



March 17, 2016

File: MV2012L8-0010

Mr. Adrian Paradis, Manager of Regulatory  
Giant Mine Remediation Project  
Indigenous and Northern Affairs Canada  
Box 1500  
YELLOWKNIFE NT X1A2R3

Email: [Adrian.Paradis@aandc-aadnc.gc.ca](mailto:Adrian.Paradis@aandc-aadnc.gc.ca)

Dear Mr. Paradis:

**Amendment Application – Approval  
Roaster Deconstruction and Underground Stabilization Work – Giant Mine, NT**

The Mackenzie Valley Land and Water Board (MVLWB or the Board) received your application requesting an amendment to Water Licence MV2012L8-0010 on January 29, 2016.

In accordance with subparagraph 72.12(1)(a) of the *Mackenzie Valley Resource Management Act*, the Board hereby approves the amendment as applied for. A copy of this amendment has been filed on the Public Registry at the office of the MVLWB.

If you have any questions or concerns, please contact Tyree Mullaney at (867) 766-7464 or email [tyree@mvlwb.com](mailto:tyree@mvlwb.com).

Yours sincerely,

A handwritten signature in black ink, appearing to read 'F. M. Adlem', is written over a light blue horizontal line.

Floyd Adlem  
MVLWB A/Chair

Copied to: Distribution List

Attachment:

- Water Licence Cover and Conditions
- General Procedures for Administering a Water Licence
- Reasons for Decision



**Mackenzie Valley Land and Water Board  
Water Licence**

**Amendment – March 17, 2016**

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Pursuant to the *Mackenzie Valley Resource Management Act* and Regulations, the Mackenzie Valley Land and Water Board, hereinafter referred to as the Board, hereby grants to:

Aboriginal Affairs and Northern Development Canada –  
Contaminants and Remediation Directorate

\_\_\_\_\_  
(Licensee)

of \_\_\_\_\_ 5103-48<sup>th</sup> Street, PO Box 1500, Yellowknife, NT X1A 2R3  
(mailing address)

hereinafter called the Licensee, the right to alter, divert, or otherwise use water subject to the restrictions and conditions contained in the *Mackenzie Valley Resource Management Act* and Regulations made thereunder and subject to and in accordance with the conditions specified in this Licence.

Licence number:	<u>MV2012L8-0010</u>
Licence type:	<u>B</u>
Water Management Area:	<u>Northwest Territories 01</u>
Location:	<u>62°28'54" N, 114°19'12" W 62°32'38" N, 114°22'34" W</u>
Purpose:	<u>To use water and dispose of waste and associated uses</u>
Description:	<u>Roaster Complex Deconstruction and Underground Stabilization Activities</u>
Quantity of water <b><u>not to be exceeded</u></b> :	<u>300 cubic metres (m<sup>3</sup>) per day</u>
Effective date of Licence:	<u>March 28, 2013</u>
Expiry date of Licence:	<u>January 31, 2019</u>

This Licence, issued and recorded at Yellowknife, includes and is subject to the annexed conditions.

**Mackenzie Valley Land and Water Board**

Handwritten signature of Floyd Adlem in black ink.

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**Floyd Adlem  
A/Chair**

Handwritten signature of Amanda Gauthier in black ink.

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**Amanda Gauthier  
Witness**

**Type B Water Licence MV2012L8-0010**  
**Aboriginal Affairs and Northern Development Canada –**  
**Contaminants and Remediation Directorate – Giant Mine Remediation Project**

**Part A: Scope and Definitions**

**Scope**

1. This Licence entitles Aboriginal Affairs and Northern Development Canada to use Water and dispose of Waste for miscellaneous undertakings limited to the deconstruction of the Roaster Complex and stabilization of the Underground Stabilization Work Area and associated activities as described in the Accepted Application and the Amendment Application located at the Giant Mine Site (62°28'54" N, 114°19'12" W and 62°32'38" N, 114°22'34" W), Northwest Territories.
2. This Licence is issued subject to the conditions contained herein with respect to the taking of Water and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposit of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Act, or other statutes imposing more stringent conditions relating to the quantity or type of Waste that may be so deposited or under which any such Waste may be so deposited this Licence shall be deemed, upon promulgation of such Regulations, to be automatically amended to conform with such Regulations.
3. Compliance with the terms and conditions of this Licence does not absolve the Licensee from the responsibility for compliance with the requirements of all applicable federal, territorial, and municipal legislation.

**Definitions**

In this Licence: **MV2012L8-0010**

**“Accepted Application”** means the type B Water Licence application as submitted to the Board on December 19, 2012 and the “Site Stabilization Plan for the Giant Mine Remediation Project” dated October 14, 2011 (redactions reduced version) submitted on January 22, 2013.

**“Act”** means the *Mackenzie Valley Resource Management Act*

**“Amendment Application”** means the Type B Water Licence application as submitted to the Board on January 29, 2016.

**“Analyst”** means an Analyst designated by the Minister under subsection 65(1) of the Act.

**“Board”** means the Mackenzie Valley Land and Water Board established under Part 4 of the *Mackenzie Valley Resource Management Act*.

**“Inspector”** means an Inspector designated by the Minister under subsection 65(1) of the Act.

**“Licensee”** means the holder of this Licence.

**“Minister”** means the Minister of Indian Affairs and Northern Development Canada or the Minister of the Government of the Northwest Territories – Environment and Natural Resources, as the case may be.

**“Polishing Pond”** means the retention structure downstream of the effluent treatment plant that is designed to receive treated minewater. Located at 62° 30' 43.146" N, 114° 20' 54.961" W.

**“Roaster Complex”** means a group of industrial process buildings at the Giant Mine Site located south of the B 1 Pit on the south side of Highway 4 (Figures 13 and 14 in the Roaster Complex Deconstruction Detailed Project Description provided in the Accepted Application). Located at 62° 30' 7.099" N, 114° 21' 27.534" W.

**“Regulations”** means Regulations proclaimed pursuant to section 63 of the *Act*.

**“Temporary Waste Storage Area”** means an area located in the northeast corner of the Central Tailings Pond (UTM Zone 11V, 636969.04 mE and 6933427.92 mN) designated for the temporary storage of hazardous and non-hazardous Waste. Refer to Figure 6 – Temporary Waste Storage Location in the document Giant Mine Roaster Complex Deconstruction – Water Management Plan submitted with the Accepted Application.

**“Underground Stabilization Work Area”** includes the underground stopes, chambers and bulkheads that are clustered near the B1 and B2 open pits; on the west side of the Mill near Highway 4; and at the north end of the roaster complex (as shown on Figures 3, 4a and 4b in the Underground Stabilization Detailed Project Description provided the Accepted Application package).

**“Waste(s)”** means Waste as defined by section 1 of the Act.

**“Water(s)”** means any Waters as defined by section 1 of the Act.

**Part B: General Conditions**

1. The Licensee shall file semi-annual reports with the Board as follows which shall contain the information as listed in Schedule 1, item 1:

<b>Reporting Period</b>	<b>Semi-Annual Report Submission Date</b>
May 1 – October 31 each year	January 31 each year
November 1 – April 30 each year	July 31 each year

2. The Licensee shall comply with the terms of any plans approved pursuant to the conditions of this Licence and with any amendments to the plans as may be made from time to time pursuant to the conditions of this Licence and as approved by the Board.
3. Compliance dates specified in the Licence may be modified at the discretion of the Board.
4. The Licensee shall comply with the Schedules annexed to this Licence, and with any amendments to the Schedules as may be made from time to time pursuant to the conditions of this Licence and as approved by the Board.
5. Meters, devices, or other methods used for measuring the volumes of Water used and Waste discharged shall be installed, operated, and maintained by the Licensee to the satisfaction of an Inspector.
6. The Licensee shall ensure a copy of this Licence and all approved plans under this Licence are maintained at site operation at all times.
7. The Licensee shall adhere to the “Communication Plan for Duration of Site Stabilization Activities” as detailed in the Accepted Application.

**Part C: Conditions Applying to Water Use**

1. The Licensee shall obtain all recycled Water from the Polishing Pond.
2. The Licensee shall obtain all fresh Water from on site storage tanks.
3. The quantity of treated minewater used for all purposes shall not exceed 300 cubic metres per day.

#### **Part D: Conditions Applying to Waste Disposal**

1. The Licensee shall ensure that any unauthorized Wastes associated with this Licence undertaking do not enter any Waters.
2. The Licensee shall, 45 days prior to starting deconstruction of the Roaster Complex, submit to the Board for approval a Giant Mine Roaster Complex Deconstruction Waste Management Plan.
3. The Licensee shall, 45 days prior to starting backfilling of stopes or chambers, construction of new bulkheads or repair of existing bulkheads, in the Underground Work Stabilization Area, submit to the Board for approval an Underground Stabilization Waste Management Plan.
4. The Licensee shall implement the plans referred to in Part D items 2 and 3 as and when approved by the Board.
5. If not approved by the Board, the plans referred to in Part D items 2 and 3 shall be revised and resubmitted for approval as directed by the Board.
6. The Licensee shall modify the Waste Management Plans referred to in Part D, items 2 and 3 as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.
7. The Licensee shall not remove or pump any ponded water encountered in the South and Central tailings ponds to areas other than within the South and Central tailings ponds unless otherwise approved by the Board.
8. The Licensee shall provide written correspondence to the Board and Inspector ten days prior to the initial deposit of Waste demonstrating that the facility has agreed to accept the Waste and has the ability to receive the volumes of Waste requested.

**Part E: Conditions Applying to Modifications**

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## **Part F: Conditions Applying to Contingency Planning**

1. If, during the period of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
  - a. Employ the appropriate contingency plan;
  - b. Report the incident immediately via the 24-hour NWT Spill Report Line. Currently the number is (867) 920-8130; and
  - c. Submit to an Inspector a detailed report on each occurrence not later than 30 days after initially reporting the event that includes a summary of clean-up actions and preventative measures to avoid any further unauthorized discharges as applicable.
2. The Licensee shall adhere to the approved General Contingency and Emergency Spill Response Plan as submitted with the Accepted Application.
3. The Licensee shall modify the General Contingency and Emergency Spill Response Plan referred to in Part F, item 2 as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.

**Part G: Conditions Applying to Abandonment and Restoration**

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## **Part H: Conditions Applying to Construction**

1. The Licensee shall, 45 days prior to starting deconstruction of the Roaster Complex, submit to the Board for approval a Roaster Complex Detailed Deconstruction Plan. This plan shall contain the items as listed under Schedule 2, item 1.
2. The Licensee shall, 30 days prior to the use of any wetting agents during decontamination for Roaster Complex deconstruction, submit to the Board for approval the Material Safety Data Sheet(s) for the wetting agents.
3. The Licensee shall, 45 days prior to starting backfilling of stopes or chambers, construction of new bulkheads or repair of existing bulkheads in the Underground Work Stabilization Area, submit to the Board for approval a detailed Underground Work Stabilization Plan. This plan shall contain the items as listed under Schedule 2, item 2.
4. The Licensee shall implement the plans referred to in Part H items 1 and 3 as and when approved by the Board.
5. If not approved by the Board, the plans referred to in Part H items 1 and 3 shall be revised and resubmitted for approval as directed by the Board.
6. The Licensee shall modify the plans referred to in Part H items 1 and 3 as necessary to reflect any proposed changes in operations. Any proposed changes shall be submitted to the Board for approval.
7. The Licensee shall only use tailings paste, waste rock from mine development, or existing inert rock material stockpiled on the surface to backfill the chambers and stopes unless otherwise approved by the Board.
8. At least seven days prior to the use of any chemicals that were not identified in the complete application, the MSDS sheets must be provided to an Inspector and the Board.
9. The Licensee shall repair or reinforce bulkheads as described in the Giant Mine Underground Stabilization Detailed Project Description, submitted with the Accepted Application, unless otherwise approved by the Board.

**Part I: Conditions Applying to Operation and Maintenance**

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**Signed on behalf of the Mackenzie Valley Land and Water Board**



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**Floyd Adlem  
Acting Chair**



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**Amanda Gauthier  
Witness**

## Schedule 1 – General Conditions

1. The Semi-Annual Report(s) referred to in Part B, item 1 shall include, but not be limited to, the following information:
  - a) The monthly and semi-annual quantities in cubic metres of fresh Water obtained from all sources;
  - b) The monthly and semi-annual quantities in cubic metres of recycled Water obtained from all sources;
  - c) The monthly and semi-annual quantities in cubic metres of each and all Waste discharged including but not limited to any “bleed” water collected from the tailings paste;
  - d) A list of unauthorized discharges, including any clean-up actions taken and preventative measures implemented to prevent future discharges;
  - e) An outline of any spill training and communications exercises carried out;
  - f) A summary of any engagement and consultation activities completed during the reporting period and an outline of any activities anticipated for the upcoming reporting period;
  - g) A summary of any revisions to the approved General Contingency and Emergency Spill Response Plans;
  - h) A summary of any revisions to the approved Waste Management Plans for Roaster Complex Deconstruction and Underground Stabilization;
  - i) Details of all work completed for the Roaster Complex, including but not limited to the actual deconstruction sequence of the associated structures;
  - j) Details of all work completed for the Underground Stabilization Work Area;
  - k) Details of any anticipated activities for the upcoming reporting period for the Roaster Complex deconstruction and the Underground Stabilization Work Area, including the proposed sequence in which the structures of the Roaster Complex will be deconstructed;
  - l) Details on the types and quantities of hazardous materials removed from the Roaster Complex deconstruction;
  - m) Details on the types and quantities of packaging used for storing waste at the Temporary Waste Storage Area, including non-hazardous and arsenic-containing hazardous waste;
  - n) Details on the volume of each type of backfill material used in each stope or chamber during the reporting period;
  - o) Completed “As-Built Statement of Risk Mitigation” letters stamped by a professional engineer that confirm the mitigation of risks associated with the Underground Stabilization Work Area; and
  - p) Any other details on Water Use or Waste disposal requested by the Board three months prior to the semi-annual report submission date.

## **Schedule 2 – Conditions Applying to Construction**

1. The Roaster Complex Detailed Deconstruction Plan referred to in Part H, item 1 shall include, but not be limited to, the following:
  - a) An assessment of the potential risks to the environment from the chosen deconstruction methods and mitigating measures to address these risks;
  - b) A summary of the equipment and methodology to be used for deconstruction of the Roaster Complex;
  - c) The proposed sequence of deconstruction work within each structure of the Roaster Complex to be taken down, including where decontamination work is required as part of the structure deconstruction;
  - d) The size reduction, stacking, packaging, and storage procedures for non-hazardous waste and arsenic-containing hazardous waste, and packaging type as applicable;
  - e) Spill contingency plans specific to Roaster Complex deconstruction if the plans deviate from or add to the November 2012 General Contingency and Emergency Spill Response Plan prepared by Nuna/Deton Cho Joint Venture as submitted in the Accepted Application;
  - f) A plan for the management and monitoring of dust, including but not limited to thresholds, action levels, and management responses; and
  - g) Design of the recycled water collection and transport system, and related spill prevention measures.
  
2. The detailed Underground Work Stabilization Plan referred to in Part H, item 3 shall include, but not be limited to, the following:
  - a) A summary of the types of backfill material required which may be one or a combination of tailings paste, waste rock from mine development, or existing inert rock material on the surface (e.g., quarried rock);
  - b) An estimate of the volume of each backfill material required;
  - c) Details of the proposed methodologies for carrying out backfilling of the chambers and repairing/reinforcing bulkheads;
  - d) Detailed plans to mitigate potential effects to the environment and issues related to tailings excavation including:
    - Management of wet or frozen tailings if encountered;
    - Ensuring acceptable grain size range of tailings as there can be no slimes used in making paste;
    - Operational dust control (wetting of tailings during excavation and paste production using treated minewater);

- Operational water management (treated minewater usage associated with dust control and wash down of equipment);
- Cross-highway transport of tailings to temporary stockpiles (trucked or piped);
- e) Details on the process to collect, store, and treat “bleed” water from tailings pastes; and
- f) Spill contingency plans specific to the Underground Stabilization Work Area if the plans deviate from or add to the November 2012 General Contingency and Emergency Spill Response Plan prepared by Nuna/Deton Cho Joint Venture as submitted in the Accepted Application.

**General Procedures for the Administration of Licences  
Issued Under the *Mackenzie Valley Resource Management Act*  
in the Northwest Territories**

1. At the time of issuance, a copy of the Licence is placed on the Public Registry in the office of the Mackenzie Valley Land and Water Board (MVLWB or the Board) in Yellowknife and is then available to the public.
2. To enforce the terms and conditions of the Licence, the Minister of Indigenous and Northern Affairs Canada has appointed Inspectors in accordance with subsection 84(1) of the *Mackenzie Valley Resource Management Act*. The Inspectors coordinate their activities with staff of the MVLWB. The Inspector responsible for Licence MV2012L8-0010 is located in the Yellowknife office.
3. To keep the MVLWB and members of the public informed of the Licensee's conformity to the Licence's conditions, the inspectors prepare reports which detail observations on how each item in the Licence has been met. These reports are forwarded to the Licensee with a covering letter indicating which action, if any, should be taken. The inspection reports and cover letters are placed on the Public Registry, as are any responses received from the Licensee pertaining to the inspection reports. It is therefore of prime importance that you react in all areas of concern regarding all inspection reports so that these concerns may be clarified.
4. It is the responsibility of the Licensee to apply to the MVLWB for a new licence. The past performance of the Licensee, new documentation and information, and points raised during a public hearing, if required, will be used to determine the terms and conditions of any new licence. Please note that if the Licence expires and another has not been issued, then water and waste disposal must cease, or you, the Licensee, would be in contravention of the *Mackenzie Valley Resource Management Act*. It is suggested that an application for a new licence be made at least eight months in advance of the Licence's expiry date.
5. If, for some reason, Licence # MV2012L8-0010 requires amendment, a public hearing may be required. You are reminded that applications for amendments should be submitted as soon as possible to provide the MVLWB ample time to complete the amendment process. The process may take up to six months or more depending on the scope of the amendment requested.



6. Specific clauses of your Licence make reference to the Board, Analyst, or Inspector. The contact person, address, phone, and fax number of each is:

**Mackenzie Valley Land and Water Board:**

Public Registry Clerk  
Mackenzie Valley Land and Water Board  
7th Floor - 4922 48 Street,  
P.O. Box 2130  
YELLOWKNIFE NT XIA 2P6  
Phone (867) 669-0506  
Fax (867) 873-6610

**Analyst:**

Analyst  
Water Laboratory  
Indigenous and Northern Affairs Canada  
P.O. Box 1500  
4601- 52nd Avenue  
YELLOWKNIFE NT XIA 2R3  
Phone (867) 669-2780  
Fax (867) 669-2718

**Inspector:**

Water Resource Officer  
Indigenous and Northern Affairs Canada  
4923-52<sup>nd</sup> Street  
YELLOWKNIFE NT X1A 2R3  
Phone (867) 669-2442  
Fax (867) 669-2871



**Mackenzie Valley Land and Water Board**  
 7th Floor - 4910 50th Avenue  
 P.O. Box 2130  
**YELLOWKNIFE NT X1A 2P6**  
 Phone (867) 669-0506  
 FAX (867) 873-6610

### Reasons for Decision

Issued pursuant to section 36 of the *Waters Act*  
 and section 121 of the *Mackenzie Valley Resource Management Act (MVRMA)*

Type B Water Licence Application	
<b>Preliminary Screener</b>	MVLWB
<b>Reference/File Number</b>	MV2012L8-0010
<b>Applicant</b>	Aboriginal Affairs and Northern Development Canada - Contaminants and Remediation Directorate
<b>Project</b>	Roaster complex deconstruction and underground stabilization, Giant Mine, NT

### Decision from Mackenzie Valley Land and Water Board Meeting of

March 17, 2016

With respect to this amendment application, notice was given in accordance with sections 63 and 64 of the *Mackenzie Valley Resource Management Act (MVRMA)* and section 43 of the *Waters Act*. There was no public hearing held in association with this application.

#### Background

- March 28, 2013 – Licence issued to AANDC – CARD;
- January 29, 2016 – Amendment application received;
- February 3, 2016 – Amendment deemed complete and sent out for review;
- February 25, 2016 – Comments submitted by reviewers;
- February 29, 2016 – Responses submitted by AANDC – CARD;
- **March 17, 2016 – Amendment presented to the Board for decision;** and
- March 27, 2016 – Licence expires.

On January 29, 2016, AANDC – CARD submitted an Amendment application to the Board to amend the term of their Licence to January 31, 2019 and to add a condition regarding chemical use.

Licence MV2012L8-0010 was initially applied for to deconstruct the roaster complex and conduct underground stabilization activities at the Giant Mine site. In their initial application, AANDC – CARD requested that the Board consider licencing under subsection 119(b) of the *Mackenzie Valley Resource Management Act* (Act), which states:

No preliminary screening, environmental assessment or environmental impact review is required to be conducted in relation to a proposal for a development

(a) that is carried out in response to a national emergency for which special temporary measures are being taken under the [Emergencies Act](#);  
or

(b) that is carried out in response to an emergency in circumstances such that it is in the interest of protecting property or the environment or in the interest of public welfare, health or safety to carry out the proposal forthwith.

At the time of the initial Licence application, the activities proposed were subject to an active Environmental Assessment (EA0809-001) conducted by the Mackenzie Valley Environmental Impact Review Board (Review Board). Based on the evidence provided by the Review Board, the Board confirmed that subsection 119(b) of the MVRMA was applicable. The proposed roaster complex deconstruction and the underground stabilization activities were eligible for licensing.

On March 1, 2016 AANDC – CARD submitted a letter indicating:

- 1) The remaining activities are a continuation of the initial application;
- 2) Completing the underground backfilling is required prior to the commencement of the full remediation program assessed during EA0809-001.

## **Decision**

Based on the evidence submitted, the Board confirmed that this amendment application is a continuation of subsection 119(b) of the *Mackenzie Valley Resource Management Act*.

The Board is satisfied that:

- any potential adverse environmental effects are insignificant or mitigable with known technology;
- the project is not likely to be a source of public concern; and
- Having due regard to the facts and circumstances, the merits of the submissions made to it, and to the purpose, scope and intent of the MVRMA and the *Waters Act* and Regulations made thereunder.

After reviewing the submission of the Applicant, the written comments received by the Board and the Staff report prepared for the Board, the Board, having due regard to the facts and circumstances, the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and the *Waters Act* and Regulations made thereunder, has determined that the amendment to Water Licence MV2012L8-0010 be issued as applied for, subject to the terms and conditions contained therein.

The Board's reasons for this decision are as follows:

- The Board is satisfied that adequate consultation has been conducted and that advice has been sought and considered in accordance with sections 63 and 64 of the MVRMA.
- It is the opinion of the Board that the conditions attached to MV2012L8-0010, pursuant to the *Waters Act*, will significantly reduce the potential environmental impacts resulting from water use and/or deposit of waste.
- The use of water and/or deposit of waste proposed by the Applicant is of a nature contemplated by the MVRMA and the *Waters Act*.
- The Board has notified the Applicant, through a statement included in the scope of this Licence, that compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of any other legislation.
- The operation will likely contribute to the socio-economic well-being and economic development of the region.

Water Licence MV2012L8-0010, as amended, contains provisions that the Board feels necessary to ensure and monitor compliance with the MVRMA and the *Waters Act* and the Regulations made thereunder and to provide appropriate safeguards in respect of the Applicant's use of the waters and/or deposit of waste affected by the Licence. The Board will provide additional referenced material or documents if requested in writing to do so.

SIGNATURE

Mackenzie Valley Land and Water Board



March 17, 2016

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Floyd Adlem  
A/Chair

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Date