

# APPENDIX A

## ENVIRONMENT ACT LICENCE No. 973 AND NOTICE OF ALTERATIONS

EA-8

3525

File: 1906.2

MANITOBA

R E G I S T E R E D

CLEAN ENVIRONMENT COMMISSION

Office of the Chairman  
Telephone: 895-5333  
Box 4, 139 Tuxedo Avenue  
Winnipeg, Manitoba  
R3N 0H6

February 4, 1983


Mr. Richard O. Burt,  
Production Manager,  
Tantalum Mining Corporation of Canada Limited,  
BERNIC LAKE, Manitoba.  
ROE OGO

Dear Mr. Burt:

Herewith Order No. 973 of The Clean Environment Commission dated February 7, 1983, issued to your Company in connection with the expansion of mill capacity and the construction and operation of a spodumene concentration pilot plant at the Tantalum Mine site.

Should you require clarification or explanation of any of the clauses of the order, please contact this office.

Yours truly,



Stan Eagleton,  
Chairman.

Mr. L. Strachan, Chief,  
Environmental Control Programs,  
Box 7, Building 2,  
139 Tuxedo Avenue,  
WINNIPEG, Manitoba. R3C 0V8

Mr. D. D. Blevins,  
Departmental Solicitor,  
Civil Litigation Branch,  
628 Woodsworth Building,  
405 Broadway Avenue,  
WINNIPEG, Manitoba. R3C 3L6

Mrs. V. MacArthur,  
Information Officer,  
Information Services,  
Room 29 Legislative Building,  
WINNIPEG, Manitoba. R3C 3L6

Provincial Library,  
200 Vaughan Street,  
WINNIPEG, Manitoba.  
R3C 1T5

Mr. F. N. Steele, City Solicitor,  
City of Winnipeg Law Department,  
510 Main Street,  
WINNIPEG, Manitoba.  
R3B 1B9

Mr. H. C. R. Gavin,  
Regional Manager,  
Manitoba Region,  
Environmental Protection Service,  
800 - 275 Portage Avenue,  
WINNIPEG, Manitoba. R3B 2B4

Mr. W. Hayden, Director,  
Fisheries Branch,  
100 - 1495 St. James Street,  
WINNIPEG, Manitoba.  
R3H 0W9

Mr. W. A. Bardswich, Director,  
Mines Branch,  
989 Century Street,  
WINNIPEG, Manitoba.  
R3H 0W4

AN ORDER OF THE CLEAN ENVIRONMENT COMMISSION  
UNDER THE CLEAN ENVIRONMENT ACT

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RE: THE CLEAN ENVIRONMENT COMMISSION and TANTALUM MINING CORPORATION OF CANADA LIMITED, Applicant,

- WHEREAS pursuant to the provisions of The Clean Environment Act, on the 10th day of October, 1972, the Tantalum Mining Corporation of Canada Limited submitted an application to The Clean Environment Commission to prescribe limits in connection with the operation of a Mine-Mill Complex located in Section 15, Township 17, Range 15 EPM with discharge of effluent into Bernic Lake in Manitoba;
- AND WHEREAS the Commission issued Order No. 396 on the 21st day of October, 1974, prescribing limits on the discharge or deposit of contaminants from the said operation;
- AND WHEREAS the Applicant filed proposals with the department for alterations to the said operation:
- (a) on the 28th day of January, 1980, in connection with the expansion of mill capacity from 163,260 tonnes to 226,750 tonnes per year;
  - (b) on the 18th day of March, 1982, in connection with the construction of a spodumene concentration pilot plant and construction of a dam to provide an impoundment for spodumene tailings in the North Bay of Bernic Lake;
- AND WHEREAS in the absence of limits, terms and conditions prescribed by a regulation under the said Act, the proposals were referred to the Commission to prescribe limits, terms and conditions;
- AND WHEREAS after giving notice of the alterations to the said operation and of its intention to consider rescinding the said order, the Commission did not receive notice of representation from any person likely to be affected by an order of the Commission issued in connection with the matter;
- AND WHEREAS the Commission considered the proposals on the 24th day of January, 1983;

IT IS HEREBY ORDERED THAT

1. The Applicant shall not discharge effluent from the final discharge point where:

- 1. (a) the concentrations of total suspended matter in the effluent are in excess of the corresponding maximum concentrations shown for those categories listed under columns I, II, and III of the following table:

Column I	Column II	Column III
Maximum Monthly Arithmetic Mean Concentration	Maximum Concentration In A Composite Sample	Maximum Concentration In A Grab Sample
25.0 mg/L	37.5 mg/L	50.0 mg/L

- (b) the pH of the effluent is below the minimum allowable values shown for those categories listed under columns I, II, and III of the following table:

Column I	Column II	Column III
Minimum Monthly Arithmetic Mean pH	Minimum pH In A Composite Sample	Minimum pH In A Grab Sample
6.0	5.5	5.0

- (c) the pH of the effluent is above the maximum allowable values shown for those categories listed under columns I, II, and III of the following table:

Column I	Column II	Column III
Maximum Monthly Arithmetic Mean pH	Maximum pH In A Composite Sample	Maximum pH In A Grab Sample
8.5	9.0	9.5

- 2. Subject to 3, the Applicant shall:

- (a) sample and analyze the effluent discharged at the final discharge point for total suspended matter at no less a frequency than that specified in the table below whereby the applicability of columns I, II, III, and IV shall be determined on the basis of the arithmetic mean concentration of the total suspended matter in the samples of effluent collected and reported in those preceding six months during which effluent discharge occurred:

2. (a)	Column I	Column II	Column III	Column IV
	At Least Weekly If Concentration Is Equal To Or Greater Than	At Least Every Two Weeks If Concentration Is Equal To Or Greater Than	At Least Monthly If Concentration Is Equal To Or Greater Than	At Least Every Six Months If Concentration Is Less Than
	25.0 mg/L	20.0 mg/L	15.0 mg/L	15.0 mg/L

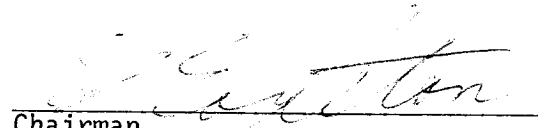
- (b) sample and analyze the effluent discharged at the final discharge point for pH not less frequently than:
- (i) once a week, where the pH of the effluent was less than 5.0 or more than 9.5 at any time in those preceding six months during which discharge of effluent occurred;
  - (ii) once every two weeks, where the pH of the effluent was between 5.0 and 5.5 or between 9.0 and 9.5 at any time in those preceding six months during which effluent discharge occurred;
  - (iii) once a month if (i) and (ii) do not apply.
3. The Applicant shall sample and analyze the effluent discharged from the final discharge point for such additional parameters and characteristics and at such frequencies and duration of time as are specified from time to time by the Commission.
  4. The Applicant shall measure the total monthly volume of effluent discharged at the final discharge point by a method of measurement or estimation satisfactory to the Environmental Management Division.
  5. The Applicant shall submit the data of the analyses and measurements carried out pursuant to 2, 3, and 4 to the Environmental Management Division within 30 days of the end of the month in which measurements and samples were taken.
  6. In the event the Commission deems it advisable to establish the effectiveness of any segment or component of the wastewater treatment system of the said operation, or to have specific areas of concern investigated, the Applicant shall submit to the Commission such engineering studies, drawings, specifications, analyses of wastewater streams and other information likely to be relevant as are requested in writing from time to time by the Commission.

7. With the exception of waste rock and mill tailings, the Applicant shall not dispose of solid waste or bulky metallic waste, as defined in regulations issued under the said Act, except in waste disposal grounds registered in accordance with the said regulations.
8. (a) In the event of an imminent cessation of the said operation, the Applicant shall forthwith file with the Commission a firm and detailed rehabilitation plan, to replace the preliminary rehabilitation scheme filed under date of the 20th October, 1975, pursuant to Commission Order No. 396, for consideration, possible amendment, and approval, or otherwise by the Commission.  
  
(b) Upon termination of the said operation, the Applicant shall take all steps necessary to carry out the detailed rehabilitation plan approved pursuant to 8(a) within a time frame agreed by the Commission.
9. This order replaces Order No. 396 which shall be and is hereby rescinded.
10. In this order:
  - (a) "effluent" includes mine water effluent, mill process effluent, tailings impoundment area effluent, treatment pond and treatment facility effluent, seepage and surface area drainage;
  - (b) "final discharge point" means the outflow channel at the south end of the West Dam, as shown on the drawing attached as Appendix "A" to this order, unless otherwise designated by the Commission in writing to reflect a change in the wastewater treatment or tailings disposal system;
  - (c) "monthly arithmetic mean" for a substance means the average value of the concentrations of such substance determined from all the composite or grab samples collected and reported during that month with the exception that, if the Applicant collects only one composite or grab sample during a month, the single set of analysis results shall be construed as being representative of the effluent quality for that month and shall be treated as the monthly arithmetic mean;

10. (c) "composite sample" means a quantity of effluent consisting of a minimum of 3 equal volumes of effluent collected at approximately equal time intervals over a sampling period of not less than 7 hours and not more than 24 hours or consisting of effluent collected continuously at an equal rate over a sampling period of not less than 7 hours and not more than 24 hours.

Order No. 973

Dated at the City of Winnipeg  
this 7th day of February, 1983.

  
Chairman,  
The Clean Environment Commission.

File: 1906.2



Access  
Road

Appendix "A" to  
Order No. 973

W.D.G.

North  
Dam

North  
Arm

West  
Dam  
Outflow  
Channel

East  
Dam

Trail

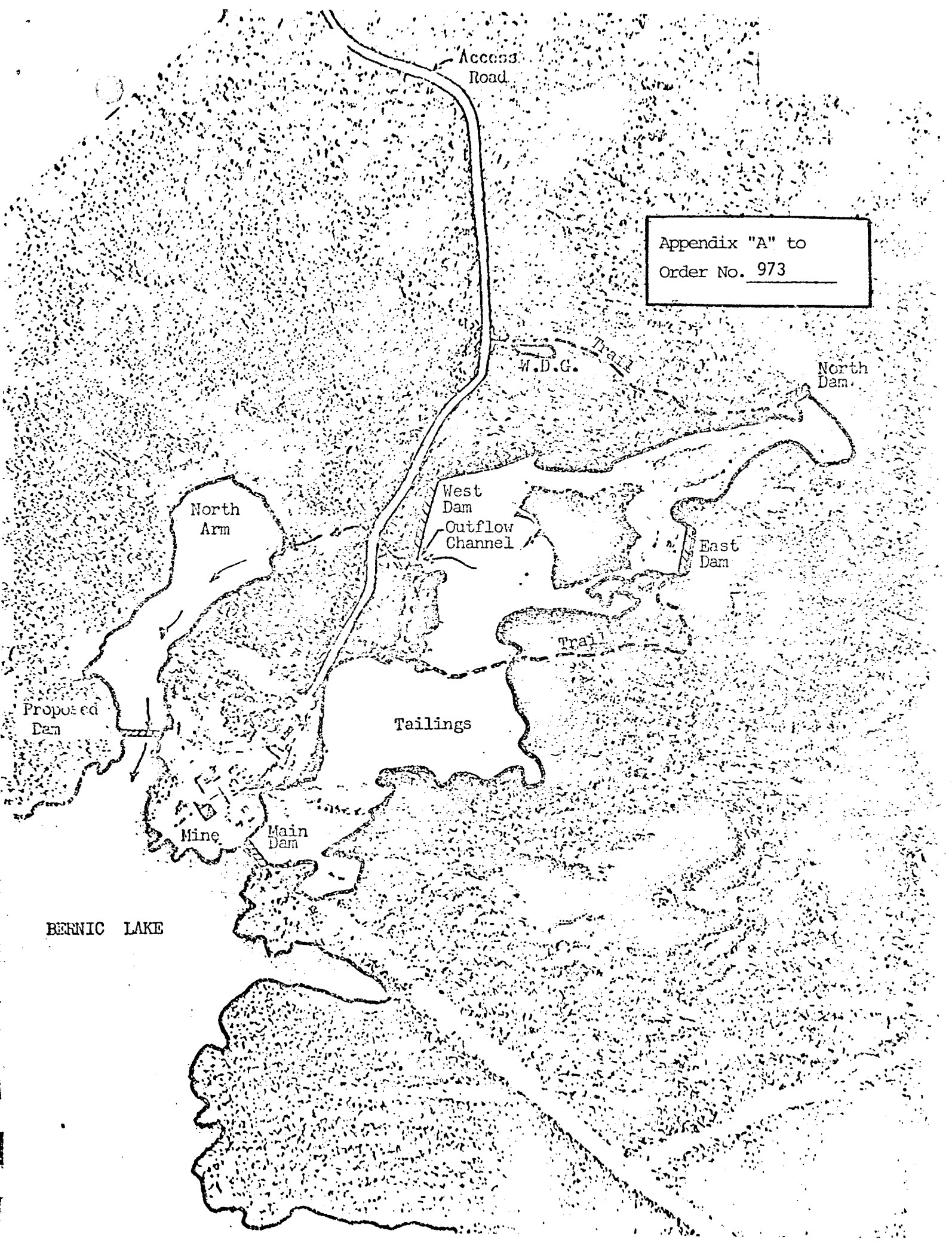
Proposed  
Dam

Tailings

Mine

Main  
Dam

BERNIC LAKE





OCT 5 1992

TANCO

Bldg. 2, 139 Tuxedo Ave.  
Winnipeg, Manitoba  
R3N 0H6  
Tel. 945-7071  
Fax 945-5229

**DISPOSITION OF PROPOSED ALTERATION**  
(Pursuant to Section 14 of The Environment Act)

*No A # 1*

Proponent: Tantalum Mining Corporation of Canada Limited  
Box 2000, Lac Du Bonnet, MB. R0E 1A0  
Attention: Mr. W.J. Neal  
Surface Superintendent

Client file: 1906.2

Date of receipt of proposed alteration: September 9, 1992

**Nature of proposed alteration:**

The existing tailings disposal management plan has been altered by the construction of retention dams #1, #3 and #4 to elevations of 1103', 1114' and 1114', respectively, and increasing the heights of existing dams #1, #2 and #5 to elevations of 1104', 1115' and 1114', respectively. Also, a new "Future Storage Area" is proposed within the 1090' elevation contour on the north shore of North Bay, requiring another new dam.

**Supporting Information:**

sufficient  insufficient

**Departmental evaluation:**

major alteration  minor alteration  pending more information

**Alteration approval status:**

not approved  under consideration  approved under Section 14(2) of The Environment Act

**Comments / Conditions:**

This approval is conditional upon:  
1) TANCO receiving surface rights to all the additional Crown Land areas, outside of the current surface rights boundary zone, which would be encroached upon by the "Future Storage Area" 1090' elevation contour and the proposed new dam identified in green on the submitted plan;  
2) all the affected dams being approved by the Mines Inspection Branch for structural stability;  
3) dams #1, #2, #3, #4, #5 and the proposed new dam on the 1090' contour elevation being so constructed so as to ensure no loss of fluids from the tailings ponds either through, under or over these dams; and  
4) the "Future Storage Area" on the north shore of the North Bay never receiving any acid generating tailings solids.

*cc ROB  
RAS  
SLV*

*original in  
main file*

*L. Strachan*

Larry Strachan, P. Eng.  
Director, Environment Act

Date: *Sept 22/92*

c.c. D. DesRivieres, Regional Director, Eastern-Interlake Region  
c.c. R. Glassford, P. Eng., Director, Mines Inspection Branch, Dept. of Labour

*W.L.  
Best*

*6/10/92  
W. Neal*



*C.C. ROB  
RAS  
PTV  
WJN*

*6/11/92*

*manifestes*

*3.5.2.5*

November 2, 1992

Mr. W.J. Neal  
Surface Superintendent  
Tantalum Mining Corp. of Canada Ltd.  
Box 2000  
Lac du Bonnet, Manitoba  
R0E 1A0

Dear Mr. Neal:

Re: Tailings Disposal Area Long Range Plan

In response to your letter of October 14, 1992, this Branch has considered your proposal and has no objections, subject to compliance with the conditions imposed by the Mines Inspection Branch of Manitoba Labour and Manitoba Environment.

Yours truly,

Arthur E. Ball, P.Eng.  
A/Director

AEB/dj

3.5.2.5  
Vault

October 20, 1992

Manitoba Government  
Energy & Mines/Mines Branch  
555-330 Graham Avenue  
R3C 4E3

Attn: Mr. Art Ball, Chief Mining Engineer

Dear Mr. Ball:

Re: Tailings Disposal Area Long Range Plan

Tantalum Mining made a submission dated August 20, 1992 to Manitoba Environment and to Mines Inspection Branch regarding our existing tailings disposal area dams, and a proposed "future storage area". Our submission included a request for guidance and advice in ensuring that we comply with all applicable regulations and legislation.

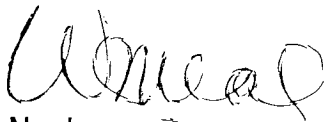
Copies of responses from the aforementioned are attached herewith; we consider that, subject to stated conditions being met, we comply with Workplace Safety & Health Act Section 21 "Requirements for tailings dams", and the Environment Act Chapter E125.

Neither of the aforementioned has indicated any other regulatory authority to which Tantalum Mining must apply regarding this proposal. We therefore request the approval of your office, and advice of your office as to what, if any, other regulatory authority requiring involvement.

Your early response will be appreciated.

Yours truly,

TANTALUM MINING CORPORATION OF CANADA LIMITED



W.J. Neal  
Surface Superintendent

WJN:SM  
Encl.



Labour

Workplace Safety and  
Support Division  
Mines Inspection Branch

1000 — 330 St. Mary Avenue  
Winnipeg, Manitoba, CANADA  
R3C 3Z5

(204) 945-3446

October 14, 1992

Mr. W. J. Neal  
Surface Superintendent  
Tantalum Mining Corporation of Canada Limited  
Box 2000  
Lac du Bonnet, MB  
R0E 1A0

Dear Mr. Neal:

Re: Proposed Tailings Storage Area

In response to your letter and drawings of August 20, 1992 and our inspection of the several sites on October 7, 1992, this will advise that your submission is in compliance with Section 21 of Manitoba Regulation 62/87 under The Workplace Safety and Health Act, subject to:

- 1) Placement of riprap on Dam #5 over the area of the subsidence is successful in precluding further movement.
- 2) Suitable testing of the soils over bedrock under the future dam across the North Bay will be carried out to confirm basal stability.

Yours very truly,

R.H. Glassford, P.Eng  
Director

RHG/lw  
TANCODAM

**Manitoba**FOR: ALISTAIR GIBB.  
FROM: PETER V.

Environment

Environmental Management

Building 2  
139 Tuxedo Avenue  
Winnipeg, Manitoba, CANADA  
R3N 0H6

File: 1906.2

March 1, 1995

NoA # 2

Mr. R.O. Burt, P. Eng.  
Director and General Manager  
Tantalum Mining Corporation of Canada Limited  
Box 2000  
Lac du Bonnet MB R0E 1A0**FAXED**

Dear Mr. Burt:

**Re: Cesium Formate Pilot Plant**

Thank you for meeting with me and other staff members on February 23, 1995, to present your proposal for the possible establishment and limited operation of a cesium formate pilot plant at your existing and licensed mining development at Bernic Lake. This letter is in response to your written and verbal request for an approval of this proposed alteration to your mining development.

Based on the information received on this proposed alteration, I regard the alteration to be a minor alteration. As such, I conditionally approve of the implementation of the proposed alteration pursuant to the provisions of Section 14(2) of The Environment Act, meaning that no changes need to be made to the existing Environment Act Licence No. 973. The conditions of this approval are:

- 1) that I am informed of the dates that the pilot plant commences operation and subsequently ceases operation;
- 2) that the operation of the pilot plant is monitored and evaluated by an independent consultant, and that any environmental impacts above and beyond any existing impacts as may be imposed by the existing operations at the mine site are identified; and,
- 3) that I am informed immediately of any environmental concerns as might be identified in the course of the monitoring activities.

I trust that the foregoing is to your satisfaction, and wish you success in this endeavour should the decision be made to proceed with the proposed pilot plant.

Yours truly,

L. Strachan, P. Eng.  
Director  
Environmental Approvals

c.c. D. DesRivieres, Regional Director, Eastern-Interlake Region (enclosure included)



EA-14  
**Manitoba**

[CAPP NoA]

 NoA #3

Environment

Environmental Management

Suite 160 VIA STATION  
123 Main Street  
Winnipeg MB R3C 1A5  
CANADA

Our File: 1906.2  
Your File: 0402-A-03

Internet: <http://www.gov.mb.ca/environ>

April 4, 1997

Mr. William Ferguson  
General Manager  
Tantalum Mining Corporation of Canada Limited (Tanco)  
Box 2000  
Lac du Bonnet MB R0E 1A0

Dear Mr. Ferguson:

**Re: Cesium Products Pilot Facility - Notice of Alteration**

This letter is in response to Tanco's Notice of Alteration (NoA) dated December 31, 1996, and your the Initial Environmental Assessment (IEA) submitted under cover of your Feb. 28/97 letter in support of the NoA. It is understood that this NoA stems from the initial NoA dated February 22, 1995, and approved on March 1, 1995, and outlines changes made to the size, scope and manner of operation of the facility compared to the initial proposal, and that the IEA has been prepared to address the detailed nature of the proposed changes and their environmental significance. In regards to the NoA dated February 22, 1995 and approved on March 1, 1995, it is hereby acknowledged that all of the environmental commitments offered by Tanco, as well as the applicable conditions stipulated in that alteration approval, have to date been fully satisfied.

In consideration of the information provided in the IEA, and the mitigation measures taken to minimize and contain the potential impacts of the operation of this facility, I regard the proposed pilot operation of the Cesium Products Pilot Facility to constitute a minor alteration to the NoA approved on March 1, 1995. Accordingly, pursuant to Section 14(2) of The Environment Act, I hereby approve the implementation of the alteration and operation of the revised pilot facility for a period of two years commencing with the first date of pilot phase production, subject to the conditions that:

- 1) the Licencee notifies the Director in writing of the date of commencement of pilot phase production at the Cesium Products Pilot Facility;
- 2) the Licencee uses the Cesium Products Pilot Facility only to produce 83 wt% cesium formate solution;
- 4) the Licencee produces no more than 3,600 tonnes of 83 wt% cesium formate solution for the purposes of the four deep-well drilling tests;
- 5) the Licencee does not produce any cesium formate solution during the pilot phase for purposes other than the four deep-well drilling tests;
- 6) the Licencee upgrades the overall mine site's Emergency Response Plan (ERP) as soon as possible to address all the new potential hazards associated with the operation of the proposed facility and the handling, storage or spill of any hazardous materials, with the ERP prepared in a manner consistent with CAN/CSA standard Z731-95 - Emergency Planning For Industry;

Letter from Strachan to Ferguson

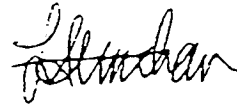
April 4, 1997

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- 7) the Licencee submits a copy of the revised ERP to the Director as soon as it is completed, and maintains the ERP in a current status;
- 8) the Licencee monitors: the process waste containment cell for any leakage; the thermal load released with the digester coolant into the Tailings Management Area and its impact upon the receiving environment; and any other environmental uncertainties in advance of the commercial production phase; and
- 9) the Licencee submits to the Director semi-annual (i.e. once every six months) reports outlining the results of the previous six months of environmental monitoring carried out pursuant to condition 8) as well as the running total of tonnes of 83 wt% cesium formate produced up to the date of each report.

We anticipate that, before the Cesium Products Pilot Facility is dedicated to commercial production, at least one more NoA will be submitted to the Department to convert the facility from a pilot facility to a full-scale commercial production facility for cesium formate or other cesium products. At such time, we expect to review and update the existing Environment Act Licence No. 973 so that it fully captures and addresses all changes which have occurred at the mine site since February 7, 1983, when the Licence was issued. In the meantime, I wish you every success in your endeavours to establish a broad commercial market for your cesium formate solution.

Yours truly,



Larry Strachan, P. Eng.  
Director  
Environmental Approvals

- c. J.M. McKernan, Principal, TetrES Consultants Inc.  
D. Brown, Regional Director, Eastern-Interlake Region (enclosure included)



**Manitoba**

EA-15



Environment

Environmental Management

123 Main Street, Suite 160  
Winnipeg MB R3C 1A5  
CANADA

NoA # 4

File: 1906.2

Internet: <http://www.gov.mb.ca/environ>

July 8, 1998

DISTRIBUTION

Mr. William Ferguson  
General Manager  
Tantalum Mining Corporation of Canada Limited (Tanco)  
Box 2000  
Lac du Bonnet MB R0E 1A0

J. Pavitt  
B. Bakke  
A. Gibb  
T. Tonner ✓

Dear Mr. Ferguson:

**Re: Cesium Products Pilot Facility - Notice of Alteration**

This letter is in response to Tanco's Notice of Alteration (NoA) dated May 29, 1998, and the supporting "Environmental Protection Plan" and "Initial Environmental Assessment" (IEA, Report No. 2), each prepared by TetraEs Consultants Inc. and dated June, 1998. It is our understanding that this NoA, referenced as NoA No. 4, expresses an alteration to the NoA No. 3 filed on December 31, 1996, which was conditionally approved on April 4, 1997. The essence of the NoA No. 4 is the construction of a second double-HDPE-lined process waste containment cell to provide an additional 2 years of storage capacity, beyond the capacity limits of the existing Cell No. 1 for the ongoing disposal needs of the cesium formate pilot facility while alternative waste management strategies are being explored.

In consideration of the information provided in support of the NoA No. 4, and the mitigation measures being proposed to minimize and contain the potential impacts of the operation of this facility, I regard the proposed construction of a second double-HDPE-lined process waste containment cell within the Tailings Management Area to constitute a minor alteration to NoA No. 3. Accordingly, pursuant to Section 14(2) of The Environment Act, I hereby approve the implementation of the alteration, together with the ongoing operation of the cesium formate production facility as a pilot plant until August 15, 1999, subject to the conditions that:

- 1) the Licencee uses the Cesium Products Pilot Facility only to produce 83 wt% cesium formate solution;
- 2) the Licencee produces no more than 3,600 tonnes of 83 wt% cesium formate solution for the purposes of the four deep-well drilling tests;
- 3) the Licencee does not produce any cesium formate solution during the pilot phase for purposes other than the four deep-well drilling tests;
- 4) the Licencee upgrades the overall mine site's Emergency Response Plan (ERP) as soon as possible to address all the new potential hazards associated with the operation of the proposed facility and the handling, storage or spill of any hazardous materials, with the ERP prepared in a manner consistent with CAN/CSA standard Z731-95 - Emergency Planning For Industry;
- 6) the Licencee submits a copy of the revised ERP to the Director by no later than July 31, 1998, and maintains the ERP in a current status;



Letter from Strachan to Ferguson

July 8, 1998

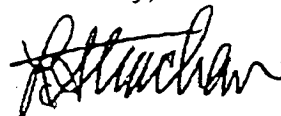
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- 7) the Licencee monitors the liners of process waste containment cell #1 and cell #2, as well as the receiving groundwater, for evidence of any leakage, and continues to monitor any other environmental uncertainties in advance of the filing of a commercial production proposal; and
- 8) the Licencee submits reports to the Director, once every six months, outlining the results of the previous six months of environmental monitoring carried out pursuant to condition (7) as well as the running total of tonnes of 83 wt% cesium formate produced up to the date of each report.

The foregoing conditions supercede the conditions which were specified in the conditional NoA approval dated April 4, 1997.

We anticipate that, before the Cesium Products Pilot Facility is dedicated to commercial production, at least one more NoA will be submitted to the Department to convert the facility from a pilot facility to a full-scale commercial production facility for cesium formate or other cesium products. At such time, we expect to review and update the existing Environment Act Licence No. 973 so that it fully captures and addresses all changes which have occurred at the mine site since February 7, 1983, when Licence No. 973 was issued.

Yours truly,



Larry Strachan, P. Eng.  
Director  
Environmental Approvals

- c. J.M. McKernan, Principal, TetrES Consultants Inc.  
D. Brown, Regional Director, Eastern-Interlake Region (enclosures included)



Environment

Environmental Management

123 Main Street, Suite 160  
Winnipeg MB R3C 1A5  
CANADA

File: 1906.2

Fax: (204) 945-5229

Internet: <http://www.gov.mb.ca/environ>

January 4, 1999

Mr. William Ferguson  
General Manager  
Tantalum Mining Corporation of Canada Limited (Tanco)  
Box 2000  
Lac du Bonnet MB R0E 1A0

Dear Mr. Ferguson:

**Re: Cesium Products Pilot Facility - Notice of Alteration No. 5**

This letter is in response to Tanco's Notice of Alteration (NoA) submitted on July 14, 1998, and the supporting "Initial Environmental Assessment" (IEA, Report No. 3) submitted on November 24, 1998. It is our understanding that this NoA, referenced as NoA No. 5, expresses a proposed alteration to the existing Cesium Products Pilot Facility (CPPF) to the extent of converting to commercial production for cesium formate solution, and expanding the facility to double its cesium formate solution production capacity from 500 oilfield barrels (183 tonnes) per month to 1,000 oilfield barrels (366 tonnes) per month, while continuing to function in a pilot plant capacity for the production of new cesium products (e.g. cesium acetate, cesium hydroxide).

In consideration of the information provided in support of the NoA No. 5, the proactive initiatives outlined in the Pollution Prevention Memorandum of Understanding (P2 MOU) signed by Manitoba Environment and the Licencee, and the mitigation measures proposed to minimize and contain the potential impacts of the operation of this facility, I regard the potential environmental effects of NoA No. 5 to be insignificant. Accordingly, pursuant to Section 14(2) of The Environment Act, I hereby approve the implementation of NoA No. 5 subject to the conditions that:

- 1) a long-term solution, satisfactory to the Director, respecting the management of process waste from the Cesium Products Facility is developed through the P2 MOU by August 31, 2000;
- 2) the Licencee agrees to the development of a new and updated Environment Act licence which would replace the existing Licence No. 973 and would address:
  - (a) the operation of the existing mine and mill;
  - (b) the operation of the Cesium Products Facility;
  - (c) all the alterations filed by the Licencee since February 7, 1983; and
  - (d) outstanding environmental uncertainties identified through the IEA, Report No. 3;whereby the new licence would be developed in consultation with Tanco and an interdepartmental Technical Advisory Committee;
- 3) the Licencee provides such information, in a timely manner, as may be requested by the Director to facilitate the development of the new licence;



- 4) the Licencee does not commercially produce any other product in the Cesium Products Facility other than cesium formate solution unless so approved by the Director;
- 5) the Licencee does not carry out any pilot production of other cesium products, unless individually approved by the Director;
- 6) the Licencee continually maintains the Emergency Response Plan in a current status and in a format consistent with CAN/CSA standard Z731-95 - Emergency Planning For Industry;
- 7) the Licencee continues to monitor the liners of process waste containment cell #1 and cell #2, as well as the receiving groundwater, for evidence of any leakage; and
- 8) the Licencee continues to submit reports to the Director, once every six months, outlining the results of the previous six months of environmental monitoring carried out pursuant to condition (7), supported with a technical interpretation compiled by an qualified person.

The foregoing conditions hereby supercede the conditions which were specified in the conditional NoA No. 4 approved on July 8, 1998.

Should you wish to discuss this approval, please do not hesitate to contact me.

Yours truly,



Larry Strachan, P. Eng.  
Director  
Environmental Approvals

- c. T. Tonner, P. Eng., Environmental/Safety Manager, Tanco  
D. Brown, Regional Director, Eastern-Interlake Region  
S. Scrafield/Attn: J. Spiegall

# Manitoba

EA-25



Conservation

Environmental Stewardship Division

123 Main Street, Suite 160  
Winnipeg MB R3C 1A5  
CANADA

Fax: (204) 945-5229

Internet: <http://www.gov.mb.ca/environ>

File: 1906.2

FAXED  
884-2211

July 4, 2001

REC'D/RECEIVED

n 4 -07- 2001

Mr. William Ferguson  
General Manager  
Tantalum Mining Corporation of Canada Limited (Tanco)  
Box 2000  
Lac du Bonnet MB R0E 1A0

Dear Mr. Ferguson:

**Re: Cesium Products Facility - Notice of Alteration No. 6**

This letter is in response to Tanco's Notice of Alteration (NoA) No. 6 submitted on June 6, 2001, and the supporting environmental effects report dated May, 2001. It is our understanding that in the circumstance of no long-term solution having been developed to-date through the Pollution Prevention Memorandum of Understanding for the management of the process wastes from the Cesium Products Facility (CPF), and whereby Disposal Cell #1 is full and Disposal Cell #2 is reaching full capacity, Tanco wishes to alter its CPF process waste management program by:

- dewatering the double-lined Disposal Cell #1 to the double-lined Disposal Cell #2;
- removing about 45,000 m<sup>3</sup> of CPF solid residues from the lined Disposal Cell #1 and transporting and depositing them into an unlined pit to be developed elsewhere within the existing Old Tailings Management Area (TMA); and
- preparing the emptied Disposal Cell #1 for re-use as soon as Disposal Cell #2 had been filled to capacity.

In consideration of the environmental effects study provided in support of the NoA, and the measures proposed to address any potential impacts stemming from the NoA, I regard the potential environmental effects of the NoA to be insignificant. Accordingly, pursuant to Section 14(2) of The Environment Act, I hereby approve the implementation of the NoA subject to the conditions that:

- 1) the removal, transfer and burial of the CPF solid residues is carried out as proposed, and deposited into a pit in the Old TMA at a location identified in the NoA as the "preferred disposal location";
- 2) subsequent to the removal of the CPF solid residues from Disposal Cell #1, the integrity of the inner liner of that cell is tested by transferring liquor from Disposal Cell #2 into Disposal Cell #1 to a depth of at least 2.5 metres and testing the leakage rate into the interstitial space between the inner and outer liner of Cell #1;

Letter from Strachan to Ferguson

July 4, 2001

Page 2 of 2

- 3) a report on the leakage rate of fluids into the interstitial space between the inner and outer liner of Disposal Cell #1 is provided to the Director, with the results compared to the manufacturer's maximum leakage rate specifications, as well as compared to the leakage rates determined during the past operating period of Disposal Cell #1;
- 4) no new CPF solid residues are deposited into the emptied Disposal Cell #1 until:
  - (a) any necessary inner liner repairs are completed; and
  - (b) the Director has expressed satisfaction, in writing, with the leakage rate results provided through item 3 above;
- 5) upon completion of the transfer of the CPF solid residues to the proposed pit, the transferred residue is covered with a 0.6 metre thick cap of the existing on-site tailings/feldspar material; and
- 6) a pre-placement and post-placement (of the CPF solid residues) groundwater sampling program is undertaken, as proposed, at the proposed monitoring wells in the vicinity of the "preferred disposal location", and at any additional monitoring wells as may be requested by the Director, with the results submitted to the Director annually, within 45 days of the collection of those annual sample runs taken for the comprehensive chemical analyses.

Should you require any clarification of any condition of this NoA approval, please do not hesitate to contact me at (204) 945-7071.

Yours truly,



Larry Strachan, P. Eng.  
Director  
Environmental Approvals

cc. T. Tonner, P. Eng., Environmental/Safety Manager, Tanco  
D. Ramsey, Agassiz North Associates Limited  
G. Prouse, Director, Eastern Region (enclosure included)

EA-18

# Manitoba



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File: 1906.2

July 24, 2001

Mr. William Ferguson  
General Manager  
Tantalum Mining Corporation of Canada Limited (Tanco)  
Box 2000  
Lac du Bonnet MB R0E 1A0

Dear Mr. Ferguson:

**Re: Cesium Products Facility - Notice of Alteration No. 7**

This letter is in response to Tanco's Notice of Alteration (NoA) No. 7 dated June 1, 2001 and submitted on June 5, 2001, and the supporting "Capital Project Submission Document" and "Conventional Cesium Project Conceptual Design Basis Report". It is our understanding that Tanco wishes to implement alterations within the existing Cesium Products Facility to augment the current 500 barrels/month production of cesium formate solution with 500,000 lbs/year (equivalent to 60 barrels/month of cesium formate solution) of technical grade cesium sulphate contained in the form of conventional cesium products of either cesium sulfate, cesium chloride, cesium hydroxide or cesium carbonate, while continuing to produce cesium formate solution at a production rate of 500 oilfield barrels/month.

Whereas: Condition #4 of the approval for NoA No. 5, dated January 24, 1999, requires the approval of the Director for the production of any other product other than cesium formate solution; the overall production of cesium products on an equivalency basis of cesium formate solution will remain less than the approved 1,000 oilfield barrels per month; and no new or significant environmental impacts resulting from the proposed alterations are anticipated by Tanco; I hereby approve the proposed NoA No. 7 pursuant to Condition #4 of the approved NoA No.5.

Should you require any clarification of any condition of this NoA approval, please do not hesitate to contact me at (204) 945-7071.

Letter from Strachan to Ferguson

July 24, 2001

Page 2 of 2

Yours truly,



Larry Strachan, P. Eng.

Director

Environmental Approvals

cc. T. Tonner, P. Eng., Environmental/Safety Manager, Tanco  
G. Prouse, Regional Director, Eastern Region (enclosure included)



# Manitoba

28-19



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Winnipeg MB R3C 1A5  
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Fax: (204) 945-5229

Internet: <http://www.gov.mb.ca/envirom>

File: 1906.2

May 17, 2002

**FAXED**  
884-2211

William Ferguson

General Manager

Tantalum Mining Corporation of Canada Limited

Box 2000

Lac Du Bonnet MB R0E 1A0

Best Not what I  
was lead to believe!  
AEI

Dear Mr. Ferguson:

**Re: Temporary Transfer of Excess Fluids - Notice of Alteration No. 8**

In response to your letter dated May 15, 2002, I acknowledge the circumstance that TANCO is presently at risk of exceeding the holding capacity of the active Cesium Products Facility (CPF) Containment Cell #2 due to difficulties being experienced in reducing the fluid level in Cell #2 by the method normally used to date. It is also understood that the proposed emergency response to manage the situation is to transfer a volume of 300 to 500 cubic metres of fluids from Cell #2 to the CPF Containment Cell #1, with the transferred fluid to be returned from Cell #1 to Cell #2 as soon as conditions permit. Whereas the double lined Cell #1 had been decommissioned, cleaned out, and not yet re-commissioned for re-use but still possessing an operable inter-layer recovery system, I hereby approve the temporary transfer of up to 500 cubic metres of fluids from Cell #2 to Cell #1 conditional upon TANCO:

- 1) implementing the inter-layer recovery system in Cell #1, as necessary, and for the duration until all the transferred fluids been returned to Cell #2;
- 2) providing notification to the Director upon the completion of having returned all the transferred fluids from Cell #1 back to Cell #2, together with information on;
  - (a) the amount of fluids transferred from Cell #2 to Cell #1;
  - (b) the amount of fluids returned from Cell #1 to Cell #2; and
  - (c) the quantity of fluids required recovered from the inter-layer recovery system.

Please keep me informed if any difficulties are encountered throughout this approved undertaking.

CC: T. Donner

Yours truly,

Larry Strachan, P. Eng.  
Director  
Environment Act

cc. B. Bremner



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CANADA

Fax: (204) 945-5229

July 24, 2002

File 1906.20

Mr. William Ferguson  
General Manager  
Tantalum Mining Corporation of Canada Limited (Tanco)  
Box 2000  
Lac du Bonnet MB R0E 1A0

Dear Mr. Ferguson:

**Re: Cesium Products Facility – Notice of Alteration No. 9  
- Placement of Containment Cell No. 2 Residue in Old TMA**

This letter is in response to Tanco's Notice of Alteration (NOA) submitted on July 8, 2002 and supporting technical and environmental effects report. You indicated that you want to extend the same plan that was previously approved for residue (i.e. NOA No. 6) from Containment Cell No. 1 of the Cesium Products Facility (CPF) to residue from Containment Cell No. 2. The work that would be undertaken would include:

- dewatering Containment Cell No. 2 with the transfer of water to Containment Cell No. 1;
- removing solid residue from Containment Cell No. 2, transporting and depositing it into an area within the existing Old Tailings Management Area (TMA) where residue from Containment Cell 1 was previously placed;
- covering the residue with a tailing/feldspar cap; and
- preparing the emptied Containment Cell No. 2 for re-use.

.../2

In consideration of the environmental effects outlined in the supporting report, I regard the potential environmental effects of the NOA to be insignificant. Accordingly, pursuant to Section 14(2) of The Environment Act, I hereby approve the implementation of the NOA subject to the following conditions:

1. removal, transfer and burial of the CPF solid residue is carried out as proposed;
2. subsequent to the removal of the CPF solid residue from Containment Cell No. 2, the integrity of the inner liner of that cell is tested by transferring liquor from Cell No. 1 into Cell No. 2 to a depth of at least 2.5 metres and testing the leakage rate into the interstitial space between the inner and outer liner of Cell No. 2;
3. a report on the leakage rate of fluids into the interstitial space between the liners is provided to the Director, with the results compared to the manufacturer's maximum leakage rate specifications, as well as compared to the leakage rates determined during the past operating period of Cell No. 2;
4. new CPF residue shall not be deposited into the emptied Cell No. 2 until:
  - a) any necessary inner liner repairs are completed; and
  - b) the Director has expressed satisfaction, in writing, with the leakage rate results provided through item 3 above;
5. CPF residue placed in the Old TMA area shall be covered with a 0.6 metre thick cap of tailing/feldspar material; and
6. the groundwater-monitoring program in the area of the disposal site shall be continued, with the results submitted to the Director annually, within 45 days of the collection of those annual sample runs taken for the comprehensive chemical analyses.

Should you require any clarification of any condition of this approval, please call me at (204)-945-7071.

Yours truly,



Larry Strachan, P. Eng.  
Director  
Environmental Approvals

- c. Robert Cameron, A/Director, Eastern Region

**TRANSITIONAL AUTHORIZATION FOR DELETERIOUS SUBSTANCES  
UNDER THE METAL MINING EFFLUENT REGULATIONS**

(Name and address of the owner and operator of the mine)

Owner: Cabot Corporation

Operator: Tantalum Mining Corporation

Lac du Bonnet

Lac du Bonnet

Manitoba

Manitoba

(Name and address of the mine)

Tanco Mine

Lac du Bonnet

Manitoba

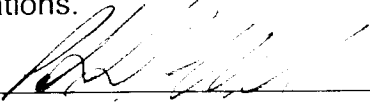
is hereby authorized as of December 6, 2002 to deposit the deleterious substances specified below until December 6, 2004 for effluent from the final discharge point identified as Final Effluent to Bernic Lake in William Ferguson's application for a transitional authorization dated September 3, 2002.

Deleterious Substance	Maximum Authorized Monthly Mean Concentration <sup>1</sup>	Maximum Authorized Concentration in a Composite Sample <sup>2</sup>	Maximum Authorized Concentration in a Grab Sample <sup>3</sup>
Arsenic	N/A	N/A	N/A
Copper	N/A	N/A	N/A
Cyanide	N/A	N/A	N/A
Lead	N/A	N/A	N/A
Nickel	N/A	N/A	N/A
Zinc	N/A	N/A	N/A
Radium 226	N/A	N/A	N/A
Total Suspended Solids	25.0 mg/L	37.5 mg/L	50.0 mg/L

Authorized Effluent pH Range<sup>4</sup>: 6.0 to 9.5

NOTE: N/A means "Not applicable"

IMPORTANT: Please refer to sections 6 to 27 and subsection 28(1) of the *Metal Mining Effluent Regulations* for conditions governing the authority to deposit. In addition, please note that this authorization may be revoked under section 38 of those Regulations.

Authorization Officer: (Signature): 

(Name): Peter Blackall

(Position): Regional Director, Environmental Protection

(Date): NOVEMBER 29, 2002

- <sup>1</sup> The maximum monthly mean of the deleterious substance in effluent is the greater of the maximum monthly mean concentration of the substance recorded during the 12-month period preceding the date of the application for the transitional authorization and the authorized monthly mean concentration set out in column 2 of Schedule 4. The maximum monthly mean concentration for a substance may not exceed the concentration required by the jurisdiction where the mine is located, if applicable.
- <sup>2</sup> The maximum authorized concentration of the deleterious substance in each composite sample collected is equal to 1.5 times the maximum authorized monthly mean concentration.
- <sup>3</sup> The maximum authorized concentration of the deleterious substance in each grab sample collected is equal to 2.0 times the maximum authorized monthly mean concentration.
- <sup>4</sup> The lower limit of the authorized pH range is equal to the lowest pH recorded during the 12-month period preceding the date of the application for the transitional authorization or 6.0, whichever is less. The upper limit of the authorized pH range is equal to the highest pH recorded during the 12-month period preceding the date of the application or 9.5, whichever is greater.



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Fax: (204) 945-5229

File 1906.20

COPY IN FILE 3.5.2.12

June 30, 2004

JUL - 6 2004

Mr. William Ferguson  
General Manager  
Tantalum Mining Corporation of Canada Limited (Tanco)  
A Cabot Corporation Company  
Box 2000  
Lac du Bonnet, MB R0E 1A0

cc: T. Tonner ✓  
S. Pavitt  
- 6 July 04

**COPY**

Dear Mr. Ferguson:

**Re: Cesium Products Facility – Notice of Alteration No. 10  
Placement of Containment Cell No. 1 Residue into the old TMA**

This letter is in response to Tanco's Notice of Alteration (NoA) dated June 2, 2004, wherein you request authorization to remove 45,000 m<sup>3</sup> of the Cesium Products Facility (CPF) residue from Containment Cell #1 for transport and placement into the existing and approved residue dry-stacking area established in the old tailings management area (TMA). The work that would be undertaken would include:

- dewatering Containment Cell No. 1 with the transfer of water to Containment Cell No. 2;
- removing solid residue from Containment Cell No. 1, and transporting and depositing it onto the existing DPF residue depository area in the old TMA where residue from Containment Cells #1 and #2 has previously been placed;
- capping the residue with non reactive feldspar waste rock; and
- preparing the emptied Containment Cell No. 1 for re-use.


In consideration of the most recent "CPF Residue Placement Groundwater Monitoring Data, 2001-2003" report dated May 25, 2004, I regard the potential environmental effects of the NoA to be insignificant. Accordingly, pursuant to Section 14(2) of The Environment Act, I hereby approve the implementation of the NoA subject to the conditions that:

1. the removed residue is placed in the old TMA, on top of the previously deposited residue, and covered with a 0.6 metre thick cap of non reactive feldspar waste rock;
2. the resultant increase in surficial elevation of the deposited residue in the old TMA does not give rise to the release of fugitive emissions of particulate matter into the environment beyond the boundary of the old TMA;

3. the effectiveness of the feldspar cover is substantiated with actual air quality data collected beyond the boundary of the old TMA in a dry weather period and under gusty wind conditions in the direction of the air monitoring unit(s), and submitted to the Director within 3 months of the date this letter;
4. subsequent to the removal of the CPF solid residue from Containment Cell No. 1, the integrity of the inner liner of that cell is tested by transferring liquor from Cell No. 2 into Cell No. 1 to a depth of at least 2.5 metres and testing the leakage rate into the interstitial space between the inner and outer liner of Cell No. 1;
5. a report on the leakage rate of fluids into the interstitial space between the liners is provided to the Director, with the results compared to the manufacturer's maximum leakage rate specifications, as well as compared to the leakage rates as determined to date over the operating period of Cell No. 1;
6. new CPF residue is not deposited into the emptied Cell No. 1 until:
  - a) any necessary inner liner repairs are completed; and
  - b) the Director has expressed satisfaction, in writing, with the most current leakage rate results provided through item 3 above; and
7. a groundwater monitoring program, satisfactory to the Director, is maintained in the area of the residue disposal site, with the results submitted to the Director annually, within 45 days of the collection of those annual sample runs taken for the comprehensive chemical analyses.

Should you require any clarification of any condition of this approval, please call me at (204)-945-7071.

Yours truly,

  
for  
Larry Strachan, P. Eng.  
Director  
Environmental Approvals

- c. B. Bremner, Eastern Region  
B. Edirmanasinghe, Mines Branch


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 Winnipeg MB R3C 1A5

Fax: (204) 945-5229

File: 1906.2

May 10, 2005

Mr. William Ferguson  
 General Manager  
 Tantalum Mining Corporation of Canada Limited (Tanco)  
 Box 2000  
 Lac du Bonnet, MB R0E 1A0

Dear Mr. Ferguson,

**Re: Cesium Products Facility – Notice of Alteration No. 11  
 - Placement of Containment Cell No. 2 Residue into Old TMA**

This letter is in response to the Notice of Alteration (NoA) submitted on February 16, 2005, by SEACOR Environmental Inc. on behalf of Tanco, along with a supporting technical and environmental effects report. The nature of the described alteration concerns the excavation and transfer of 80,000 cubic metres of accumulated residue from Cell No. 2 of the Cesium Products Facility (CPF) to the existing disposal/storage site within the old Tailings Management Area (TMA). The work that would be undertaken would include:

- dewatering Containment Cell No. 2 with the transfer of the fluids to Containment Cell No. 1;
- excavating the solid residue from Containment Cell No. 2, and transporting and depositing it onto the existing CPF residue depository area in the old TMA where residue from Containment Cells No. 1 and No. 2 has previously been placed;
- capping the newly deposited residue with non reactive feldspar waste rock; and
- preparing the emptied Containment Cell No. 2 for re-use.

In consideration of the environmental effects outlined in the supporting report, I regard the potential environmental effects of the NoA to be insignificant. Accordingly, pursuant to Section 14(2) of The Environment Act, I hereby approve the implementation of the NoA subject to the conditions that:

1. the removed residue is placed in the old TMA, on top of the previously deposited residue, and covered with a 0.6 metre thick cap of non reactive feldspar waste rock immediately following the completion of the residue transfer activity;
2. the resultant increase in surficial elevation of the deposited residue in the old TMA does not give rise to the release of fugitive emissions of particulate matter into the environment beyond the boundary of the old TMA;
3. the effectiveness of the feldspar cover is substantiated with actual air quality data that is collected beyond the boundary of the old TMA during a dry weather period, under gusty wind conditions in the direction of the air monitoring unit(s), with the data and

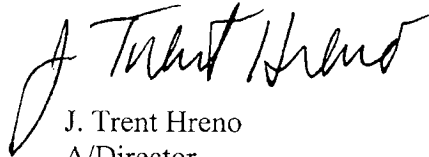


Letter from Hreno to Ferguson  
May 10, 2005

- an interpretation of the data submitted to the Director within 3 months of the completion of condition No. 1;
4. subsequent to the removal of the CPF solid residue from Containment Cell No. 2, the integrity of the inner liner of that cell is tested by transferring liquor from Cell No. 1 into Cell No. 2 to a depth of at least 2.5 metres and testing the leakage rate into the interstitial space between the inner and outer liner of Cell No. 2;
  5. a report on the leakage rate of fluids into the interstitial space between the liners is provided to the Director, with the results compared to the manufacturer's maximum leakage rate specifications, as well as compared to the leakage rates as determined to date over the operating period of Cell No. 2;
  6. new CPF residue is not deposited into the emptied Cell No. 1 until:
    - a) any necessary inner liner repairs are completed; and
    - b) the Director has expressed satisfaction, in writing, with the most current leakage rate results provided through item 3 above; and
  7. a groundwater monitoring program, satisfactory to the Director, is maintained in the area of the residue disposal site, with the results submitted to the Director annually, within 45 days of the collection of those annual sample runs taken for the comprehensive chemical analyses.

Should you require any clarification of any condition of this approval, contact Clem Moche at (204)-945-7013.

Yours truly,



J. Trent Hreno  
A/Director

Environmental Assessment and Licensing

c.c. D. Ramsey (SEACOR)  
B. Bremner  
E. Armitt

EA-23



# Manitoba

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123 Main Street, Suite 160  
Winnipeg MB R3C 1A5

Phone 945-8321  
Fax: (204) 945-5229

- 1) M. Van Den Broek
- 2) C. Moche

→ 3) File: 1906.2

May 16, 2006

Mr. William Ferguson  
General Manager  
Tantalum Mining Corporation of Canada Limited  
Box 2000  
Lac du Bonnet, MB R0E 1A0

Dear Mr. Ferguson:

**Re: Cesium Products Facility – Notice of Alteration No. 12  
Placement of Containment Cell No. 1 Residue into the old TMA**

This letter is in response to the letter dated May 10, 2006, which was submitted to us by Wardrop on behalf of Tantalum Mining Corporation. Consistent with previous similar requests, the letter is being treated as a Notice of Alteration (specifically NoA No. 12) received on May 12, 2006, from Wardrop on behalf of Tantalum Mining Corporation, together with supporting technical information supplied by Wardrop and dated May 11, 2006.

The nature of the described alteration concerns the excavation and transfer of accumulated residue (volume unspecified) from within Cell No. 1 of the Cesium Products Facility (CPF) to the existing disposal/storage site within the old Tailings Management Area (TMA). The work to be undertaken is understood to include:

- dewatering Containment Cell No. 1 with the transfer of the fluids to Containment Cell No. 2;
- excavating the solid residue from Containment Cell No. 1, and transporting and depositing it onto the existing CPF residue depository area in the old TMA where residue from Containment Cells No. 1 and No. 2 has previously been placed and capped;
- capping the newly deposited residue with non reactive feldspar waste rock; and
- preparing the emptied Containment Cell No. 1 for re-use.

Whereas the change in the environmental effects, as based on the supporting technical information is considered to be insignificant, I hereby approve the implementation of NoA No. 12 pursuant to Section 14(2) of The Environment Act subject to the conditions that:

1. the removed residue is placed in the old TMA, on top of the previously deposited residue, and covered with a 0.6 metre thick cap of non reactive feldspar waste rock immediately following the completion of the residue transfer activity;
2. the additional material added to the existing mound does not compromise it's slope stability;
3. the resultant increase in surficial elevation of the deposited residue in the old TMA does not give rise to the release of fugitive emissions of particulate matter into the environment beyond the boundary of the old TMA;

4. the effectiveness of the feldspar cover is substantiated with actual air quality data that is collected in the Fall of 2006 beyond the boundary of the old TMA during a dry weather period, under gusty wind conditions in the direction of the air monitoring unit(s), with the data and an interpretation of the data submitted to the Director within 3 months of the completion of the air monitoring activity;
5. subsequent to the removal of the CPF solid residue from Containment Cell No. 1, the integrity of the inner liner of that cell is tested by transferring liquor from Cell No. 2 into Cell No. 1 to a depth of at least 2.5 metres and testing the leakage rate into the interstitial space between the inner and outer liner of Cell No. 1;
6. a report on the leakage rate of fluids into the interstitial space between the liners is provided to the Director the results compared to the manufacturer's maximum leakage rate specifications, as well as compared to the leakage rates as determined to date over the operating period of Cell No. 1;
7. no new CPF residue is deposited into the emptied Cell No. 1 until:
  - a) any necessary inner liner repairs have been completed; and
  - b) the Director has expressed satisfaction, in writing, with the most current leakage rate results provided through item 5 above; and
8. a groundwater monitoring program, satisfactory to the Director, is maintained in the area of the residue disposal site, with the results submitted to the Director annually, within 45 days of the collection of those annual sample runs taken for the comprehensive chemical analyses.

In regards to the matter of the ongoing annual transfer of the solid residue from Containment Cell No's 1 or 2, I would appreciate receiving an update on the initiative that had been expressed in the past by Tanco whereby the Cesium Plant solid residues would be reclaimed, reprocessed, and subsequently disposed of into the new TMA. I raise this matter because the Mines Branch had last year expressed to us their concerns about creating a high and visible mound with the relocated Cesium Plant waste residue. At the current trend, the objective of maintaining as small a footprint as possible for the transferred residue may gradually become impractical due to possible slope stability issues. Other disposal options such as disposal by underground backfilling may also warrant consideration, especially if the Cesium Plant residue is reprocessed and is then no longer deemed to hold any further economic mineral value.

Should you require clarification of any condition of this approval, please contact Clem Moche at (204)-945-7013.

Yours truly,

**Original Signed by**

Tracey Braun, M.Sc.  
Director  
Environmental Assessment and Licensing

Letter from Braun to Ferguson  
May 16, 2006  
Page 3 of 3

c.c. D. Ramsey (Wardrop)  
B. Bremner  
E. Armitt



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 123 Main Street, Suite 180, Winnipeg, Manitoba R3C 1A5  
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**COPY**

Mr. Henry Landry  
 General Manager  
 Tantalum Mining Corporation of Canada  
 Box 2000  
 Lac du Bonnet, MB R0E 1A0

File: 1906.2

Dear Mr. Landry:

**Re: Cesium Products Facility – Notice of Alteration No. 13  
 Placement of Containment Cell No. 2 Residue into the old TMA**

This letter is in response to the letter dated May 24, 2007, which was submitted to us by Wardrop on behalf of Tantalum Mining Corporation. Consistent with previous similar requests, the letter is being treated as a Notice of Alteration (specifically NoA No.13) respecting the ongoing management of the solid residues being generated by the Cesium Products Facility (CPF), the operation which in itself was the object of an approved Notice of Alteration. In future correspondence respecting the ongoing management of the CPF solid wastes, please be sure to submit the requests as a Notice of Alteration so as to add clarity to the public record.

The nature of the described alteration concerns the excavation and transfer of accumulated residue from within Cell No. 2 of the (CPF) to a location adjacent to the existing disposal/storage site within the old Tailings Management Area (TMA). The work to be undertaken is understood to include:

- dewatering Containment Cell No. 2 with the transfer of the fluids to Containment Cell No. 1;
- excavating the solid residue from Containment Cell No. 2, and transporting and depositing it to a location adjacent to the existing CPF residue depository area in the old TMA, where residue from Containment Cells No. 1 and No. 2 has previously been placed and capped;
- capping the newly deposited residue with non reactive feldspar waste rock; and
- preparing the emptied Containment Cell No. 2 for re-use.

Based on the technical information provided by Wardrop, I have concluded that the change in environmental effects is insignificant. I therefore approve NoA No. 13 as a minor alteration pursuant to Section 14(2) of The Environment Act subject to the conditions that:

1. the removed residue is placed in the old TMA, at the identified area adjacent to the previously deposited residue, and covered with a 0.6 metre thick cap of non reactive feldspar waste rock immediately following the completion of the residue transfer activity;

**Manitoba**  
 spirited energy

2. the resultant increase in surficial elevation of the deposited residue in the old TMA does not give rise to the release of fugitive emissions of particulate matter into the environment beyond the boundary of the old TMA;
3. the effectiveness of the feldspar cover is substantiated with actual air quality data that will be collected in the fall of 2007 beyond the boundary of the old TMA during a dry weather period, under gusty wind conditions in the direction of the air monitoring unit(s), with the data and an interpretation of the data submitted to the Director within 3 months of the completion of the air monitoring activity;
4. subsequent to the removal of the CPF solid residue from Containment Cell No. 2, the integrity of the inner liner of that cell is tested by transferring liquor from Cell No. 1 into Cell No. 2 to a depth of at least 2.5 metres and testing the leakage rate into the interstitial space between the inner and outer liner of Cell No. 2;
5. a report on the leakage rate of fluids into the interstitial space between the liners is provided to the Director with the results compared to the manufacturer's maximum leakage rate specifications, as well as compared to the leakage rates as determined to date over the operating period of Cell No. 2;
6. no new CPF residue is deposited into the emptied Cell No. 2 until:
  - a) any necessary inner liner repairs have been completed; and
  - b) the Director has expressed satisfaction, in writing, with the most current leakage rate results provided through item 4 above; and
7. a groundwater monitoring program, satisfactory to the Director, is maintained in the area of the residue disposal site, with the results submitted to the Director annually, and within 45 days of the collection of those annual sample runs taken for the comprehensive chemical analyses.

Should you require clarification of any condition of this approval, please contact Clem Moche at (204) 945-7013.

Yours truly,



Tracey Braun, M.Sc.  
Director  
Environmental Assessment and Licensing

c.c. M. Walker (E. Region)  
E. Armitt  
D. Ramsey (Wardrop)

**COPY**

Environmental Stewardship Division  
Environmental Assessment and Licensing Branch  
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5  
T 204 945-7100 F 204 945-5229  
[www.gov.mb.ca/conservation/envapprovals](http://www.gov.mb.ca/conservation/envapprovals)

February 08, 2008

Henry Landry  
General Manager  
Tantalum Mining Corporation of Canada  
Box 2000  
Lac du Bonnet, MB R0E 1A0

File: 1906.2

Dear Mr. Landry:

**Re: Notice of Alteration No. 14 - CPF Cell No. 2 Re-Commissioning Request**

I acknowledge the receipt of a letter from Wardrop, dated January 17, 2008, which was submitted on behalf of Tantalum Mining Corporation, and which I am treating as Notice of Alteration No. 14 to the ongoing management of the CPF tailings stream.

I am satisfied that the potential environmental effects resulting from the requested alteration are insignificant and so do hereby approve the requested alteration as a minor alteration, subject to the condition that the Cell 2 area is also captured during the next scheduled groundwater monitoring program, respecting the overall groundwater impacts from the Tailings Management Area.

Yours truly,



Tracey Braun, M.Sc.  
Director  
Environmental Assessment and Licensing

Enclosure

cc: D. Ramsey  
M. Walker A/Director, Eastern Region

**Conservation**

Environmental Stewardship Division  
Environmental Assessment and Licensing Branch  
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5  
T 204 945-7100 F 204 945-5229  
www.gov.mb.ca/conservation/eal

*EA-27*

File: 1906.2  
July 2, 2008

Mr. Michael Enns  
Project Manager  
Tantalum Mining Corporation of Canada Limited  
Box 2000  
Lac du Bonnet, MB R0E 1A0

Dear Mr. Enns:

*NoA-15* Re: Residue Transfer from Containment Cell No. 1

This letter is in response to two letters, both dated May 23, 2008, which were jointly submitted to us by Wardrop on behalf of Cabot Specialty Fluids (a subsidiary of Cabot Corporation) which operates the Cesium Products Facility (CPF) located on the site of the Tantalum Mine, whereby one letter requested permission to transfer drained residue from storage Cell #1 to the previously approved site in Tanco's Tailings Management Area (TMA), (which I am treating as NoA No.15), and the other letter contained a report on the findings of a dust survey conducted in fulfillment of a condition of a previous Notice of Alteration approval in support of continuing depositions of the CPF residue within the previously approved drained CPF residue storage site within the TMA.

Whereas the change in the environmental effects, as based on the supporting Dust Survey report, is considered to be insignificant, I hereby approve the implementation of NoA No. 15 as a minor alteration pursuant to Section 14(2) of The Environment Act subject to the conditions that:

1. the removed residue is placed in the old TMA, on top of the previously deposited similar residues, and covered with a 0.6 metre thick cap of non reactive feldspar waste rock immediately following the completion of the residue transfer activity;
2. the additional material added to the existing mound does not compromise it's slope stability;
3. the resultant increase in surficial elevation of the deposited residue in the old TMA does not give rise to future release of fugitive emissions of particulate matter into the environment beyond the boundary of the old TMA;
4. subsequent to the removal of the CPF solid residue from Containment Cell No. 1, the integrity of the inner liner of Cell No. 1 is tested by transferring liquor from Cell No. 2 into Cell No. 1 to a depth of at least 2.5 metres and testing the leakage rate into the interstitial space between the inner and outer liner of Cell No. 1;

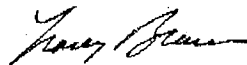


-2-

5. a report on the leakage rate of fluids into the interstitial space between the liners is provided to the Director the results compared to the manufacturer's maximum leakage rate specifications, as well as compared to the leakage rates as determined to date over the operating period of Cell No. 1;
6. no new CPF residue is deposited into the emptied Cell No. 1 until:
  - a) any necessary inner liner repairs have been completed; and
  - b) the Director has expressed satisfaction, in writing, with the most current leakage rate results provided through item 5 above; and
7. a groundwater monitoring program, satisfactory to the Director, is maintained in the area of the residue disposal site, with the results submitted to the Director annually, within 45 days of the collection of those annual sample runs taken for the comprehensive chemical analyses.

Should you require clarification of any condition of this approval, please contact Clem Moche at (204)-945-7013.

Yours truly,



Tracey Braun, M.Sc.  
Director  
Environmental Assessment and Licensing

c.c. D. Ramsey (Wardrop)  
J. Irwin  
E. Armitt



EA-28

Environmental Stewardship Division  
Environmental Assessment and Licensing Branch  
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5  
T 204 945-7100 F 204 945-5229  
www.gov.mb.ca/conservation/eal

September 2, 2009  
File: 1906.2

Michael Enns, P.Eng.  
Project Manager  
Tantalum Mining Corporation of Canada  
Box 2000  
Lac du Bonnet MB R0E 1A0

Dear Mr. Landry:

**Re: Notice of Alteration No. 16 - CPF Cell No. 1 Re-Commissioning Request**

I acknowledge the receipt of a letter dated August 21, 2009 from Wardrop Engineering Inc., which was submitted to me on behalf of Cabot Specialty Fluids respecting the ongoing use Cell No.1, as part of the ongoing management of the CPF tailings stream. This letter is considered Notice of Alteration No. 16 to Environment Act Licence No. 973

I am satisfied by the submitted report that the Cell No. 1 inner liner has been adequately repaired and that the potential environmental effects resulting from the requested alteration will be insignificant. I hereby approve the requested alteration to place the repaired Cell No. 1 back into service as a minor alteration, subject to the condition that the Cell 1 area is captured, during the next scheduled groundwater monitoring program respecting the overall groundwater impacts from the Tailings Management Area.

Yours truly,

for Tracey Braun, M.Sc.  
Director  
Environmental Assessment and Licensing

cc. P. Solylo, P. Geo. (Wardrop Engineering Inc.)  
D. Labossiere

Environmental Stewardship Division  
Environmental Assessment and Licensing Branch  
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5  
T 204 945-7100 F 204 945-5229  
[www.gov.mb.ca/conservation/eal](http://www.gov.mb.ca/conservation/eal)

September 15, 2009  
File: 1906.2

Colleen Bugslag  
Safety, Health & Environment Manager  
Tantalum Mining Corporation of Canada Ltd.  
Box 2000  
Lac du Bonnet MB R0E 1A0

Dear Ms. Bugslag:

**Re: Notice of Alteration No. 17 - Re-Transfer of Residue from CPF Cell # 2**

I acknowledge the receipt of a letter dated August 12, 2009, together with a report labeled "CPF Residue Placement Groundwater monitoring Data, 2008", both having been submitted to me by Wardrop Engineering Inc., on behalf of Cabot Specialty Fluids, for permission to transfer the existing residue solids from within CPF Cell No. 2 to the existing approved 2001-2008 residue placement area within the old Tailings Management Area.

I have reviewed the submission and am treating it as Notice of Alteration No. 17 to Environment Act Licence No. 973. Accordingly, and in consideration of the continuing satisfactory groundwater monitoring results, I am satisfied that the change in the environmental effects will be negligible and therefore do hereby approve NoA No. 17, as a minor alteration conditional upon the licensee repeating the annual groundwater monitoring program in 2009, within the old tailings area and reporting the results and interpretation of the data to the Director in 2010.

Yours truly,



Tracey Braun, M.Sc.  
Director  
Environmental Assessment and Licensing

cc. P. Solylo P. Geo. (Wardrop)  
D. Labossiere

Manitoba



**Conservation**

Climate Change and Environmental Protection Division  
Environmental Assessment and Licensing Branch  
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5  
T 204 945-7100 F 204 945-5229  
www.gov.mb.ca/conservation/eal

**File: 1906.20**  
October 21, 2010

Ms. Colleen Bugslag, CRSP  
Safety, Health and Environment Manager  
Tantalum Mining Corporation of Canada Ltd.  
P.O. Box 2000  
Lac Du Bonnet, MB R0E 1A0

Dear Ms. Bugslag:

**Re: CPF Cell No. 2**

This letter is in response to the e-mail dated October 6, 2010 requesting approval to operate CPF Cell No. 2 temporarily with a single liner pending the results of a study to determine what is required to restore the two-liner system.

Following a review of the information provided I am prepared to approve the temporary use of the cell as described in your e-mail with the following conditions:

1. Prior to operating the cell, the test data for the inner liner repairs must be submitted to the Director for approval.
2. Prior to operating the cell, a leak monitoring program must be submitted to the Director for approval. The leak monitoring program shall include the location, parameters and frequency of testing.
3. The Licencee shall submit a monitoring report to the Director every two weeks for the duration of the use of the cell in a single liner configuration. The monitoring report shall include the results of the leak monitoring program, observations and a status update pertaining to the long term solution as specified below.
4. The Licencee shall submit for approval, on or before February 1, 2011, a repair and maintenance plan for the CPF facility that includes but is not limited to a description of how the Licencee will provide sufficient capacity to operate the facility during maintenance and repair operations.
5. This approval expires on February 28, 2011 unless a later date is approved by the Director in accordance with the approved repair and maintenance plan.

Yours truly,

*Tracey Braun*

Tracey Braun, M.Sc.  
Director  
Environmental Assessment and Licensing Branch

c. Diane Oertel, Manitoba Conservation  
Doug Ramsey, Tetra Tech

*CRAMP MESS AGT.  
- (D) CONSERVATION*

*BMV LICENSE*

*Tracey.Braun@gov.mb.ca*