require emergency or diversionary airstrips for use by light aircraft flying in Visual Flight Rules conditions. Ready access to weather information, licensing of pilots and the reliability of modern aircraft have rendered the idea practically obsolete. Further, the Banff and Jasper airstrips are located in relatively stable areas for mountain weather.

In 1996, the Banff-Bow Valley Study identified significant development pressures on Banff National Park and recommended removal of the Banff airstrip as a means of mitigating development pressures and restoring the Cascade Wildlife Corridor. For the purposes of consistency, the same considerations were applied to the Jasper airstrip.

# B. The users' perspective<sup>5</sup>

The Banff airstrip was opened in the mid 1930s, and one of the earliest recorded emergency landings was in 1949. Over the years, other air rescue incidents have arisen that demonstrate the use of the Banff airstrip for public safety purposes, including incidents in October 1990 and June 1992. In poor weather conditions making it impossible to transit the mountains leading to Golden in the west, Jasper in the north, Radium in the south, and out of the mountains to the east, Banff is the only safe meadow with at least 3,000 feet of landing space available anywhere along the Bow Valley corridor in which to land.

The interprovincial flights by light aircraft through the Rocky Mountains *via* Jasper is on the Northern Visual Flight Rules navigation route and Jasper is a natural and important emergency and diversionary airstrip logistically placed among the major Roche Miette, Yellowhead and Columbia Icefields mountain passes. Weather conditions in the three mountain passes are often unpredictable, and

emergency and diversionary use has been made of the Jasper airstrip in the past 12 years.

### C. Attempts to reconcile the perspectives

For the past 10 years, both the Banff and Jasper National Parks have managed development according to management plans, which have included use provisions for the airstrips. These plans have been the subject of a wide consultative process in which the users have participated.

As mentioned above, the 1986 plan *In Trust for Tomorrow: A Management Framework for Four Mountain Parks* described the airstrips as "anomalous" and deemed it not appropriate to retain them unless a demonstrable need for emergency use could be shown. Even though this view did not change in the 1988 management plans for both Banff and Jasper National Parks, no doubt as a result of no small effort on the part of the users, both plans provided for the monitoring of the use of the airstrips as emergency and diversionary facilities to gather information on their need.

In 1994 the Government of Canada appointed the Banff-Bow Valley Task Force. The objectives of the Banff-Bow Valley Study were to assess the cumulative environmental effects of development and use in the entire Bow River watershed within Banff National Park, and specifically do the following:

... to develop a vision and goals for the Banff-Bow Valley that will integrate ecological, social and economic values; to complete a comprehensive analysis of existing information, and to provide direction for future collection and analysis of data to achieve ongoing goals; and to provide direction on the management of human use and development in a manner that will maintain ecological values and provide sustainable tourism.<sup>6</sup>

Prior to the Banff-Bow Valley Task Forces's involvement, a three-year monitoring program was established for the Banff and Jasper airstrips beginning in 1989, and then in 1992 the monitoring program was extended, with the decision to close the airstrips deferred, so the issue could be included in the *Four Mountain Parks Five Year Review*.

The report developed as a result of the monitoring was delivered in 1994, after a review with interested parties, including the users. The results of all phases of the monitoring process did not, as far as Parks Canada is concerned, prove the need to keep the airstrips open. However, the users contest the results on the basis that the data is incomplete. In the end result, the decision regarding closure of the airstrip was then further deferred pending the outcome of the Banff-Bow Valley Study expected to be released in 1997.

The evidence makes it abundantly clear that during this lengthy review period, the users were very active in pressing their perspective, which apparently had effect since the decision to close the airstrips was continuously deferred.<sup>7</sup>

In the course of waiting for the result of the decision-making process, however, in August 1995 Parks Canada moved to change the regulations governing aircraft access to the national parks of Canada to require aircraft access permits to be issued at the discretion of the superintendent of the park concerned. In response to what was described by the official dealing with the issue as "a large degree of interest and representations", including that of the users, the regulatory proposal was not implemented, again, pending the outcome of the Banff-Bow Valley Study.

There is no doubt that throughout this piece the users have been on the defensive, and have been fighting a battle to keep the airstrips open against an offence which has slowly, but surely, proceeded in the direction of closing them. Accordingly, now that the decision has been made to do just that, and since the users have apparently to this point failed in making their merit arguments stick, they are left with challenging the respondents on the legality of the decision-making process to the fullest extent that the law will allow.

### II. The Decision

The following is the critical evidence respecting the decision to close the Banff and Jasper airstrips.

### A. The "Doré" letter

The users urge that the critical period in the decision-making process to be examined in this case begins with the holding back of the implementation of the regulation to require aircraft access permits in 1995. The users say that, in the letter written by Mr. Gerard Doré, Chief, Legislative and Regulatory Affairs, Parks Canada, stating an agreement to delay plans to implement the regulations requiring aircraft permits in national parks, the following critical representation was made:

Representations on the regulatory proposals, to date, have indicated that the status quo should be maintained with respect to the airstrips in Banff and Jasper for the time being. To this end, the provisions of the proposed National Parks Aircraft Access Regulations relating to the airstrips in Banff and Jasper will be deleted.<sup>9</sup>

The Jasper users say that following this statement there have been no valid reasons given for the closure of the Jasper airstrip. As is shown below, however, the Jasper airstrip closure has been linked by Parks Canada to the Banff airstrip

closure. Thus, respecting the claims of both user groups, the decision-making process respecting Banff must be considered.

### B. The Banff-Bow Valley Study recommendations

The next step in the decision-making process was the issuing of the report of the Banff-Bow Valley Task Force in October 1996. In it, the Task Force identified that the airstrip, along with adjacent facilities, restrains or prevents wildlife movement through the Cascade Mountain Corridor which is a significant wildlife movement feature. As a result, the Task Force recommended that the airstrip be closed by June 1997 because there is no need for an airstrip in Banff National Park.<sup>10</sup>

### C. The speech of the Honourable Sheila Copps delivered October 7, 1996

In this address, which closely followed the release of the Banff-Bow Valley Study, Ms. Copps made the following statements:

I have already read the report, and <u>I am prepared to act immediately on some of the recommendations</u>. The actions I am about to announce flow directly from the report, and come directly from the people of the Bow Valley. . . .

We are going to beef up all our efforts to restore the wildlife corridor. To do that, we will proceed with plans to close and rehabilitate the airstrip, the bison paddock, and the cadet camp. The public and park horse corrals will be relocated as soon as a new location is found. [Emphasis added.]

Regarding implementation of the Banff-Bow Valley Study, Ms. Copps made the following statements:

The Banff Bow Valley is also a place for open management. We need to make sure that the decisions made here are made in the open, are made with common sense, and conform with the *National Parks Act*. We need decisions that are fair and predictable.

That is why I have instructed that a clear and open development review process, as recommended by Task Force, be in place by the end of the year. I have also requested that a revised, comprehensive management plan, one that provides clear direction for this park, be tabled in Parliament by April 1997.

The Banff Bow Valley is a place of environmental stewardship. This place must lead the way, nationally and internationally, in ensuring that environmentally friendly practices are carried out by everyone that lives, visits and operates here.

I have instructed that Parks Canada improve sewage treatment immediately at all our facilities, and that we reduce, at source, our phosphate use.

And today I challenge every individual and both communities in the Bow Valley to work with us, and with the province, to develop excellence in environmental practices. Because let's face it"if we can't keep the park clean, then we can't keep the park.

Ladies and gentlemen, naturally there are parts of this report as with all massive undertakings like this where more public evaluation is needed before more decisions can be taken.

Today, I may be able to move on some of the report's recommendations, but, of course, I can't move on all of them. That job doesn't belong just to me"it belongs to all of us. And we can't do the entire job today"but it can start today.

Make no mistake"the time for decisions is now, and the time for action is now.

Today we have the report in our hands, and we must begin immediately to sit down with each other and assess it, and consider it, and determine the feasibility of all the recommendations.

D. Environmental screening of February 28, 1997

In his affidavit, Mr. Zinkan describes how Parks Canada has complied with the CFAA as follows:

As the Responsible Authority within the Canadian Environmental Assessment Act the Department of Canadian Heritage undertook a screening of the decommissioning of the Banff and Jasper airstrips. The public were invited to comment on the screening by March 14, 1997. The Department of Canadian Heritage has considered public participation in its screening.<sup>12</sup>

The screening reports detailed the physical actions that would be taken to take the airports out of practical service with the focus being the environmental effects of so doing. The legal importance of this action in relation to the provisions of the CEAA will be considered below, but in the context of the decision-making process, the screening activity was an important event in the way it disclosed to the community in both Banff and Jasper the imminence of the closure of both airstrips.

The screening report for the Jasper airstrip was sent to the Jasper users on March 4, 1997 and the one for Banff was available to the public late in February. As described below, objections were received regarding the contemplated action on both airstrips.

E. The March 1997 letters

In separate but identical letters dated March 20, 1997, Ms. Copps confirmed, to each of the Jasper and Banff users, her decision to close the airstrips. The contents of each letter is as follows:

Thank you for your correspondence regarding the closure of the airstrip in Banff National Park.

On October 7, 1996, I set a new direction for Banff National Park, which is essential in ensuring a sustainable future for this jewel in Canada's system of national parks. The enclosed document clearly and strongly expresses my commitment to the direction needed to preserve and protect this natural legacy forever.

The decision to close the airstrip is taken with confidence that this determination best serves the long-term interests of the Park, and on March 19, 1997, the Government of Canada ratified the regulatory amendments to finalize its closure. Please find enclosed a chronology on the closure of the Banff and Jasper airstrips.

I am dedicated to this course of action and proud that my decision will play a vital role in the protection of our national treasures.

Yours sincerely,

Sheila Copps

### F. The regulations

Paragraph 7(1)(00) [as enacted by R.S.C., 1985 (4th Supp.), c. 39, s. 5] of the *National Parks Act* [R.S.C., 1985, c. N-14] authorizes the Governor in Council to make regulations, including regulations governing aircraft access to the national parks. On April 2, 1997, *Regulations Amending the National Parks General Regulations* (SOR/97-149) and *National Parks Aircraft Access Regulations* (SOR/97-150) were published. Regulation SOR/97-149 repeals the aircraft use provisions of the *National Parks General Regulations* [SOR/78-213] in favour of SOR/97-150, which is a comprehensive regulation governing aircraft access to national parks.

Prior to SOR/97-149, the *National Parks General Regulations* prohibited the landing or taking off of an aircraft in a national park, except in a few select locations which included Banff and Jasper. The *National Parks Aircraft Access Regulations* (SOR/97-150) changed this scheme to allow aircraft access to a number of northern national parks and reserves, but also changed the access provisions to other parks to require a permit to land or take off. With respect to the impact of these Regulations on the status of the airstrips, the Regulatory Impact Analysis Statement for SOR/97-150 contains the following statement:

Based on the recommendations of the Banff Bow Valley Study, the airstrip in Banff National Park will be closed and, therefore, the landing or take-off of aircraft at this airstrip will not be authorized under the new regulations. For purposes of consistency, the airstrip in Jasper National Park will also be closed to conform with the recommendations of the 1988 management plan for that plan [sic]. [Emphasis added.]

With respect to the decision itself, the Regulatory Impact Analysis Statement for SOR/97-150 also contains these sentences:

The decision to close the Banff airstrip was publicly announced by the Honourable Sheila Copps in October 1996. Since the rationale for closing the Banff airstrip applies equally to the Jasper airstrip, the latter is to be closed as well.

Opposition to the closure of the airstrips from local flying clubs and their provincial and national associations, such as the Canadian Owners and Pilots Association, can be expected. The perceived importance of the airstrips for emergency and diversionary landings will be used as their justification. However, a joint Transport Canada-Parks Canada monitoring program issued in 1995 showed no significant requirement for the Banff and Jasper airstrips for emergency or diversionary use. [Emphasis added.]

### III. Attacks on the Decision

Each of the applicants has chosen a different approach to attacking the decision rendered. The primary application of the Banff users is to quash the Ms. Copps decision, <sup>14</sup> while the application of the Jasper users is to quash the Regulations. <sup>15</sup>

### A. Decision-making authority

In their written and oral arguments, the applicants argued that the Regulations under scrutiny in this case are *ultra vires* the Governor in Council acting under the *National Parks Act* and that proper authority over the Banff and Jasper airstrips is found in the *Aeronautics Act* [R.S.C., 1985, c. A-2] administered by Transport Canada. However, the technical argument upon which this assertion was based wilted in the face of the careful research done by Mr. Kirk Lambrecht, counsel for the respondents, in preparation for his oral response.<sup>16</sup>

As a result, the applicants' arguments were reduced to an assertion that there is some conflict between Transport Canada's general jurisdiction over aerodromes in Canada, and Parks Canada's jurisdiction, by paragraph 7(1)(00) of the National Parks Act, over control of aircraft access to national parks, including the use of the Banff and Jasper airstrips. In this respect it was argued that paragraph 7(1)(00) of the National Parks Act must be interpreted in the context of the

Aeronautics Act, and thus must be interpreted as granting authority strictly over "control" of access by aircraft to sensitive locations <u>in</u> the national parks, and not over air traffic <u>through</u> a park, or the maintenance of aerodromes that are fundamentally for the safety and security of such traffic.

I find there is no conflict as asserted. The jurisdiction of Parks Canada is restricted to national parks, which are defined geographic areas within which special use considerations are in effect. In this respect, I find that any landing or take-off of aircraft, and any facility for this purpose, including the Banff and Jasper airstrips, are properly within a Parks Canada concern, and appropriately under Parks Canada jurisdiction.

### B. Due process obligations

Since the Banff-Bow Valley Study was seen by all concerned to be an important event in determining the future of the mountain parks, and after its completion, the decision-making process would kick into high gear, I find that no due process issues arise up to the point where the study was tabled.

1. Who made the decision to close the airstrip, and when was it made?

The evidence proves that the political decision was made sometime before October 7, 1996 by Ms. Copps, informally announced by her on October 7th, ratified by the Governor in Council on March 19, 1997, formally announced in the letters of March 20th, and then published in the Regulations on April 2, 1997. From the words used, Ms. Copps confirmed on October 7, 1996, that the decision had already been made. <sup>17</sup>

It is clear from what Ms. Copps said on October 7, 1996 that the decision to close and rehabilitate the Banff airstrip was made before the speech was given. Thus, her references to the process to be followed regarding implementing the Banff-Bow Valley Study cannot be said to include this decision. In fact, she made it quite clear that this is so when she said:

Today, I may be able to move on some of the report's recommendations, but, of course, I can't move on all of them. That job doesn't belong just to me"it belongs to all of us. And we can't do the entire job today"but it can start today.

2. What due process expectations were created by the decision?

The applicants argue that, in view of the "Doré letter", and by Ms. Copps statements on October 7, 1996, that the respondents created a legitimate expectation that more consultation would follow the release of the Banff-Bow Valley Study, and, therefore, there is a breach of due process in the fact that this did not occur.

Recently, the Supreme Court of Canada in *Reference Re Canada Assistance Plan (B.C.)*, 1991 CanLII 74 (S.C.C.), [1991] 2 S.C.R. 525 held, at pages 557-558 that with respect to "legitimate expectation":

There is no support in Canadian or English cases for the position that the doctrine of legitimate expectations can create substantive rights. It is a part of the rules of procedural fairness which can govern administrative bodies. Where it is applicable, it can create the right to make representations or to be consulted. It does not fetter the decision following the representations or consultation.

Thus, if the evidence shows that expectations of consultation were created, failure to meet the expectations can amount to a breach of due process. However, on the basis of the above analysis of the evidence, I find it is clear that no expectations were created with respect to Banff.

But regarding Jasper, the decision announced on October 7th is substantively unrelated to the Jasper airstrip. Thus, the statements made by Ms. Copps at that time do create a legitimate expectation that, as far as Jasper is concerned, the process she outlined would be followed regarding any decisions to do with that airstrip.

It is clear that Parks Canada has viewed the airstrips in Banff and Jasper as on the same footing, since the decision to close both was tied to the tabling of the Banff-Bow Valley Study which relates to Banff only. Indeed, even in the letters of March 20th, no reason is stated for the closure of the Jasper airstrip. The first mention of the rationale comes in the Regulatory Impact Analysis Statement to SOR/97-150 as quoted above, which cites "for purposes of consistency" as the reason.

Due process objections were voiced before the Jasper March 20th letter was written, in the form of responses to the Environmental Screening Report which was provided to the Jasper users. For example, this letter, sent on Jasper Tourism and Commerce letterhead, clearly expresses the concerns being held about substance and process:

March 14, 1997

Hon. Sheila Copps

Minister

Canadian Heritage

House of Commons

Ottawa, Ont.

Dear Ms. Copps:

Re: Proposed Closure of Jasper Airstrip

Jasper Tourism and Commerce has been informed of Parks Canada initiative to have regulatory changes made effecting operations of the Jasper airstrip. We do not agree with the process that has been followed, public consultation overall, is questionable, as we have not been well informed of any with Jasper business community or aviation affiliates, locally or nationally.

We urge you to work with the aviation community before continuing with analysis of environmental impact and re-address the need for emergency and diversion landings. Closure of the Jasper Airstrip would be very detrimental to our area.

Yours truly,

Doreen VanAsten

General Manager

In the context of an "open management" process as announced by Ms. Copps on October 7, 1996, it is no small wonder that the Jasper applicants are unhappy with the conclusion that the Jasper airstrip should be closed merely to be consistent. In addition, the assertion in the Regulatory Impact Analysis Statement to SOR/97-150 that "[s]ince the rationale for closing the Banff airstrip applies equally to the Jasper airstrip, the latter is to be closed as well" appears to be unfounded on the evidence. The Banff-Bow Valley Study recommended that the Banff airstrip be closed because of its placement in an important wildlife corridor. There is no suggestion in the evidence that the same situation applies to the Jasper airstrip.

Given the cursory way that the specific circumstances of the Jasper airstrip was dealt with in the decision-making process, it is not difficult to see how people in Jasper would be very concerned that the process for decision making touted by Ms. Copps in her October 7th speech was not followed and they object accordingly.

I find that in the statements of Ms. Copps, Parks Canada created its own expectations for the decision-making process for Jasper. I further find that Parks Canada did not follow them, and accordingly, did not meet its due process obligations. The effect to be given to these findings is set out in Part IV below.

- C. Compliance with CEAA
- 1. The scheme under CEAA

Paragraph 4(a) states the purposes of CEAA as:

4. . . .

(a) to ensure that the environmental effects of projects receive careful consideration before responsible authorities take actions in connection with them;

Section 5 sets out the general circumstances in which a project may require an environmental assessment. Subsection 5(1) reads in part as follows:

- **5.** (1) An <u>environmental assessment</u> of a <u>project</u> is required before a <u>federal</u> <u>authority</u> exercises one of the following powers or performs one of the following duties or functions in respect of a project, namely, where a federal authority
- (a) is the proponent of the project and does any act or thing that commits the federal authority to carrying out the project in whole or in part; [Emphasis added.]

Under subsection 2(1), the definitions of "environmental assessment", "project" and "federal authority" are as follows:

**2.** (1) . . .

"environmental assessment" means, in respect of a project, an assessment of the environmental effects of the project that is conducted in accordance with this Act and the regulations;

. .

"project" means

. . .

"federal authority" means

- (a) a Minister of the Crown in right of Canada,
- (b) an agency of the Government of Canada or other body established by or pursuant to an Act of Parliament that is ultimately accountable through a Minister of the Crown in right of Canada to Parliament for the conduct of its affairs,
- (c) any department or departmental corporation set out in Schedule I or II to the Financial Administration Act, and
- (d) any other body that is prescribed pursuant to regulations made under paragraph 59(e),

but does not include the Commissioner in Council, or an agency or body of the Yukon Territory or the Northwest Territories a council of the band within the meaning of the *Indian Act*, The Hamilton Harbour Commissioners constituted pursuant to *The Hamilton Harbour Commissioners' Act*, The Toronto Harbour Commissioners constituted pursuant to *The Toronto Harbour Commissioners' Act*, 1911, a harbour Commission established pursuant to the *Harbour Commissions Act* or a Crown corporation within the meaning of the *Financial Administration Act*;

If the Governor in Council is the decision maker, subsection 5(2), not subsection 5(1), is the governing provision. Paragraph 5(2)(a) reads:

5. . . .

- (2) Notwithstanding any other provision of this Act,
- (a) an environmental assessment of a project is required before the Governor in Council, under a provision prescribed pursuant to regulations made under paragraph 59(g), issues a permit or licence, grants an approval or takes any other action for the purpose of enabling the project to be carried out in whole or in part;

Paragraph 59(g) provides that:

59. The Governor in Council may make regulations

. .

(g) prescribing the provisions of any Act of Parliament or any regulation made pursuant to any such Act that confer powers, duties or functions on the Governor in Council, the exercise or performance of which require an environmental assessment under subsection 5(2); [Emphasis added.]

The regulation of concern in this case under paragraph 59(*g*), is SOR/94-638 [Comprehensive Study List Regulations], which sets out the following provisions:

3. The projects and classes of projects that are set out in the schedule are prescribed projects and classes of projects <u>for which a comprehensive study is required</u>. [Emphasis added.]

This Regulation then states the following under the heading "Comprehensive Study List, Part 1, National Parks and Protected Areas":

1. The proposed construction, <u>decommissioning</u> or abandonment <u>in relation to a physical work</u> in or on a national park, national park reserve, national historic site or historic canal that is contrary to its management plan. [Emphasis added.]

Thus, a decision by the Governor in Council only triggers an assessment, albeit a comprehensive assessment, when certain action is taken "in relation to a physical work", and also only when such action is contrary to the national park's management plan.<sup>18</sup>

While "physical work" is not defined in the CEAA, I agree with the respondents' argument that it means "physical activity by humans and concrete results". 19

2. In this case as a matter of law, who is the critical decision maker *vis à vis* CEAA?

The following comment in *Canadian Environmental Assessment Act: An Annotated Guide* provides the analytical framework for answering the question:

This definition [of federal authority] describes, in some detail, what entities are a federal authority for the purposes of the Act. The concept of federal authority is crucial to the environmental assessment process since it identifies the persons or bodies whose participation in a project may trigger the requirement for an environmental assessment. All Ministers, departments and agencies of the Government of Canada are federal authorities. Federal authorities may also include other bodies created by statute and accountable through a Minister to Parliament, or other bodies prescribed by regulation made under s. 59(e).

The Governor in Council is not a federal authority within the meaning of the definition. It should be noted that pursuant to s. 5(2) of the Act, projects requiring the approval of the Governor in Council may trigger the application of the Act if such approval, or any other action taken by the Governor in Council for the purpose of enabling the project to proceed, is given pursuant to a provision listed in Schedule II of the *Law List Regulations*, SOR/94-636. In this case, the federal authority exercises its normal responsibilities short of the final project decision. With the recommendations of the federal authority, the Governor in Council will make his or her decision about the project.<sup>20</sup> [Emphasis added.]

On the evidence, the decision to close the Banff and Jasper airstrips was made by Ms. Copps, but to implement this plan, regulatory amendments were necessary. Thus, the practical importance to be attached to the Regulations is nothing more than stated by Ms. Copps in her letters of March 20th, that is, the Regulations are merely a ratification of her decision as a necessary step to finalize the closure of the airports.

The applicants argue that since the critical decision at the base of the decision-making process is Ms. Copps', and since no environmental assessment was done before she made the decision, that decision and all subsequent decisions, including the Regulations, are void for failure to comply with a jurisdictional precondition.

However, as the respondents have argued, regardless of whether the approval of the Regulations is a routine step in which the Governor in Council has no practical involvement, as a matter of law, the decision to change the *National Parks General Regulations* to give effect to Ms. Copp's decision is the Governor in Council's, and without it, no change can occur.

Thus, even though Ms. Copps made the decision to effectively close the Banff and Jasper airstrips, since this decision required the approval of the Governor in Council to put it into effect, I find that as a matter of law, the Governor in Council is the critical decision maker who took the vital action for the purpose of enabling the closure. Accordingly, the decision made here is outside the perview of subsection 5(1) and within subsection 5(2) of CEAA.

3. Is the decision of the Governor in Council a decision "in relation to a physical work"?

To trigger an environmental assessment, the answer to this question must be "yes". Regarding the answer, the respondents argue that with respect to ending use of the airstrips, it is possible to split the decision to "close" the airstrips from the decision to "decommission" the airstrips. On this basis, it is argued that it is possible to make and ratify a decision to close the airstrips as a "land use" decision, thus not attracting the need to do an environmental assessment before the decision is made, because a change in land use is not a change "in relation to a physical work" being the humanly constructed aspect of the airstrips themselves. That is, a land use decision is distinct from a subsequently contemplated decision to decommission the airstrip, which is action "in relation to a physical work" being the removal of structures and placing markings on the runway indicating that it has been decommissioned. As the argument goes, it is only this latter situation that triggers the requirement to do a comprehensive assessment before the action is taken.

Accordingly, the respondents further argue that following the analysis just cited, it has complied with the requirements of CEAA since the Cabinet ratification of March 19, 1997 is the land use decision respecting the airstrips, which does not under any condition require an environmental assessment, and the decision to decommission, which is action in relation to a physical work, has already been the subject of an environmental screening.

In the opinion of the respondents, the required trigger for a comprehensive assessment has not occurred since the decommissioning of either airstrip is not contrary to their respective management plans.

In view of the terms of paragraph 5(2)(a), I consider the Crown's "two-decision" argument compelling. Thus, by the Governor in Council passing the regulations, the land use question is settled. As a result, free aircraft access to the Banff and Jasper airstrips has ended. Thus, I find that the decision of the Governor in

Council is not a decision "in relation to a physical work" under section 1 of the Comprehensive Study List of SOR/94-638. However, it is clear that the decommissioning of either airstrip is an action taken "in relation to a physical work" as specified in that provision.

While the land use change is a matter for the Governor in Council as described, the decommissioning dependant thereon is not. Thus, subsection 5(1) governs and applies to Parks Canada which is the proponent of the decommissioning. In this respect, the type of assessment depends on whether the decommissioning contemplated is on the Comprehensive Study List in SOR/94-638. If it is, a comprehensive study is required. If not, only a screening need be done.

Under section 1 of the Comprehensive Study List, since each decommissioning is in relation to a physical work in a national park, a comprehensive study is required, but only if the decommissioning is contrary to the management plan for the park concerned.

4. Is decommissioning of the Banff and Jasper airstrips contrary to their respective management plans?

The critical date which determines which plan governs the CEAA requirements of the decision reached is March 19, 1997, being the date that the Governor in Council ratified the decision made by Ms. Copps. At that time, the 1988 management plans for Banff and Jasper were in effect, and, accordingly, I find it is the terms of these plans that must be considered.<sup>22</sup>

Regarding the terms of the management plans, the respondents argue that since the 1988 plan for Banff was based on the 1986 report *In Trust for Tomorrow: A Management Framework for Four Mountain Parks*, the management plan should include statements found in the previous study. I do not agree with this submission because, while this might work in favour of the respondents' position on this issue, the potential for conflict on other issues remains. I find, therefore, that the intention expressed by the phrase "contrary to the management plan" in section 1 of the Comprehensive Study List in SOR/94-638 is to judge a contemplated action "in relation to a physical work" according to the actual terms of the relevant management plan and nothing more.

Each of the 1988 Banff and Jasper management plans includes the following provision:

The . . . airstrip will be retained solely for emergency/ diversionary landing purposes. Its future requirement for these purposes will be monitored over the next three years. A final decision will be made at the end of this three year period. [Emphasis added.]

I find that the underlined portion of the just-quoted paragraph is the provision of each management plan which governs the status of the related airstrips during the life of the plan as written. According to this provision, the "retention" of the airstrips must mean that they will be kept in a form suitable for the approved emergency and diversionary use. As described above, the decommissioning of the airstrips has the potential to change the status set out in each management plan, and I find there is, therefore, a conflict between the management plan and the proposed decommissioning of each airstrip.

Therefore, I find that a comprehensive study is required respecting any decision to decommission either the Banff or Jasper airstrips. I also find that the fact that screening assessments have already been done is an irrelevant consideration as far as the law is concerned, although undoubtedly, the results will be of practical assistance in the development of the required comprehensive studies.

5. When does the comprehensive study need to be done?

Regarding the timing of the assessment, section 11 of CEAA reads as follows:

**11.** (1) Where an environmental assessment of a project is required, the federal authority referred to in section 5 in relation to the project shall ensure that the environmental assessment is conducted as early as is practicable in the planning stages of the project and before irrevocable decisions are made, and shall be referred to in this Act as the responsible authority in relation to the project.

I find that in observance of this provision, the comprehensive environmental study must be carried out before any decision is made to decommission.

6. What needs to be investigated?

The primary need is addressed by paragraph 16(1)(a) of CEAA as follows:

- **16.** (1) Every screening or comprehensive study of a project and every mediation or assessment by a review panel shall include a consideration of the following factors:
- (a) the <u>environmental effects</u> of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out; [Emphasis added.]

Under subsection 2(1), "environmental effect" is defined as follows:

"environmental effect" means, in respect of a project,

Regardless of whether I am right that a comprehensive study needs to be done, or whether only a screening will suffice, I agree with the applicants' argument that a liberal interpretation should be given to the "health and socio-economic conditions" aspects of the definition of environmental effects to be investigated under paragraph 16(1)(a). The users' argument, which deserves weight, is as follows:

An "environmental effect" includes any change that the closure and decommissioning of the Banff airstrip will cause in the environment. This encompasses "the effect of any such change in health and socio-economic conditions" in the VFR flight corridor that the airstrip serves between Alberta and British Columbia. The unavailability of the airstrip for emergency or diversionary use creates a significant adverse effect on public health and safety, by increasing the risk of accidents and consequently affecting the health and safety of VFR pilots and passengers who fly through the Banff area.<sup>23</sup>

In final response to this health and safety concern, in argument counsel for the respondents emphasized that by the following quoted subsections 3(1) and (4) and section 6 of Regulation SOR/97-150, aircraft access to the airstrips is still possible for safety reasons even after decommissioning, thus the applicants' argument for keeping the airstrips open loses weight:

### AIRCRAFT ACCESS PERMITS

- **3.** (1) Subject to subsection (4), the superintendent [of a national park] may issue an aircraft access permit to any person who applies.
- (4) The superintendent shall, before issuing a permit, take into account
- (a) the natural and cultural resources of the park;
- (b) the safety, health and enjoyment of visitors or residents of the park; and
- (c) the preservation, control and management of the park.
- **6.** Notwithstanding anything in these Regulations, the superintendent may authorize the take-off and landing of an aircraft anywhere in a park for the purposes of
- (a) natural or cultural resource management and protection directly related to the administration of the park;

- (b) any other management or control function directly related to the administration of the park;
- (c) public safety; or
- (d) law enforcement.

But, purely as a practical matter, I heard in the oral argument for the Banff applicants that the decommissioning of the airstrips, which involves marking them with an "x" visible from the air, will inhibit their use by pilots who have an emergency need to do so. As I understand the point, pilots are trained to avoid airfields with such markings.

While no precise evidence has been tendered to support this argument within the many expressed safety concerns of the applicants, because it has been made in response to a suggested ameliorating effect of the possible application of SOR/97-150, an issue of some importance is raised regarding the Banff and Jasper airstrips which should be investigated from a safety perspective. The question is, if the grass fields which have been used as active airstrips are now taken out of such service by regulatory change but left undeveloped for other purposes as expressely intended, what harm would be caused by keeping them in a condition that would allow them to be used, within the superintendent's discretion generally or specifically exercised, for safety purposes as argued by the applicants?

### IV. Relief

Regarding Parks Canada's failure to meet the due process obligations it established as identified in Part III B above in relation to the Jasper airstrip, I have come to the conclusion that there has not been a breach of due process that warrants the exercise of my discretion.

In this respect, I find weight should be given to the respondents' argument that there has been an overwhelming mass of consultation about the decision to close the airstrips and there is no point in having more. It is very clear that Parks Canada was well aware of the objections of Jasper users and residents regarding the closure of the airstrip at each step of the decision-making process. With respect to the Governor in Council's decision made on March 19, 1997, it is clear that Parks Canada correctly predicted the objections which have been voiced to its passage by both Banff and Jasper users. The following portion of the Regulatory Impact Analysis Statement to SOR 97-150 makes this clear:

Opposition to the closure of the airstrips from local flying clubs and their provincial and national associations, such as the Canadian Owners and Pilots Association, can be expected. The perceived importance of the airstrips for emergency and diversionary landings will be used as their justification. However,

a joint Transport Canada-Parks Canada monitoring program issued in 1995 showed no significant requirement for the Banff and Jasper airstrips for emergency or diversionary use.<sup>24</sup>

It is also clear that Parks Canada is determined to proceed with implementing its perspective. Given this reality, I do not believe that there is any purpose in acting to reverse the decision-making process which has taken place on the basis of a failure to meet the legitimate expectation identified. This is so because such action would only result in yet another opportunity to make the representations which have been rejected in the past and, I have no doubt, would be rejected again. Accordingly, on this ground of complaint proved by the Jasper users, I choose not to exercise the discretion provided to me by subsection 18.1(3) [as enacted by S.C. 1990, c. 8, s. 5] of the *Federal Court Act* [R.S.C., 1985, c. F-7].

However, I am willing to exercise my discretion to enforce the legal requirement to complete a comprehensive environmental assessment prior to the decommissioning of either the Banff or Jasper airstrip. It is unclear whether a formal decision has yet been made to decommission the airstrips. However, I find that because a comprehensive environmental assessment is required before this decision can be made, any decision that might already have been made is made without jurisdiction to do so.

Therefore, for the reasons given, under paragraph 18.1(3)(b) of the Federal Court Act I hereby quash any decision already made by the respondents to decommission either the Banff or Jasper airstrip, and prohibit the respondents from making any decision to decommission either the Banff or Jasper airstrip until separate comprehensive environmental studies are completed on each.

As no special reasons to do so exist, I make no order as to costs.

<sup>&</sup>lt;sup>1</sup> As the applicants' concern stems from their experience as users of the airstrips, and the interests that they express are the same for both the Banff and Jasper airstrips, these separate applications were heard together. Given this unity of concern, both sets of applicants may be referred to hereinafter as "the users" except where it is appropriate to discern between them.

<sup>&</sup>lt;sup>2</sup> Hereinafter referred to as "CEAA".

<sup>&</sup>lt;sup>3</sup> This statement of the perspective is found in the respondents' written argument and is based on the affidavit of June 16, 1997 of Mr. Charles Zinkan, Acting Director, Mountain Parks, Parks Canada, Department of Canadian Heritage (respondents' application record).

<sup>&</sup>lt;sup>4</sup> At para. 24.

Respecting the Banff airstrip, Ms. Copps letter was preceded by a letter to Mr. Schiesser from Mr. Zinkan dated March 19, 1997, wherein Mr. Zinkan gave notice that the regulatory changes had been effected and that all equipment and structures had to be removed from the Banff airstrip by May 17, 1997, "after which the airstrip will be decommissioned" (Banff application record, at p. 150).

- 1. An order in the nature of *certiorari* to quash the decision of the respondent Minister of Canadian Heritage to implement regulations to close the Banff Aerodrome (airstrip) such decision referred to in a letter dated March 20, 1997 and communicated to and received by the applicant Bernie Schiesser on April 2, 1997.
- 2. An order in the nature of *certiorari* to quash the subsequent and directly related action of the respondent Park Superintendent by letter dated March 19,

<sup>&</sup>lt;sup>5</sup> The perspective for Banff is found in the affidavit of Mr. Howard Srigley, Sector Commander of Civil Air Rescue Emergency Services, Banff Sector (Banff application record). The perspective for Jasper is found in the affidavit of Mr. Dan Bowen, President of the Jasper Flying Club (Jasper application record).

<sup>&</sup>lt;sup>6</sup> Banff-Bow Valley: At the Crossroads: Summary Report, Zinkan affidavit, op.cit., Exhibit 14, at p. 9.

<sup>&</sup>lt;sup>7</sup> Zinkan affidavit, *op.cit.*, at paras. 33-48.

<sup>&</sup>lt;sup>8</sup> The letter in which this is stated has been referred to as the "Doré letter", since it was written by Mr. Gerard Doré, Chief, Legislative and Regulatory Affairs, National Parks, Parks Canada. This letter is referred to below for a statement which it contains which the users say constitutes a representation that has been breached.

<sup>&</sup>lt;sup>9</sup> Jasper application record, at p. 25.

<sup>&</sup>lt;sup>10</sup> Zinkan affidavit, op.cit., at para. 57.

<sup>&</sup>lt;sup>11</sup> Zinkan affidavit, *op:cit.*, Exhibit 51.

<sup>&</sup>lt;sup>12</sup> Zinkan Affidavit, op.cit., at para. 65.

<sup>&</sup>lt;sup>13</sup> The Banff letter was addressed to Mr. Bernie Schiesser, President, Banff Flying Club (Banff Application Record, at p. 1), and the Jasper letter was addressed to Mr. K. A. McNeil, Vice-President, Western Canadian Owners and Pilots Association (Jasper application record, at p. 11).

<sup>&</sup>lt;sup>14</sup> In detail, the request is as follows:

1997, to remove all aircraft, equipment, structures and/or material stationed at the Banff airstrip on or before May 17, 1997.

- 3. A declaration that the respondents will permit and continue to permit the Banff airstrip to remain open for the purposes of public safety, including interprovincial flights by light aircraft through that portion of the Rocky Mountains on the Visual Flight Rules (VFR) navigation route, for emergency use, civilian search and rescue, and related safety training exercises, notwithstanding the registration pursuant to the *National Parks Act*, of the *National Parks Aircraft Access Regulations* and the *Regulations Amending the National Parks General Regulations* on March 19, 1997, which Regulations the applicants seek to have declared unlawful.
- 4. An interim injunction, or a stay, of the effect of the Regulations closing the Banff airstrip, until such time that the trial of this judicial review action can be heard and proper evidence presented and arguments made by the applicants regarding aviation and public safety and rescue operations that depend on the viability of the Banff airstrip.

The body that is to be reviewed is the respondent Minister of Canadian Heritage for her decision to implement the impugned Parks Regulations to close and decommission the airstrip, and the respondent Her Majesty the Queen and affiliated servants of Her Majesty for the passing and registration of said Parks Regulations and any related action taken pursuant to such Regulations.

- 1. An order in the nature of *certiorari* to quash the regulation contained in the Regulations of Canada, SOR/97-149 and 97-150 made on March 19, 1997 and published in the *Canada Gazette* Part II on April 2, 1997, and all related decisions at the ministerial level including orders in council, as relate to the closure of the Jasper Aerodrome located at Jasper (Henry House), located at latitude 52 degrees, 59 minutes, 55 seconds North, longitude 118 degrees, 03 minutes, 39 seconds West (hereinafter the Jasper airstrip).
- 2. An interim and permanent injunction preventing the respondents together with all agents and servants of the respondents from taking actions towards decommissioning and closure of the Jasper airstrip.
- 3. An interim and permanent order in the nature of prohibition to prevent the respondents together with all agents and servants of the respondents from taking actions towards decommissioning and closure of the Jasper airstrip.
- 4. A declaratory judgment declaring all regulations, orders in council, ministerial decisions and all others ensuing therefrom, toward closing and decommissioning the Jasper airstrip to be null and void.

<sup>&</sup>lt;sup>15</sup> In detail, the request is as follows:

- 5. Such further orders as this Honourable Court shall deem meet in the circumstances.
- <sup>16</sup> It is interesting to note as a practical matter that on the record Transport Canada has confirmed the aerodromes in Banff and Jasper are owned and operated by Heritage Canada, and that the decision respecting their closure falls within that department's jurisdiction. (Zinkan affidavit, *op.cit.*, Exhibit 68).
- <sup>17</sup> Since the decision was not formally communicated to the users until the March 20, 1997 letters, I find that no issues arise as to the timing of the filing of the originating notices of motion under consideration.
- <sup>18</sup> An environmental assessment can be either a "comprehensive study" or a "screening", with both required to be conducted by considering certain factors outlined in s. 16(1) of CEAA, but a comprehensive study is required to consider additional factors outlined in s. 16(2)
- <sup>19</sup> This phrase is taken from Hobby, Ricard, Bourry and de Pencier, *Canadian Environmental Assessment Act: An Annotated Guide* (Canada Law Book, May 1997), at p. II-20.
- <sup>20</sup> *Ibid.*, at p. II-14.
- <sup>21</sup> S. 301.04(1) of the *Canadian Aviation Regulations* (SOR/96-433) Part III, Subpart 1"Aerodromes, says that "When an aerodrome is closed permanently, the operator of the aerodrome shall remove all of the markers and markings installed at the aerodrome", and s. 301.04(4) says that "the operator of the aerodrome shall place closed markings, as set out in Schedule 1 to this Subpart, on the runway". The Schedule requires that the runway be marked with a large "x" visible from the air.
- <sup>22</sup> Regarding Banff, although a new management plan was put into effect in April of this year, the respondents have not asserted that the decision was taken pursuant to this new plan. Accordingly, it is irrelevant to this discussion.

With respect to the Jasper airstrip, on the evidence it is clear that the Jasper 1988 management plan is the relevant plan. Knowledge of this fact, and confirmation of this understanding on the part of Parks Canada is expressed in the letter from Parks Canada to the Jasper Flying Club dated March 4, 1997. Included with that letter was a copy of the environmental screening report which had been completed, and in which the following statement is made:

The decision to close the airstrip is founded on policy, and is the conclusion of direction and subsequent studies identified in the Park Management Plan (1988). Accordingly, the screening addresses closure and decommissioning only, and does not review the environmental implication of continued operation of the

facility. (Letter from Mr. Ron Hooper, Superintendent, Jasper National Park, to the Jasper Flying Club, c/o Dan Bowen, Dan Bowen affidavit of May 5, 1997, Exhibit A, Jasper application record, at p. 34.)

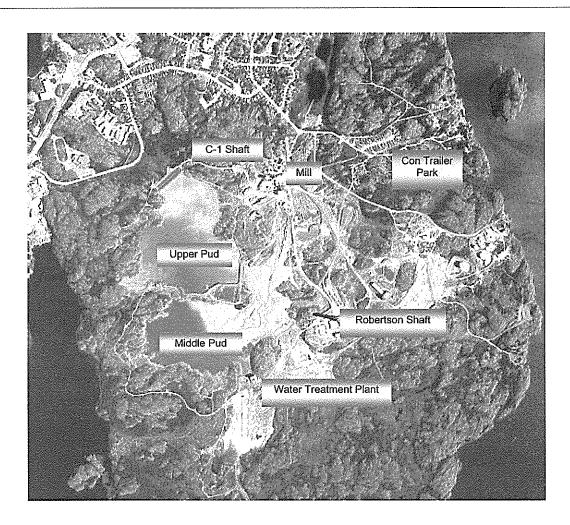
<sup>&</sup>lt;sup>23</sup> Banff application record, at p. 224.

<sup>&</sup>lt;sup>24</sup> Jasper application record, at p. 29.

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# MRAWAR CON MNE LID

# 2005 ANNUAL SNP REPORT WATER LICENCE N1L2-0040



Prepared by: Ron Connell

**Environmental Superintendent** 

Date: March 28, 2006

### **CON MINE 2005 ANNUAL SNP REPORT**

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### **APPENDICES**

APPENDIX 1: WATER CONSUMPTION & PRODUCTION STATISTICS

APPENDIX 2: SURVEILLANCE NETWORK PROGRAM

APPENDIX 3: POND ELEVATIONS

### 1.0 INTRODUCTION

This annual report is prepared by Miramar Con Mine Ltd. (MCML), and submitted to the Mackenzie Valley Land and Water Board (MVLWB) as required under Part B, Item 5 of Water License N1L2-0043.

Miramar Con Mine Ltd. (MGML) is a gold mining facility owned and operated by Miramar Mining Corporation. It is located south of the City of Yellowknife, Northwest Territories, bounded by Kam Lake on the east and Yellowknife Bay of Great Slave Lake on the west. The minesite surface leases encompass a total area of 340 hectares.

Con Mine started production in 1938 under the ownership of Consolidated Mining and Smelting Limited (Cominco). Nerco Minerals Limited purchased the operation in 1986, and owned and operated the mine until 1993 at which time Kennecott Limited purchased Nerco and sold Con Mine to Miramar Mining Corporation. Miramar Con Mine Limited (MCML) has owned and operated the mine since October 1993. Con Mine ceased underground production in November 2003, however ore produced at Giant Mine continued to be processed at Con Mine mill until July 2004, at which time Giant Mine ceased production. Although all production has ceased, the mill and autoclave will continue to operate intermittently until the calcines and arsenic sludges on site have been treated to render them environmentally inert. It is anticipated that this work will be completed by December 2007.

The minesite is located in a zone of discontinuous permafrost, with a mean annual air temperature of 4.6 degrees Centigrade below zero. During the winter, wind direction is generally from the north and during the summer, from the south. Total annual precipitation ranges from 200 to 500 mm. Based on 30-year averages (1971 to 2000), normal annual precipitation at Yellowknife is 281 mm, of which 116 mm occurs as snowfall and 165 mm as rainfall. The local topography is characterized by a series of exposed bedrock highs and minor overburden deposits in low areas.

The mine infrastructure is comprised of two complexes, the Mill complex and the Robertson Shaft complex. The Mill complex is a combination of buildings that include the C-1 shaft headframe, which was the original access to the mine. It is located immediately north of the main mill building. These buildings are generally structural steel with metal cladding, however they were constructed in stages and exhibit various types of construction and small additions. The Robertson Shaft complex includes the Robertson headframe, a large steel structure that dominates the minesite, the associated main mine office complex, and the adjacent mine dry. Several small shops and warehouses are located next to the office complex.

### 2.0 WATER CONSUMPTION

Water consumption at MCML is now confined to the water pumped from Great Slave Lake. Potable water has not been taken from the City of Yellowknife for a number of years, and currently there are no plans to resume this activity. Since production has permanently ceased at Con Mine and the underground workings are being allowed to flood, minewater is no longer pumped to surface.

During calcine and arsenic sludge treatment, water is discharged to the Upper and Middle Pud Tailing Containment Areas (TCA's) from the following sources:

- Mill and/or Autoclave operations
- Domestic water from the surface operations

Water is discharged to the environment from the following source:

• The Water Treatment Plant (WTP) at Surveillance Network Station 40-1 historically operated during the summer months only.

Summaries of all water consumption data can be found in Appendix I of this report. These summaries include the following:

- Annual quantity of water in cubic meters obtained from Great Slave Lake
- Annual quantity of water in cubic meters obtained from the City of Yellowknife
- Annual quantity of water in cubic meters discharged from the WTP

### 2.1 Water Meters

There are ten water meters intermittently in use at Con Mine, three of which are now used to measure water intake or discharge. The remainder are used for internal process flow measurement. When in use the flowmeters are inspected and calibrated annually. The regulatory accepted operating range for calibration of the meters is +/-15%. The meters that are currently in use during operations are indicated in bold lettering below.

- Meter #1 A 6" Sensus propeller type flowmeter in a Rockwell housing is used to monitor the amount of water taken from Great Slave Lake for use as process water in the mill and autoclave.
- Meter #2 A 4" Sensus turbine type flowmeter was formerly used to monitor the flow of water taken from Great Slave Lake, chlorinated for use as potable water, and supplied to residents of the two trailer parks associated with the mine. This service was discontinued in the fall of 2003 when the City of Yellowknife began supplying potable water to tanks that were installed by the home owners. This meter will be permanently taken out of service.

Meter #3

A 6" Sensus propeller type flowmeter in a Rockwell housing was formerly used to monitor the amount of fresh water taken from Great Slave Lake and chlorinated for use as potable water on the minesite. This system was permanently taken out of service on May 01, 2005. At that time MCML installed several large potable water tanks to supply water for all domestic requirements on site. Water is now supplied to the minesite by W.B. Water Services and sewage is removed by Kavanaugh Brothers Ltd. This meter will be permanently taken out of service.

Meter #8 During mill operations, a 6" Rosemount magnetic flowmeter is used to monitor the flow of sediment and process water pumped to the Upper and Middle Pud Tailing Containment Areas.

Meter #9 A 6" Rockwell turbine flowmeter is set to monitor the flow of potable water from the City of Yellowknife in the event this line were to be returned to service. It has been out of service for a number of years.

Meter #17 An 18" Rosemount magnetic flowmeter is used to monitor the flow of treated water pumped from the Water Treatment Plant at SNP 40-1 to the Meg-Keg-Peg Lakes drainage system that ultimately discharges into Great Slave Lake at Jackfish Bay.

All active meters were inspected and calibrated by a technician from Spartan Controls Ltd. of Edmonton, Alberta in September 2005.

### 2.2 Production Statistics

As noted in Section 1.0, production at Con Mine ceased in November 2003, and milling of ore produced at Giant Mine ceased in July 2004. Up until April 2005, arsenic sludges and calcines continued to be excavated and treated to render them environmentally inert. At that time all available arsenic sludges had been treated and the mill and autoclave were shut down. This shutdown will allow time to excavate and stockpile all remaining material in preparation for one last run of the mill and autoclave. This work is expected to be complete in 2007. A tabular summary of all material processed at Con Mine during the 2005-operating year can be found in Appendix I of this report.

### 3.0 SURVEILLANCE NETWORK PROGRAM (SNP)

As per the terms and conditions of the Water License, MCML maintained the Surveillance Network Program (SNP) dated July 30, 2000. The SNP is comprised of thirteen (13) SNP sampling stations, nine (9) of which are active during periods of open water or discharge from the Water Treatment Plant (WTP). The remaining sites are no longer active. The sites were sampled as outlined in the Surveillance Network Program appended to the Water License.

Quality Control was maintained as per the approved Quality Control & Quality Assurance Plan dated November 2000, and most recently by the Standard Operating Procedure for Effluent and Water Quality Monitoring as required under the federal Metal Mining Effluent Regulation. In all cases where the federal requirements are more stringent than those in the Water License, the more stringent procedure is followed. A summary of all data generated under the Surveillance Network Program during the 2005-operating year can be found in Appendix II of this report.

### 4.0 WATER TREATMENT PLANT (WTP)

Discharge to the environment at SNP 40-1 took place between July 08, 2005 and September 27, 2005, inclusive. A total of 224,897 m³ of effluent was treated and discharged to the receiving environment, which consists of the Meg-Keg-Peg Lakes drainage system that ultimately discharges into Great Slave Lake. Following discharge into a drainage channel that leads to Meg Lake (SNP 40-1), the water quality is additionally monitored just above the point where the channel enters Meg Lake (SNP 40-10), and again at the point where the Meg-Keg-Peg Lakes system drains into Great Slave Lake (SNP 40-5).

All treated effluent in 2005 was in full compliance with discharge criteria stated in the NWT Water License. A summary of all data generated at SNP 40-1 can be found in Appendix II of this report.

In spite of the foregoing, the treated effluent was acutely lethal to Rainbow Trout in the sample taken on July 11<sup>th</sup>, but not acutely lethal in samples taken on July 12, August 31<sup>st</sup>, and September 26<sup>th</sup>. It was acutely lethal to *Daphnia Magna* in all toxicity tests carried out during the 2005-operating season. As explained in the Toxicity Identification and Evaluation (TIE) study conducted in 2003, ammonia is responsible for the acute toxicity to Rainbow Trout, and the high concentration of dissolved salts (salinity) of the effluent is responsible for the acute toxicity to *Daphnia Magna* at Con Mine. Ammonia is contributed to the effluent as a byproduct of the breakdown of Cyanide in the effluent, and as a residue from underground blasting. The high salinity was contributed by deep Canadian Shield bedrock brines in the groundwater pumped to surface during dewatering of the mine. Mining (and blasting) ceased in 2003 and minewater is no longer pumped to surface. The use of Cyanide was discontinued when ore processing ceased in July 2004. As a result, a substantial reduction of these toxic components was noted during the 2005-operating season, along with a corresponding toxicity reduction. It is anticipated that a further reduction of toxicity will occur in 2006.

### 5.0 TAILING CONTAINMENT AREAS (TCA's)

As explained in Section 1.0 of this report, as of July 2004, ore is no longer processed at Con Mine. With the exception of a small amount of residue from the calcine and arsenic sludges that were being processed between January and April, no tailing has been produced since that time. A summary of the calcine and arsenic sludges treated during the 2005-operating year appears in Appendix 1.

The Tailing Containment Areas (TCA's) at Con Mine consist of two types, the active TCA's (Upper and Middle Pud), and the historical TCA's (Lower Pud, Neill, and Crank Lake). The following activities were conducted by MCML to ensure that the tailing structures remain physically and chemically intact:

- As required under the Water License, in June 2005 the Annual Geotechnical Inspection (AGI) of the TCA's was carried out in conjunction with Geotechnical Engineers from Golder Associates. Action items following the AGI included:
  - The lowest point measured around the perimeter of Upper Pud TCA was 1708.42 at Taylor Road Dam. A one meter freeboard between the crest of the dams and the water level is required under the Water License, therefore a maximum water level of 1707.42 m was recommended for Upper Pud TCA. This level was incorporated into the Water Management Plan.
  - The lowest point measured around the perimeter of Middle Pud TCA was 1700.97 at Dam 3 Central. This is arrived at by deducting 0.15 m (the thickest of the cover over the GCL) from the lowest point measured along the upstream crests of the dams. A one meter freeboard between the crest of the dams and the water level is required under the Water License, therefore a maximum water level of 1699.97 m was recommended for Middle Pud TCA. This level is incorporated into the Water Management Plan.
  - The sump at Dam 4 continues to be monitored to confirm that a coarse gravel lining is not required.
  - o It is recommended that the area in front of Dam 2 be regraded and any low areas filled in. MCML will survey this area in 2006 to confirm that drainage is away from the dam face, and then place fill in the low areas to ensure that water is not ponded at the dam face.
  - It is recommended that the area in front of Dam 7 should be surveyed and regraded to confirm that drainage is away from the dam face. This will be carried out during the 2006-operating year.

- All tailing structures are routinely inspected for erosion, sloughing, and seepage.
  Pumps are maintained at the toe of several structures to return seepage to the
  TCA's, and a vacuum truck is employed to control seepage levels in several
  small sumps and excavations. Plans for 2006 include backfilling some of these
  areas to prevent seepage accumulation.
- In preparation for closure of the Upper Pud TCA, an engineered drainage channel will be constructed to carry ponded water from this area to the Middle Pud TCA. This will allow the tailing to dry and consolidate prior to capping.
- The pond elevations of Upper and Middle Pud TCA's are routinely surveyed to ensure that they remain within the maximum elevation under the Water License. No exceedances were observed during the 2005-operating year.

A summary of the Pond Elevations for the Upper and Middle Pud Tailing Containment Areas can be found in Appendix III of this report.

### 6.0 CARE AND MAINTENANCE

There are no plans to resume production at Con Mine, therefore maintenance is confined to work required to sustain those facilities required for processing of calcines and arsenic sludges, water management, effluent treatment, and administration. This includes the progressive rehabilitation activities in preparation for final closure of the operation which are outlined in Section 8.0 of this report.

### 7.0 RECYCLING AND REDUCTION OF WATER CONSUMPTION

As of November 2005 no water is being taken from Great Slave Lake. This will be the case until processing of the remaining arsenic sludge and calcines is commenced.

- Minewater Water is no longer pumped from the underground workings. They have been allowed to flood since November 2003. A test conducted by URS Canada Inc., in June 2004 indicated that minewater had risen 519 feet to the 5681 foot level after seven months of flooding. An attempt to repeat this test in 2005 failed due to damage within the Robertson shaft.
- Process Water The intake of process water was 215,784 m³ in 2005, as compared to 781,741 m³ in 2004. Processing of arsenic sludge and calcines was suspended in April 2004 when the supply of available material was exhausted.
- **Domestic Water** As of May 01, 2005 water is no longer taken from Great Slave Lake and chlorinated for use as potable water. Several holding tanks were installed on site and water for domestic used is now trucked to the minesite.

Metering & Pumping – As noted in Section 2.0, production has permanently ceased at the operation and the metering and pumping system was downgraded to reflect the monitoring requirements and water consumption of a closed out operation. No meters are in use at this time, and only those meters associated with the water distribution system and the Water Treatment Plant remain operational, in preparation for use in 2006.

A new Water Management Plan is being developed by Golder Associates to reflect the current situation at the operation.

### 8.0 PROGRESSIVE RECLAMATION

In accordance with the terms and conditions of the Reclamation Security Agreement between DIAND and MCML signed on April 04, 2003, and Part H, Section 1 of the Water License issued by the Northwest Territories Water Board on July 30, 2000, MCML is required to incorporate progressive reclamation activities into the period of time leading up the approval of a final "Closure and Reclamation Plan" for Con Mine.

During the 2005-operating year MCML carried out the following activities:

- Continued general site clean-up and consolidation of scrap materials.
- Removed the remaining asbestos and other hazardous materials from the majority of buildings in preparation for demolition.
- Removed/demolished structures and cleaned up sites of the following buildings:
  - o 101 Burns Meat Building
  - o 102 Small Warehouse at Con Dock
  - o 103 Large Warehouse at Con Dock
  - o 107 Stanton Cottage Hospital
  - o 122 Triple Garage on Con Road
  - o 201 "Cabin" at "C" Shaft Gate to NWT Mining Heritage Group
  - o 202 Gatehouse at "C" Shaft Gate
  - o 203 Office at "C" Shaft Gate
  - o 204 Small Warehouse at "C" Shaft Gate
  - o 205 Large Warehouse at "C" Shaft Gate
  - o 208 Refinery
  - o 209 Metallurgical Laboratory
  - 211 Storage shed at "C" Shaft
  - 212 Mechanical Room at "C" Shaft complex
  - o 213 C-1 Dry
  - 214 Office at "C" Shaft complex
  - o 219 Pipe Shop at "C" Shaft
  - o 220 Assay Laboratory
  - o 228 Kennecott building
  - o 229 Reagent storage building at "C" Shaft
  - o 302 Administrative Office complex at Robertson Shaft

- Engineered, designed & placed a concrete cap on the Burns Raise
- Backfilled the adit that connects to the Burns Raise
- Engineered, designed & placed a concrete cap on the C-1 Exhaust Vent
- Located, inspected, and prepared an Engineer's report on Rat Lake Manway
- Located, drilled, tested concrete, and drafted report on Negus 116 stope
- Located, inspected, and drafted report on Rycon R-1 shaft on Tin Can Hill
- Completed cleanup, grading and final inspection of Negus 114 cap
- Completed cleanup, grading and final inspection of Negus 120 cap
- Completed cleanup, grading and final inspection of Rycon R57 cap
- Completed field work and inspection of 204Q opening to surface. (Cap in 2007)
- Completed cleanup of tailing at the south end of Rat Lake
- Completed phase 2 of Con Pond cleanup. The concrete wall must be removed in order to complete phase 3. (Need approved Closure Plan for this.)
- Installed 3 more new groundwater monitoring wells
- Carried out 2005 groundwater well monitoring program
- Designed cover system for hazardous waste sites
- Designed Engineered drainage channel from Upper Pud to Middle Pud
- Attempted second round of water sampling at Robertson Shaft
- Removed all core from former core storage areas and demolished structures
- Treated over 7,000 tonnes of arsenic sludges and calcines
- Excavated remaining calcines from former calcine storage area
- Stockpiled ~10,000 additional tonnes of calcines and arsenic sludge
- Removed and reclaimed site of former haul road that intersected Taylor Road
- Liquidated (sold) all remaining bulk Sodium Cyanide stored on site
- Liquidated (sold) three large propane storage tanks

It is anticipated that the final Closure and Reclamation Plan for Con Mine will be approved in 2006, following which the plan will be implemented.

### 9.0 COMPLIANCE

Con Mine operated in full compliance with the terms and conditions of the NWT Water License during the 2005-operating year. No exceedances were reported at any of the SNP monitoring stations. All tailing containment areas were maintained within the specified criteria. However, under the federal Metal Mining Effluent Regulation, the failure of Acute Toxicity tests reported in Section 4.0 is considered to be out of compliance following the expiration of the Transitional Authorization from Environment Canada. An explanation for these failures has been provided to Environment Canada under a separate cover.

# 9.1 Spills and Discharges

There were no reportable spills during the 2005-operating year. The last spill at Con Mine took place on November 28<sup>th</sup>, 2004. With the exception of that spill, all spill reports from previous years have been accepted as final and the spill files have been closed.

#### 10.0 EMERGENCY RESPONSE MANUAL & GENERAL CONTINGENCY PLAN

In February 2004 the Con Mine Emergency Response and General Contingency Plan was updated and submitted to the MVLWB, as well as to the other regulatory agencies. No questions or comments were received. As Con Mine is permanently shut down, this document continues to reflect the current situation at the minesite. In the event that significant changes are made at the operation, this document will be reviewed and revised, and a copy of the latest revision will be submitted to the MVLWB.

# 11.0 CLOSURE AND RECLAMATION PLAN

Revision #5 of the Con Mine Final Closure and Reclamation Plan is being developed through a process that involves the Miramar Con Abandonment and Restoration Working Group (MCARWG). This group was formed following rejection by the MVLWB of Revision #4 of the plan. Prior to its final submission to the MVLWB each section of the plan is reviewed and approved in principle by the Working Group. As of December 2005, nine of the anticipated ten sections of the plan have been submitted to the Working Group for review. Sections one through six have received approval in principle from the Working Group, and sections one through four have received approval in principle from the Board. As Golder Associates was instrumental in compiling earlier versions of this plan, MCML contacted them to assist with preparation of Revision #5.

It is now anticipated that Revision #5 of the complete Con Mine Final Closure and Reclamation Plan will be submitted to the MVLWB in the second quarter of 2006.

# 12.0 ESTIMATED MINE RECLAMATION LIABILITY

At this juncture the Mine Reclamation Liability remains at \$8,126,529 as stated in Revision #4 of the Con Mine Final Abandonment and Restoration Plan. This estimate does not recognize or adjust for progressive reclamation undertaken to date, including the work identified in Section 8.0 above as being completed in 2005, or the work that was completed in 2004 following submission of Revision #4 of the Closure Plan.

These changes will be incorporated into Section 10 of Revision #5 of what is now officially recognized as the "Final Closure and Reclamation Plan for Con Mine."

### 13.0 ACID GENERATING POTENTIAL

Testwork conducted by URS Canada Inc., on behalf of Con Mine indicates that ore, waste rock, and tailing generated by the operation is not potentially acid generating and that waste rock and tailing is actually acid consuming. As presented in the "Acid and Alkaline Rock Drainage and Geochemical Characterization Plan" submitted to the MVLWB in 2001, the mine wastes are characterized by a high neutralization potential. Neutralization potential (NP) is a measure of the neutralizing capacity of a material, expressed as equivalency units of kilograms of calcium carbonate per tonne of material. The neutralization potential of Con Mine wastes ranges up to one hundred eighty one kilograms per ton of calcium carbonate and neutralization potential to acid potential ratios ranging from 3.6 to 17.6 with a median of 11. Acid Potential (AP) is a measure of the acid generating potential of a material. Indian and Northern Affairs Canada's Acid Rock Drainage Guidelines (1992) states that mine rock with a neutralization potential to acid potential ratio of greater than 3 is net acid consuming. Based on the foregoing, there were no revisions to the Acid and Alkaline Rock Drainage and Geochemical Plan.

### 14.0 TAILING MANAGEMENT PLAN

The Water License requires submission of a Tailing Management Plan. In March 2003 a supplemental Tailing Management Plan or "Two Year Plan" was submitted to the MVLWB. It set out guidelines for management of Con Mine tailing facilities to the end of December 2004 when the mine was scheduled to close. In actual fact, Con Mine closed in September 2003, and Giant Mine stopped producing ore for shipment to Con in July 2004, so placement of tailing was never completed as per the management plan. As only a minor volume of residue was produced as a result of the treatment of arsenic sludges and calcines, the plan was not updated in 2005.

As part of the Con Mine Final Closure and Reclamation Plan, the Tailing Management Plan will be replaced by a Water Management Plan. This document will be prepared by Golder Associates and submitted to the MVLWB in 2006.

#### 15.0 HAZARDOUS WASTE AND LANDFILL MANAGEMENT PLANS

The principals and operating standards outlined in the "Hazardous Waste Management Plan" and the "Landfill Operations Plan" submitted to the MVLWB in 2001 remain the same. As such, there are no plans to revise these documents at this time.

#### 16.0 SUMMARY

As stated in the Introduction, production has permanently ceased at Con Mine. Activities on site are now geared towards final closure of the operation. This process is expected to take up to five years, at which time an extended period of post closure monitoring will commence. The Water Treatment Plant will continue to operate during the summer months on an as-required basis, but the volume of water treated is expected to decrease dramatically during closure activities, and be reduced to the treatment of seasonal precipitation during the post closure monitoring period. It is expected that support services such as the Environmental Laboratory will continue to operate in conjunction with the Water Treatment Plant. During this period MCML expects to continue to operate the facilities in full compliance with the terms and conditions of the NWT Water License and the federal Metal Mining Effluent Regulations.

The Con Mine Water License expires on July 26, 2006. An application for an extension to the existing Water License to September 30, 2008, to cover the period during closure activities, was submitted to the MVLWB on July 20, 2005. A Public Hearing was held on November 9, 2005 to hear arguments for and against the requested extension. No official response to this request has been received to date.

# **APPENDIX I**

# Water Consumption & Materials Processed

		<u>Mira</u>	mar Con I	Mine Ltd.		
200	5 Summary o	f Water Cons	sumption an	d Materials Pro	ocessed at Co	n Min€
Month 2005	Great Slave Lake Water (M³)	Domestic (YK) Water (M³)	Treated Effluent (M³)	As Sludge Processed (Tons)	Calcines Processed (Tons)	Total Sludge Processed (Tons)
January	50,598	0	0	894	1,565	2,459
February	42,378	0	0	185	1,305	1,490
March	43,897	0	0	765	1,129	1,894
April	36,105	. 0	0	487	908	1,395
May	20,144	0	0	0	0	0
June	4,900	100	0	0	0	0
July	4,551	0	100,196	0	0	0
August	4,746	0	20,185	0	0	0
September	5,537	0	104,516	0	0	0
October	2,928	0	0	0	0	0
November	0	0	0	0	0	0
December	0	0	0	0	0	0
Total	215,784	100	224,897	2,331	4,907	7,238

#### Notes:

- 1. Under most conditions domestic water is not taken from the City of Yellowknife for use at Con Mine.
- 2. Ore production ar Con Mine has ceased and the underground workings are being allowed to flood. Minewater is no longer pumped
- 3. Ore production ar Giant Mine has ceased. Ore is no longer processed at Con Mine.
- 4. Processing of Arsenic Sludge and Calcine ceased at the end of April. Processing will resume in the summer of 2006.

# **APPENDIX II**

# Surveillance Network Program

#### Miramar Con Mine, Ltd. SNP 40-1 Water Treatment Plant Discharge Composite Sample - July 2005

WQ	Flow	рH	TSS	TSS	CN	CN	As	As	Сп	Cu	NI	NI	Pb	Zn	Ra226	0&G	Comments
Limit :	M³/Day	6.0-9.5	15.00	15.00	0.80	0.800	0.500	0.500	0.30	0.300	0.500	0.500	0.200	0.200	.37 Bql.	5.0	
July 01		30,000	100405450	1943388	0.654.7565	2000	11200000	9949353	18698045	0374757	WINGS	javetirej	:391935	######################################	\$100 TEXT (C)		No Discharge
July 02		397977	3002005	75.18.7E3	terreport.	9958999	298659Y	5/49/84%	ASSOCIA	18930890	\$1155E	20/57/65	(\$130.50)	3403577	4895533	FRES.	No Discharge
July 03		15072075	9,555,50	1949/198	10,000,000	PARRIANT.	gayaa	950/38/58/4	MESTS	1997/920	perpotes:	18381/469	Revilleen	59599	2005-2416GE	20000000	No Discharge
July 04		8004899	54978	110240000	E6073000	2007/200	ayan kada	SQAGGGC	80009A0	198999	986966	265 E VACE.	(22/02/3)	90,90,000	300000000000000000000000000000000000000	65000	No Discharge
July 05		1974/00/4	19699994	4000000000	956965	9289296	9889994	88839104	389,900,00	9946990	999 P.A	5972575	9989999	8802049	8.856\$10.00	9869868	No Discharge
July 06		397130571	04:09:033	444,93360	32/8/04/9	1978587674	189581986	18600546)	decemb	3760860	5,480,76	130946	39300939	alkeyese	\$8/\$989750+	2626654	No Discharge
July 07		January Property	0.0000000	35449809	66702446	A0799-08-	99941952	48.65%	17.5950P	394397	8000000	89585	10300000	90354E	P1777/050	490448094	No Discharge
July 08	2,021	9.09	5.2	57-836	0,57	9099342	0.003	897181ER	0.15	(\$4986)d	0,025	\$408.000	< 0.001	0.002	3458.00AS	3528787	Discharge commenced @ noon
July 09	4,268	9.02	2.0	320898A	0.72	40.99300	0.003	\$2.00°	0.15	Years a	0.041	890,009	<0.001	0.003	部を対した	954WW	
July 10	4,217	9.00	3.2	A STABOL	0.74	vijatelyet.	0.004	900000000	0.17	德物谱水	0.037	mistra.	0.002	0.003	4939000		
July 11	4,427	8.94	2.8	7.3	0.63	0.561	0,004	0.0009	0.21	0.140	0.069	0.054	< 0.001	<0.008	0.010	<1.0	ALS W1551 - Finat
July 12	4,406	8.81	3.2	7.0	0.65	0.766	0.003	<0.020	0.14	0,172	0.053	0,066	< 0.001	< 0.008	0.005	্<1.0	ALS W1583 - Final (Dup, CN = 0.713)
July 13	4,157	8.58	4.4	362462491	0.32	20022003	0.008	288E5E66	0.13	48039788854	0.055	80038389	< 0.001	0.002	39994899	50,025	
July 14	5,147	8.71	8.0	3002890.	0.62	NX3889	0.003	\$2005500 B	% <b>0.17</b> %	1984)/80%	0.119	North B	0.002	0.001	888608	8929W287	
July 15	5,128	8.62	2,4	1909808	0.48	WEGEDISTO	0.004	SHARES	0.20	30846557	0.185	AND/8038	< 0.001	0.004	878090	W4886881	
July 16	4,430	8.62	2.8	1,004,000	0,53	9080988	0.004	2000 P	.0.17	A83489AW	0.148	3/9/9/32	< 0.001	0.014	3453YG	\$\$\$\$\$\$	
July 17	2.953	8.73	2.8	96-03609	0.67	343448	0.007	384984	0.15	48.648494	0.190	\$630E3	< 0.001	0.017	380,000	85885	
July 18	4.957	8.66	2.4	4.9	0.72	0.641	0.004	0.0009	0.22	0.179	0.255	0.182	<0.001	<0.008	< 0.010	8888	ALS W1767r
July 19	4,934	8.66	3.2	920000	0.75	34557669	0.005	88996	0.22	1978023	0.141	\$48.48	< 0.001	<0.001	983949s	With West	
July 20	4,388	8.63	3.6	03000000	0.70	<0.005	0.002	<0.20	0,22	0.194	0.230	0.230	< 0.050	< 0.005	349-553-635	98404887	ALS W1856 - Final (CN not preserved
July 21	5,408	8.46	8.4	6.8	0.46	0.676	0.003	0,0009	0.20	0.194	0.250	0.230	< 0.001	0.011	物類等等表	966877988	ALS W2020 - Final
July 22	5,582	8.61	4.0	(0001009)01	0.70	SEESTAT	<0.001	5975256	0.19	78576789	0.248	\$455A56	0.030	0.015	\$81555888S	(86)8668	
July 23	5,953	8.61	4,0	6977978	0.77	50799700	0.002	589686	0.18	19.H988	0.226	3000000	0.040	0.015	998990894	XBAHERIX	
July 24	4,450	8,45	3,6	1000000	0.54	60460900	0.003	\$900000	0.20	48000000	0.242	granic.	0.050	0,015	20000000	955 X560	
July 25	2,244	8.46	3.2	8.5	0.62	0.667	0.004	0.0026	0.29	0.169	0.330	0.246	<0.001	0,007	0.020		ALS W2230 - Final
July 26	1,412	8.58	3.2	324949/6	0.59	30,34,033	0,004	2001200F	0.22	197,039,948.	0.177	E840975	0.060	0.011	\$1000 PM		
July 27	5,284	8.60	3.6	JA1888-87	0.37	\$1888	0.003	834844.	0.22	1350)3556.	0.192	8995Y95	0.070	0.013	48787933	0737,7738	
July 28	2,932	8.94	3.2	0.0048398	0.35⊹	89/69/08	0.005	30009800	0.14	14040250	:0.070	27650428	0.002	0.001	\$14500.00	1928/06/51	
July 29	4,454	9.08	3.6	30000000	0.35	3078W384	0.003	9893550	0.11	A9549234	0.060	\$19.5911650	0.001	0.003	80.593/338	2582750	
July 30	5,144	9.14	3.2	9390399	0.60	1999998	0.014	939559	0.11	0202020	0.050	34,647.6	0.001	0.011	600000000	3897(09)	
July 31	1,900	8.60	3,6	86386 pr	0.37	3.07 6.44	0.006	02/03/2004	0,09	Section	0.140	9,4+31+443	<0.001	0.007	Well-Jacky 1	XXXX.	
TOTAL				1	·									· · · · · · · · · · · · · · · · · · ·	T		

Note 1: Dates and comments highlighted in yellow are weekly MMER samples.

Note 2: Copies of the full ALS reports can be found following the summary pages in the monthly SNP report, or as .PDF attachments.

July 2005

#### Miramar Con Mine, Ltd. SNP 40-1 Water Treatment Plant Discharge Composite Sample - August 2005

WQ	Flow	рH	TSS	TSS	CN	CN	As	As	Cu	Cu	Ni:	NI :	РЬ	Zn	Ra226	O&G	Comments
Limit	M <sup>3</sup> /Day	6.0-9.5	15.00	15.00	0.80	0.800	0.500	0.500	0.30	0.300	0.500	0.500	0.200	0.200	.37 Bql.	5.0	
ugust 01	0	2400000	46606648	6556735	2000000	250553%	960900	984 <i>64</i> 44	3503,94	44044	14,254,44E	481/984	7868.C	\$48.8W.	1887E	\$4900EE	No discharge
ugust 02	0	54,46,437	404,044	955.55(3)	137550	9/8/38/9	Mariana Mariana	\$\$35.00 Ltd	3400340	\$454900	900400A	3504/0	03500	KING SE	\$2,440E	olego.	No discharge
ugust 03	0	\$154.AA	400045	\$285Ka	3544353.	640350	salierat	चित्रुत्वताकृत्यः	60000	2012/10	1850343	(1946)	38450	343544	geges.	83099E6	No discharge
ugust 04	0	97,977.00	139520	32035	698.980	2,379,790	86400,00	30000000000000000000000000000000000000	49149191	18/49/3/35	Heliye	\$55E85	55/430-12	288700	903000	W300)05	No discharge
igust 05	0	805000	Weight.	939900	96999a	\$5095594	Windler	1997/01/19 04	ferr 630	3003000	Grabina.	स्रहेश्वास्त्र	166001669	(2005-200)	76/8998	916096	No discharge
igust 06	0	\$40,000	4496	\$65-855.550 ·	Georgia	53/96/974	disferen	093845,3546	Sipinista.	被绝级的	Jan 1981	编数编制	SHOW	93983998	Selection.	N993344	No discharge
igust 07	901	8.39	3.6	Hawyyett	0.58	61,604,600	0.001	gByadata.	0.154	के के के लिए	0.136	操作的特	58/85/4F	CHARLA	3749905	relivit.	Commence Discharge
igust 08	707	7.65	4,4	6.6	0.68	0.725	0.004	<0.020	0.156	0.146	0.174	0.150	<0.10	<0,010	<0.005	< 1.0	ALS W2922r - Final
igust 09	0	Particle.	9,000,000	\$6380XXX	2818/3628W	25000	WASSES.	Specifically	A445808	學問題問	48499	4890599	SEE SEE	9487560	中有符合	16947654	No discharge
gust 10	0	74470000	440.090	953499	999990	SAMONA	Wassing:	\$\$6456564	475.2743	3[44E182	\$\$63.0\s	5376333	4989999	1848848	900000000	340/5/6	No discharge
gust 11	0	NAME OF A	749,557,5251	0553955	135898550	Banggaban	49869798	94505 Nation II	30000000	9999999	455475	<b>SEP\$199</b>	5000000	254159976°	Weeks	arapsa.	No discharge
gust 12	0	58 (8-55%)	4696439	759769753	BWHEEN.	390889A	10003000	West will be	35008355	965969	7259655	\$200 MARCON	99(A926)A	\$499953	989999	HEVER	No discharge
gust 13	0	PASSAGE.	Masars	48,774,945	经现在的	\$46680	A98584	郑和学科	549044	85/88/69	(C. 1965)	æiggs:	38368	339707	37975387	\$\$\$\$\$\$\$	No discharge
gust 14	0	997375	3500 SE	355 (FB)	(\$1.00)	20/22/201	1000	1884198341	地名苏特	被被指揮	\$65000	93455	178年8年		503750	AFTM 6/3	No discharge
gust 15	0	報題發展	(100000)	355,000	2000/00/2000 2000/00/2000	\$19859C	343316	##HOTO	-3/31253/P	200275	1959/25	WHEST	<b>2005</b>	2000	MARAES:	404938	No discharge
ıgust 16	0	空沙湾	999999	地域推進	2014/2014	75070000	<b>建筑规则</b>	250000	Sussib	W8992845	Villey 17 V-417	99900	20023725	10000000000000000000000000000000000000	255,000	MERCEN.	No discharge
igust 17	0	2000	SERVING.	10/200489	<b>6976670</b> 6	49986	400000	网络特殊	223(2276)	被短短短	195005F	355189951	<b>SESSION</b>	56H959/H58	800000000	\$2.00 pt	No discharge
ugust 18	0	9009999	490384440	99997868	92998999	568W69886	24660000	MERCHER	Bundanja	W199995	4869888	130000	#WIESER	\$748E8EE	\$989998	0000000	No discharge
ugust 19	0	489898	1905/195	19590956	\$255559V	\$900000	400300	160817039	Strings, No.	63986998	6079.766	458,600	8000000	0166666	9898786	\$558555	No discharge
igust 20	0	89798999	98689066	80068888A	Services	800000	#1980#F	\$666005544	4303598	9988 (F	48.9000	\$50,665.56	985865AS	49246	7,435,430	59666	No discharge
ugust 21	0	88888	30000	352832	3400	1917-1916	1975	989584	9999	37437ABS	466000	<i>\$3498</i>	3490333	77735976 77755976	\$850	(28)389;	No discharge
ugust 22	0	3000000	494394P	92531632	3990000	2862000 28600000000000000000000000000000	04598s	993754	90398	786988897	MENGER.	海绵绵绵	2000 PM	YMSKE	3000	9224843.	No discharge
igust 23	0	550000	9,00000.8-	enderfreed Statement	250050A	8233820	3483848	W481493903	45/95/540	34900	355,033	Sangary	10,838,550	49/489700	9365X333	3000/48/48	No discharge
ugust 24	0	Surfactio	90/88/88/09	4550M30	383446)960	309335000	38/8/50/69	99900000	BUADSMIR	1985388	28388881	758357	100000000000000000000000000000000000000	10/600000	79/33/750	251/49/2	No discharge
ugust 25	0	CHARLE	403000	70000000	\$5000000	3788556	34993330	1959 (Cath	90,0507,4	9,459,67689	2825080F	9569339	5359597	803899	968988	WWW.	No discharge
ugust 26	0	3833333	MPS No.	985466	<b>WARREN</b>	EFFE	197187489	9656879P	217820	0.689963	1848989	230000	167407 (ST)	489696	\$658,635	\$65E959	No discharge
ugust 27	2,608	8.20	8.0	\$25,000	0,42	8848988	0,007	V/200000-0-0	0.24	4996	0.452	7504F8	2002/06	2018/04/65	6498,005	[488484]	Commence Discharge
igust 28	3,971	7.65	5.2	12.1	0.74	0.459	0.006	0.0012	0.23	0.210	0.388	0.430	<0.001	0,030	0.010	9899090	ALS W3782 - Final
ugust 29	5,030	7.81	2.8	10.4	0.59	0.766	0.007	0.00107	0.27	0.219	0.487	0.447	<0.09	0.033	< 0.010	< 1.0	ALS W3805 - Final
ugust 30	5,080	8.08	3,6	(0408006)	0.42	appear	0.004	089/9/300	0.17	20000000	0.393	0.099900000	Population (	2/03/1995	9/9/9/A	\$60,000	
ugust 31	1,888	7.72	2.4	4574(86)	0.39	95/85/5/8	0.003	Weren grade	0.12	938998	0.398	7587959g	947):5310	24800451	0,251,03	Septimen.	
TOTAL	20,185			1	1					1		i	1		i		

Note 1: Dates and comments highlighted in yellow are weekly or monthly MMER samples.

Note 2: Copies of the ALS Certificates of Analysis can be found following the summary pages.

August 2005

# Miramar Con Mine, Ltd. SNP 40-1 Water Treatment Plant Discharge Composite Sample - September 2005

Entries in Blue Print are ALS Control Samples

WQ	Flow	pН	TSS	TSS	CN	CN	As	As	Cu	Cu	Ni	Ni	Pb	Zn	Ra226	O&G	Comments : 1 4 4 14
Limit	M³/Day	6.0-9.5	15.00	15.00	0.80	0.800	0.500	0.500	0.30	0.300	0.500	0.500	0.200	0.200	.37 Bqf.	5.0	ARE NOTES AND A SECOND OF THE
Sept. 01	3,419	7,76	2,6	19049968	0.54	(6)74(3)6(6)	0.024	ESCRIPTOR	0.25	(9500,638)	0.378	250571g.	overhousens	396838885	382639 SY	98668	
Sept. 02	3,047	7.80	3.0	18x13x5560	0.42	948866	0.002	384960,414	0.22	3000000	0.420	2009500F	30/9/06/55999	148846	2532000	saugen	
Sept. 03	3,043	7.61	2.8	6978780	0.64	MARKE	0.004	750,435,950	0.24	YS (439) // .	0.429	48.84.67	400 (ASS)	009806	3/3/4/20	海等特别	
Sept. 04	4,165	7.89	4.00	355 SS	0.69	K-83558	0.006	980384	0.24	0,680,630,6	0.415	Market		\$48.865	2551235	FFE SE	
Sept. 05	3,165	8.03	3.6	3/20/02/	0.58	6250EE	<0,001	\$455W\$	0.25	9589889	0.455	50,600,08	48.27.259X	9869484	29282E	Referen.	
Sept. 06	2,531	8,10	4.0	10.6	0.56	0.917	0.001	0.00154	0.22	0.214	0.375	0,370	<0.0005	0.0252	0.007	等的影響	ALS W4162 - Final
Sept. 07	4,389	8,40	2.8	ROXELIA:	0.32	24343467	0,0015	9/9/99/00	0.25	98886Au	0.377	2890000	<b>VERSIONES</b>	998761180.	70876969	1608869	
Sept. 08	3,193	7,65	4.4	168400000	0.38	400309085%	0.001	.000000000	0.23	(ESMESS)	0.376	3030,00	1900000000	50.678878	\$655059A	學的發展	
Sept. 09	3,356	8.25	3.4	989859	0.42	6/95/7955	0.080	359425465	0.21	\$1600EH	0.324	N 95000	Palatiania	91999	10°00'00'00	#6%35	
Sept. 10	4,335	8.20	3.6	\$540,5744	0.30	98899	0.001	2000 B	0.20	98549.5%	0.321	144504,93		945344	8758455E	350000	
Sept. 11	4,318	8,27	2.0	94584	0.51	265500	0.005	58000303	0,18	ph/9888	0.298	88619786	935981908	5/3297/S	19219303	35080550	
Sept. 12	4,456	7.98	2.4	10.8Fd.Ar	0.64	455453	0,008	48689493	0,20	699999	0.313	365745	WATER BAR	94096780	(ANTENDE)	parishana parisha pa	
Sept. 13	4,167	7.95	2.4	5.7	0.56	0.876	0.001	0.00631	0.21	0.203	0.331	0.317	<0.0010	0.0232	<0.010	<1.0	ALS W4481 - Final
Sept. 14	4,457	8.09	2.8	0,000,000,000	0.62	WEST	0.007	369903608	0.23	5000000	0.316	300000	(86.699699)	9865698	1698/986%	gosset.	
Sept. 15	4,458	7.88	2.8	30/8/2004	0.50	28/9/397	0.004	220/2019 at	0.21	05/07/63	0.313	\$175350	Production.	2600000	#60mbys	85 \$1500	
Sept. 16	4,491	7.99	1,6	(0.00)(0.00)	0.59	<i>ानस</i> ्थ्र	0.002	55 33,000	0.22	(特殊(57))	0.303	2000/19	mennyyehe	的特別級	<b>福建设学</b>	289356	
Sept. 17	4,491	7.86	2.0	KW812	0.66	经合理结	0.007	######################################	0.21	GENERAL	0.300	553576	RECKSON.	48408	WHAT	233233	
Sept. 18	4,501	7.98	5.6	284494	0.67	ARBORS	0.007	\$795.2445.	0.22	26600000	0.342	88日日4号	MEDICAL PROPERTY.	492544F	\$85505	6998999	
Sept. 19	4,219	7,98	9,2	28.00 (A)	0.56	100000000000000000000000000000000000000	0.029	\$20000000	0.24	COMMUNICAL DESCRIPTION OF THE PROPERTY OF THE	0.325	30/250 YX	<0.001	0.032	200600000	189399994	
Sept. 20	3,733	7.94	0.89	6896050.	0.53	\$49,5655	0.004	25500000	0.23	5520527	0.355	3003-37030	MOSSAGE	98902696	9964998	39,800,000	
Sept. 21	4,265	7.96	3.2	2554954	0.70	296849.86¥	0.009	\$5\$V\$766	0.23	1968/6984	0.282	编码像	MELTY GOESA	295998E	399039	09/02/54	
Sept. 22	4,072	7.80	ଃ.2 ା	68402566	0.72	ARREST.	0.004	御教授研	0.26	2834090	0.301	\$200 PM	V6946268	関係は著	23923	经进行	
Sept. 23	4,390	7,88	3.0	李奇等等	0.77	\$15,000 p.	<0.001	\$\$\$\$\$\$\$	0.30	50,000	0.335	Market Ar	1355,5155,545	446848	2351/2236	3000 x 5x	
Sept. 24	4,361	8.20	3.6	488888	0.75	2003/2005	0,010	35/455.05	0.25	12419534	0,300	福度研究	janesiseisei	海岸似数	46.000	(44)(44)	
Sept. 25	4,067	7.42	3,2	994599	0.76	(9:59/8%	0.002	5980000	0.25	929966	0.306	Water to	999/999	Manager	354983	9249494	
Sept. 26	3,144	7.97	∌ 4,4≫	3.9	0.79	0.860	800,0	0.00333	0.23	0.226	0.336	0,326	<0.00050	0.027	< 0.010	<1.0	ALS W5070
Sept. 27	2,283	8.00	2.4	5334559	0.70	1816/191	800.0	8884488	the said	ARMENT.	aporton.	<i>प्रकास</i> क	ngasasaya	300270000	20400636	2000929	WTP Shut Down for the year
Sept. 28	0	009653	MARKET CO	<i>@19899</i>	5375777	90,000,000	101184489	2007/65012		3,553,55	3887860	Assas	32   50000045	3050000	85200,296	de l'appere	
Sept. 29	0	440493	Barrana .	galajidate	i i i i i i i i i i i i i i i i i i i	:23.22	707578	\$44,000	920947	和福祉	pilylio/ji.	4900000	68404886	33558153	355000	658655	
Sept. 30	0	140,000,001	18483	9825999	A92960	1019962	\$3.84S	HORSE H	\$80483	892989a	4847-385V	Saraji ya	(4) HOSE	3/39448	000/0000	\$19.50m	
		6989386	834174V	-94.006	esercit	957999	14,480,68	200/55195	95499	160460	RATES	rither, the	(blacker)	46899999	1000000	98.850c	
		W65919464	2283394	996981a	3856/40	9/22/04/39	GD9/03/93	Destablish	15470376	25536464	199755333	ACAMA.	1999/Me904	700097055	\$880000.	90099800	
TOTAL.	104,516			T	l	[	1								1		

Note 1: Dates and comments highlighted in yellow are weekly MMER samples.

Note 2: Copies of the full ALS Reports can be found following the summary pages.

September 2005

SNP 40-5 Meg/Keg/Peg Outflow to Great Slave Lake - 2005

SNP 40-5					reat Si	ave Lai	(e - <u>2</u> 00						
	Temp	Field	TDS	NH3	CN	As	Cu	Ni	Pb	Zn	Fecal	O&G	
DATE	Deg. C	pН	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	Y/N	mg/l	Comments
May 30/05	15.3	7.4	6250	4.79	0.0412	0.119	<0.010	0.0363	<0.030	<0.0040	Present	<1.0	ALS V8788
June 29/05	17.0	7.6	11400	2.77	0.0276	0.279	<0.020	0.0330	<0.060	<0.0080	Present	<1.0	ALS W1226
July 12/05	20.7	7.7	14200	0.308	0.0095	0.239	<0.020	0.0380	<0.0010	0.008	Present	<1.0	ALS W1551
July 21/05	16.1	8.5			0.0111	0.353	0.0065	0.0420	0.0012	<0.010			AL\$ W2020
Aug. 15/05	12.8	7.2	17200	3.50	0.0269	0.350	<0.050	0.0490	<0.15	<0.020	Present	<1.0	ALS W3113r
Sep. 07/05	11.5	7.3	16300	3.48	0.0334	0.198	<0.020	0.047	<0.060	0.0116	Present	<1.0	AL\$ W4187
•					190010000000000000000000000000000000000		Ambandes un 16				20030 PER 18601	(1869) (Benedig 2007) ( (2007) (1869) (Benedig 2007)	End of Open Water
					1500.0800.0500.07		7578758758	\$480000					-
			SVIALIST SE	anders an		45-11-5-6.0	00000000	9/00/00/45	<i>\$16</i> (6)			w.Gregore	
					1917,053,055,05	7820300000		2007/2004/02				\$128/23/25/	
							COAS CARROLL			783 55 75 75 75 75 75 75 75 75 75 75 75 75			
			P. S. Savis	G-100-100-01	450.450.561.5	7. S.		E 18 (8)	201900000000				
•••			94609678			1600 AS 1600	059/06/05/0	Yes Service					
			10000000000	200000000000000000000000000000000000000		#775754						(1997)	
			2/25/2018					#15.851/476/593 677-677 (687-58					
			5.65.63.65					\$150 GWS			V 10 (10 (10 (10 (10 (10 (10 (10 (10 (10		
			2001224829	9000000000		\$100 M	10317945			ALCONOMIC SON	VSE 10.735	00000000	
						\$60 \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	#12.813.811.82Y					909/09/975/7	
							141.61254.86641.813 7.1011.1131.713		50/1801 (1651) (1 53/1801 (1671) (1			\$200484256/23-0 \$40048508460	
				54.778548778		18.5 A S. A S. A	7760 William					200245750	
			30000000					900000000000000000000000000000000000000	31 (34) (A. 16)	445644B			
			protection of the second	200000000000000000000000000000000000000	and the second second		000000000000	Wasan nganana		eserviero (Ales			*
			Daniel Constitution				100000000000000000000000000000000000000					50000000000000000000000000000000000000	
								SWEETER		5513516806	45000000	MAGESTES.	
			1444/40044	(4)28/48/4			12/19/2004	464/36/38			77241553555		
	<del>                                     </del>											YET DIVE	
									10 (10 (10 (10 (10 (10 (10 (10 (10 (10 (				
	\ <u></u>		\$18754Y51A38		STATE OF THE		1457-000/98	100000000	an and a co		75-05-25-34		

Note 1: Copies of the full ALS Reports are appended following the summary pages:

SNP 40-6 Taylor Road Dam Pumping Station - 2005

	Temp	Field	CN	As	Cu	Ni	Pb	Zn	
DATE	Deg. C	pН	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	Comments
22-Арг-05	-	-	0.030	0.088	<0.01	0.033	0.00	0.0760	Con Mine Environmental Laboratory
2-May-05	-	-	0.029	0.135	<0.01	0.018	0.05	868 6± 0686	Con Mine Environmental Laboratory
9-May-05	-	-	0.029	0.176	<0.01	0.021	0.09		Con Mine Environmental Laboratory
16-May-05	-	_	<0.003	0.182	<0.01	0.018	0.06	Almand Arta Indiana.	Con Mine Environmental Laboratory
24-May-05	5.5	7.6	0.015	0.218	<0.01	0.019	0.10	0.0112	Con Mine Environmental Laboratory
30-May-05	14.0	8.0	0.0090	0.235	<0.01	0.028	0.09	• 00/	Con Mine Environmental Laboratory
7-Jun-05	12.3	7.9	0.035	0.191	<0.01				Con Mine Environmental Laboratory
14-Jun-05	13.5	8.0	0.044	0.118	<0.01			aktara yesa tari Awazan T	Con Mine Environmental Laboratory
20-Jun-05	9.1	8.1	0.018	0.121	<0.01	4/5504 <b>-</b> 2750 X		100 mg	Con Mine Environmental Laboratory
28-Jun-05	13.2	8.3	0.0225	0.122	0.0034	107018275174			ALS W1226 - Final
6-Jul-05	18.0	8.5	0.035	0.772	0.040		<b>SHEWS</b>		ALS W1404 - Final
12-Jul-05	21.8	8.2	0.020	0.125	<0.010	<0.010	<0.0010	0.0078	ALS W1551 - Final
18-Jul-05	19.5	7.5	0.033	0.162	<0.010	0168/65 <b>-</b> 1601/69	6:6-m/s	888/ <b>-</b> 788	ALS W1767 - Final
26-Jul-05	12.7	8.5	0.032	0.113	<0.010				ALS W2177 - Final
2-Aug-05	16.1	8.3	0.037	0.115	<0.010				ALS W2584 - Final
9-Aug-05	13.6	8.3	0.050	0.086	<0.010			100 miles	ALS W2832 - Final
17-Aug-05	9.8	8.1	0.029	0.095	<0.010		9845489		ALS W3317 - Final
23-Aug-05	13.0	8.2	0.024	0.097	<0.010				ALS W3457 - Final
31-Aug-05	7.0	8.3	0.271	0.083	<0.010				ALS W3998 - Final
7-Sep-05	10.4	8.2	0.028	0.088	<0.010				ALS W4187 - Final
13-Sep-05	4.4	8.5	0.0211	0.102	<0.010				ALS W4481 - Final
20-Sep-05	5.9	8.2	0.0177	0.125	<0.010				ALS W4824 - Final
26-Sep-05	1.4	8.3	0.0283	0.225	<0.010				ALS W5660 - Final
							Experies.	96290,650	End of Open Water Season

Note: Where applicable, copies of the Commercial Laboratory Reports are not attached as they contain no additional information.

SNP 40-7 Dam #2 Drainage to Kam Lake - 2005

	Temp	рH	TSS	NH3	CN	As	Cu	Ni	Pb	Zn			
DATE	Deg. C		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l			Comments
May 24/05			tin vetet		North Park		visita de la composição d	8720 NO.		Santon San			No Water
June 07/05			ARTHUR VIEW	and a final conference									No Water
June 20/05						1921/22/1947A	.ngu\$101500						No Water
July 06/05						e Selection (Selection		90 05 040 000 07/030 04 044		Estate e acción de Servición MA DE		<b>非要能够</b>	No Water
July 18/05			35616W651		100000000000000000000000000000000000000			desired (S.				in The State	No Water
Aug. 09/05			Regisser victorischer († 1905) 1905 – Frank Statistischer († 1905)	9878387	3435	1997/1910						10000000000000000000000000000000000000	No Water
Aug. 23/05			ale service de l'écrète L'écret apprendict de l'écrète		aday Masasiya Yas Masasiya da Sana		70-28-50: 4-1-5-5-6-6						No Water
Sep. 07/05			0.0000000000000000000000000000000000000	10 10 10 10 10 10 10 10 10 10 10 10 10 1	e a regional de la composición de la c		10616/678745A	-10.50 May 1939				dividua.	No Water 🔔
Sep. 20/05					ON DESCRIPTION	<b>建筑</b> 的大学	10/10/13/50		77 (37 (38 57 77 (37 (38 57				No Water
				343443434	SHEWELE				NUMBER	W. 10000	2002 CAR	Application of the con-	End of Open Water
				Gen (200 / 200 / 5) - 10   10   10   10   10   10   10   10							\$25 \$ 53 \$ 1 \$ 5 10°		
						跨網網							
					Ballania.						A CONTRACTOR		
						<b>经现金</b> 经验		0.000,000,000			78875	1988 (1988):	
				State State				50% Maries	577054575542				
					31 E E E	<b>建设计划</b> 管							
			\$16.00 posts		97.050.050.25		Addition being		3274507660760	92/4580450G			
	· · · · · · · · · · · · · · · · · · ·		11 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1										
			V/70/03/03/03/0					47 (463)/S.S.	0.080.540.64				
				93000000000000 5-555-555-555				19200			38864888	1997-1997-1997	
					Superior (	(\$56) (\$60) (\$60) is	2011/05/05/05/05					\$450 to \$150.00	
			176,560,77						70.08-1074.00				
						<b>30</b> 1565546	ed green		(0.5819)(0.52	\$1000 B		888183E3	
			West of the First				\$2500 to \$250					3599989	
			70.889.0000.000 70.889.0000.000		Kyrolywords Kyrolywords		WKUKU PA		4 1997 (A.S.)	1600 1907 1200 13	754 550 50		
			1476 1177 221		3.60.76.76			200 V 100 V 100 V	2003 00 00 00 00 00 00 00 00 00 00 00 00	set of the Alexander (Constitution)		energe/stell es du Transcontration	
			2007/200	TO SAIT TO			Mary 1988	\$35165455A	A KERTING	eropeia.	OF STATES		

SNP 40-8 Dam #1 Drainage to Kam Lake - 2005

SNP 40-8	Dam #	1 Dra	ıınage t	o Kam	Lake -	2005	
	Temp	рΗ	TSS	CN	As	Cu	
DATE	Deg. C		mg/l	mg/l	mg/l	mg/l	Comments
May 24/05	-0.3	7.40	2.7	0.02	0.0543	<0.0010	ALS V8617 - Final
June 07/05	-			0.019	0.081	<0.010	ALS V9131 - Final (No TSS due to shallow, muddy water at sample point)
June 20/05	-	7.40	< 1.0	0.212	0.590		Con Mine Enviro Lab
July 06/05	-	-			36.56 <del>-</del> 5.56.5		No Water
July 18/05	,	-				\$6.50 <b>等</b> 7.50 化	No Water
Aug. 09/05	-	-	949 <b>1</b> 975	NIS ENG		######################################	No Water
Aug. 23/05	-	•					No Water
Sep. 07/05	8.2	7.70	1.1	0.0334	0.080	<0.010	ALS W4187 - Final
Sep. 20/05	5.2	7.90	1.8	0.0272	0.077	<0.010	ALS W4824 - Final
			中野的自	4678W	y, defenda		End of Open Water season
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SNP 40-9 Lower Pud Drainage to Kam Lake - 2005

	Temp	Field	TSS	CN	As	Cu	
DATE	Deg. C	рН	mg/l	mg/l	mg/l	mg/l	Comments
May 24/05	2.4	7.8	1.3	0.070	0.179	0.030	ALS V8617 - Final
June 07/05	-	-	被销售额的	0.066	0.685	0.031	ALS V9131 - Final
June 20/05	-	7.9	< 1.0	0.1120	0.071	0.030	Con Mine Enviro Lab
July 06/05	13.5	7.5		0.0248	0.127	<0.010	ALS W1404 - Final
July 18/05	16.3	7.4	4.2	0.0269	0.868	0.031	ALS W1767r - Final
Aug. 09/05	10.5	7.7	7.1	0.0401	0.742	0.030	ALS W2832 - Final
Aug. 23/05	10.0	7.8	7.9	0.0284	0.874	0.027	ALS W3457 - Final
Sep. 07/05	8.1	7.8	7.1	0.147	0.536	0.038	ALS W4187 - Final
Sep. 20/05	5.5	8.1	2.5	0.140	0.561	0.038	ALS W4824 - Final
			PONET PA				End of Open Water season
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			544508			1414114	

Note 1. Copies of the ALS Reports are not appended as they contain no additional information.

<b>SNP 40-10</b>	Lower	r Pud			leg Lak	e - 200	5						
	Temp	pН	TDS	NH3	CN	As	Cu	Ni	Pb	Zn	Fecal	O&G	
DATE	Deg. C		mg/l	mg/i	mg/l	mg/i	mg/l	mg/l	mg/l	mg/l	Y/N	mg/l	Comments
May 30/05	16.0	7.9	2960	3.30	0.0433	0.085	0.084	0.0970	<0.030	0.0137	Present	<1.0	ALS V8788
June 29/05	19.2	7.8	4140	2.3	0.0314	0.167	0.108	0.103	<0.030	0.018	Present	1.4	ALS W1226
July 12/05	22.7	7.5	11900	11.8	0.452	0.214	0.091	0.112	<0.0010	0.0100	Present	<1.0	ALS W1551
July 21/05	13.4	7.3	50x30 = 10x30	88/30 <b>-</b> 1982	0.687	0.00596	0.133	0.22	<0.0010	<0.010	1920 - 1830 H	3/4. <b>-</b> 4/3	ALS W2020
Aug. 15/05	18.0	7.7	10300	13.1	0.290	0.0787	0.091	0.134	<0.060	0.012	Present	<1.0	ALS W3113r
Sep. 07/05	12.9	7.8	10900	15.6	0.776	0.0074	0.189	0.357	<0.060	0.0273	Present	<1.0	ALS W4187
			er de la	Park Service Colors Service Service Colors	own en kanne Acquella lage en	elektrika tarahan			100 000 000 000 100 000 000 000				End of Open Water
			\$450.55 PM	Market State	307/61/1287/3	ALEGE CL.	1,741.47.174.			500 DE 1880 E	12.30.26	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	
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Note 1. Copies of the complete ALS Reports are appended following the summary pages.

SNP 40-11 Con Dock - 2005

DATE	Water Condition	Comments
June 14th	Open Water	Channel clear of ice - request boom installation
June 21st	Open Water	Boom installed - No visible Oil Sheen
June28th	Open Water	No visible Oil Sheen
July 5th	Open Water	No visible Oil Sheen
July 12th	Open Water	No visible Oil Sheen
July 19th	Open Water	No visible Oil Sheen
July 26th	Open Water	Minimal Sheen - Cleaned usin absorbent pads
August 2nd	Open Water	No visible Oil Sheen
August 9th	Open Water	Minimal Sheen - Cleaned usin absorbent pads
August 16th	Open Water	No visible Oil Sheen
August 23rd	Open Water	No visible Oil Sheen
August 30th	Open Water	No visible Oil Sheen
Sep. 7th	Open Water	No visible Oil Sheen
Sep. 13th	Open Water	No visible Oil Sheen
Sep. 20th	Open Water	No visible Oil Sheen
Sep. 28th	Open Water	No visible Oil Sheen
Oct. 04/05	Open Water	No visible Oil Sheen
Oct. 12/05	Open Water	No visible Oil Sheen - Ice forming - Boom removed for the year
		End of Open Water Season

SNP 40-12 Rat Lake - 2005

NP 40-12						γ		
	Temp	рН	As	Cu	Ni	Pb	Zn	
DATE	Deg. C		mg/i	mg/l	mg/l	mg/l	mg/l	Comments
May 24/05	0.8	7.2	0.186	<0.0010	<0.0050	<0.030	0.0080	ALS V8617 - Final
June 29/05	16.4	8.5	0.283	<0.0010	<0.0050	<0.030	0.0064	ALS W1226 - Final
July 12/05	22.5	8.7	0.26	<0.010	<0.050	<0.050	0.0053	ALS W1551 - Final
Aug. 02/05	16.8	9.5	0.219	<0.010	<0.0050	<0.030	0.005	ALS W2584 - Final
Sep. 07/05	11.5	9.3	0.164	<0.010	<0.0050	<0.030	0.0115	ALS W4187 - Final
			「対象は数数数					End of Open Water season
			等 经基础					
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# CHEMICAL ANALYSIS REPORT

Date:

June 20, 2005

ALS File No.

V8788

Report On:

SNP 2005 Water Analysis

Report To:

Miramar Con Mine, Ltd.

Box 2000

Yellowknife, NT

X1A 2M1

Attention:

Mr. Ron Connell

Received:

June 1, 2005

# **ALS ENVIRONMENTAL**

per:

Can Dang, B.Sc. - Project Chemist Andre Langlais, M.Sc. - Project Chemist

File No. V8788

# **RESULTS OF ANALYSIS - Water**

Sample ID		SNP 40-5 Monthly	SNP 40-10 Monthly	
Sample Date ALS ID		05-05-30 1	05-05-30 2	
Field Tests Field pH Field Temperature (cels	eine)	7.40 15	7.90 16	
Physical Tests Conductivity (uS/cm Total Dissolved Solids Hardness CaCO3 Total Suspended Solids Turbidity (NTU)	)	8260 6250 2300 7.3 5.66	3840 2960 1150 8.0 10.2	
Dissolved Anions Alkalinity-Total Bromide Br Chloride Cl Fluoride F Sulphate SO4	CaCO3	8.2 15.4 1660 <0.40 382	85.8 6.4 970 <0.40 343	
Nutrients Ammonia Nitrogen Total Kjeldahl Nitrogen Nitrate Nitrogen Nitrite Nitrogen Total Phosphate	N N N P	4.79 6.40 <2.0 <2.0 0.0223	3.30 5.20 <2.0 <2.0 0.0276	
<u>Cyanides</u> Total Cyanide CN		0.0412	0.0433	

Results are expressed as milligrams per litre except where noted. < = Less than the detection limit indicated.

File No. V8788

# **RESULTS OF ANALYSIS - Water**

Sample ID		SNP 40-5 Monthly	SNP 40-10 Monthly
Sample Date		05-05-30	05-05-30
ALS ID		1	2
Total Metals Aluminum	T-Al	0.350	0.312
Antimony	T-Sb	<0.20	<0.20
Arsenic	T-As	0.119	0.085
Barium	T-Ba	0.070	0.037
Beryllium	T-Be	<0.0050	<0.0050
Bismuth	T-Bi	<0.20	<0.20
Boron	T-B	0.15	0.13
Cadmium	T-Cd	<0.0010	<0.0010
Calcium	T-Ca	853	401
Chromium	T-Cr	<0.010	<0.010
Cobalt	T-Co	0.066	0.041
Copper	T-Cu	<0.010	0.084
Iron	T-Fe	0.424	0.330
Lead	T-Pb	<0.030	<0.030
Lithium	T-Li	0.022	0.015
Magnesium	T-Mg	34.3	30.2
Manganese	T-Mn	0.292	0.187
Mercury	T-Hg	<0.000050	0.000112
Molybdenum	T-Mo	0.011	<0.010
Nickel	T-Ni	0.0363	0.0970
Phosphorus	T-P	<0.30	<0.30
Potassium	T-K	13.6	7.3
Selenium	T-Se	<0.20	<0.20
Silicon	T-Si	0.947	2.47
Silver	T-Ag	<0.010	<0.010
Sodium	T-Na	568	202
Strontium	T-Sr	12.3	5.08
Thallium	T-TI	<0.20	<0.20
Tin	T-Sn	<0.030	<0.030
Titanium	T-Ti	<0.020	0.013
Vanadium	T-V	<0.030	<0.030
Zinc	T-Zn	<0.0040	0.0137

Results are expressed as milligrams per litre except where noted. < = Less than the detection limit indicated.

# **RESULTS OF ANALYSIS - Water**

Sample ID		SNP 40-5 Monthly	SNP 40-10 Monthly
Sample Date		05-05-30	05-05-30
ALS ID		1	2
Dissolved Met Aluminum Antimony Arsenic Barium Beryllium	tals D-AI D-Sb D-As D-Ba D-Be D-Bi D-B	0.067 <0.20 0.059 0.071 <0.0050 <0.20 0.15	0.0179 <0.20 0.058 0.035 <0.0050 <0.20 0.12
Boron Cadmium Calcium Chromium	D-Cd D-Ca D-Cr	<0.0010 863 <0.010	<0.0010 409 <0.010
Cobalt	D-Co	0.067	0.042
Copper	D-Cu	<0.010	0.071
Iron	D-Fe	0.029	0.072
Lead	D-Pb	<0.030	<0.030
Lithium	D-Li	0.026	0.014
Magnesium	D-Mg	35.8	30.7
Manganese	D-Mn	0.293	0.183
Mercury	D-Hg	<0.000050	<0.000050
Molybdenum	D-Mo	0.010	<0.010
Nickel	D-Ni	0.0386	0.0970
Phosphorus	D-P	<0.30	<0.30
Potassium	D-K	14.0	7.4
Selenium	D-Se	<0.20	<0.20
Silicon	D-Si	0.824	1.67
Silver	D-Ag	<0.010	<0.010
Sodium	D-Na	566	206
Strontium	D-Sr	12.6	5.21
Thallium	D-TI	<0.20	<0.20
Tin	D-Sn	<0.030	<0.030
Titanium	D-Ti	<0.020	<0.010
Vanadium	D-V	<0.030	<0.030
Zinc	D-Zn	<0.0040	0.0131
Inorganic Par Sulphide	<u>ameters</u> S	<0.020	0.030
Extractables Oil and Greas	е	<1.0	<1.0

Results are expressed as milligrams per litre except where noted. < = Less than the detection limit indicated.

# Appendix 1 - METHODOLOGY

Outlines of the methodologies utilized for the analysis of the samples submitted are as follows

# Conductivity in Water

This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.

Recommended Holding Time:

Sample: 28 days Reference: APHA

For more detail see ALS Environmental "Collection & Sampling Guide"

#### Solids in Water

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total dissolved solids (TDS) and total suspended solids (TSS) are determined by filtering a sample through a glass fibre filter, TDS is determined by evaporating the filtrate to dryness at 180 degrees celsius, TSS is determined by drying the filter at 104 degrees celsius. Total solids are determined by evaporating a sample to dryness at 104 degrees celsius. Fixed and volatile solids are determined by igniting a dried sample residue at 550 degrees celsius.

Recommended Holding Time:

Sample: 7 days Reference: APHA

For more detail see ALS Environmental "Collection & Sampling Guide"

#### Conventional Parameters in Water

These analyses are carried out in accordance with procedures described in "Methods for Chemical Analysis of Water and Wastes" (USEPA), "Manual for the Chemical Analysis of Water, Wastewaters, Sediments and Biological Tissues" (BCMOE), and/or "Standard Methods for the Examination of Water and Wastewater" (APHA). Further details are available on request.

### **Turbidity of Water**

This analysis is carried out using procedures adapted from APHA Method 2130 "Turbidity". Turbidity is determined by the nephelometric method.

Recommended Holding Time:

Sample: 2 days Reference: APHA

For more detail see ALS Environmental "Collection & Sampling Guide"

# Appendix 1 - METHODOLOGY - Continued

# Alkalinity in Water by Colourimetry

This analysis is carried out using procedures adapted from EPA Method 310.2 "Alkalinity". Total Alkalinity is determined using the methyl orange colourimetric method.

Recommended Holding Time:

Sample: 14 days Reference: APHA

For more detail see ALS Environmental "Collection & Sampling Guide"

# Dissolved Anions in Water by Ion Chromatography

This analysis is carried out using procedures adapted from APHA Method 4110 "Determination of Anions by Ion Chromatography" and EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography". Anions are determined by filtering the sample through a 0.45 micron membrane filter and injecting the filtrate onto a Dionex IonPac AG17 anion exchange column with a hydroxide eluent stream. Anions routinely determined by this method include: bromide, chloride, fluoride, nitrate, nitrite and sulphate.

Recommended Holding Time:

Sample: 28 days (bromide, chloride, fluoride, sulphate)

Sample: 2 days (nitrate, nitrite) Reference: APHA and EPA

For more detail see ALS Environmental "Collection & Sampling Guide"

### Ammonia in Water by Selective Ion Electrode

This analysis is carried out, on sulphuric acid preserved samples, using procedures adapted from APHA Method 4500-NH3 "Nitrogen (Ammonia)". Ammonia is determined using an ammonia selective electrode.

Recommended Holding Time:

Sample: 28 days Reference: APHA

For more detail see ALS Environmental "Collection & Sampling Guide"

#### Total Kjeldahl Nitrogen in Water

This analysis is carried out using procedures adapted from APHA Method 4500-Norg "Nitrogen (Organic)". Total kjeldahl nitrogen is determined by sample digestion at 367 celcius with analysis using an ammonia selective electrode.

Recommended Holding Time:

Sample: 28 days Reference: APHA

For more detail see ALS Environmental "Collection & Sampling Guide"

# Appendix 1 - METHODOLOGY - Continued

# Phosphate in Water

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". All forms of phosphate are determined by the ascorbic acid colourimetric method. Dissolved ortho-phosphate (dissolved reactive phosphorous) is determined by direct measurement. Total phosphate (total phosphorous) is determined after persulphate digestion of a sample. Total dissolved phosphate (total dissolved phosphorous) is determined by filtering a sample through a 0.45 micron membrane filter followed by persulfate digestion of the filtrate.

Recommended Holding Time:

Sample: 2 days Reference: EPA

For more detail see ALS Environmental "Collection & Sampling Guide"

# Cyanide Species in Water

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide and weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method. Cyanate is determined by the cyanate hydrolysis method using an ammonia selective electrode. Thiocyanate is determined by the ferric nitrate colourimetric method.

Recommended Holding Time:

Sample: 14 days Reference: APHA

For more detail see ALS Environmental "Collection & Sampling Guide"

#### Metals in Water

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" 20th Edition 1998 published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotplate or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by atomic absorption/emission spectrophotometry (EPA Method 7000 series), inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B), and/or inductively coupled plasma - mass spectrometry (EPA Method 6020).

Recommended Holding Time:

Sample: 6 months Reference: EPA

For more detail see: ALS "Collection & Sampling Guide"

# Appendix 1 - METHODOLOGY - Continued

### Mercury in Water

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" 20th Edition 1998 published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

Recommended Holding Time:

Sample: Reference: 28 days

EPA

For more detail see ALS Environmental "Collection & Sampling Guide"

# Sulphide in Water

This analysis is carried out using procedures adapted from APHA Method 4500-S2 "Sulphide". Sulphide is determined using the methlyene blue colourimetric method.

Recommended Holding Time:

Sample: 7 days Reference: APHA

For more detail see ALS Environmental "Collection & Sampling Guide"

# Oil & Grease (low-level) in Water

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3510 & 9071, published by the United States Environmental Protection Agency (EPA), "Standard Methods for the Examination of Water and Wastewater", 20th ed., Method 5520, published by the American Public Health Association, and "BC Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials," 5th ed., published by the B.C. Ministry of Environment, Lands & Parks, 1994. The procedure involves an extraction of the entire water sample with hexane. This extract is then evaporated to dryness, and the residue weighed to determine Oil and Grease. ALS Environmental's routine detection limit, or Limit of Reporting (LOR), for this method is 2 mg/L for a 1L sample volume. By request, a LOR of 1 mg/L is sometimes applied for this method. The 1 mg/L LOR is equal to the 99% confidence limit Method Detection Limit as defined by the US EPA. A higher degree of variability is expected at levels below 2 mg/L.

Recommended Holding Time:

Sample: 28 days Extract: 40 days

Reference: Puget Sound Protocols

For more detail see ALS Environmental "Collection & Sampling Guide"

Appendix 1 - METHODOLOGY - Continued

Results contained within this report relate only to the samples as submitted.

This Chemical Analysis Report shall only be reproduced in full, except with the written approval of ALS Environmental.

**End of Report** 

THE FOLLOWING DOCUMENTS ARE PROTECTED. AS SUCH THEY CANNOT BE INCLUDED IN THE ELECTRONIC COPY OF THE MASTER DOCUMENT.

THEY ARE APPENDED SEPARATELY IN ELECTRONIC FORMAT FOLLOWING THE MASTER DOCUMENT.

# ALS CHEMICAL ANALYSIS REPORTS:

- 1. V8788
- 2. W1226
- 3. W1551
- 4. W1583
- 5. W1767
- 6. W1856
- 7. W2020
- 8. W2230
- 9. W2922R
- 10. W3113R
- 11. W3782
- 12. W3805RR
- 13. W4162
- 14. W4187
- 15. W4481
- 16. W5070

# **APPENDIX III**

# **Pond Elevations**

Con Mine Tailings Pond Elevations (New maximum elevations effective Jan 23, 2001)

	MAX =	1707.480	neters	MAX =	1699.950 m	eters	
	UPPER PUD	Distance to	1 m freeboard	MIDDLE PUD	Distance to 1	m freeboard	COMMENTS
DATE	ELEVATION	(meters)	(feet)	ELEVATION	(meters)	(feet)	
31-Dec-03	1706.266	1.214	3.983	1697.241	2.709	8.888	
9-Jan-04	1706.369	1.111	3.645	1697.358	2.592	8.504	
16-Jan-04	1706.326	1.154	3.786	1697.448	2.502	8.209	
28-Jan-04	1706.585	0.895	2.936	1697.716	2.234	7.329	
5-Feb-04		0,907	2.976	1697.815	2.135	7.005	
13-Feb-04	1706.492	0.988	3.241	1697.797	2.153	7.064	
20-Feb-04 27-Feb-04	1706.510 1706.524	0.970 0.956	3.182 3.136	1697.906 1697.990	2.044 1.960	6.706 6.430	
5-Mar-04	is.	0.983	3.225	1698.055	1.895	6.217	
12-Mar-04	À-	0.959	3.146	1698,166	1.784	5.853	
19-Mar-04	1706.457	1.023	3.356	1698.225	1.725	5.659	
26-Mar-04	1706.380	1.100	3.609	1698.282	1.668	5,472	
2-Apr-04	1706.141	1.339	4.393	1698.130	1.820	5.971	
16-Apr-04	1706.745	0.735	2.411	1698.710	1.240	4.068	
23-Арг-04	1706.593	0.887	2.910	1698.686	1.264	4.147	
30-Apr-04	1706.603	0.877	2.877	1698.785	1.165	3.822	
7-May-04	re re	0.829	2.720	1699.161	0.789	2.589	
14-May-04	41	0.993	3.258	1,698.775	1.175	3.855	1
21-May-04	·	0.467	1.532	1,698.994	0.956	3.136	
28-May-04	i in	0.348	1.142	1,699.195	0.755	2.477	
4-Jun-04	•	0.274	0.899	1,699.286	0.664	2.178	_
11-Jun-04		0.267	0.876	1,699.294	0.656	2.152	
18-Jun-04		0.242	0.794	1,699.209	0.741	2.431	
25-Jun-04		0.304	0.997	1,698.948	1.002	3.287	
30-Jun-04 9-Jul-04		0.287	0.942 0.758	1,698.905 1,698.458	1.045 1.492	3.428 4.895	
9-Jul-04 16-Jul-04		0.193	0.633	1,698.195	1.755	5.758	
23-Jul-04		0.280	0.919	1,697.842	2.108	6.916	
29-Jul-04		0.214	0.702	1,697.634	2.316	7.598	
10-Aug-04		0.249	0.817	1,697.174	2.776	9.108	
20-Aug-04		0.278	0.912	1,696.641	3,309	10.856	
27-Aug-04	1,707.175	0.305	1.001	1,696.486	3.464	11.365	
3-Sep-04	1,707.270	0.210	0.689	1,696.216	3.734	12.251	
20-Sep-04	1,707.298	0.182	0.597	1,695.847	4.103	13.461	
4-Nov-04	1,706.798	0.682	2.238	1,697.054	2.896	9.501	
12-Nov-04	1,707.029	0.451	1.480	1,697.047	2.903	9.524	
3-Dec-04	1 .	0.451	1.480	1,697.418	2.532	8.307	Upper Pud Not Done - Instrument Frozen
10-Dec-04	· ·	0.521	1.709	1,697.474	2.476	8.123	
6-Jan-05	1	0.624	2.047	1,697.903	2.047	6.716	1
26-Jan-05		0.787	2.582	1,698.048	1.902	6.240	
1-Mar-05	4	0.828	2.717	1,698.496	1.454	4.770	
	1,706.634 1,706.833	0.846 0.647	2.776 2.123	1,698.691 1,698.887	1.259 1.063	4.131 3.488	
	1,705.833	0.021	0.069	1,699.105	0.845	2.772	Pumping Commenced
	1,707.391	0.021	0.292	1,699.198	0.752	2.467	I many commonwed
	1,707.338	0.142	0.466	1,699.198	0.752	2.467	
· ·	1,707.331	0.149	0.489	1,699.254	0.696	2.283	
	1,707.246	0.234	0.768	1,699.232	0.718	2.356	
1	1,707.127	0.353	1.158	1,699.241	0.709	2.326	1
	1,707.320	0.160	0.525	1,699.420	0.530	1.739	Ollerhead Survey - Questionable!
	1,706.915	0.565	1.854	1,698.960	0.990	3.248	Surveyed by Merv Mercer
11-Aug-05	1,706.770	0.710	2.329	1,698.754	1.196	3.924	Surveyed by Merv Mercer
	1,706.714	0.766	2.513	1,698.703	1.247	4.091	1
	1,706.690	0.790	2.592	1,698.620	1.330	4.364	
	1,706.673	0.807	2.648	1,698.339	1.611	5.285	
	1,706.691	0.789	2.59	1,698.194	1.756	5.761	Surmed by Mari Mars-
	1,706.687	0.793	2.60	1,698.396	1.554	5.098	Surveyed by Merv Mercer
1-Dec-05	1,706.632	0.848	2.78	1,698.404	1.546	5.072	Surveyed by Merv Mercer
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