



# Ministry of Environment Inspection Record

Environmental  
Protection  
Division

EP System: <u>AMS</u>	Inspection Status: <u>FINAL</u>	
System Number: <u>105719</u>	Inspection No: <u>23226</u>	
EP System Status: <u>Active</u>	Inspection Date: <u>2015-10-15</u>	
Region: <u>Skeena</u>	Office: <u>Smithers</u>	
Trigger: <u>Planned</u>	Incidents of Non-Compliance Observed: <u>Yes</u>	
Non-Compliance Decision Matrix Level: <u>Level 1</u>	Non-Compliance Decision Matrix Category: <u>Category B</u>	
Inspector Name(s): <u>Neil Bailey</u>	Risk Ranking: <u>0 to 1 = Low</u>	
Audit: <u></u>	Total Non-Compliance(s): <u>2</u>	
Regulated Party: <u>CHIEFTAIN METALS INC.</u>		
Regulated Party Contact(s): <u>Rob Marsland</u> <u>Senior Environmental Engineer</u>		
Mailing Address: <u>Chieftain Metals Inc. c/o Terry Chandler, Executive Vice President, Unit 118, 1515 Broadway St, Port Coquitlam BC V3C 6M2</u>		
Phone No: <u>(604) 836 7559</u>	Fax No: <u></u>	
Contact Email: <u>rob.marsland@chieftainmetals.com</u>		
Location Description or Site Address: <u>Tulsequah Chief Mine Site mine located approximately 100 kilometers south of Atlin, BC and 64 kilometers northeast of Juneau, Alaska on the east bank of Tulsequah River in northwest British Columbia.</u>		
Latitude: <u>58.71666</u> <u>N</u>	Longitude: <u>133.5833</u> <u>W</u>	
Receiving Environment(s): <u>Surfacewater</u>		

## Summary

<b>MONITORING AND REPORTING REQUIREMENTS</b>		
Inspection Period: From: 2014-07-01 To: 2015-10-15		
Requirement Source: <u>Permit</u>		
Activity: <u>On Site</u>	Waste Type: <u>Effluent</u>	
<b>Inspection Summary:</b> <p>Site inspection was conducted on Oct. 15th by Neil Bailey (MOE), Mark Love (MOE) and Diane Howe (MEM). Site tour was provided by Rob Marsland, Senior Environmental Engineer. Terri Zanger and Rob Motley were also on site from Chieftain. Weather was overcast, 1 deg. C, periods of light rain.</p> <p>Site currently in care and maintenance, with the water treatment plant shut down until activities resume at the site (moving of waste rock).</p> <p>2014 Q3 and Q4, 2015 Q1 and Q2 reports were reviewed for compliance with the permit.</p> <p>The following non-compliances were noted from the Oct. 15th site inspection and data review:</p> <p>1) Written Approval for the bypass of the water treatment plant was not obtained and the discharge does not meet the conditions specified in Section 3.6. The permittee is in non-compliance with section 2.1 of the permit.</p> <p>2) At site W51 for July 29, 2014 pH, conductivity and alkalinity were not monitored for.</p> <p>Monitoring of W46 is suspended in June 2015 as path of river no longer passes through this location.</p>		<b>Response:</b> <u>Advisory</u>
<b>ACTIONS REQUIRED BY REGULATED PARTY:</b> <p>1) Commission the IWTP immediately once site development occurs.</p> <p>2) Ensure monitoring occurs in the locations, frequencies and parameters required in The June 12 2014 Amendment to Section 4.0 Discharge and Receiving Environment Monitoring. Contact Director regarding amending the monitoring location of W46.</p>		
<b>ADDITIONAL COMMENTS:</b> <p>On June 6, 2012, Chieftain Metals Inc., sent a letter to Mr. Wade, Comin, Inspector, Environment Canada, with copy to Ian Sharpe, Regional Director, Environmental Protection, of the Ministry of Environment. The letter informed Mr. Comin, that the Company intended to cease operations of the mine water treatment plant at the Tulsequah Chief Mine site.</p> <p>Subsequently, Chieftain Metals notified the Ministry that they had ceased operating the water treatment plant as of June 22, 2012 and were bypassing the authorized works.</p> <p>Permit 105719 issued under the Environmental Management Act (EMA), on April 27, 2012 requires that water from the 5200, 5400, and 5900 portals and mine site runoff report be collected and treated through prescribed works specified in Section 1.1.5.</p> <p>Further, Section 2.1 prohibits the bypass of authorized works unless there is written approval from the Director,</p>		

or that it meets the conditions specified in Section 3.6, which allows for the discharge of neutral mine water from the underground that meets the limits specified in Section 1.1.3 of the authorization.

Permit amendment issued on June 12, 2014 amending Discharge and Receiving Environment Monitoring. Commencing July 1, 2014, Section 4.0 of permit 105719 is to read as follows:

- Sample monthly from October through February increased to bi-weekly April through May and then returns to monthly in the period from June to September.
- The sites to be sampled remain W10, W46, SE2, W51 and W31
- The parameters to be sampled for remain total and dissolved metals, pH, conductivity, turbidity. suspended solids, hardness and alkalinity.

An Aquatic Ecological Risk Assessment was conducted in the Tulsquah River in 2013 by triton Environmental, Palmer Environmental and Core6.

#### Compliance History:

Advisory issued 2012-05-21 for accidental release of mine water.

Written Approval for the bypass of the water treatment plant was not obtained and the discharge did not meet the conditions specified in Section 3.6. As a result, Chieftain Metals Inc. was in violation of Section 2.1 \_\_\_Bypasses\_\_\_ of Permit 105719. Warning issued 2012-07-24.

2012-12-06 Notice of non-compliance for sludge pond seep.

2013-01-16 Advisory issued requiring permittee to follow monitoring requirements laid out in the Discharge and Receiving Environment Authorization Amendment - specifically the weekly metals sampling required at W10 and W32.

Compliance Summary	In	Out	N/A	N/D
Discharge	1	0	0	0
Operations	0	1	0	0
Reporting	1	0	0	0
Monitoring	0	1	1	0

## Inspection Details

<b>Requirement Type:</b> <u>Monitoring</u>
<b>Requirement Description:</b> Section 1.1.3 Interim Acid Water Treatment Plant (IAWTP) discharge characteristics: Maximum allowable concentration in any grab sample 0.5mg/L for Aluminum(dissolved), 0.05mg/L for Arsenic(dissolved), Copper(dissolved) and Lead(dissolved) 0.2 mg/L for Zinc(dissolved) 30mg/L for TSS, 6.0-9.5 pH units 50% Survival in 100% Concentration, Minimum - Rainbow Trout 96 hr Acute Lethality, Single Concentration These limits apply to treated effluent discharge from the IAWTP and the Neutral pH Mine Water (NMW).
<b>Details/Findings:</b> IAWTP being shut down since June22, 2012 there was no discharge of treated mine effluent form the plant to sample.
<b>Compliance:</b> <u>Not Applicable</u>
<b>Requirement Type:</b> <u>Operations</u>

**Requirement Description:**

1.1.5 The authorized works include, but are not limited to, a water collection and conveyance system, pumps, an acid water treatment plant which includes a neutralization chamber, rapid mix tank, flocculent tank, inclined plate-type separator/thickener, filters and holding tanks, a discharge line, outfall to the Tulsequah River, and related appurtenances approximately located as shown on Site Plan A.

**Section 2.1 Bypasses**

Any bypass of the authorized works is prohibited unless the approval of the Director is obtained and confirmed in writing.

**Details/Findings:**

Written Approval for the bypass of the water treatment plant was not obtained and the discharge does not meet the conditions specified in Section 3.6. As a result, Chieftain Metals Inc. is in violation of Section 2.1 \_Bypasses\_ of Permit 105719.

**Compliance:** Out

**Requirement Type:** Discharge

**Requirement Description:**

3.6.1 Uncontaminated groundwater from underground drill holes with characteristics better than or equal to that specified in section 1.1.3, may bypass the treatment plant and be diverted to Portal Creek.

**Details/Findings:**

Neutral pH water met the criteria for diversion for all data reviewed.

**Compliance:** In

**Requirement Type:** Monitoring

**Requirement Description:**

Section 4.0 Discharge and Receiving Environment Monitoring.

Commencing July 1, 2014, Section 4.0 of permit 105719 is to read as follows:

- Sample monthly from October through February increased to bi-weekly April through May and then returns to monthly in the period from June to September.
- The sites to be sampled remain W10, W46, SE2, W51 and W31
- The parameters to be sampled for remain total and dissolved metals, pH, conductivity, turbidity, suspended solids, hardness and alkalinity.

**Details/Findings:**

The Permittee did not meet the amended requirements for Discharge and Receiving Environment Monitoring on the following dates and locations:

- At site W51 for July 29, 2014 pH, conductivity and alkalinity were not monitored for.
- Monitoring of W46 is suspended in June 2015 as path of river no longer passes through this location.

**Compliance:** Out

**Requirement Type:** Reporting

**Requirement Description:**

5.7 Annual report

The Permittee shall submit an annual report by March 31st of each year, with the first report submitted on March 31, 2013.

**Details/Findings:**

2014 Annual Report submitted and on file.

**Compliance:** In

**Were the following collected during inspection:**

Samples? <input type="checkbox"/>	Photos? <input checked="" type="checkbox"/>	EMS No. <input type="text"/>
Other (please specify) <input type="text"/>		
Is the Inspection related to an EA Project? <input type="checkbox"/>	EA Project Certificate Number: <input type="text"/>	

<i>INSPECTION CONDUCTED BY:</i>	
<i>Signature</i> Neil Bailey	<i>Date Signed</i> 2015-11-05
<i>ENCLOSURE(S) TO REGULATED PARTY &amp; DESCRIPTION:</i> <input type="text"/>	
<a href="#">CVIS Archives</a>	
<i>REGULATORY CONSIDERATIONS:</i> <input type="text"/>	
<p><i>DISCLAIMER:</i></p> <p>Please note that sections of the permit, regulation or code of practice referenced in this inspection record are for guidance and are not the official version. Please refer to the original permit, regulation or code of practice.</p> <p>To see the most up to date version of regulations and codes of practices please visit:  <a href="http://www.bclaws.ca/">http://www.bclaws.ca/</a></p> <p>If you require a copy of the original permit, please contact the inspector noted on this inspection record or visit: <a href="http://www2.gov.bc.ca/gov/topic.page?id=DF89089126D042FD96DF5D8C1D8B1E41&amp;title=Publicly%20Viewable%20Authorizations">http://www2.gov.bc.ca/gov/topic.page?id=DF89089126D042FD96DF5D8C1D8B1E41&amp;title=Publicly%20Viewable%20Authorizations</a></p> <p>It is also important to note that this inspection record does not necessarily reflect each requirement or condition of the authorization therefore compliance is noted only for the requirements or conditions listed in the inspection record.</p>	

<b>Ministry of Environment</b>	<b>Skeena</b>	<b>Mailing Address:</b>	<b>Phone:</b> (250) 847-7260
	<b>Region</b>	Bag 5000, 3726 Alfred St	<b>Fax:</b> (250) 847-7591
	Environmental Protection Division	Smithers, BC V0J 2N0	<b>Website:</b>
			<a href="http://www.gov.bc.ca/env">http://www.gov.bc.ca/env</a>

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Photo 1

Site from the air,  
viewed from the  
Northwest.



Photo 2

Sludge pond  
adjacent runway.





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Photo 3

5400 portal.



Photo 4

Neutral Mine  
Water discharge.



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Photo 5

View from 5400  
to 5200 level.



Photo 6

Waste rock, view  
from 5400 portal.





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Photo 7

Exfiltration  
Pond.



Photo 8

5200 portal.  
Large rock on  
neutral mine  
water bypass  
pipe.





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Photo 9

5200 discharge location. Samples for TSS, total metal and dissolved metals taken at this location.



Photo 10

View to IWTP discharge point.



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Photo 11

Sludge storage pond adjacent to IWTP.



Photo 12

Water treatment plant holding tanks.





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Photo 13

Neutralization chamber.



Photo 14

Rapid mixing tank.

