Wolverine Project

QUARTZ MINING LICENSE QML-0006

2008 ANNUAL REPORT

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1 Introduction

This Annual Report has been prepared to satisfy requirements contained within Quartz Mining License QML-0006 (QML) Condition 10.5 for activities that occurred during the period of January 1st to December 31st, 2008 at the Wolverine Project.

Table 1-1 outlines the QML Annual Report information requirements and the corresponding Report section where the information is provided. Yukon Zinc Corporation (YZC) has commenced with project development and hence some QML requirements pertaining to operations cannot be reported on in this report. A Socio-Economic Assessment summary is provided in Section 10 this report, as required by the Environmental Assessment Screening Document.

Table 1-1: QML annual report information requirements and corresponding report section

QML Section	Requirement	Report Section Where Addressed
10.5 a)	A summary of mining activities at the mine.	Section 2
10.5 b)	A map showing all structures, works and installations associated with the Undertaking.	Section 2
10.5 c)	The total amount of ore and waste removed from the mine.	N/A[1]
10.5 d)	The total amount and the average head grade of ore processed through the mill.	N/A
10.5 e)	The total amount and grade of all stockpiled ore.	N/A
10.5 f)	The total amount and grade of concentrate produced, stockpiled, and transported from the Undertaking.	N/A
10.5 g)	As-built drawings of the mine and of all structures, works and installations constructed or altered in the mine.	N/A
10.5 h)	Details respecting any action taken as a result of the recommendations made by the engineer in relation to the inspection referred to in paragraph 10.1.	N/A
10.5 i)	A summary of any updates to estimates of ore reserves and mine life, including reserve category, tonnage and grade.	Section 3
10.5 j)	A summary of any underground stability incidents.	Section 4
10.5 k)	A summary of paste backfill placement activities conducted and their locations in the mine.	N/A
10.5 l)	A summary of humidity cell tests undertaken for waste rock and paste backfill.	Section 5

10.5 m)	A summary of quantity and related analysis of leachate collected from paste backfill.	N/A
10.5 n)	The total amount of tailings deposited in the tailings impoundment.	N/A
10.5 o)	An evaluation of the performance of the tailings facility, including an estimate of remaining available storage capacity in the facility.	N/A
10.5 p)	The data generated from the full depth sampling of the tailings.	N/A
10.5 q)	A summary of any hydrogeology studies undertaken and related analysis of these data, including groundwater flow pathways as influenced by underground workings.	N/A
10.5 r)	A summary and evaluation of data results from the field pilot test of the bio-pass system.	N/A
10.5 s)	A summary of surface water quality monitoring, including any acute lethality testing conducted.	Section 6
10.5 t)	A summary of groundwater quality monitoring in wells downslope of the mine workings.	Section 6
10.5 u)	A summary of the programs undertaken for environmental monitoring and surveillance as outlined in the Monitoring and Surveillance Plan and the Wildlife Protection Plan, including an analysis of these data and any action taken or adaptive management strategies implemented to monitor or address any changes in environmental performance.	Section 6
10.5 v)	A summary of progressive and ongoing reclamation activities.	N/A
10.5 w)	A summary of proposed development and production for the coming year.	Section 7
10.5 x)	A summary of activities related to care and maintenance of the Undertaking, including any temporary closure activities, if applicable.	N/A
10.5 y)	A summary of spills and accidents that occurred as a result of the Undertaking.	Section 8
10.5 z)	A summary of the previous and projected use of the access road, including maintenance work conducted, a summary of the level of traffic, access control issues, wildlife incidents and other accidents, and upgrade or maintenance work planned for the upcoming year.	Section 9

Notes: 1 - N/A = Requirement not applicable; due to project phase in the initial stages of construction in 2008 (e.g., no mine or mill operations)
2 - Monitoring and Surveillance Plan and the Wildlife Protection Plan in preparation

1.1 Project Update for 2008

Yukon Zinc Corporation's (YZC) Wolverine Project, located in the southeast Yukon (Figure 1-1), is a zinc-silver-copper-lead-gold underground mining project that will mine up to 1,700 t/d of diluted ore. Following construction over a one and one half year period, the mine will operate for approximately nine years. The reclamation and closure phase will occur over a three-year period as previously described in the *Wolverine Project Reclamation and Closure Plan V2008-02*.

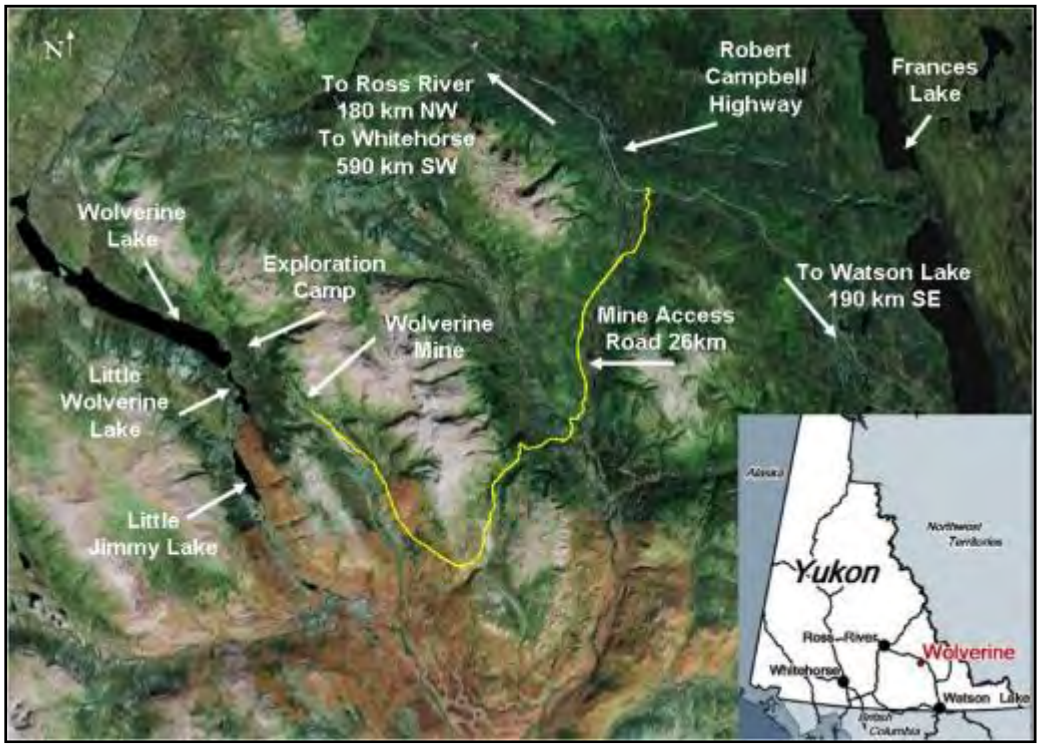

Figure 1-1: Location of Yukon Zinc Corporation's Wolverine Project

On July 2, 2008, Jinduicheng Molybdenum Group Ltd and Northwest Nonferrous International Investment Company Ltd. (JXC) took sole ownership of Yukon Zinc Corporation. The new ownership intends to proceed with development and operation of the Wolverine Project. The YZC management team has expanded to increase internal capacity in engineering, construction, and project controls to execute the development and operation of the Wolverine Project over the 2009 and 2010 period in a timely and responsible manner.

1.2 2008 Reporting Requirements

As summarized in Table 1-2, various reports were submitted to Yukon Energy, Mines and Resources and the Yukon Water Board in 2008 as per the requirements of *QML-0006*, *Type A Water License QZ04-065 (A-Licence)*, and *Type B Water Licence QZ01-051 (B-Licence)*. During this phase of transition into project development, environmental monitoring was conducted as per both water licences.

Table 1-2: QML, B-Licence, A-Licence Reports, and Security Payments Submitted in 2008

Regulatory Submissions 2008	Date Submitted
Type A Water Licence (QZ04-065)	
RPT: Monitoring and Surveillance Monthly Report (Nov 07 to Feb 08)	4-Apr-08
NTF: Provision of coordinates for monitoring points W8, W71, W72 & W73	3-Apr-08
RPT: Monitoring and Surveillance Monthly Report (Mar 08)	15-Apr-08
RPT: Monitoring and Surveillance Monthly Report (Apr 08)	30-May-08
RPT: Monitoring and Surveillance Monthly Report (May 08)	24-June-08
RPT: Monitoring and Surveillance Monthly Report (June 08)	10-July-08
RPT: Monitoring and Surveillance Monthly Report (July 08)	15-Aug-08
RPT: Monitoring and Surveillance Monthly Report (Aug 08)	26-Sept-08
RPT: Monitoring and Surveillance Monthly Report (Sept 08)	27-Oct-08
RPT: Monitoring and Surveillance Monthly Report (Oct 08)	24-Nov-08
RPT: Monitoring and Surveillance Monthly Report (Nov 08)	17-Dec-08
NTF: Sump #3 Design Minor Modification Construction Schedule	17-Oct-08
NTF: Minor modification to the design submitted to the Board Sump #3	17-Oct-08
NTF: Ditch A&B Construction Schedule	27-Oct-08
NTF: Provision of coordinates for ground water wells MW07-2 & MW07-3	24-Nov-08
NTF: Minor modification to the design submitted to the Board (Revisions to Ditch A & B)	24-Nov-08
Type B Water Licence (QZ01-051)	
RPT: Annual report for 2007	18-Jan-08
RPT: Surveillance Network Program (Dec 07)	24-Jan-08
RPT: Surveillance Network Program (Jan 08)	26-Feb-08
RPT: Surveillance Network Program (Feb 08)	20-Mar-08
RPT :Surveillance Network Program (Mar 08)	14-Apr-08
RPT: Surveillance Network Program (Apr 08)	30-May-08
RPT: Surveillance Network Program (May 08)	24-June-08
RPT: Surveillance Network Program (June 08)	10-July-08
RPT: Surveillance Network Program (July 08)	15-Aug-08
RPT: Surveillance Network Program (Aug 08)	26-Sept-08
RPT: Surveillance Network Program (Sept 08)	27-Oct-08
RPT: Surveillance Network Program (Oct 08)	24-Nov-08
RPT: Surveillance Network Program (Nov 08)	17-Dec-08
Schedule 3 (Waters Act) Land Treatment Facility	22-May-08
Schedule 3 (Waters Act) Land Treatment Facility	21-Jun-08
Schedule 3 (Waters Act) Land Treatment Facility	21-Aug-08
Schedule 3 (Waters Act) Land Treatment Facility	21-Aug-08
Schedule 3 (Waters Act) Waste Rock Pad	5-Sept-08
NTF: Sump #3 Design Minor Modification Construction Schedule	17-Oct-08
Quartz Mining License (QML-0006)	
RPT: 2007 Annual Report	3-Apr-08
Final Plan - Quarry Permit 07/224	2-Feb-08
PLN: Reclamation & Closure Plan V2008-02 (Final)	19-Mar-08
PLN: General Site Plan 2008-04 (Draft)	28-Nov-08
PLN: Tailings and Infrastructure Design and Construction Plan 2009-02 (Draft)	31-Dec-08
Security Payment (QML-0006))	
$409, 726	28-May-09
$409, 726	25-Aug-08

RPT: Report; NTF: Notification; PLN: Plan

2 Activities 2008

The focus of the 2008 included continued dewatering of the underground test mine developed in 2005, construction of infrastructure to support water storage and treatment and the future mine development, access road improvements, land treatment farm construction, mine area infrastructure/services relocation, permanent camp utilities installation and tailings facility site preparation (installation of diversion ditches and removal of organic material). Figure 2-1 details the location of major surface infrastructure as of the end of 2008 and the sections below describe the main construction activities undertaken in 2008. Environmental monitoring and reporting was conducted on a regular basis for all construction activities on the mine site; reports are provided in Appendix A.

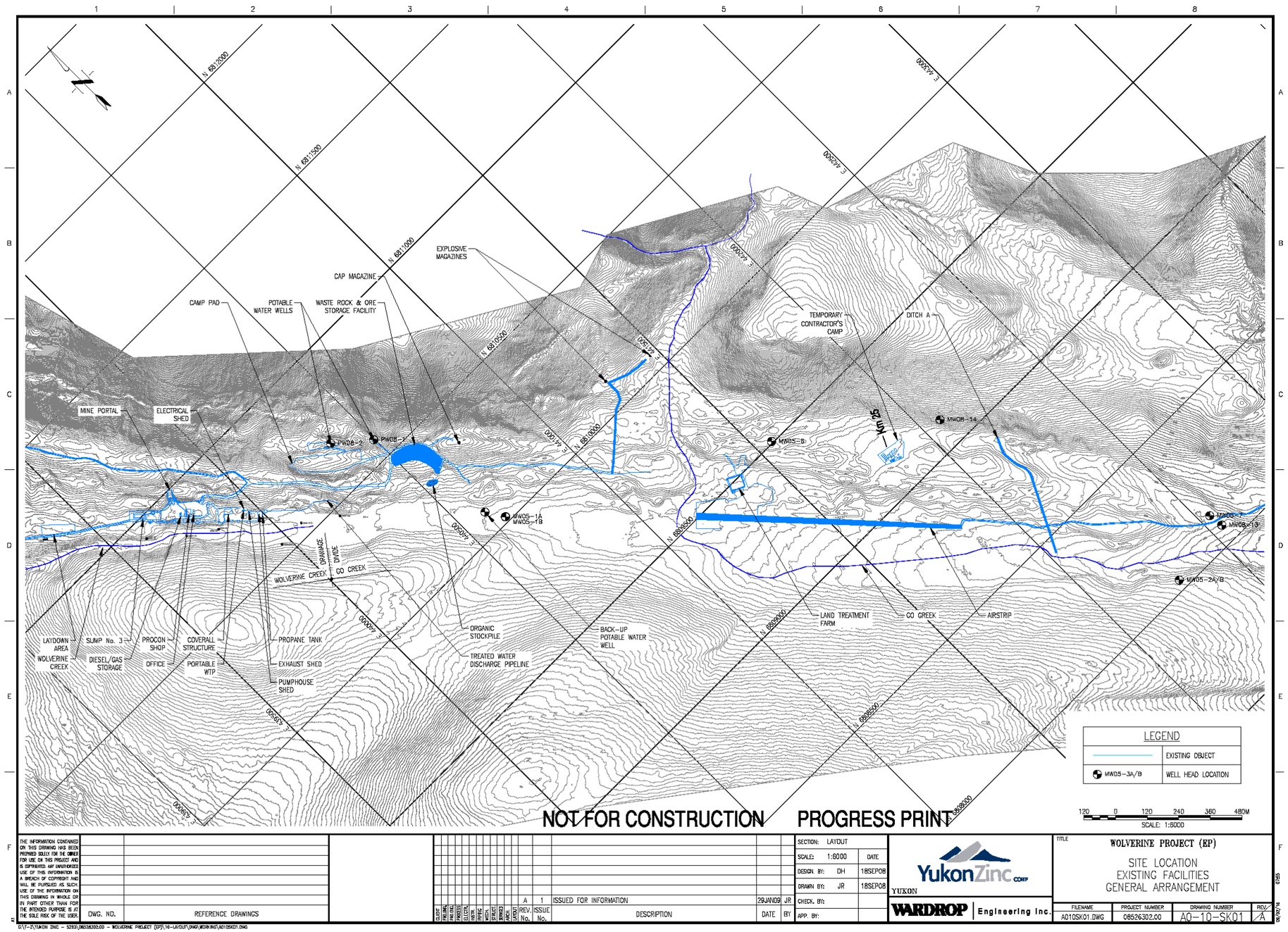

Figure 2-1: Existing Infrastructure End of 2008

2.1 Underground

Dewatering of the underground mine continued throughout 2008. In late 2008, a geotechnical assessment program, involving a 300 m core drilling program was completed resulting in finding favorable ground conditions for mine development. Further assessments will be conducted in June 2009. Shotcreting of the main ramp was conducted as needed.

2.2 Sump #3 Construction

YZC submitted a Notification of Minor Modification to the Yukon Water Board as per A Licence Part D Condition 31 and B Licence part C Section 23 on October 17, 2008. The Notification was copied to Yukon Energy, Mines and Resources to supplement information contained in *General Site Plan Version 2007-03*. The Notification outlined that a temporary structure (Sump #3) would be constructed to permit underground dewatering over the 2008-09 period to provide adequate surface capacity for settling and storage.

Sump #3 is a 2000 m^3 sump, contained within a Sprung structure (Pictures 2-1 and 2-2), and is located approximately 100 m northwest of the mine portal (Figure 2-1). Site preparation activities in the area of Sump #3 commenced on September 5th, 2008. The Sprung building was erected and pipelines installed in October, excavation and lining of the sump occurred in November, and the sump was commissioned on December 20th, 2008.

Picture 2-1: Sump # 3 Sprung structure, facing southeast, 12/13/08.

Picture 2-2: Sump #3 1/8 full, facing north, 12/13/08.

A report detailing the general layout, completed construction activities, engineering details of Sump #3 and the pipeline upgrade, and quality assurance and quality control documentation was provided in *Sump #3 Construction Report and Drawings* (February 24, 2009).

Water pumped to this sump is either recycled as a supply source for underground drill water, or pumped to the water treatment sumps (Sump #1 and Sump #2) for treatment prior to discharge as per B Licence requirements. This underground dewatering settling sump will be decommissioned once

the tailings facility is constructed and will be replaced with a permanent freshwater pond to support mine dewatering and drill requirements during operations.

2.3 Land Treatment Farm Decommissioning of Cell #1

In 2008, the Land Treatment Farm (LTF) (Permit # 4202-24-022) consisted of two cells: Cell 1 (58 m^3) and Cell 2 (361 m^3), for the purpose remediating hydrocarbon contaminated soil resulting from diesel spills. Picture 2-3 shows an aerial view of the facility in the fall of 2007, just after Cell 2 construction completion and material had been moved into it from two other cells.

Picture 2-3: Aerial view of LTF in fall 2007.

On August 19th, 2008, YZC received a letter from Yukon Environment approving the removal of remediated material from Cell 1 and Cell 2. The remediated soil was relocated to the industrial area from both cells September 16th through 18th and the material was spread out and leveled for construction activities. Cell 1 was decommissioned during this time (Picture 2-4).

To maintain the integrity of the liner of Cell 2, only the upper portion of the material was removed (165 m^3 of 359 m^3, approximately 50%) and the remainder acts as a protective boundary layer that will allow for deposition of contaminated material by heavy equipment, as well as tilling and turning of contaminated material stored on top of the boundary layer (Picture 2-5). All future contaminated material will be moved to Cell 2 for remediation.

Details of origin and treatment of all the material stored at the land treatment facility area are provided in the Land Treatment Facility Annual Reports for 2007 (March 2008) and 2008 (March 2009).

Picture 2-4: Cell 1 area following removal remediated material, underlying material, and re-contouring of area, facing northeast, 09/22/08.

Picture 2-5: Cell 2 after 165 m^3 removal of remediated material, facing east, 9/29/08.

2.4 Mine Area Utilities Relocation

Mine area utilities infrastructure, including the generators, compressors, diesel fuel tanks, and associated cables, switchgear, and piping, were been moved to a new location adjacent to the mine contractor shop (Picture 2-6). From the area adjacent to the portal this work was undertaken in preparation for the commencement of underground development work in January and surface construction in April 2009.

Picture 2-6: New location of fuel tanks and gensets, facing south, 11/12/08.

2.5 Camp Infrastructure

2.5.1 Temporary Construction Camps

Two small camps have been used to support construction activities over the 2008 period. The YZC exploration camp located near Wolverine Lake has been used by YZC staff and underground mine contractor (Procon Mining and Tunneling Ltd.) staff.

A temporary construction camp owned by Arctic Construction Ltd. was installed to the northeast of the airstrip (Picture 2-7) in September 2008 and will be used throughout 2009 to support construction activities. The 50 person camp, maximized to 24 people in 2008, was self sufficient, with its own potable water well and sanitary system. YZC received an *Approval to use a sewage disposal system, Temporary road camp Permit #3337 24*, for the Arctic camp on September 24th, 2008.

Picture 2-7: Arctic construction camp situated east of the airstrip, facing south, September 2008.

Both camps will be operational until the permanent camp is operational, or until they are no longer required.

2.5.2 Permanent Camp Services Installation

The permanent camp location is situated to the east of the mill building (Figure 2-1). In 2007, the 65 m x 273 m pad was leveled by cutting and filling from the northeast embankment to the southwest slope. In fall 2008, subsurface utilities including fire water, potable water and sewage pipelines, and propane lines were installed (Picture 2-8).

Picture 2-8: Installation of the permanent camp underground utilities, facing east, October 2008.

Potable water wells (PW08-01 and PW08-02 on Figure 2-1) were installed at the end of October to provide primary water supply well to the 205-man camp. The wells are around 300 feet deep, and 6" steel casings were installed to facilitate the installation of a submerged pump. Pump tests and water quality analysis were conducted to ensure that the water flow and quality was appropriate for camp use.

The 205 person camp has been manufactured by Northern Trailer and will consist of five 41 person sleeper units, a kitchen/dining building and a recreation building arranged as separate buildings and without enclosed walkways. These modular units will be mobilized to site in January-February 2009 and the camp is anticipated to be operational in late April 2009.

2.6 Tailings Facility Site Preparation Works

The tailings facility will consist of a lined basin, the main dam, a seepage dam, spillways, seepage collection and diversion ditches, a reclaim pump barge and pipelines. YZC completed stripping of organic material from within the tailings facility footprint (Picture 2-9) by the end of 2008, and the excavation of Diversion Ditch A on December 31, 2009.

The *Tailings and Infrastructure Design and Construction Plan*, prepared as per *QML-0006* Section 13.3 requirements, was submitted and approved on February 20, 2009.

Picture 2-9: Looking east at stripping of organic material from within the tailings facility basin (Nov. 2008).

Diversion Ditch A is a permanent water management structure required to intercept runoff from the catchment northwest of the tailings impoundment. The design of Ditch A was modified to integrate changes resulting from alterations to the layout of adjacent structures such as the removal of the dense media separation stockpile and the modified alignment access road. The modification resulted in the ditch length being reduced from 900 m to approximately 600 m, and the installation of a culvert to permit an increased gradient over a shorter alignment. The construction of Diversion Ditch A was close to completion by the end of 2008 (Pictures 2-10 and 2-11), with only the rip rapping requirement to complete in 2009. Figure 2-2 provides the excavation footprint along with culvert installation details, profile drawings and stilling basin design.

Picture 2-10: The completion of ditch A 0+000m to 0+200, facing southwest, 11/21/08.

Picture 2-11: Ditching and culvert installation, facing east, 11/27/08.

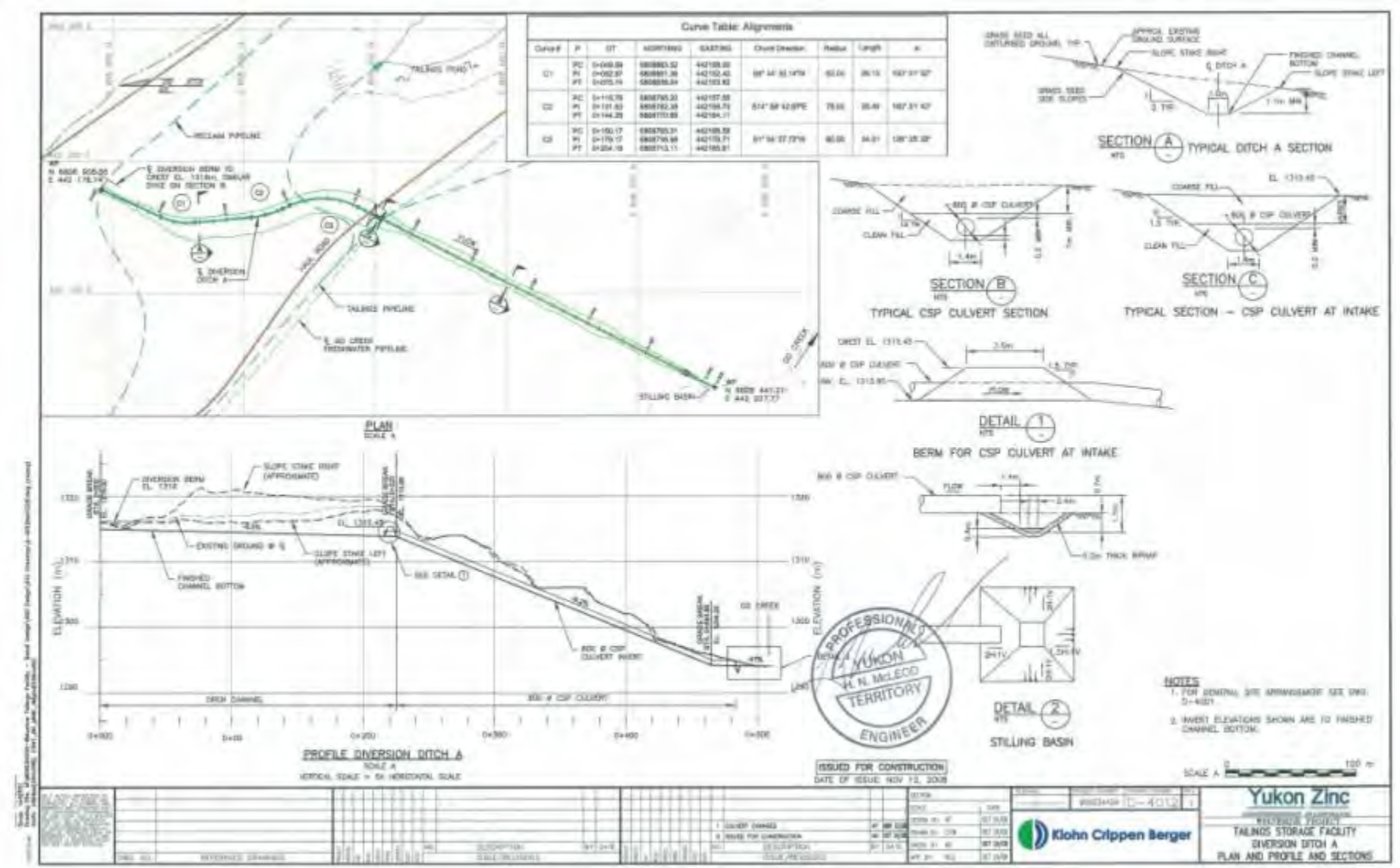

Figure 2-2: Diversion Ditch A: Plan and Profile and Sections

2.7 Installation of Monitoring Infrastructure

Two groundwater monitoring wells, GW08-13 and GW08-14, were installed upstream and downstream of tailings facility, respectively, at the locations outlined in Section 6.6.3, in late October, 2008. The 10' deep wells were required to meet the monitoring schedule outlined in *A Licence* Schedule A.

2.8 Km 18 Borrow Sites

Two borrow sites were developed between mid-September and mid-November, 2008 on the north and south side of the access road at Km 18 (Pictures 2-12 and 2-13). The borrow material was used for material in the bin walls at Bunker Creek, underground ramp material, road surfacing, and infilling of trenches for septic, grey water and camp services. Screening plants were used to separate the material into different grain sizes. Strippings and organics were separated into windrowed piles at both sites.

Picture 2-12: Km 18 South borrow site, facing south, 9/10/08.

Picture 2-13: Km 18 North Borrow Site facing northeast, 11/02/08.

3 Updates to estimates of ore reserves and mine life, including reserve category, tonnage and grade.

Ore processing has been modified in that it no longer includes dense media separation (DMS), and hence all diluted ore from the mine will be sent through the process plant. The mining rate remains the same but the milling rate has increased from 1,400 t/day (or 1,700 t/day pre DMS) to 1,700 t/d (no DMS). Although there is an average daily increase in mill throughput, the overall amount of diluted ore milled over the Life of Mine (LOM) has not increased from 2007 projections (5.15Mt) provided in the A Licence Application. The LOM mass balance for the operation (numbers in brackets represent previous projections) is provided in Figure 3-1.

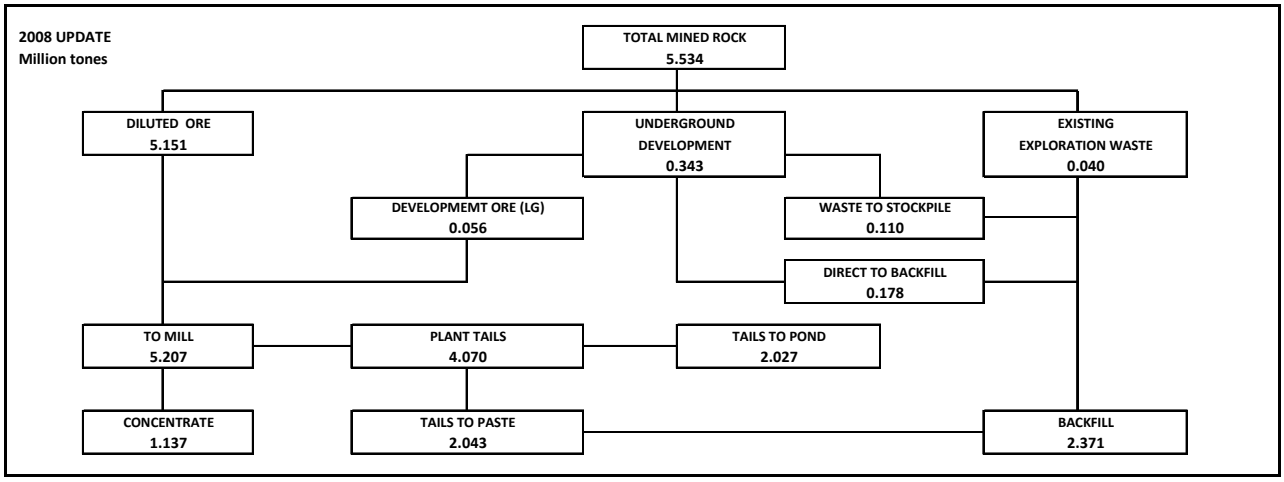

Figure 3-1: LOM Mass Balance for the Operation

Mine life is projected at approximately nine years, with Year 1 production occurring for approximately half the year, and Year 9 with reduced production as well. The annual tonnage by operating year for each component of operating process is provided in Table 3-1. In a typical year, approximately 620,500 t will be mined and milled, with 136,000 t of concentrate being produced. Tailings will either be deposited underground as paste backfill or pumped to the tailings facility for eventual subaqueous disposal. Waste rock from advanced exploration stage test mine development and from ongoing stope development during operations will be encapsulated in paste backfill.

Table 3-1: Annual Tonnage by Operating Year for Each Component of Operating Process

Year		Diluted Ore	Milling Rate	Concentrate Production	Total Mill Tailings	Waste To Backfill	Tails to Paste	Tails to TF	Low Grade To Stockpile	Low Grade To Mill	Waste To To Stockpile	Waste To Backfill
Exploration											40000	
1 (184 d)	t/y	355640	387090	81504	305586	0	146101	159486	22200	31450	51338	0
2	t/y	620500	620500	136182	484319	69375	226408	257910	22200		58275	0
3	t/y	622200	622200	136555	485645	102675	213426	272219	11100			36000
4	t/y	620500	620500	136182	484319	5550	252628	231690				113614
5	t/y	620500	620500	136182	484319	0	254908	229410				
6	t/y	620500	620500	136182	484319	0	254908	229410				
7	t/y	622200	622200	136555	485645	0	255606	230039				
8	t/y	620500	620500	136182	484319	0	254908	229410				
9	t/y	448919	472969	101164	371805	0	184421	187385		24050		
Total	t	5151459	5206959	1136684	4070275	177600	2043315	2026960	55500	55500	149613	149614
Volume	m^3	@1.82t/m^3 tails,						1113714				

4 Underground stability incidents

On May 7th, 2008, a rockfall of approximately 1.5 m^3 occurred at the underground portal. The Chief Mine Safety Officer of the Yukon Workers Compensation Health and Safety Board (YWCHSB) inspected the portal on May 16th, 2008 and issued inspection report I.R. No. 10038, dated May 23rd, 2008.

YZC engaged Rockland Ltd. to review the event and recommend remedial measures. A geotechnical investigation was carried out and a report issued recommending short and long term measures and. YZC immediately implemented these measures, which included the installation of instrumentation and minimizing the risk of another failure from the side slopes at the portal. Instrumentation, including four bolt extensometers and seventeen tiltmeters, were installed on fifteen steel sets and two bull horn sets. Manual monitoring commenced by the end of September and automated monitoring will commence in January 2009. The portal was excavated, rock-bolted and screened and a 10 m multi-plate culvert was installed and backfilled at the end of October. Pictures 4-1 to 4-6 outline these events described above.

Picture 4-1: View of the rockfall area immediately after the event, 5/ 07/08.

Picture 4-2: View of the rockfall area (left side of portal) after scaling, 6/06/08.

Picture 4-3: Instrumentation installed, 9/21/08.

Picture 4-4: Rock bolt and screening completed on the left side of portal, 9/22/08.

Picture 4-5: Multi-plate installed, 10/16/08.

Picture 4-6: Backfilling and leveling completed, 10/30/08.

5 Humidity cell tests undertaken for waste rock and paste backfill.

Waste rock, paste backfill, ore, DMS, and tailings humidity cells have been operating since 2005/06. Table 5-1 summarizes the composition, the start date of operation and the weeks in operation as of December 31st, 2008. Flushing of the cells is conducted weekly, with analysis of the leachate performed at the same time. Based on analytical frequency for tailings cells "OA" and "OD" were reduced to once every 4 weeks in late September 2008, with flushing continuing weekly. Analytical frequency for all other cells will be reduced to monthly upon authorization.

Table 5-1: Waste Rock, Paste Backfill, Ore and Tailings Humidity Cell Composition and Duration of Operation

Humidity Cell	Composition	Date Started	Operational/ Decommissioned	Weeks in operation as of 12/31/08
HC1	Rhyolite/rhyolite fragmental	22-Dec-05	under review[1]	159
HC2	Iron formation	22-Dec-05	under review[1]	159
HC3	Rhyolite/rhyolite fragmental	22-Dec-05	under review[1]	159
HC4	Rhyolite/rhyolite fragmental	22-Dec-05	Operating	159
HC5	Calcite-pyrite exhalite	22-Dec-05	under review[1]	159
HC6	Calcite-pyrite exhalite	22-Dec-05	Operating	159
HC7	Carbonaceous argillite	22-Dec-05	Operating	159
HC8	Carbonaceous argillite	22-Dec-05	under review[1]	159
HC9	Non-carbonaceous argillite	12-Jan-06	under review[1]	156
HC10	Non-carbonaceous argillite	12-Jan-06	Operating	156
HC11	Iron formation	12-Jan-06	under review[1]	156
HC12	Rhyolite/argillite	12-Jan-06	under review[1]	156
HC13	Rhyolite/argillite	12-Jan-06	under review[1]	156
HC14	Ore	16-Feb-06	under review[1]	151
HC15	Ore	16-Feb-06	under review[1]	151
HC16	Ore	16-Feb-06	under review[1]	151
HC17	DMS float	21-Feb-06	under review[1]	150
HC18	DMS float	21-Feb-06	under review[1]	150
HC19	DMS float	21-Feb-06	under review[1]	150
HC20	NP[2] depleted ore	23-May-06	under review[1]	137
HC21	NP depleted ore	23-May-06	Continue operation for 20 weeks	137
HC22	NP depleted ore	23-May-06	under review[1]	137
T1	Paste backfill	23-May-06	Continue operation for 20 weeks	137
T2	Paste backfill	23-May-06	Continue operation for 20 weeks	137
LD	Tailings - Lynx zone diluted ore composite	22-Jul-05	Decommissioned (3-Oct-06)	175 - Complete
WD	Tailings - Wolverine zone diluted ore composite	22-Jul-05	Decommissioned (3-Oct-06)	175 - Complete
OA	Tailings - Overall ore composite	06-Jun-05	Operational	187
OD	Tailings - Overall diluted ore composite	22-Jul-05	Operational	180

1. Under review and awaiting authorization

2. Neutralization potential

6 Programs undertaken for environmental monitoring and surveillance

YZC conducted monitoring as per the Environmental Monitoring Plan that was outlined in the *General Site Plan Version 2007-03.* Monitoring conducted throughout 2008 included:

- Construction activities
- Wildlife monitoring;
- Geochemical characterization (acid base accounting and shake flasking testing);
- Weather;
- Piezometer water levels;
- Surveillance Network Monitoring:
    - Surface water quality;
    - Hydrological assessments;
    - Groundwater quality; and
    - Stream sediment quality.

6.1 Construction Monitoring

The purpose of construction monitoring is to ensure that site activities have minimal adverse environmental effects. During construction activities in 2008, a qualified Construction Manager and Environmental Monitor were onsite to:

- Coordinate the activities of contractors and technical specialists.
- Ensure accurate layout and measurement of the work as well as quality control.
- Re-design as required to accommodate changes in conditions (i.e., soil conditions or grade-line corrections).
- Ensure contractor compliance with all regulatory, permitting and contractual conditions.
- Prepare daily reports of all construction activities, including equipment employed, areas worked, personnel involved, and possible mishaps, outcomes and remedies.
- Complete a photographic journal of all activities and weekly summary reports.
- Monitor for safety infractions and near misses, and document outcomes and corrective actions.

Environmental monitoring reports for all construction activities are were prepared by the Environmental Monitor onsite during the activity. Table 6-1 summarizes the Environmental Monitoring Reports included in Appendix A, the monitoring period and the date of the monitoring report submission. Table 6-2 summarizes the frequency of monitoring that was conducted in 2008.

Table 6-1: Environmental Monitoring Report Summary

Site	Monitoring Period From	Monitoring Period To	Date of Report
Access Road Snow Clearing			
Airstrip to Km 0	01-Apr	07-Apr	07-Apr
Airstrip to Km 32-29	01-Apr	07-Apr	07-Apr
Airstrip to Km 0	11-Apr	22-Apr	22-Apr
Bunker Creek			
	03-Sep	22-Sep	22-Sep
	23-Sep	24-Sep	24-Sep
	25-Sep	26-Sep	26-Sep
	27-Sep	28-Sep	28-Sep
	29-Sep	30-Sep	30-Sep
	01-Oct	02-Oct	02-Oct
	03-Oct	04-Oct	04-Oct
	05-Oct	06-Oct	06-Oct
	07-Oct	13-Oct	13-Oct
	14-Oct	20-Oct	20-Oct
Creek Crossings			
	01-Apr	07-Apr	07-Apr
	11-Apr	21-Apr	22-Apr
	22-Apr	04-May	04-May
	06-May	12-May	12-May
	12-May	19-May	19-May
	28-May	28-May	28-May
	02-Jun	02-Jun	02-Jun
	02-Nov	02-Nov	02-Nov
Go Creek			
	26-May	28-May	28-May
Hawkowl			
	21-May	09-Jun	09-Jun
Km 9+500			
	21-May	09-Jun	09-Jun
Km 15			
	04-Sep	04-Sep	04-Sep
	18-Sep	18-Sep	22-Sep
	22-Sep	29-Sep	29-Sep
	30-Sep	06-Oct	06-Oct
	07-Oct	13-Oct	13-Oct
	13-Oct	20-Oct	15-Oct
	15-Oct	20-Oct	20-Oct
	21-Oct	27-Oct	27-Oct
Km 18 Borrow Pit			
	09-Sep	22-Sep	22-Sep
	06-Oct	20-Oct	20-Oct
	28-Oct	02-Nov	02-Nov
	04-Nov	17-Nov	17-Nov
Km 19 Blasting			
	07-Oct	20-Oct	20-Oct
	21-Oct	27-Oct	27-Oct
	31-Oct	02-Nov	02-Nov
Km 25			
	03-Jun	09-Jun	09-Jun
Km 28+900 Fuel Cache			
	29-Jul	04-Aug	04-Aug
Arctic Camp			
Septic	14-Sep	22-Sep	22-Sep
Potable water well	29-Oct	03-Nov	29-Oct
Potable water well	26-Nov	08-Dec	08-Dec

Site	Monitoring Period From	Monitoring Period To	Date of Report
Drilling			
New camp	18-Oct	22-Oct	27-Oct
Groundwater/potable wells	29-Oct	31-Oct	31-Oct
Exploration Camp			
Grey Water	15-Sep	22-Sep	22-Sep
Grey Water	23-Sep	06-Oct	06-Oct
Genset	02-Oct	06-Oct	06-Oct
Land Treatment Facility			
Cell #1 Decommissioning	16-Sep	20-Sep	22-Sep
Permanent Camp			
	02-Oct	06-Oct	06-Oct
	14-Oct	20-Oct	20-Oct
	21-Oct	27-Oct	27-Oct
	29-Oct	03-Nov	03-Nov
	04-Oct	17-Nov	17-Nov
	18-Nov	08-Dec	08-Dec
	09-Dec	22-Dec	22-Dec
Portal Area			
	08-Sep	22-Sep	22-Sep
	06-Oct	21-Oct	20-Oct
Diesel tanks	20-Oct	29-Oct	29-Oct
	21-Oct	27-Oct	27-Oct
	29-Oct	03-Nov	03-Nov
	04-Nov	10-Nov	11-Nov
	11-Nov	17-Nov	17-Nov
	18-Nov	24-Nov	24-Nov
	25-Nov	01-Dec	01-Dec
	02-Dec	22-Dec	22-Dec
CDS Decommission	29-Jul	04-Aug	04-Aug
Tailings			
	21-Oct	27-Oct	27-Oct
	01-Nov	03-Nov	03-Nov
	04-Nov	10-Nov	10-Nov
	11-Nov	17-Nov	17-Nov
	18-Nov	24-Nov	24-Nov
	25-Nov	01-Dec	01-Dec
	02-Dec	08-Dec	08-Dec
	08-Dec	22-Dec	22-Dec
Ditch A			
	12-Nov	17-Nov	17-Nov
	18-Nov	24-Nov	24-Nov
	25-Nov	01-Dec	01-Dec
Waste Rock Pad			
	20-Apr	26-Apr	28-Apr
	29-Apr	05-May	05-May
	06-May	12-May	12-May
	13-May	19-May	19-May
	13-Aug	25-Aug	19-Aug
	27-Sep	30-Sep	29-Sep
Waste Rock Sump			
	22-Apr	28-Apr	28-Apr
	29-Apr	05-May	05-May
	06-May	12-May	12-May
	13-May	19-May	19-May

Table 6-2: Frequency of Environmental Monitoring

Site name	Diesel Tanks	PCS/PDS	Waste Rock Sump	Waste Rock Pad	LTF	Campbell Creek	Go Creek	Hawkowl Creek	Bunker Creek	Putt Creek	Pitch Creek	Sprung	Arctic Camp	W9	Portal Work	Special Waste	Km 15	Km 19	New Camp Site	Water Well	Tailings facility	Access Road	Exploration Camp
Date																							
01-Apr						X	X	X	X	X	X											X	
02-Apr																							
03-Apr																							
04-Apr																							
05-Apr																							
06-Apr																							
07-Apr																							
08-Apr																							
09-Apr																							
10-Apr																							
11-Apr						X	X	X	X	X	X											X	
12-Apr																							
13-Apr																							
14-Apr																							
15-Apr																							
16-Apr																							
17-Apr																							
18-Apr																							
19-Apr																							
20-Apr				X																			
21-Apr																							
22-Apr			X			X	X	X	X	X	X												
23-Apr																							
24-Apr																							
25-Apr																							
26-Apr																							
27-Apr																							
28-Apr																							
29-Apr			X	X																			
30-Apr																							
01-May																							
02-May																							
03-May																							
04-May																							
05-May																							
06-May			X	X		X	X	X	X	X	X												
07-May																							
08-May																							
09-May																							
10-May																							
11-May																							
12-May						X	X	X	X	X	X												
13-May			X	X																			
14-May																							
15-May																							
16-May																							
17-May																							
18-May																							
19-May																							
20-May																							
21-May								X														X	
22-May																							
23-May																							
24-May																							
25-May																							
26-May							X																
27-May																							
28-May						X	X	X	X	X	X												
29-May																							
30-May																							
31-May																							

Site name	Diesel Tanks	PCS/PDS	Waste Rock Sump	Waste Rock Pad	LTF	Campbell Creek	Go Creek	Hawkowl Creek	Bunker Creek	Putt Creek	Pitch Creek	Sprung	Arctic Camp	W9	Portal Work	Special Waste	Km 15	Km 19	New Camp Site	Water Well	Tailings facility	Access Road	Exploration Camp
Date																							
03-Jun			X	X																		X	
04-Jun		X																					
05-Jun		X	X	X																			
06-Jun		X	X	X	X		X	X	X	X	X												
07-Jun	X		X	X	X		X																
08-Jun			X	X	X		X	X															
09-Jun			X	X	X		X																
10-Jun	X		X	X	X	X	X																
11-Jun			X	X		X	X	X															
12-Jun			X	X		X	X	X															
13-Jun																							
14-Jun																							
15-Jun																							
16-Jun																							
17-Jun																							
18-Jun																							
19-Jun																							
20-Jun	X	X	X	X	X	X	X	X			X												
21-Jun																							
22-Jun																							
23-Jun	X	X	X	X	X	X	X	X	X	X	X												
24-Jun																							
25-Jun																							
26-Jun																							
27-Jun																							
28-Jun																							
29-Jun																							
30-Jun		decommision																					
01-Jul			X	X		X	X																
02-Jul			X	X		X	X	X	X	X	X												
03-Jul			X	X																			
04-Jul			X	X	X																		
05-Jul			X	X																			
06-Jul			X	X																			
07-Jul	X		X	X																			
08-Jul			X	X																			
09-Jul			X	X																			
10-Jul	X		X	X																			
11-Jul			X	X	X																		
12-Jul			X	X																			
13-Jul	X		X	X																			
14-Jul	X		X	X																			
15-Jul			X	X	X																		
16-Jul																							
17-Jul																							
18-Jul																							
19-Jul																							
20-Jul																							
21-Jul			X	X																			
22-Jul			X	X																			
23-Jul	X		X	X			X	X															
24-Jul																							
25-Jul			X	X	X																		
26-Jul	X		X	X	X		X	X															
27-Jul			X	X	X		X	X															
28-Jul	X				X		X																
29-Jul																						X	
30-Jul	X		X	X																			
31-Jul						Low flow, not monitored				Low flow													
01-Aug					X																		
02-Aug																							
03-Aug					X																		
04-Aug																							
05-Aug																							
06-Aug																							
07-Aug																							
08-Aug																							
09-Aug																							
10-Aug																							
11-Aug																							
12-Aug			X	X	X																		
13-Aug			X	X																			
14-Aug			X	X																			
15-Aug			X	X																			
16-Aug			X	X																			
17-Aug			X	X	X																		
18-Aug			X	X																			
19-Aug			X	X																			
20-Aug			X	X																			
21-Aug			X	X	X																		
22-Aug			X	X																			
23-Aug			X	X	X																		
24-Aug			X	X	X																		
25-Aug			X	X	X																		
26-Aug			X	X																			
27-Aug			X	X																			
28-Aug			X	X																			
29-Aug			X	X	X																		
30-Aug			X	X																			
31-Aug			X	X																			

Site name	Diesel Tanks	PCS/PDS	Waste Rock Sump	Waste Rock Pad	LTF	Campbell Creek	Go Creek	Hawkowl Creek	Bunker Creek	Putt Creek	Pitch Creek	Sprung	Arctic Camp	W9	Portal Work	Special Waste	Km 15	Km 19	New Camp Site	Water Well	Tailings facility	Access Road	Exploration Camp
Date																							
03-Sep									X														
04-Sep																	X						
05-Sep									X														
06-Sep																							
07-Sep									X														
08-Sep									X						X								
09-Sep		PCS							X													X	
10-Sep																							
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22-Sep					X				X								X						
23-Sep			X	X					XX			X										X	
24-Sep			X	X					XX			X	X		X								
25-Sep	X		X	X					XX	X	X	X			X	X	X						
26-Sep			X	X					X			X		X	X	X	X						
27-Sep			X	X					X			X	X		X	X	X						
28-Sep	X		X	X					XX	X	X				X	X	X						
29-Sep			X	X	X				XX			no work			X	X	X						
30-Sep			X	X					XX						X	X	X						
01-Oct			X	X					XX						X		X						
02-Oct			X	X					XX						X		X		X				X
03-Oct			X	X					X						X		X						
04-Oct			X	X					X					X	X	X	X		X				
05-Oct			X	X					X					X	X		X						
06-Oct	X		X	X	X				X			X		X	X		X					X	
07-Oct									X			X			X		X	X					
08-Oct			FROZEN	FROZEN					X			X			X		X						
09-Oct									X			X			X		X						
10-Oct												X		X	X	X							
11-Oct									X						X		X	X					
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14-Oct									X										X				
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18-Oct																			X				
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20-Oct	ELOCATED																						
21-Oct	X											X			X		X	X	X	X	X		
22-Oct	X											X			X				X	X	X		
23-Oct												X			X				X	X			
24-Oct												X			X		X	X	X	X	X		
25-Oct												X			X				X	X	X		
26-Oct	X											X			X				X	X	X		
27-Oct	X											X			X		X	X	X	X	X		
28-Oct												X			X				X	X		X	
29-Oct	X											X	X		X				X	X			
30-Oct												X			X				X	X			
31-Oct												X			X			X	X	X			
01-Nov												X			X				X	off site	X		
02-Nov						X		X	X	X	X	X			X				X	off site	X		
03-Nov					FROZEN							X			X				X	X	X		
04-Nov	X											X			X						X	X	
05-Nov	X											X			X						X		
06-Nov												X			X				X		X		
07-Nov												X			X				X		X		
08-Nov	X											X			X				X		X		
09-Nov												X			X						X		
10-Nov												X			X				X		X		
11-Nov	X											X			X						X		
12-Nov	X											X			X					X	X		
13-Nov												X			X				X		X		
14-Nov												X			X						X		
15-Nov					SPILL							X	X		X	X			X		X		
16-Nov	X											X			X						X		
17-Nov												X	X						X		X		
18-Nov	X											X							X		X		
19-Nov												X									X		
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25-Nov	X											X				X			X		X		
26-Nov													X										
27-Nov																					X		
28-Nov												X	X										
29-Nov	X												X						X		X		
30-Nov												X	X								X		
01-Dec												X	X								X		
02-Dec	X											X							X		X		
03-Dec												X									X		
04-Dec												X											
05-Dec												X	X						X				
06-Dec	X											X	X						X		X		
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31-Dec																							

6.2 Wildlife Monitoring

A log of wildlife observations was kept throughout 2008 (Table 6-3). The observations for November and December were misplaced and so are not included in the table.

The Wildlife Protection Plan (required as per Part 12.3 of the QML) is scheduled to be completed by Spring 2009.

Table 6-3: Wildlife Log 2008

Date	Time	Location	Species	# of Animals	Activity
09-Jan	0:00	K29.5	Wolf	1	moving towards lower winter road
10-Jan	730	K30.5	Red fox	1	Playing in snow
10-Jan	800	Waste rock pad	Ptarmigan	~20	flying
15-Jan	1400	Portal	Red fox	1	Hanging around shop
19-Jan	1300	Camp	Ptarmigan	flock	near lakeside
27-Jan	1330	Waste rock pad	Ptarmigan	flock	Hanging around road
10-Feb	1100	Waste rock pad	Ptarmigan	~10	flying
11-Feb	1200	Procon shop	Red fox	1	
14-Feb	800	Camp	Red fox	1	Hanging around kitchen
16-Feb	1525	Wolverine Lake	Wolf	1	Walking across west to east
18-Feb	1200	Camp	Ptarmigan	~10	
23-Feb	1000	Km 6	Lynx	3	On road
05-Mar	1330	Km 6.5	Lynx	3	On road
07-Mar	1700	Km 18	Owl	1	On road
07-Mar		Access road	Ptarmigan		Clusters on road
08-Mar		Access road	Ptarmigan		Clusters on road
10-Mar	1630	Km 11	Moose	2	Cow and calf
16-Mar	1100	Access road	Wolf		Lots of indicators of wolf presence
17-Mar	All day	Portal	Fox	1	New fox (white and black markings)
20-Mar	900	Camp	Squirrel	1	Squirrels are back
21-Mar	1000	Km 8	Moose	1	Browsing in willow
31-Mar	1100	Km 6	Lynx	2	on the road
02-Apr	1200	Camp	Bald Eagle	1	flying
07-Apr	1015	Camp	Bald Eagle	1	Soaring over
08-Apr	1700	Km 21	Partridge	18	Flock/walking around
08-Apr	1015	Camp	Squirrel	1	Making noise
27-Apr		Camp	Marten	1	Trying to get into my tent
28-Apr		Wolverine Lake	Bald Eagle	1	Fishing at mouth of Little Wolverine.

01-May			Cranes	flock	flying above
01-May			White crowned sparrows	flock	flying
04-May			Longspurs		
04-May	Various	Above Lake	Sandhill cranes	Lots	Annual Migration Route
05-May		Camp	Birds	4	Fluttering around.
06-May	1400	Camp	Sandhill cranes	flock	Migrating North
06-May	All day	All over	Robins	Lots	Many for the last two weeks.
06-May		Beach	Sandpiper	1	Walking and chirping
09-May	Am	Km 2	Sandhill cranes	flock	Migrating North
10-May	Pm	Over Lake	Seagulls	flock	flying over lake
10-May	1500	Km 13	Grizzly	1	Young bear hanging out by the road
11-May	900	WRP	Grizzly	1	May have been same bear
12-May	1600	Lake	Caribou	5	Walking around lake-3 cows and 2 calves
12-May	1600	Lakeshore	Ducks	3	on the shore in front of cabin
12-May	1100	Under Pantry	Bunny	1	sitting
12-May	1100	Procon Cabin	Porcupine	1	chewing on cabin
13-May	1400	Km 31.5	Porcupine	1	Gnawing on new plants.
14-May	1300	Wolverine Lake	Caribou	3	Swimming across lake.
15-May	700	Km 31	Moose	1	on the road
15-May	1615	Km 30.5	Porcupine	1	baby porcupine at gorge
16-May	930	Km 22	Spruce Hen	1	on the road
16-May	1430	Km 2	Bull Moose	1	on the road
16-May	1510	Km 13	Caribou	5	on the road
17-May	1400	Km 13	Caribou	4	on the road
17-May	1500	Km 27.5	Moose	1	Bull Moose
19-May	420	Km 29	Fox	1	Carrying something in it's mouth
20-May	2025	Camp	Moose	1	Walking around procon cabins.
22-May	1400	Km 30	Caribou	2	on the road
22-May	1530	Km 31.5	Porcupine	1	waddling
25-May	1730	Km 32	Porcupine	1	hanging out
26-May	All day	Lakes	Eagle	2	Flying
26-May	All day	Lakes	grayling & trout		at the confluence of lakes.
26-May	2100	Km 31	Black Bear	1	on the road
27-May	1130	Km 24	Moose	1	in the valley

27-May	1600	w82	Marten	1	stalking me
31-May	1305	Km 31	Porcupine	1	Side of the road.
31-May	1330	Km 31.5	Porcupine	1	gorge creek
31-May	1030	Camp	geese	2	sitting on ice.
01-Jun	1320	Km 2	Caribou	1	on the side of the road.
01-Jun	2030	Camp	Porcupine	1	chewing on wood.
02-Jun	800	Km 27	Porcupine	1	waddling
03-Jun	800	Km 31	Caribou	1	on the road
03-Jun	1500	Km 31.5	Moose	2	Cow and calf
04-Jun	1100	Little Wolverine	Swan	1	Flying over lake. (nesting?)
05-Jun	2200	Km 32	Moose	1	Bull Moose
14-Jun	1600	Robert Campbell	Bear	1	Black Bear
14-Jun	1600	Robert Campbell	Moose	1	Bull Moose
21-Jun	1445	Km 30.5	Cow Moose	1	Moving across road
21-Jun	1945	Campbell Creek	Grizzly	1	Moving into bushes
22-Jun	1200	old km 3	Grizzly	1	Eating in the bush
22-Jun	1930	old km 4	Grizzly	1	Grubbing
24-Jun	2000	Km 32	Grizzly	1	crossing road
25-Jun	810	Upper Site Road	Grizzly	1	Walking along upper road
29-Jun	810	Camp	Bald Eagle	2	Flying over lake.
02-Jul	415	Km 30	Cow Moose	1	
02-Jul	830	Airstrip	Grizzly	1	Sleeping.
03-Jul	900	Km 18.5	Bull Moose	1	Standing on road.
04-Jul		Airstrip	Grizzly	1	Hanging out watching grader work.
07-Jul		Km 26-27	/		Signs of grizzly back around.
16-Jul	900	Km 0.5	Wolf Pups	2	Running on the road.
16-Jul	1900	Far shore of lake	Cow Moose	1	Grazing on dwarf birch.
17-Jul	800	Km 26	Bull Moose	1	Running on the road.
18-Jul	1600	Airstrip	Grizzly	1	Passing by.
20-Jul	900	Km 3	Wolf		
21-Jul	1600	Km 29	Moose		
23-Jul		Km 28.5	Lynx	1	on the road
24-Jul	1030	Km 4	Wolf	1	Carrying a leg from a moose.
24-Jul	1000	Km 3.5	Wolf	3	Mother and two pups.
24-Jul	1700	Airstrip	Moose	1	cow.

24-Jul	1155	Km 19.5	Caribou	4	On Access Road.
25-Jul	1130	Airstrip	Grizzly	1	
27-Jul	1415	Km 22	Grizzly	1	on the road
28-Jul	1830	Km 31.5	Moose	2	Cow and calf grazing.
28-Jul	1300	Km 18	Grizzly	1	on the road
28-Jul	1600	Money Drainage			
28-Jul	1200	Km 21			
02-Aug	955	Airstrip	Small Bird	1	On Airstrip
03-Aug	1340	Km 18	Caribou	1	On Access Road.
03-Aug	1740	Km 25	Small Caribou	1	On Access Road.
04-Aug	1945	Airstrip	Caribou	1	Airstrip
15-Aug	900	Km 31.5	Wolves	4	1 female and 3 pups
17-Aug	1400	Airstrip	Caribou	1	
24-Aug	1900	Km 31	Rabbit	1	Running
22-Aug	1500	Km 31.5	Porcupine	1	waddling
28-Aug	1830	Km 31	moose	1	
29-Aug	1200	Km 31	Moose	3	Cow and 2 calves
29-Aug	1100	Km 22	Moose	2	Cow and a calf
30-Aug	1020	Km 31	Moose	1	
01-Sep	1100	Km 31	Moose	2	Cow and a calf
05-Sep	1830	cabin 7	Bunny	1	Hopping
05-Sep	1100	Km 31	Porcupine	1	waddling
05-Sep	1100	Airstrip	Caribou	3	Bull and 2 cows
08-Sep	1655	Km 31	Moose	1	On Access Road.
09-Sep	1000	camp	Bull Moose	1	Running through the bush
15-Sep	1750	camp	Cranes	41	Flying south
17-Sep	1200	Airstrip	Porcupine	1	Spinning in circles.
17-Sep	300	Airstrip	Caribou	1	
20-Sep	5100	on top of portal	Grizzly	1	Running
24-Sep	2125	camp	Bull Moose	2	Calling, splashing water by the lake.
26-Sep	1600	Little Wolverine	Moose	1	Cow moose at lake shore.
26-Sep	All day	above site	Cranes	100's	Flying south
01-Oct	1830	Km 6-7	Lynx	1	Running across the road
02-Oct	1955	camp	Bull Moose	1	in the way of quad
03-Oct	1100	Km 20	Bull Moose	1	On Access Road.

04-Oct	1430	Km 31.5	Bull Moose	1	On Access Road.
04-Oct	1715	Km 21-22	Moose	2	
06-Oct	1145	Down the lake	Bull Moose	1	walking by shore.
06-Oct	1130	Km 12	Wolves	12	crossing road towards valley
06-Oct	1500	Little Wolverine	Moose	1	on far side of lake feeding, one antler.
10-Oct	1600	side slope	Grizzly	1	Large boar big fat hump.
18-Oct	1045	Km 29-30	Caribou	7	Running on the road.

6.3 Geochemical Characterization

Geochemical characterization via acid base accounting was conducted on native material to establish metal leaching potential: all material that was deemed non-acid generating material (NAG) based on criterion provided by AMEC Earth and Environmental (AMEC) (as detailed in General Site Plan (Version 2007-03)) was used in construction activities; material that was deemed potentially acid generating material (PAG) was sent for shake flask testing.

6.3.1 Acid Base Accounting

Acid base accounting was conducted to establish neutralization potential, acid generation potential and metal leaching potential of borrow sources or excavated sites. The following analyses were conducted: paste pH, total sulphur (Total S), sulphate sulphur (Sulphate), sulphide sulpher (by difference) (Sulphide) and neutralization potential (NP). The results are summarized in Table 6-4 and full lab results provided in Appendix B. Samples labeled “13+675” and “13+975” (from lab report VA08115508), representing chainage along of the road route, were deemed NAG based on the ABA results in Table 6-4 using the AMEC criterion. All other samples summarized in Table 6-4 were deemed PAG and were sent to ALS Environmental Laboratories (ALS) for shake flask testing.

6.3.2 Shake Flask Testing

If acid base accounting results offer evidence that the borrow sources are potentially acid generating, as was the case at 13 of the 15 sites sample din 2008, further testing to quantify the metal leaching potential of the material was required. Shake flask testing involved a 24 hour 3:1 deionized water to rock extraction procedure, and the resulting leachate was analyzed for pH and metals using ICP-MS. These results are presented in Table 6-5, and the full lab reports are presented in Appendix B. Leachate pH values ranged from 6.27 to 7.92 and are well within the acceptable range in pH as regulated by the MMER. Regulated metals arsenic, copper, lead, nickel and zinc were below the MMER guidelines, except in samples “TP07-6” and “TP07-8” where copper and zinc were above MMER guidelines, and in sample “TP07-7” where copper was above the MMER guideline. As such, all material excavated from the industrial complex (as shown in Figure 6-1) will only be used for construction material at the industrial complex.

Table 6-4: 2008 Acid Base Accounting Results for Borrow and Excavation Sites

Sample ID	Lab Report	Nad83 coordinates		ABA Test Results										Notes
		Easting	Northing	Paste pH	Fizz Rating	NP kg CaCO3/t rock	AP kg CaCO3/t rock	NNP kg CaCO3/t rock	NPR -	Total S %	Sulphate S %	Sulphide S %	Acid Potential*	
Bunker Creek	VA08115508	450074	6810207	7.8	1	8	0.3	8	25.6	0.01	0.03	<0.01	PAG	See Shake Flask Testing L691233
13+675	VA08115508	448083	6808701	8.8	2	23	<0.3	23	147.2	<0.01	0.01	<0.01	NAG	
13+975	VA08115508	448017	6808626	8.4	1	12	<0.3	12	76.8	<0.01	0.01	<0.01	NAG	
TP07-3	VA08115508	439905	6810998	6.6	1	6	59.1	-53	0.1	1.89	1.87	0.02	PAG	See Shake Flask Testing L691233
TP07-6	VA08115508	439545	6811103	6.5	1	3	2.5	1	1.2	0.08	0.01	0.07	PAG	See Shake Flask Testing L691233
TP07-7	VA08115508	440020	6810660	7	1	5	2.5	3	2	0.08	<0.01	0.08	PAG	See Shake Flask Testing L691233
TP07-8	VA08115508	440030	6810630	7.7	1	5	7.2	-2	0.7	0.23	0.26	<0.01	PAG	See Shake Flask Testing L691233
TP07-9	VA08115508	439977	6810654	7.8	1	8	0.6	7	12.8	0.02	<0.01	0.02	PAG	See Shake Flask Testing L691233
TP07-11	VA08115508	440152	6810710	7.7	1	7	1.3	6	5.6	0.04	<0.01	0.04	PAG	See Shake Flask Testing L691233
KM18	VA08143497	446449	6804920	6.6	1	4	0.6	3	6.4	0.02	0.01	0.01	PAG	See Shake Flask Testing L713112
BH08-1	VA08158246	439880	6810810	5.4	1	4	0.3	4	12.8	0.01	<0.01	0.01	PAG	See Shake Flask Testing L713936
BH08-2	VA08158246	439924	6810761	7	1	8	9.7	-2	0.83	0.31	<0.01	0.31	PAG	See Shake Flask Testing L713936
BH08-5	VA08158246	440106	6810706	5.2	1	1	7.5	-7	0.13	0.24	0.05	0.19	PAG	See Shake Flask Testing L713936
BH08-6	VA08158246	439802	6811115	5.5	1	2	52.2	-50	0.04	1.67	1.09	0.58	PAG	See Shake Flask Testing L713936
TP08-4	VA08158246	440074	6810680	5.4	1	2	1.3	1	1.6	0.04	0.04	<0.01	PAG	See Shake Flask Testing L713936

Table 6-5: Shake Flask Testing Results for Borrow and Excavation Sites

Sample ID	MMER	BUNKER CREEK	TP07-3	TP07-6	TP07-7	TP07-8	TP07-9	TP07-11	KM18	BH08-1	BH08-2	BH08-5	BH08-6	BH08-4
Date Sampled		14-Aug-08	14-Aug-08	14-Aug-08	14-Aug-08	14-Aug-08	14-Aug-08	14-Aug-08	06-OCT-08	31-OCT-08	31-OCT-08	31-OCT-08	31-OCT-08	31-OCT-08
ALS Sample ID		L691233	L691233	L691233	L691233	L691233	L691233	L691233	L713112	L713936-1	L713936-2	L713936-3	L713936-4	L713936-5
Leachable Anions & Nutrients														
pH	**6.0-9.0**	7.92	7.02	6.75	7.18	7.47	7.55	7.53	7.01	6.27	7.77	6.66	6.44	6.66
% Moisture		0.41	0.88	0.85	0.56	0.44	0.68	0.94	0.16	0.21	0.11	0.33	0.22	0.33
Leachable Metals														
Aluminum (Al)		12.5	16.5	11.6	10.4	11.3	9.04	9.33	9.22	5.56	0.266	0.0086	0.0133	7.13
Antimony (Sb)		0.00362	0.0011	0.00562	0.00472	0.0182	0.00343	0.00136	0.00016	0.00051	0.00312	0.00021	0.00019	0.00060
Arsenic (As)	**0.5**	0.0106	<0.010	0.0110	0.0110	0.0382	0.0273	0.0074	0.0023	0.0066	0.0017	<0.0010	<0.0010	0.0040
Barium (Ba)		0.499	41.5	2.18	2.70	9.41	0.842	1.61	0.0761	0.661	0.201	0.195	0.432	1.57
Beryllium (Be)		<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)		<0.0025	<0.0050	0.0073	0.0031	0.0054	<0.0025	<0.0025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00056
Boron (B)		<0.050	<0.10	<0.050	<0.050	<0.050	<0.050	<0.050	0.012	<0.010	<0.010	0.012	<0.010	<0.010
Cadmium (Cd)		0.00040	<0.00050	0.00749	0.00333	0.00887	0.00188	0.00043	0.000131	0.00113	0.000499	0.000860	0.000419	0.00159
Calcium (Ca)		8.54	2.9	2.70	5.44	6.27	8.82	10.2	1.49	2.62	11.5	5.67	1.11	2.07
Chromium (Cr)		0.0649	0.0392	0.0277	0.0190	0.0207	0.0329	0.0337	0.0357	0.0153	0.00078	<0.00050	<0.00050	0.00651
Cobalt (Co)		0.00858	0.0143	0.0102	0.00859	0.0137	0.0106	0.00972	0.0141	0.00830	0.00021	0.00056	0.00142	0.00662
Copper (Cu)	**0.3**	0.120	0.199	**0.690**	**0.332**	**0.505**	0.145	0.130	0.0592	0.103	0.0216	0.0119	0.0011	0.0727
Iron (Fe)		9.26	9.84	5.27	6.60	14.1	8.82	8.29	6.23	4.82	0.388	<0.030	<0.030	4.23
Lead (Pb)	**0.2**	0.0190	0.0368	0.0933	0.0830	0.374	0.0457	0.0177	0.00613	0.0173	0.00225	0.00011	<0.00010	0.0550
Lithium (Li)		<0.025	<0.050	<0.025	<0.025	<0.025	<0.025	<0.025	0.0054	<0.0050	<0.0050	<0.0050	<0.0050	0.0053
Magnesium (Mg)		8.48	5.71	6.56	5.89	5.30	7.21	6.14	5.70	2.41	1.56	1.07	0.333	2.13
Manganese (Mn)		0.378	2.96	0.688	0.596	0.995	0.354	0.312	0.450	0.474	0.0738	0.206	0.198	0.378
Mercury (Hg)									<0.000050	0.000170	<0.000050	<0.000050	0.000058	0.000078
Molybdenum (Mo)		0.00755	0.0180	0.00896	0.0112	0.0203	0.0120	0.00900	0.00020	0.00124	0.0158	0.00014	0.00074	0.00160
Nickel (Ni)	**0.5**	0.0459	0.0612	0.0189	0.0198	0.0309	0.0275	0.0273	0.0259	0.0135	0.00107	0.0174	0.00553	0.0158
Phosphorus (P)		<0.30	<0.30	<0.30	<0.30	0.34	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Potassium (K)		14.0	5.11	19.1	11.8	13.9	4.39	4.23	2.21	1.70	5.04	3.74	3.77	2.70
Selenium (Se)		<0.0025	<0.0050	0.0077	0.0050	0.0075	0.0029	<0.0025	<0.00050	0.00119	0.00883	0.00862	0.00224	0.00108
Silicon (Si)		9.42	11.9	12.9	11.0	9.90	8.92	10.5	17.0	9.61	2.91	6.87	4.37	9.78
Silver (Ag)		0.00028	<0.00050	0.00171	0.00094	0.00585	0.00048	0.00028	<0.000050	0.000179	<0.000050	<0.000050	<0.000050	0.000231
Sodium (Na)		8.17	4.02	7.54	6.93	5.44	7.73	5.68	2.77	1.34	1.92	0.631	0.302	0.834
Strontium (Sr)		0.0402	0.166	0.0263	0.0369	0.0734	0.0324	0.0411	0.00449	0.0218	0.0387	0.0364	0.0375	0.0166
Thallium (Tl)		<0.00050	<0.0010	0.00185	0.00068	0.00073	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010
Tin (Sn)		<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Titanium (Ti)		0.122	0.331	0.108	0.149	0.167	0.276	0.260	0.548	0.304	0.015	<0.010	<0.010	0.088
Uranium (U)		0.00130	0.00198	0.00288	0.00172	0.00379	0.000896	0.00113	0.000291	0.000654	0.000819	<0.000010	<0.000010	0.00449
Vanadium (V)		0.0476	0.052	0.0340	0.0319	0.0402	0.0439	0.0411	0.0223	0.0250	<0.0010	<0.0010	<0.0010	0.0120
Zinc (Zn)	**0.5**	<0.050	0.28	**0.827**	0.438	**1.03**	0.129	0.059	0.035	0.106	0.017	0.021	<0.010	0.215

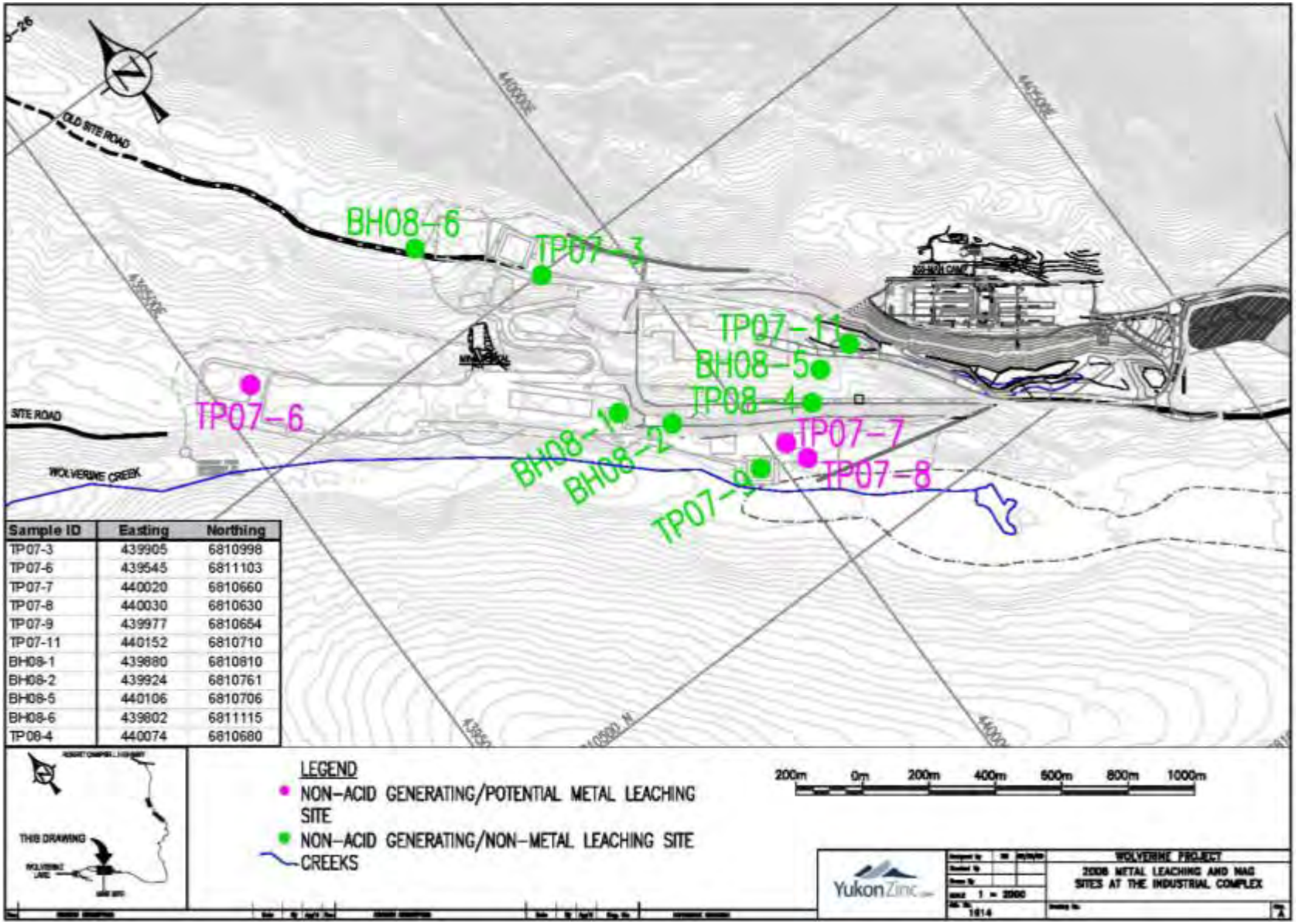

Figure 6-1: 2008 Geochemistry Sample Locations

6.4 Weather Monitoring

Weather is logged continuously on an hourly basis via a "HOBO Onset" weather station located near south end of the airstrip. The station was installed May 10th, 2006 and collects the following data: temperature, relative humidity, solar radiation in and out, wind speed and direction, and barometric pressure. The weather station is downloaded approximately every two months by an Environmental Technician.

6.4.1 Temperature

The mean, maximum, and minimum temperatures recorded by the weather station in 2008 are presented in Figure 6-2. The values for August are averaged from values from August 1st through 16th. There was no September or October data as the memory of the weather station was full (this was rectified October 31); hence the values presented in Figure 6-2 are from the 2007 data. The December data was averaged from December 1st through 15th.

The mean monthly temperature at the project site in 2008 was -6ºC. Mean monthly temperatures are below freezing December through April and September through December, and above freezing May through August. The minimum recorded temperature in 2008 was -41ºC and the maximum recorded temperature was 21°C.

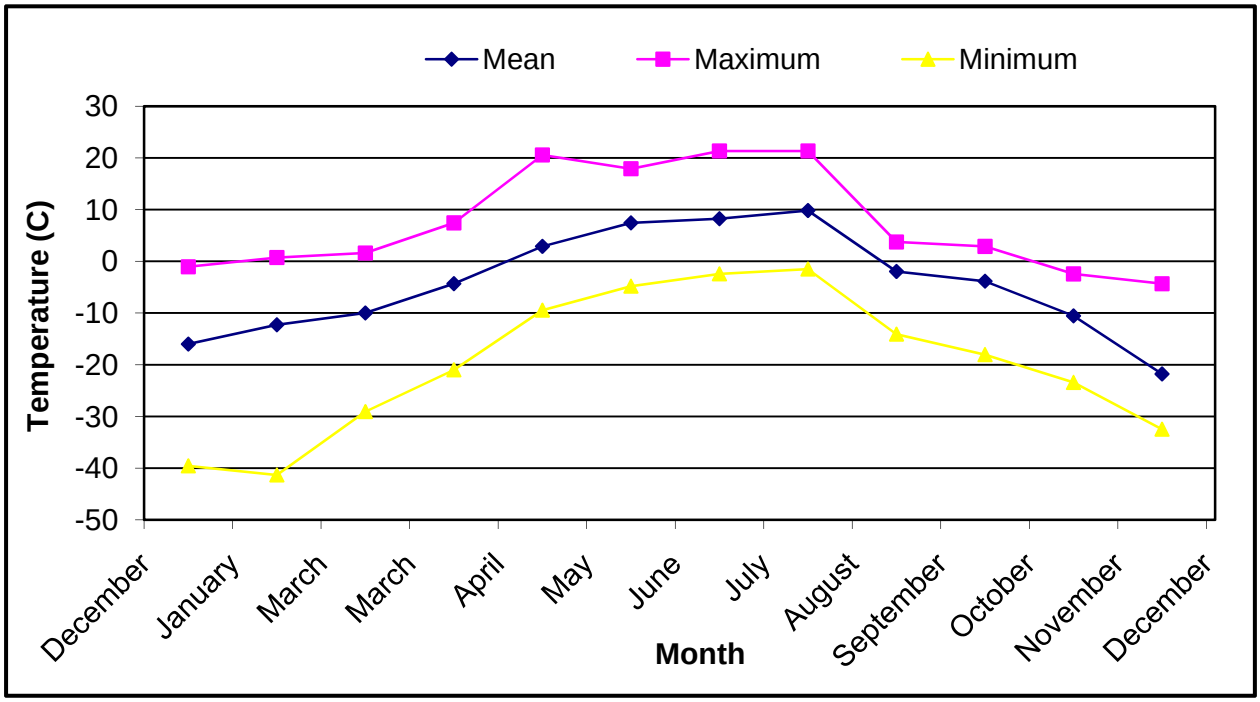

Figure 6-2: Mean, Maximum and Minimum Temperatures (ºC) by Month for 2008

6.4.2 Precipitation

The monthly precipitation for 2008, as recorded by the HOBO weather station, is presented in Figure 6-3. Again, the values for August are averaged from values from August 1st through 16th and the December data was averaged from December 1st through 15th. There was no September or October data as the memory of the weather station was full (this was rectified October 31); hence the values presented in Figure 6-3 are from the 2007 data. July was the wettest month with 75.4 mm of precipitation and January and December were the driest months with no recorded precipitation (precipitation falling as snow in that period).

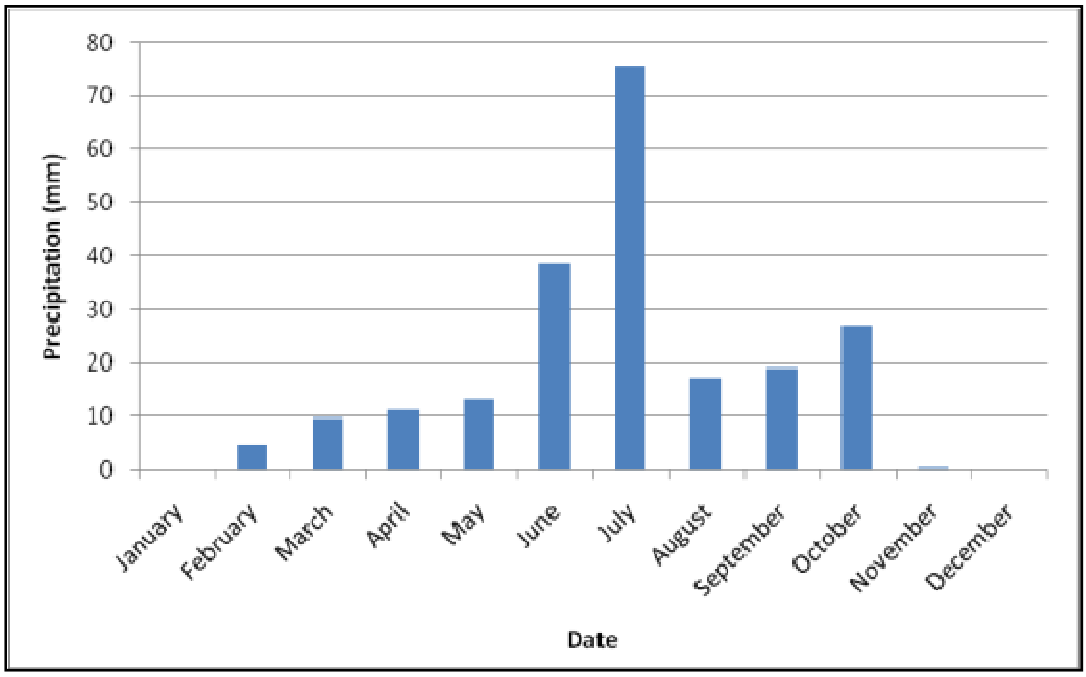

Figure 6-3: 2008 Monthly Precipitation

6.4.3 Evaporation Rates

Evaporation figures were estimated from the 1963 Hamon equation1, and the monthly and annual values are shown in Figure 6-4. The total annual evaporation was 452 mm.

[1] For a derivation of the Hamon equations, see Type A Water Licence QZ04-065 Application Section 26.d)

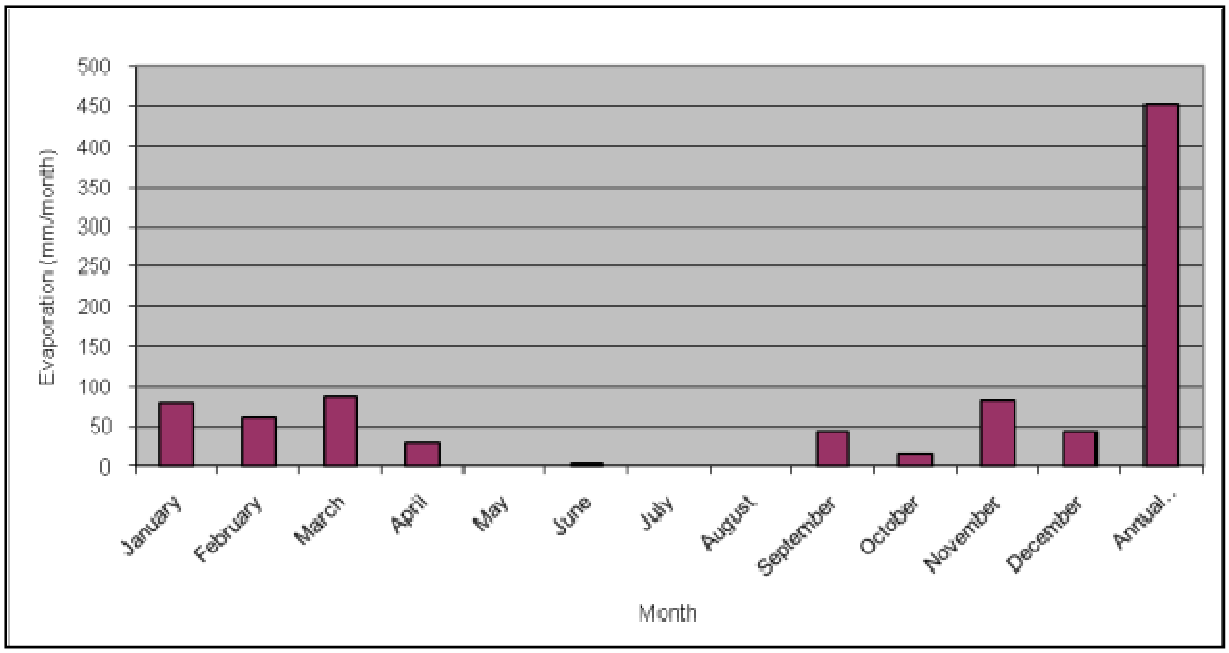

Figure 6-4: Monthly and Annual Evaporation Estimates

6.5 Piezometer Water Levels

Piezometers installed northeast of the mine portal in two exploration boreholes monitor groundwater conditions in the mineralized zones at the anticipated depth of mining, as shown in Figure 6-6. A graph of potentiometric elevations from deep and shallow piezometer locations PZ-A and PZ-B is presented in Figure 6-5, with precipitation measurements included. Precipitation data for September and October was taken from the 2007 data, as no 2008 data is available for these months. The last download of the piezometer data occurred in November 2008; hence data is not presented past this date.

Battery failure occurred at PZ-B deep in early June, and was sent in for repair. Logging resumed in late August, however the recorded values were around 1700 m asl, hence the data presented in Figure 6-5 from August to November was extrapolated from the PZ-B shallow data. The gap in PZ-B shallow data is from battery failure.

Overall, there was an increase in the water level with spring freshet in late May and early June, with the water levels returning to approximate levels measured in early 2008 by November 2008. Values are comparable to 2007 values, with the mean water level for the four piezometers at ~1360 m asl.

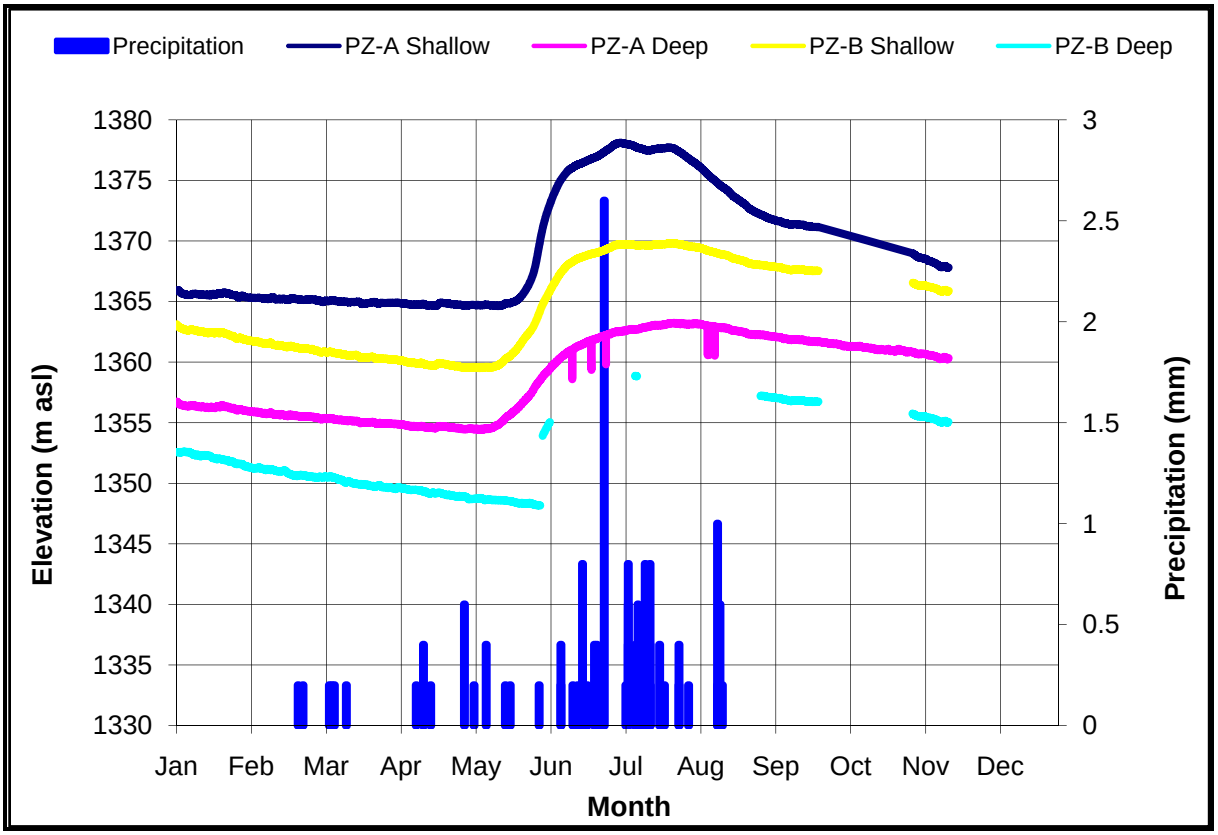

Figure 6-5: Potentiometric Elevations with Recorded Precipitation

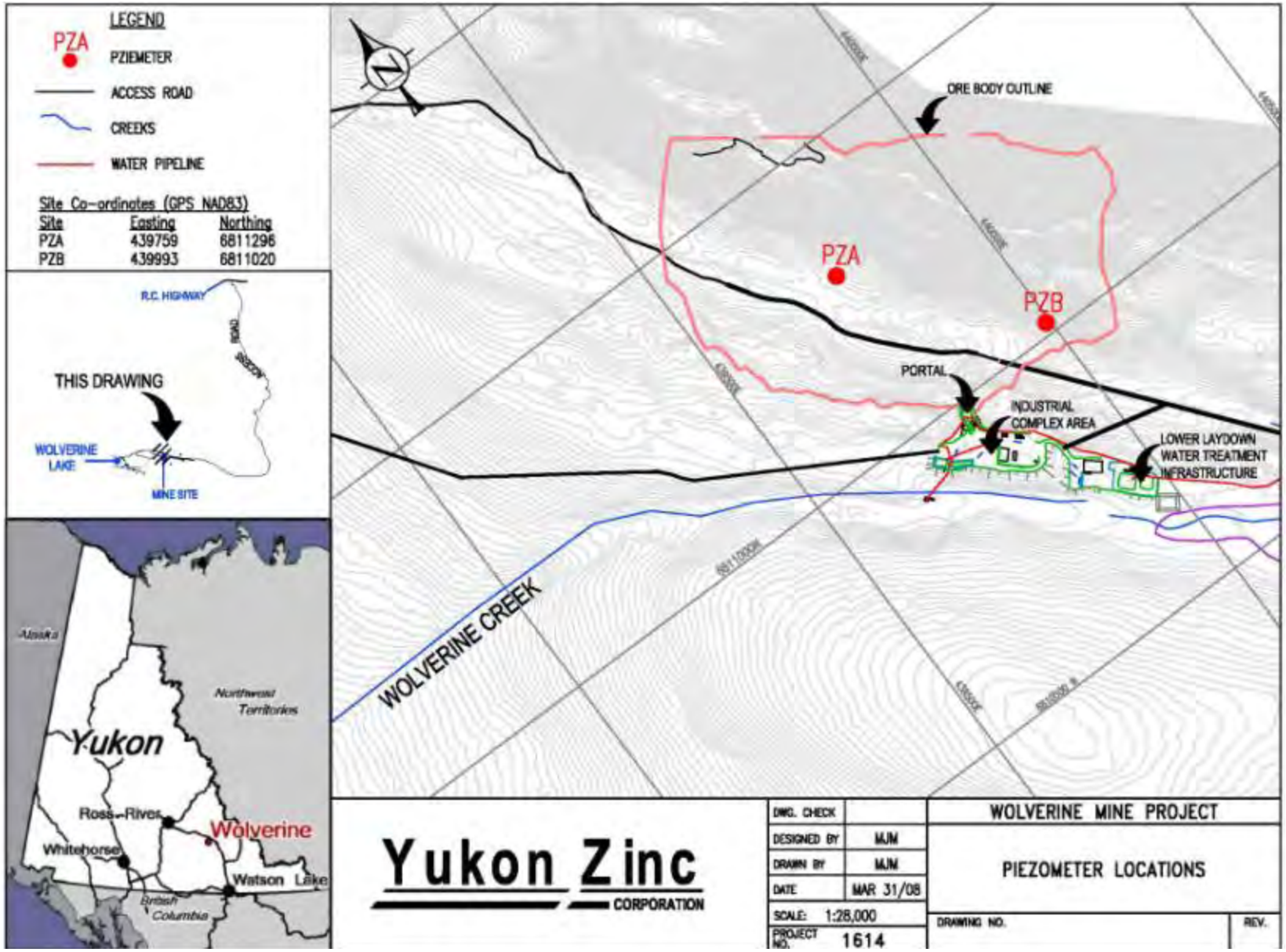

Figure 6-6: Piezometer Locations and Co-ordinates

6.6 Surveillance Network Monitoring

In 2008, both the A and B Type Water Licences were in effect. B-Licence monitoring was conducted throughout 2008; however, A-Licence monitoring did not begin until September 2008, when use of Go Creek water for a temporary construction contractor's camp triggered the monitoring requirements.

The surface water monitoring (water quality and hydrology) described below is further detailed in the 2008 Annual Reports for both A-Licence and B-Licence (January 2008), which includes the lab reports pertaining to the water quality results for Surveillance Network Monitoring sites. Sediment monitoring and sediment results are detailed in the 2008 B-Licence Annual Report only.

6.6.1 Surface Water Quality and Acute Lethality Testing

Monitoring station locations, water quality sampling frequency, flow monitoring requirements and parameter sampling requirements for both the A and B-Licences are summarized in Table 6-6.

Table 6-6: Sampling Requirements for A-Licence and B-Licence

B-Licence Component and Station No.	**Sampling Frequency**	**Analytical Suite[1]**	**Flow monitoring Frequency**
Water Quality - W9: Wolverine Creek	Quarterly	A, B, DOC	Quarterly
Water Quality - W12: Go Creek above Pup Creek	Quarterly	A, B, DOC	Quarterly
Water Quality - W16: Go Creek near Hawkowl Creek	Monthly	A, B, DOC	Monthly
Sediment (W9, W12, W16)	Annually	B	n/a
UTMD - Underground test mine discharge	Weekly	A, B	Weekly
WRSS - Waste rock stockpile decant	Weekly	A, B	Weekly
C-PS - Clean sump decant	Weekly	A, B	Weekly
WTSP - Water treatment plant settling pond	Weekly	A, B	Weekly
AWP-SP - Aggregate wash plant settling pond	Monthly	TSS	-
A-Licence Component and Station No.	**Sampling Frequency**	**Analytical Suite**	**Flow monitoring Frequency**
Wolverine Creek Watershed – W82, W9, W1, L1, W21, W8	Monthly[2]	FP, LP, TSS, MA, NP, TM, DM, DOC[3]	Continuous/Monthly[4]
Go Creek Watershed – W31, W16, W15, W81, W80, W12	Monthly[5]	FP, LP, TSS, CN[6], MA, NP, TM, DM, DOC[5]	Monthly/Continuous[7]

Money Creek Watershed – W14, W22, W40	Monthly	FP, LP, TSS, MA, NP, TM, DM	Continuous[8]
Road Route – W71, W72, W73	Monthly	FP, LP, TSS, MA, NP, TM, DM	N/A
Tailings Facility – T1, R1, R2	Monthly/Daily[9]	FP, LP, TSS, CN, MA, NP, TM, DM, DOC[10], Ra226[10]	Monthly/Continuous[11]
Groundwater Wells	Quarterly/Monthly[12]	FP, LP, MA, NP, TM, DM[13]	Water level – Quarterly/Monthly/Annually[12]

Notes:
1. A: Physical parameters, ICP-MS – dissolved metals, ammonia, nitrate; B: ICP-MS – total metals; DOC – Dissolved Organic Carbon; TSS: Total suspended solids
2. Sampling requirements for W82 and W9 are weekly when discharging into Wolverine Creek.
3. DOC is not required for W8 and W21.
4. Continuous flow monitoring is required at W82, W9 and W21, and monthly at W8.
5. Daily water quality sampling is required at W80 when discharging from the retention pond.
6. CN and DOC only required at W31 and W16.
7. Monthly flow monitoring is required at W31, W16, W15 and W81, and continuously at W80 and W12.
8. Continuous flow monitoring is only required at W22 in the Money Creek Watershed.
9. Monthly water quality sampling is required at T1, and daily at R1 when discharging from the retention pond.
10. DOC and Ra226 only required at R1
11. T1 - Monthly water level monitoring; R1 - Continuous water level and volume monitoring; R2 - continuous flow monitoring when discharging from the retention pond.
12. Quarterly during construction, monthly during operations, quarterly during temporary closure and annually during permanent closure.
13. All groundwater samples are filtered to remove impurities caused by sampling, and hence will not be analyzed for total metals (TM).

A map of the surface water quality monitoring sites for is provided in . Table 6-7 summarizes the required surface water quality station sampling frequency as well as all sampling conducted in 2008.

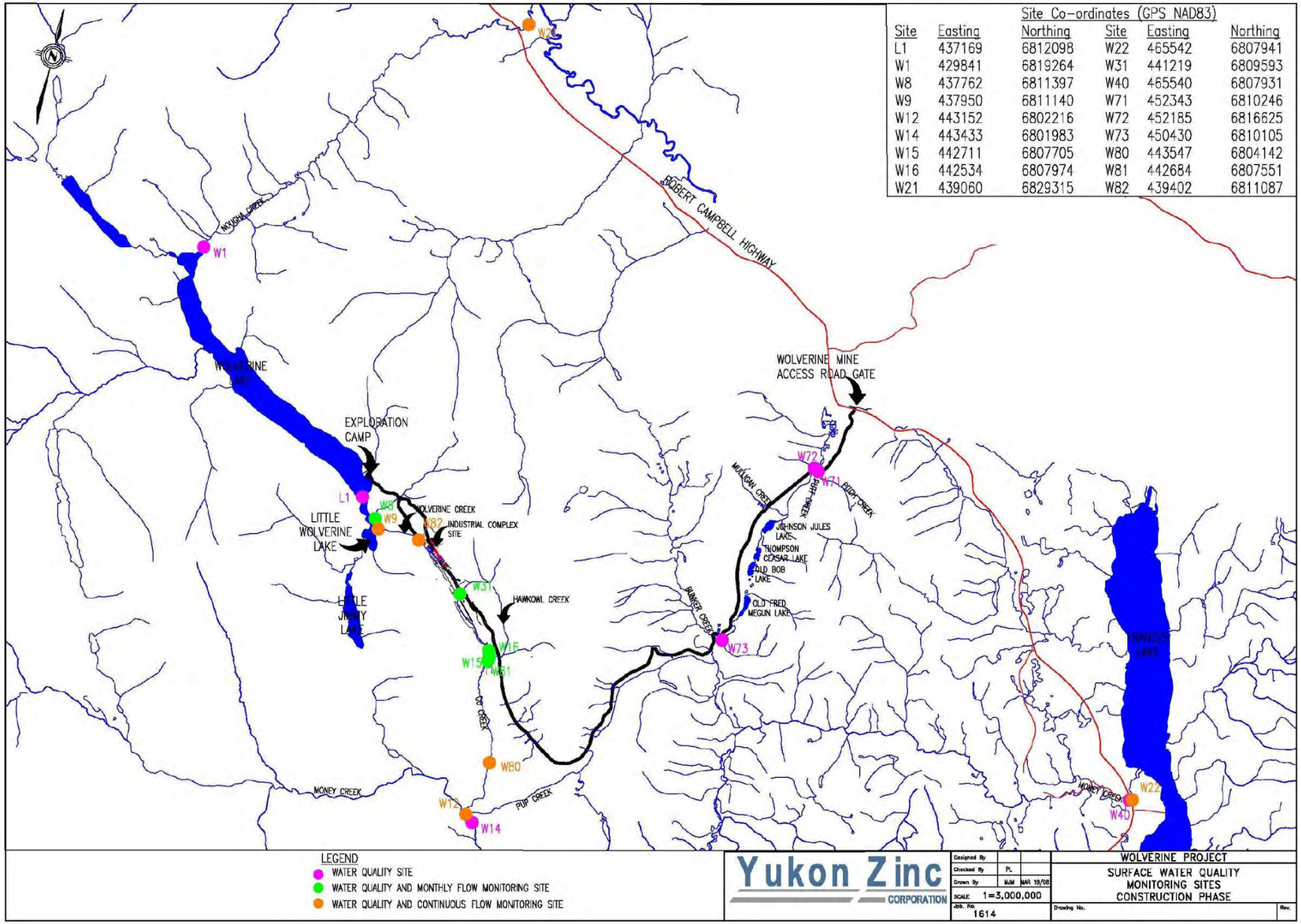

Figure 6-7: Surface Water Quality Monitoring Sites

Table 6-7: Frequency of Surface Water Quality Sampling Conducted in 2008

Water Quality Station	Required Sampling Frequency		Sampling Conducted											
	B-Licence	A-Licence	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
W9	Q	M**	X	X	X		X	X		X	X		X	
W12	Q	M			X			X	X	X	X	X	X	
W16	M	M		X	X	X	X	X	X	X	X	X	X	
UTMD	W		XXX	XXXX	XXXXX	XXXX	XXXX	XXXXX	XXXX	XXXX	XXX	XXXX	XXX	X
WRSS	W					X	XXXXXX	XXX	XXXX	XXXX	XXXXX	X		
C-PS	W						XXX							X
WTSP	W		XXXXXXX	XXXX	XXXX	XX	XXXXXXX	XXXXX	XXXXX	XXXX	XXXX	XXXX	XXXX	XXXX
AWP-SP	M													
W1	-	M			X						X			
W8	-	M									X		X	
W14	-	M			X						X	X	X	
W15	-	M		X	X						X		X	
W21	-	M	X	X	X		X	X		X	X	X	X	X
W22	-	M	X	X	X		X	X		X	X	X	X	X
W31	-	M									X	X	X	X
W40	-	M			X							X	X	X
W71	-	M		X	X						X	X	X	X
W72	-	M		X	X						X	X	X	X
W73	-	M		X	X						X	X	X	X
W80	-	M**			X			X	X	X	X	X	X	
W81	-	M			X						X		X	
W82	-	M**	X	X	X			X	X	X	X	X	X	X
L1	-	M									X		X	
T1	-	M												
R1	-	D**												
R2	-	C												

M=Monthly, W=Weekly, Q=Quarterly; C=Continuous flow monitoring when discharging from the Retention Pond (R1)
**Sampling is daily at W80 and R1 when discharging from R1 and weekly at W82 and W9 when discharging from Wolverine Creek

Fish bioassays, analyzed via a 96 hour LC50 were taken monthly from January through November; however due to holiday lab closures, samples were not taken in December. These details are provided B-Licence Annual Report for 2008.

6.6.2 Hydrological Assessments

The hydrology conducted in 2008 is summarized in Table 6-8. To ensure consistent monitoring, water level sensors are located at W9, W12, W21, W22, W80 and 3.4 km downstream of W16 at W80 (same stream reach). Water levels are measured hourly by the sensor, and monthly stream velocity measurements are taken manually when possible, using a flow probe.

Table 6-8: Frequency of Hydrology Conducted in 2008

Hydrology	Required Sampling Frequency		Hydrology Conducted											
	B-Licence	A-Licence	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
W9	Q	C	DL	DL			DL	DL, H		DL, H	DL, H		DL, H	
W12	Q	C						DL, H	DL, H	DL, H	DL, H	DL	H, DL	
W16	M	M					H	H	H	H	H	H	H	
W8	-	M									H		H	
W15	-	M									H		H	
W21	-	C	DL	DL			DL	DL		DL, H	DL, H	DL	DL	
W22	-	C	DL	DL			DL	DL		DL, H	DL, H	DL	DL	
W31	-	M									H		H	H
W80	-	C						DL, H	DL, H	DL, H	DL, H		DL	
W81	-	M									H		H	
W82	-	C	DL	DL	DL			DL, H	DL	DL, H	DL, H	DL	H, DL	H

Q=quarterly; M=Monthly; C= Continuously; DL=Water level sensor downloaded; H=Manual hydrology measurements taken

6.6.3 Groundwater Quality

The groundwater wells sampled in 2008 are summarized in Table 6-9. Wells MW05-6 and MW06-8M were not sampled in 2008 due to contamination concerns, which were verified by Lorax Environmental Services (Lorax) in October 2008, during the installation of MW07-2 (renamed MW08-13) and MW07-3 (renamed MW08-14). Lorax identified that well MW05-6 is not contaminated, and suggested that sampling continue at this site; however, the well was not locatable in December, hence, will be sampled in 2009. Well MW06-8M was found to be isolated from the surrounding bedrock due to bentonite and cement grout contamination during installation, and therefore will be re-drilled in 2009.

Groundwater wells were not sampled in the February, May and December periods (blanks in Table 6-9) due to the water in the wells being frozen to surface levels. Well MW06-10D was not sampled in September due to issues with the in-situ deep well pump. Wells MW06-8D, MW06-10M and MW06-10D were not sampled in February or December (and May for well MW06-10D) because they are deep wells with pumps installed, and operating the pumps in below freezing temperatures could damage the pumps.

Table 6-9: Frequency of Groundwater Wells Sampling in 2008

Monitoring Well (MW)	Date Sampled				Monitoring Well (MW)	Date Sampled			
	Feb-08	May-08	Sep-08	Dec-08		Feb-08	May-08	Sep-08	Dec-08
05-01A		X	X		05-07B		X	X	X
05-01B	X	X	X		06-08S[1]	X	X	X	X
05-02A			X		06-08D[1]		X	X	
05-02B			X		06-09S	X	X	X	X
05-03A[1]		X	X		06-09M		X	X	
05-03B[1]	X	X	X		06-10S	X	X	X	X
05-04A			X		06-10M			X	
05-04B			X		06-10D				
05-05A[1]	X	X	X	X	06-11S[1]		X	X	
05-05B[1]	X	X	X		06-12S	X	X	X	X
05-06					08-13			X	
					08-14				

[1]Groundwater quality monitoring in wells downslope of the mine workings.

A map of the groundwater monitoring well locations is provided in Figure 6-8.

6.7 Stream Sediment Quality

Sediment sampling and analysis for total metals is required annually during summer low flows for W9, W12 and W16. Samples were taken August 24th in triplicate, and analyzed by ICP-MS.

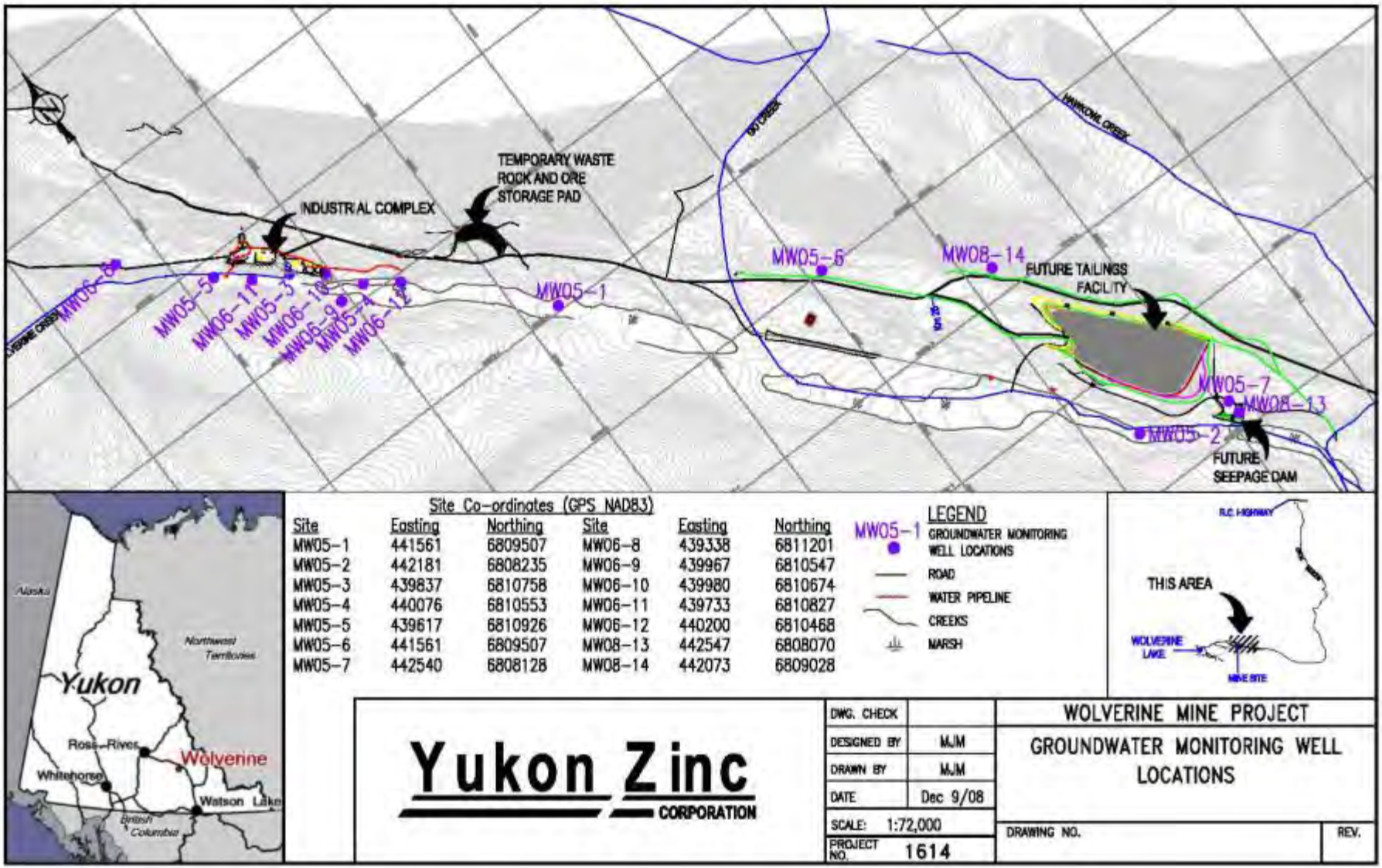

Figure 6-8: Groundwater Monitoring Well Locations

7 Project Development Schedule

As per *General Site Plan V2008-04*, submitted to Energy Mines and Resources on November 28, 2008, the development of the surface infrastructure and the underground is estimated to take approximately one and one half years, resulting in commissioning of the plant in June 2010 and full production by late summer 2010. The schedule for development activities at the Wolverine Project is provided in Figure 7-1.

Project Development		**2008**				**2009**				**2010**			
Milestone or Activity	**Pre-2008**	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Access & Transportation													
Phase 1 Road Complete (km 0-24)	♦												
Phase 1 Road Construction (km 23-27)													
Phase 2 Road Construction													
Airstrip Improvements													
Surface Facilities													
Detailed Engineering Design													
Procurement of Equipment													
Camp Area Preparation	♦												
Camp Services and Infrastructure													
Drill Potable Water Wells	♦												
Potable Water Piping/Pumping/Enclosures													
Industrial Complex (IC) Ditches/Sumps													
IC Civil & Foundations													
IC Structural Steel & Bldgs													
IC Utilities													
Service facilities (shops & warehouse)													
Power Facilities													
Tailings Facility													
Construct Diversions/Drainage													
Site Clearing & Borrow Preparation													
Construct Starter Dam/Seepage Dam													
Install Liner & Filling Diversion/Pipelines/Barge													
Mining & Processing													
Geotechnical Drilling													
Mine Development													
Commission Plant													
Ramp up to full production													

Note: blue diamond = completed activity; green diamond/bar = activity to be completed.

Figure 7-1: Project Development and Regulatory Submission Schedule 2008-2010.

8 Spills and Accidents

There were no reportable spills or accidents at the Wolverine Mine Site during 2008.

9 Access Road

9.1 Previous and Projected Use

In 2007, YZC completed the first phase of access road construction from km ~190 of the Robert Campbell Highway to the project site. The road was operational in late August 2007 and has been used to supply fuel and other supplies to support current operations throughout 2008. Prior to September 2008, use of the road was minimal, after which the rate increased to two trucks per week on average.

In 2009, with the onset of construction activities, it has been estimated that there will be an average of 100 delivery trucks per month (with the peak of those deliveries occurring between June and October) for construction purposes. Once in the operations phase, in mid 2010, the number of trucks on the road will average 26 haul trucks over a 24 period (13 full and 13 empty).

9.2 2008 Work and Upgrades Conducted

In September-October 2008, additional improvements were completed to permit the safe transportation of large equipment and the camp to site in 2009. Activities included the replacement of the temporary bridge with a permanent bridge at Bunker Creek, the removal of a bedrock outcrop at km 15, and road grade improvements near km 15 and 19. Environmental monitoring reports were completed for all construction activities on the access road and are provided in Appendix A.

9.2.1 Bunker Creek

The temporary bridge at over Bunker Creek at Km 10.5 was replaced with a permanent bridge during September and October 2008 (Picture 9-1).

Picture 9-1: Bunker Creek Permanent Bridge, capped road completed looking towards Robert Campbell Hwy, 10/15/08.

9.2.2 Km 15 Blasting and Re-alignment

During the original phase I road construction in 2007, the removal of the bedrock outcropping at KM 15+100 was not able to be removed by mechanical means.

In September 2008, road realignment commenced, starting with the drilling and blasting to the rock outcrop followed by stripping and clearing along the steep down slope side (Picture 9-2). Cutting and filling was done to bring the road to grade design from km 15 to km 15+300. Stripping and road widening was done up towards km14 from the new alignment around knob hill (Picture 9-3).

The original culvert at 15+100 was removed and replaced with a larger one as the road widened. The ditch line was increased by a 2 m depth to capture groundwater and prevent glaciation through the winter months.

Picture 9-2: Before blasting, stripping and clearing, looking north, 09/26/08

Picture 9-3: Final grade complete, looking north, 10/27/08

9.2.3 Km 19

In order to reduce the grade of the road at Km 19, the road was realigned by drilling and blasting, cutting and filling (Pictures 8-4 to 8-7).

Picture 9-4: Km 19 Drill site for blast; drill in background, cleared area on the right, facing east, 10/08/08.

Picture 9-5: Km 19 Drill site facing southwest, 10/15/08.

Picture 9-6: Km 19 Drill Site, realignment nearing completion, facing north, 10/31/08.

Picture 9-7: Km 19 Drill site, realignment nearing completion, facing Wolverine mine site, 10/31/08.

9.3 Access Control Issues

There are two Wolverine Mine Access Control Gates at km 0.1 and km 0.49, to prevent public use of the access road. In 2008, an automated system was installed at the gate at km 0.1 that enabled the gate to be opened via radio once authorized by a site supervisor.

9.4 Projected Road Construction Activities

Additional road construction activities in early 2009 will include the continued construction of the access road on the west side of the tailings facility from km 23+150 to km 27+200 (See GSP 2008-04). The site

road currently in use on the upslope (east) side of the tailings facility will be used to construct tailings facility diversion Ditch B.

Prior to the start of production in mid 2010, YZC will improve the road to a Phase 2 level for concentrate haul trucks and service vehicle use. The main improvements include decreasing side slopes, widening the road or adding pull out bays in certain locations, replacing culverts at Hawkowl Creek, and adding a granular surface.

As required by QML-0006, within 60 days of completing construction of the access road to the Transportation Association of Canada RLU 60 Single Lane Resource Road level (previously referred to as Phase 2), YZC will submit an as-built report containing engineered-stamped drawings and descriptions of any reclamation activities undertaken or to be undertaken in relation to any borrow sites used in construction of the access road.

10 Socio-Economic Assessment

The EA Screening Report requires that YZC report annually on the following:

- number of Yukoners and non-Yukoners employed at the mine; and,
- the value of goods and services procured within Ross River, Watson Lake and the Yukon as a whole (Table 10-1).

Over the course of the year, 75 Yukoners and 37 non-Yukoners were employed at the project site by YZC and the contracting companies, Courer des Bois, Procon Mining and Tunneling Ltd., Arctic Alliance (joint venture between Kaska and Arctic Construction Ltd.). The value of goods and services procured, excluding Arctic Alliance, is provided in Table 7.1. YZC is not privy to the share of Arctic Alliance's value that goes to the Kaska.

Table 10-1: Goods and services procured from Ross River, Watson Lake and the Yukon for 2008

Location	Amount
Ross River	$1,304,510
Watson Lake	$84,171
Yukon	$3,371,769

Appendix A Environmental Monitoring Reports

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: April1-April 7	Inspector(s): James Spencer
Site Name: Access Road Snow Clearing	Location/Co-ordinates: Access Road - Airstrip to KM 0
Site Location Description: Snow from winter Grading Accumulated along road	

Weather Conditions:

01-Apr-08	Clear, Sunny	6
02-Apr-08	Clear, Sunny	7
03-Apr-08	Clear, Sunny	6
04-Apr-08	Clear, Sunny, windy at high elevations	8
05-Apr-08	Clear, Sunny	8
06-Apr-08	Clear, Sunny intermittent snow flurries	3
07-Apr-08		

Part 2 – Site Assessment

Activity: Object is to push snow from the road and clean out the ditches so they can start to drain water. Follow up activity will be to clear culverts and assess the need for cross drains and water bars. Secondary ditches should be eliminated where possible but may be only solution in short term until material softens and road can be re-worked later on in the year.

Site Description:

The work will take place within the boundary of the ROW and will not disturb any previously undisturbed ground even if it does lie within the ROW. This will effectively limit any additional disturbance while accomplishing the prescribed task. Critical areas are km km 18+850 to km 23 (from as-built design not km markings on road) and km16+500 – Km 10. These areas are steep ~ 6-11%.

One key area of concern, in addition to the problem areas outlined in2008ARoad_04_01_08_JS, is km 13+525. A fairly significant gully with no culvert listed on the YES as-built drawings file (ASBUILTAUGUST.DWG).

Assessed Risk: Low to High depending on area

Photos Attached: YES

Samples Taken: No

Additional Information Attached: No

Part 3 –Mitigation Requirements

Mitigation Required: Work will continue as prescribed. As of April 7th crews have cleared km 25 - km ___ and km 13 – km ____ using caterpillars. Some ditching will need to be done around the culverts using the excavator and steam cleaining to unplug problem areas

Mitigation Condition: Good, waiting for increased meltwater to assess the effectiveness of the program.

Part 4 –Monitoring Requirements

Follow-up Monitoring: Will monitor general condition and progress of the snow clearing, ditching and culvert de-icing program as the season progresses.

Monitoring Frequency: Weekly

Reporting Requirements: Weekly

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Project Name: Access Road Snow Clearing	
	
Km6_berms_08_29_08 Looking Loaded	**Km14Ditchmaintenance_03_29_08 – Looking Loaded**
	
Km17_banks_03_29_08 – Looking Empty	**Km23_bank_03_29_08 – Looking Empty**

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Project Name: Access Road Snow Clearing	
	
SHawnsWrk_km 13-Km11- Looking Loaded	SHawnsWrk_km 13-Km11 - Looking Loaded
	
Km17_banks_03_29_08 – Looking Empty	Al'sWrk_km24_04_03_08 – Looking Empty

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: April 11th – April 22nd, 2008	Inspector(s): Jennie Gjertsen
Site Name: Access Road	Location/Co-ordinates: Access Road - Airstrip to KM 0

Site Location Description: Snow from winter Grading Accumulated along road

Weather Conditions:

11-Apr-08	Clear	1
12-Apr-08	Snow in morning, rain in afternoon	0
13-Apr-08	Overcast with clear periods	0
14-Apr-08	Overcast	-2
15-Apr-08	Overcast with sunny periods	2
16-Apr-08	Sunny with high clouds, light winds	1
17-Apr-08	Heavy snowfall overnight, snow and wind	-8
18-Apr-08	Overcast	-5
19-Apr-08	overcast with periods of sun	0
20-Apr-08	overcast with periods of sun	2
21-Apr-08	light snow in morning, clearing in the afternoon	3

Part 2 – Site Assessment

Activity: Object is to push snow from the road and clean out the ditches so they can start to drain water. Follow up activity will be to clear culverts and assess the need for cross drains and water bars. Secondary ditches should be eliminated where possible but may be only solution in short term until material softens and road can be re-worked later on in the year. Work done until now, includes road ditching, ice flow break up, clearing trees at edge of road that cause a safety concern.

Site Description: The work will take place within the boundary of the ROW and will not disturb any previously undisturbed ground even if it does lie within the ROW. This will effectively limit any additional disturbance while accomplishing the prescribed task. Critical areas are km km 18+850 to km 23 (from as-built design not km markings on road) and km16+500 – Km 10. These areas are steep ~ 6-11%.

One key area of concern, in addition to the problem areas outlined in2008ARoad_04_01_08_JS, is km 13+525. A fairly significant gully with no culvert listed on the YES as-built drawings file (ASBUILTAUGUST.DWG).

Assessed Risk: Low to High depending on area

Photos Attached: YES

Samples Taken: No

Additional Information Attached: No

Part 3 –Mitigation Requirements

Mitigation Required: Work will continue as prescribed.

Blocked culverts need to be cleared using steam machine, more ditching to be done around Bunker Creek, sedimentation prevention measures to be put in place once ground is more thawed.

Mitigation Condition: Good, waiting for increased meltwater to assess the effectiveness of the program, as well as implement erosion and sediment controls

Part 4 –Monitoring Requirements

Follow-up Monitoring: Will monitor general condition and progress of the snow clearing, ditching and culvert de-icing program as the season progresses.

Monitoring Frequency: Weekly

Reporting Requirements: Weekly

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Project Name: Access Road	
	
Km10 – Falling trees 04_19_08	**Km9 Ice flow clearing 04_19_08**
	
Km9 Ice flow ditching 04_19_08	

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: April1-April 7	Inspector(s): James Spencer
Site Name: Site Road Snow Removal	Location/Co-ordinates: Site Road km32-km29
Site Location Description: Snow from winter Grading Accumulated along road and at Portal	
Weather Conditions: 01-Apr-08Clear, Sunny 6 02-Apr-08Clear, Sunny 7 03-Apr-08Clear, Sunny 6 04-Apr-08Clear, Sunny, windy at high elevations 8 05-Apr-08Clear, Sunny 8 06-Apr-08Clear, Sunny intermittent snow flurries 3 07-Apr-08	
Part 2 – Site Assessment	
Activity: Remove snow and promote drainage along site road. Minimize portal runoff. Capture portal runoff in sumps.	
Site Description: The work will take place within the boundary of the road and ditch and will not impact any reclaimed, seeded or vegetated areas. This will effectively limit any additional disturbance while accomplishing the prescribed task. Pipes and electrical at Portal to be flagged for safety around PCS and PDS while snow clearing taking place.	
Assessed Risk: Low to High depending on area	
Photos Attached: YES	
Samples Taken: No	
Additional Information Attached: No	
Part 3 –Mitigation Requirements	
Mitigation Required: Work will continue as prescribed. As of April 7th crews have cleared snow from km 29- km 32. More ditching needs to happen from km 31 to km 32 in particular to prevent secondary ditches and washouts. Avoid cross ditching if possible. Culvert at km31.5 is working. Ditch dug to capture portal runoff in to PCS. Other snow at portal removed to minimize runoff.	
Mitigation Condition: Fair, waiting for increased melt water to assess the effectiveness of the program.	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Will monitor general condition and progress of the snow clearing, ditching and monitor sump levels at the PCS and PDS.	
Monitoring Frequency: Daily	
Reporting Requirements: Weekly	

Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Snow Clearing	
	
KM30_ditching-snowremoval_03_29_08 - Looking Empty	Km31_04_03_08– Looking Empty
	
Km31_04_03_08– Looking Empty	PortalSnowRemoval_08_27_08 – PDS in Background

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: September 3-22, 2008	Inspector(s): James Spencer
Site Name: Bunker Creek (stn: 10+250)	Location/Co-ordinates:

Site Location Description:

Bunker Creek at the crossing is 4.5m wide across the top of the bank. The stream banks are soft moss covered, with a slight overhang. The riparian area extends 5m on either side. The downchain approach is at a design grade of 6%and has a large collection area for potential runoff. The sliver cut that was proposed on that cut slope has been re-surveyed to appropriate a steeper cut and minimize large scale clearing of the area. Organics from the upchain side of the bridge are stored at location 10+600. The new ditch will be ditchblocked at approximately 15m intervals and an energy dissipater will break up flow at the outlet of the ditch. The upchain side is at a design grade of_____%

Weather Conditions:

Mixed fall weather, lots of rain early during development. See daily log.

Part 2 – Site Assessment

Activity: Re-grade and re-align both upchain and downchain approaches to Bunker Creek

Clearing: The cutslopes on both approaches were cleared, Organics were stockpiled at 10+600 upchain and windrowed above the cut at 10+300 upchain. On the downchain side organics were stockpiled at 9+ 750m.

Waste: A large 100mx 100m waste area was developed on the downchain side at km 10+450, wasted material from the cut and blast for the approach removed approximately_____m3 of material

Geotech: layed down material over riparian approaches on both sides of the binwall locations

Silt Fence: Installed 5 short 40' smiles, 3 downchain and 2 upchain to contain the binwall excavation toe of fill at bridge

Ditches: Need to install ditch blocks every 15 m, on the downchain approach to bridge along cut slope ditch, to control erosion. Energy dissipator at outflow. Need to add a cross drain half way down slope on the upchain approach. Two ditches on this side of the bridge grade at_____%. It will need to be rock lined and have small energy dissipators at the outflow.

Site Description:

Upchain: At this point the final grade from approximately 10+300 to 10+500 is established and the final approach is still being drilled and blasted and hauled for fill material at 10+500. The waste area is just about complete and has been re-contoured and will have strippings spread back over for reclamation once all waste has been deposited there. Due to the extensive cut on this side and to avoid removing excessive amounts of material the approach will have a ditch on the high and low side. The collection area is very small. A cross culvert will likely be cut in at km 10+325. Some rock lining and energy dissipaters at the ditch outlet will be armoured using angular blast rock. The cutslope immediately adjacent to Bunker Creek is large rock and non-erodible so will act as an excellent rock blanket. Slightly further upchain the material changes and the finer material may benefit from a different mulch application that is yet to be determined.

Downchain: The soils on this side of the bridge are more erodible and have intermittent permafrost zones and steeper cuts. This will mean that the ditch may be compromised and will need to be maintained and monitored for stability or the need for a change in mitigation. No cross ditches due to the proximity of the creek on the fill side. Ditch blocks and an energy dissipater at the outflow will handle the flow from 10+100 to the bridge. A culvert may

be crossed in at 10+075 just after the permafrost zone to alleviate any excess floes from outflowing into the Bunker riparian zone adjacent to the bridge crossing.

Assessed Risk: Medium

Photos Attached: Yes

Samples Taken: None

Additional Information Attached: None

Part 3 –Mitigation Requirements

Mitigation Required: See above included in site description. Also will need to monitor the bridge and binwall install. A pump will be needed to pump the overflow at the binwall to vegetation using 150'+ of hose. Downchain design of cutslope ditch is critical and has been discussed between Arctic, Larry Lebedoff and Environmental Staff. Original ditch line to be maintained through th lower 100m of downchain side of Bunker (with energy dissipater at outflow) and will marry up to the new road alignment at approx 10+150m . This will provide for a buffer between the ditch outflow and the creek.

Mitigation Condition: Spill kit labeled and placed at the base of the existing temporary bridge. The hangers and trees have been removed from cutslopes. All waste material stockpiled in flat areas to minimize erosion. Silt fences and natural lay of land are holding up to rain events very well.

Part 4 –Monitoring Requirements

Follow-up Monitoring:

Monitor if heavy rain or site activity taking place. Observe more erodible cutslopes further upchain 10+300 and the sloughing that will likely occur at the cutslopes on the downchain side. Ensure ditchblocks are installed at the proper intervals.

Monitoring Frequency: Daily

Reporting Requirements: As required

Yukon Zinc CORPORATION

Bunker loaded pre-development 09_03_08

Bunker empty pre-development 09_03_08

Bunker empty Silt Fence 09_05_08

Bunker D/S dilt fence 09_05_08

Bunker cut slope upchain of bridge 09_07_08

Bunker empty 09_07_08

Bunker upchain waste area 09_07_08

Bunker approach upchain of bridge 09_07_08

Bunker cut slope upchain of bridge 09_17_08

Bunker downchain organics stockpile 09_22_08

Bunker downchain cut slope clearing 09_22_08

Bunker binwall excavation downchain side 09_22 _08

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: September 23-24, 2008	Inspector(s): Billie Maje and Jennie Gjertsen
Site Name: Bunker Creek (stn: 10+250)	Location/Co-ordinates:

Site Location Description:

Bunker Creek, at the crossing is 4.5m wide across the top of the bank. The stream banks are soft moss-covered with a slight overhang. The riparian area extends 5m on either side. The downchain approach is at a design grade of 6% and has a large collection area for potential runoff. The sliver cut that was proposed on that cut slope has been re-surveyed to appropriate a steeper cut and minimize large scale clearing of the area. The new ditch will be ditchblocked at approximately 15m intervals and an energy dissipater will break up flow at the outlet of the ditch. Organics from the upchain side of the bridge are stored at location 10+600.

Weather Conditions:

23-Sep-08	Sun and cloud	8
24-Sep-08	Some light snow, mix of sun and cloud	5

Part 2 – Site Assessment

Activity: (last 2 days)

- Excavation of downchain bin wall site and upchain approach
- Bin wall area excavation encountered good river drain rock, eliminating the need to dig deeper, and also using less foreign fill than in the original design.

Clearing: The cutslopes on both approaches were cleared; organics were stockpiled at 10+600 upchain and windrowed above the cut at 10+300 upchain. On the downchain side organics were stockpiled at 9+ 750m.

Waste: A large 100mx 100m waste area was developed on the downchain side at km 10+450, wasted material from the cut and blast for the approach removed approximately _____ m3 of material

Geotech: layed down material into downchain binwall excavation before drain rock installed

Silt Fence:

- Silt fencing was removed for downchain binwall excavation, and excavation was within 2m of creek bend
- reinstallation of silt fencing before any further work continued

Ditches: Need to install ditch blocks every 15 m, on the downchain approach to bridge along cut slope ditch, to control erosion. Energy dissipator at outflow. Need to add a cross drain half way down slope on upchain approach. Ditches on upchain approach will need to be rock lined and have small energy dissipators at the outflow.

Site Description:

Upchain: The final approach is still being drilled and blasted and hauled for fill material at 10+500. The waste area is complete and has been re-contoured and will have strippings spread back over for reclamation once all waste has been deposited there. Due to the extensive cut on this side and to avoid removing excessive amounts of material the approach will have a ditch on the high and low side. The collection area is very small. A cross culvert will likely be cut in at km 10+325. Some rock lining and energy dissipaters at the ditch outlet will be armoured using angular blast rock. The cutslope immediately adjacent to Bunker Creek is large rock and non-erodible so will act as an excellent rock blanket. Slightly further upchain the material changes and the finer material may benefit from a different mulch application that is yet to be determined.

Approach is getting closer to grade, allowing for binwall area excavation to commence.

Downchain: The soils on this side of the bridge are more erodible and have intermittent permafrost zones and steeper cuts. This will mean that the ditch may be compromised and will need to be maintained and monitored for stability or the need for a change in mitigation. No cross ditches due to the proximity of the creek on the fill side. Ditch blocks and an energy dissipater at the outflow will handle the flow from 10+100 to the bridge. A culvert may be crossed in at 10+075 just after the permafrost zone to alleviate any excess floes from outflowing into the Bunker riparian zone adjacent to the bridge crossing.

Binwall area excavation has been completed and is being filled with drain rock, followed by compaction before binwall installation. The excavated area was close to creek, but is now filled and silt fenced, reestablishing stability and preventing bank rupture.

Assessed Risk: Medium

Photos Attached: Yes

Samples Taken: None

Additional Information Attached: None

Part 3 –Mitigation Requirements

Mitigation Required: Continue monitoring the bridge and binwall install. A pump will be needed to pump the overflow at the binwall to vegetation using 150'+ of hose. Downchain design of cutslope ditch is critical and has been discussed btwn Arctic, Larry Lebedoff and Environmental Staff. Original ditch line to be maintained through the lower 100m of downchain side of Bunker (with energy dissipator at outflow) and will marry up to the new road alignment at approx 10+150m . This will provide for a buffer between the ditch outflow and the creek. Spill sock downstream of bridge install needs to be lengthened and moved into proper shaped "U".

Continue to monitor condition of silt fencing and spill sock, as well as encroachment of construction areas to creek.

Mitigation Condition: Spill kit labeled and placed at the base of the existing temporary bridge. The hangers and trees have been removed from cutslopes. All waste material stockpiled in flat areas to minimize erosion. Silt fences and natural lay of land are holding up to rain events very well.

Part 4 –Monitoring Requirements

Follow-up Monitoring:

Monitor twice daily and report every two days. Observe more erodible cutslopes further upchain 10+300 and the sloughing that will likely occur at the cutslopes on the downchain side. Ensure ditchblocks are installed at the proper intervals.

Monitoring Frequency: Twice Daily

Reporting Requirements: Every 2 days

	
Bunker downchain binwall excavation 09_23_08	Bunker downchain binwall excavation 09_23_08
	
Bunker downchain binwall excavation 09_23_08	Bunker downchain binwall excavation 09_23_08

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Bunker downstream spill sock 09_23_08	Bunker downchain binwall excavation 09_23_08
	
Bunker downchain binwall excavation 09_24_08	Bunker UC approach looking at binwall excavation DC 09_24_08

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Bunker downchain binwall pad prep 09_24_08	Bunker downchain cutslope work 09_24_08
	
Bunker downchain binwall pad prep 09_24_08	Bunker upchain binwall excavation 09_24_08

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: September 25-26, 2008	Inspector(s): Billie Maje and Jennie Gjertsen
Site Name: Bunker Creek (stn: 10+250)	Location/Co-ordinates:

Site Location Description:

Bunker Creek, at the crossing is 4.5m wide across the top of the bank. The stream banks are soft moss-covered with a slight overhang. The riparian area extends 5m on either side. The down chain approach is at a design grade of 6% and has a large collection area for potential runoff. The sliver cut that was proposed on that cut slope has been re-surveyed to appropriate a steeper cut and minimize large scale clearing of the area. The new ditch will be ditchblocked at approximately 15m intervals and an energy dissipater will break up flow at the outlet of the ditch. Organics from the up chain side of the bridge are stored at location 10+600.

Weather Conditions:

25-Sep-08	Sun and cloud, light snow in the afternoon.	6
26-Sep-08	High overcast.	5

Part 2 – Site Assessment

Activity: (last 2 days)

- Up chain bin wall ground work excavation and padding.
- Laying out the steel parts of bin wall.
- Establishing the bin wall.

Clearing: The cut slopes on both approaches were cleared; organics were stockpiled at 10+600 up chain and windrowed above the cut at 10+300 up chain. On the down chain side organics were stockpiled at 9+ 750m.

Waste: A large 100mx 100m waste area was developed on the down chain side at km 10+450, wasted material volume from the cut and blast for the approach will be calculated once the upchain and downchain approaches have been completed.

Geotech: laid down material into down chain and up chain bin wall excavation before drain rock installed

Silt Fence:

- Silt fencing was re- installed down chain and also up chain. Silt fence improvements and changes continue to occur

Ditches: Need to install ditch blocks every 15 m, on the down chain approach to bridge along cut slope ditch, to control erosion. Energy dissipater at outflow. Need to add a cross drain half way down slope on up chain approach. Ditches on up chain approach will need to be rock lined and have small energy dissipators at the outflow.

Site Description:

Up chain: The waste area is complete and has been re-contoured and will have strippings spread back over for reclamation once all waste has been deposited there. Due to the extensive cut on this side and to avoid removing excessive amounts of material the approach will have a ditch on the high and low side. The collection area is very small. A cross culvert will likely be cut in at km 10+325. Some rock lining and energy dissipaters at the ditch outlet will be armoured using angular blast rock. The cutslope immediately adjacent to Bunker Creek is large rock and non-erodible so will act as an excellent rock blanket. Slightly further up chain the material changes and the finer material may benefit from a different mulch application that is yet to be determined.

Down chain: The soils on this side of the bridge are more erodible and have intermittent permafrost zones and steeper cuts. This will mean that the ditch may be compromised and will need to be maintained and monitored for stability or the need for a change in mitigation. No cross ditches due to the proximity of the creek on the fill side.

Ditch blocks and an energy dissipater at the outflow will handle the flow from 10+100 to the bridge. A culvert may be crossed in at 10+075 just after the permafrost zone to alleviate any excess flows from outflowing into the Bunker riparian zone adjacent to the bridge crossing.

Bin wall area excavation has been completed and is being filled with drain rock, followed by compaction before bin wall installation. The excavated area was close to creek, but is now filled and silt fenced, reestablishing stability and preventing bank rupture.

Assessed Risk: Medium

Photos Attached: Yes

Samples Taken: None

Additional Information Attached: None

Part 3 –Mitigation Requirements

Mitigation Required: Continue monitoring the bridge and bin wall installment. Down chain design of cutslope ditch is critical and has been discussed between Arctic, Larry Lebedoff and Environmental Staff. Original ditch line to be maintained through the lower 100m of down chain side of Bunker (with energy dissipater at outflow) and will marry up to the new road alignment at approx 10+150m. This will provide for a buffer between the ditch outflow and the creek. Spill sock downstream of bridge install needs to be lengthened and moved into proper shaped “U”.

Continue to monitor condition of silt fencing and spill sock, as well as encroachment of construction areas to creek.

Mitigation Condition: Good. Silt fences will be monitored closely in the event of rain, and spill sock downstream still needs to be extended and secured closer to bank.

Part 4 –Monitoring Requirements

Follow-up Monitoring:

Monitor twice daily and report every two days. Observe more erodible cutslopes further up chain 10+300 and the sloughing that will likely occur at the cutslopes on the down chain side. Ensure ditchblocks are installed at the proper intervals.

Monitoring Frequency: Twice Daily

Reporting Requirements: Every 2 days

Bunker Creek: up chain bin wall excavation 09_25_08 (facing downchain (DC))

Bunker Creek; down chain bin wall loading 09_25_08 (facing DC)

Bunker Creek: down chain bin wall layout. 09_25_08 (facing upchain (UC))

Bunker Creek: down chain bin wall establishment. 09_25_08 (facing UC)

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Bunker Creek: up chain landscaping and drain rock hauling for UC bin wall. 09_25_08 (facing UC)	Bunker Creek: 09_26_08 Site over view. Ground prep work for UC bin wall. (**Note: silt fence installed later.)**
	
Bunker Creek: DC cut slope and re- alignment of road. 09_26_08 (facing DC)	Bunker Creek: Silt fencing re-installed. 09_26_08 (facing DC)

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: September 27-28, 2008	Inspector(s): Billie Maje and Jennie Gjertsen
Site Name: Bunker Creek (stn: 10+250)	Location/Co-ordinates: Access Road 10+250

Site Location Description:

Bunker Creek, at the crossing, is 4.5m wide across the top of the bank. The stream banks are soft moss-covered with a slight overhang. The riparian area extends 5m on either side. The down chain approach is at a design grade of 6% and has a large collection area for potential runoff. The sliver cut that was proposed on that cut slope has been re-surveyed to appropriate a steeper cut and minimize large scale clearing of the area. Organics from the up chain side of the bridge are stored at location 10+600.

Weather Conditions:

Date	Weather Conditions	Average daily temperature (°C)
27-Sep-08	High Overcast	4
28-Sep-08	Sunny with clouds	4

Part 2 – Site Assessment

Activity: (last 2 days)

- Down chain bin wall loading and backfilling with screened material from Km18 borrow source
- Start of up chain bin wall layout and installation
- Compaction being done with 1000lb plate tamper out side the bin walls, and a jumping jack tamper for inside the bin walls
- Clearing and cutting of downchain approach to grade

Clearing and Waste: On the down chain side organics and other waste from the approach to the bridge are being hauled and stockpiled at 9+ 750m. Up chain approach has not been worked on during this reporting period.

Geotech: To be laid over backfilling around the bin walls, before the riprap is installed

Silt Fence: - Silt fence improvements and changes continue to occur

Ditches: To be addressed once approaches are complete. Will need to install ditch blocks every 15 m, on the down chain approach to bridge along cut slope ditch, to control erosion. Energy dissipater at outflow. Need to add a cross drain half way down slope on up chain approach. Ditches on up chain approach will need to be rock lined and have small energy dissipators at the outflow.

Site Description:

Up chain: The waste area is complete and has been re-contoured and will have strippings spread back over for reclamation once all waste has been deposited there. Due to the extensive cut on this side and to avoid removing excessive amounts of material the approach will have a ditch on the high and low side. The collection area is very small. A cross culvert will likely be cut in at km 10+325. Some rock lining and energy dissipaters at the ditch outlet will be armoured using angular blast rock. The cutslope immediately adjacent to Bunker Creek is large rock and non-erodible so will act as an excellent rock blanket. Slightly further up chain the material changes and the finer material may benefit from a different mulch application that is yet to be determined.

Down chain: The soils on this side of the bridge are more erodible and have intermittent permafrost zones and steeper cuts. This will mean that the ditch may be compromised and will need to be maintained and monitored for stability or the need for a change in mitigation. No cross ditches due to the proximity of the creek on the fill side. Ditch blocks and an energy dissipater at the outflow will handle the flow from 10+100 to the bridge. A culvert may be crossed in at 10+075 just after the permafrost zone to alleviate any excess flows from outflowing into the Bunker riparian zone adjacent to the bridge crossing. The new ditch will be ditchblocked at approximately 15m intervals and an energy dissipater will break up flow at the outlet of the ditch.

Assessed Risk: Medium

Photos Attached: 12 photos, Bunker_09_27_08, Bunker_09_28_08. Additional photos for the reporting period can be found in the Environmental monitoring photos folder for access road creeks.

Samples Taken: None

Additional Information Attached: None

Part 3 –Mitigation Requirements

Mitigation Required:

- Down chain design of cutslope ditch is critical and has been discussed between Arctic, Larry Lebedoff and Environmental Staff. Original ditch line to be maintained through the lower 100m of down chain side of Bunker (with energy dissipater at outflow) and will marry up to the new road alignment at approx 10+150m. This will provide for a buffer between the ditch outflow and the creek.
- Once bin wall backfill is complete, fines need to be covered with geotextile and armoured with rip rap

Mitigation Condition: Good. Silt fencing in place, and is continually being maintained. Spill sock downstream of bridge install has been lengthened and moved into proper shaped “U”.

Part 4 –Monitoring Requirements

Follow-up Monitoring:

- Continue monitoring the bridge and bin wall installment.
- Continue to monitor condition of silt fencing, as well as encroachment of construction areas to creek.
- Continue to monitor that fuels are not stored within 30m of creek
- Monitor more erodible cutslopes further up chain 10+300 and the sloughing that will likely occur at the cutslopes on the down chain side. Ensure ditchblocks are installed at the proper intervals, once road is to grade

Monitoring Frequency: Twice Daily

Reporting Requirements: Every 2 days

	
09_27_08 Bunker Bridge binwall installation (facing downchain (DC))	09_27_08 Down chain bin wall loading (facing DC)
	
09_27_08 Up chain bin wall layout (facing DC)	09_27_08 Down chain bin wall installation (facing downstream)

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09_27_08 Down chain bin wall loading with material from K18 borrow source	09_27_08 Up chain bin wall layout (facing downstream)
	
09_27_08 Up chain bin wall layout, and down chain install (facing DC)	09_28_08 K10 waste pile

	
09_28_08 Load and haul of waste material from down chain approach to bridge (facing upchain (UC))	09_28_08 Load and haul of waste material from down chain approach to bridge (facing UC)
	
09_28_08 Down chain bin wall backfill and compaction in foreground, down chain approach work in background (facing DC)	09_28_08 Down chain bin wall backfill and compaction in foreground, down chain approach work in background (facing DC)

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: September 29-30, 2008	Inspector(s): Billie Maje, Melissa Kirby and Jennie Gjertsen
Site Name: Bunker Creek	Location/Co-ordinates: Access Road 10+250

Site Location Description:

Bunker Creek, at the bridge crossing, is 4.5m wide across the top of the bank. The stream banks are soft moss-covered with a slight overhang. The riparian area extends 5m on either side. The down chain approach is at a design grade of 6% and has a large collection area for potential runoff. The sliver cut that was proposed on that cut slope has been re-surveyed to appropriate a steeper cut and minimize large scale clearing of the area. Organics from the up chain side of the bridge are stored at location 10+600.

Weather Conditions:

Date	Weather Conditions	Average daily temperature (°C)
29-Sep-08	Overcast	0
30-Sep-08	Fog in morning clearing to clouds	8

Part 2 – Site Assessment

Activity: (last 2 days)

- Down chain bin wall loading and backfilling with screened material from Km18 borrow source
- Up chain bin wall installation and some loading
- Compaction being done with 1000lb plate tamper out side the bin walls, and a jumping jack tamper for inside the bin walls
- Clearing and cutting of down chain approach
- Some cutting of up chain approach

Clearing and Waste: On the down chain side organics and other waste from the approach to the bridge are being hauled and stockpiled at 9+ 750m.

Waste from up chain approach being stockpiled beside approach until more material is removed

Geotech: To be laid over backfilling around the bin walls, before the riprap is installed

Silt Fence: Silt fence improvements and changes continue to occur

Ditches: To be addressed once approaches are complete. Will need to install ditch blocks every 15 m, on the down chain approach to bridge along cut slope ditch, to control erosion. Energy dissipater at outflow. Need to add a cross drain half way down slope on up chain approach. Ditches on up chain approach will need to be rock lined and have small energy dissipaters at the outflow.

Site Description:

Up chain: The waste area is complete and has been re-contoured and will have strippings spread back over for reclamation once all waste has been deposited there. Due to the extensive cut on this side and to avoid removing excessive amounts of material the approach will have a ditch on the high and low side. The collection area is very small. A cross culvert will likely be cut in at km 10+325. Some rock lining and energy dissipaters at the ditch outlet will be armoured using angular blast rock. The cut-slope immediately adjacent to Bunker Creek is large rock and non-erodible so will act as an excellent rock blanket. Slightly further up chain the material changes and the finer material may benefit from a different mulch application that is yet to be determined.

Down chain: The soils on this side of the bridge are more erodible and have intermittent permafrost zones and steeper cuts. This will mean that the ditch may be compromised and will need to be maintained and monitored for stability or the need for a change in mitigation. No cross ditches due to the proximity of the creek on the fill side. Ditch blocks and an energy dissipater at the outflow will handle the flow from 10+100 to the bridge. A culvert may be crossed in at 10+075 just after the permafrost zone to alleviate any excess flows from outflowing into the Bunker riparian zone adjacent to the bridge crossing. The new ditch will be ditchblocked at approximately 15m intervals and an energy dissipater will break up flow at the outlet of the ditch.

Assessed Risk: Medium

Photos Attached: 12 photos, Bunker_09_29_08, Bunker_09_30_08. Additional photos for the reporting period can be found in the Environmental monitoring photos folder for access road creeks.

Samples Taken: None

Additional Information Attached: None

Part 3 –Mitigation Requirements

Mitigation Required:

- Down chain design of cutslope ditch is critical and has been discussed between Arctic, Larry Lebedoff and Environmental Staff. Original ditch line to be maintained through the lower 100m of down chain side of Bunker (with energy dissipater at outflow) and will marry up to the new road alignment at approx 10+150m. This will provide for a buffer between the ditch outflow and the creek.
- Once bin wall backfill is complete, fines need to be covered with geotextile and armoured with rip rap

Mitigation Condition: Good. Silt fencing in place, and is continually being maintained.

Part 4 –Monitoring Requirements

Follow-up Monitoring:

- Continue monitoring the bridge and bin wall installment.
- Continue to monitor condition of silt fencing, as well as encroachment of construction areas to creek.
- Continue to monitor that fuels are not stored within 30m of creek
- Monitor more erodible cutslopes further up chain 10+300 and the sloughing that will likely occur at the cutslopes on the down chain side. Ensure ditchblocks are installed at the proper intervals, once road is to grade

Monitoring Frequency: Twice Daily

Reporting Requirements: Every 2 days

09_29_08 Bunker Bridge binwall installation and backfilling (facing up chain (UC))

09_29_08 Down chain bin wall height

09_29_08 Up chain bin wall layout and construction (facing downstream)

09_29_08 Down chain bin wall installation, backfilling and loading (facing downchain (DC))

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09_29_08 Silt fencing in place at down chain bin wall compaction nearest to creek	09_29_08 Down chain cutting and realignment for approach (facing DC)
	
09_29_08 Down chain bin wall backfill (facing DC)	09_30_08 Loading and backfilling of down chain bin wall (facing downstream)

09_30_08 Loader and excavator working on road realignment and approach

09_30_08 Silt fencing near creek (facing downstream)

09_30_08 Loading and backfilling of down chain bin wall (facing UC)

09_30_08 Loading and backfilling of bin walls (facing UC)

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 1-2, 2008	Inspector(s): Melissa Kirby and Jennie Gjertsen
Site Name: Bunker Creek	Location/Co-ordinates: Access Road 10+250

Site Location Description:

Bunker Creek, at the bridge crossing, is 4.5m wide across the top of the bank. The stream banks are soft moss-covered with a slight overhang. The riparian area extends 5m on either side. The down chain approach is at a design grade of 6% and has a large collection area for potential runoff. Organics from the up chain side of the bridge are stored at location 10+600.

Up-chain = (UC); down-chain (DC)

Weather Conditions:

Date	Weather Conditions	Average daily temperature (°C)
29-Sep-08	Overcast	0
30-Sep-08	Fog in morning clearing to clouds	7
1-Oct-08	Cloudy	7
2-Oct-08	Some clouds	10

Part 2 – Site Assessment

Activity: (last 2 days)

- DC and up-chain UC bins walls loaded, backfilled, compacted, wrapped with geotech and rip rapped.
- Clearing and cutting of DC approach continued

Silt Fence: Silt fence improvements and changes continue to occur

Ditches: To be addressed once approaches are complete.

Site Description:

Good. Dry working conditions have enabled work to continue rapidly without any sediment issues.

Assessed Risk: Low

Photos Attached: 6 photos, Bunker_10_01_08, Bunker_10_02_08. Additional photos for the reporting period can be found in the Environmental monitoring photos folder for access road creeks.

Samples Taken: None

Additional Information Attached: None

Part 3 –Mitigation Requirements

Mitigation Required: None.

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Mitigation Condition: Good. Silt fencing in place, and is continually being maintained.

Part 4 –Monitoring Requirements

Follow-up Monitoring:

- Ensuring that enough rip rap has been placed around the bin walls
- Ensure that site is prepped for permanent bridge installment and temporary bridge removal.
- Continue to monitor condition of silt fencing, as well as encroachment of construction areas to creek.

Monitoring Frequency: Twice Daily
Reporting Requirements: Every 2 days

	
10_01_08 Facing DC, completed bin wall loading, backfilling continues, cutting and grading approach continues.	10_01_08 Facing UC, UC bin wall loading and backfilling, packing around bin wall.
	
10_01_08 Facing UC	10_02_08 Facing DC, bin walls complete, geotech wrapped around backfilling followed by rip rap placement.

	
10_02_08 Facing UC, geotech and rip rap placement, sediment fencing in place.	10_02_08 Facing DC, sediment fencing in place, no sediment in creek.

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 7-13, 2008	Inspector(s): James Spencer
Site Name: Bunker Creek	Location/Co-ordinates: Access Road 10+250

Site Location Description:

Bunker Creek, at the bridge crossing, is 4.5m wide across the top of the bank. The stream banks are soft moss-covered with a slight overhang. The riparian area extends 5m on either side. The down chain approach is at a design grade of 6% and has a large collection area for potential runoff. Organics from the up chain side of the bridge are stored at location 10+600.

Up-chain = (UC); down-chain (DC)

Weather Conditions:

Date	Weather Conditions	Average daily temperature (°C)
07-Oct-08	High Overcast	-7
08-Oct-08	Cool, sunny most of day, light flurries in morning	-8
09-Oct-08	overcast most of day	-6
10-Oct-08	Cool and windy	-7
11-Oct-08	Overcast and fog snow	-4
12-Oct-08	mixed sun and cloud	0
13-Oct-08	Light flurries, sun, cloud very mixed	-4

Part 2 – Site Assessment

Activity:

Permanent Bridge

Oct 7-10

-Start on armouring the outflow of the u/s DC ditch will have energy dissipater followed by an armoured outflow to the creek edge

-Ditchblocks being placed at 15m intervals in u/s DC ditch. Complete rip-rap armouring of binwalls

-organics spread over old borrow pit at km 10+100and 9+900

-organics spread over waste area at km 9+900

Oct 11-13

-The dissipater is complete on DC, u/s bank along with rocklined and geotextiled outflow, the ditch is ditchblocked every 15m

-armouring complete on the DC, d/s bank

-armouring, dichblocks and outflow complete on UC, u/s bank

-armouring and ditch outflow complete on UC, d/s bank. Also cross drain completed

Temporary Bridge: organic layer re-established for reseeding.

Silt Fence: Silt fence monitoring and repairing when required.

Site Description:

Site is completed as of Oct 13th, Just need reseeding and monitoring for bridge movement and sloughing

Assessed Risk: Low

Photos Attached: 12 photos, Bunker_10_07_08, Bunker_10_13_08. Additional photos for the reporting period can be found in the Environmental monitoring photos folder for access road creeks.

Samples Taken: None

Additional Information Attached: None

Part 3 –Mitigation Requirements

Mitigation Required: .

- Re-seeding to early next week by Billie Maje

Mitigation Condition: Good.

Part 4 –Monitoring Requirements

Follow-up Monitoring:

- Monitor condition of silt fencing
- Monitor more erodible cutslopes further up chain 10+300 and the sloughing that will likely occur at the cutslopes on the DC.
- Monitor ditch water quality during rains and freshet
-Monitor sloughing

Monitoring Frequency: Weekly

Reporting Requirements: As required

	
10_08_08 Facing UC, preparing ditch grade and energy dissipater on u/s DC side of bridge	10_08_08 Facing DC, cross-drain for culvert and ditchblock on UC side of bridge
	
10_08_08 Facing DC,aerial view showing the cross drain location to the right of the ambulance	10_08_08 Facing DC, location of removed temporary bridge contoured and organics replaced. Pile of rip rap at location of energy dissipater

10_09_08 Facing DC, finishing the armouring and energy dissipater and prepping for the outflow path of the ditch to creek

10_11_08 Facing DC, Ditch blocks and start of rock lined ditch on u/s DC side

10_11_08 Facing UC, rocklined outflow to Bunker Creek after energy dissipater.

10_11_08 Facing DC, aerial view of project area.

10_13_08 Facing UC, finishing the armouring and rock lined outflow on UC d/s side

10_13_08 Facing UC, armouring on UC u/s bank completed rock lined ditch

10_13_08 Facing d/s on UC side, Culvert outflow for cross drainage complete

10_11_08 facing UC, Reclaimed borrow pit and shaped waste pile and organic stockpile on UC side

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 14-20, 2008	Inspector(s): James Spencer
Site Name: Bunker Creek	Location/Co-ordinates: Access Road 10+250

Site Location Description:

Bunker Creek, at the bridge crossing, is 4.5m wide across the top of the bank. The stream banks are soft moss-covered with a slight overhang. The riparian area extends 5m on either side. The down chain approach is at a design grade of 6% and has a large collection area for potential runoff. Organics from the up chain side of the bridge are stored at location 10+600.

Up-chain = (UC); down-chain (DC)

Weather Conditions:

Date	Weather Conditions	Average daily temperature (°C)
14-Oct-08	Sunny most of day	-5
15-Oct-08	Clear in the morning , clouds roll in afternoon	-2
16-Oct-08	Light snow in morning, clearing in the afternoon	-1
17-Oct-08	Snowing lightly all day slippery roads	-2
18-Oct-08	Snowed morning, clearing in the afternoon	-4
19-Oct-08	Snowing lightly most of day windy	-7
20-Oct-08	Clear most of day mix sun and flurries	-7

Part 2 – Site Assessment

Activity:

Permanent Bridge

Oct 14-17

- armouring, dichblocks and outflow to be completed on UC, u/s bank
- capping and grading the road surface both UC and DC of bridge
- pulling back organics over waste area at UC waste site

Temporary Bridge: organic layer re-established for seeding.

Silt Fence: monitor in Spring

Site Description:

Site is 100% completed as of Oct 17th as capping road took two days. Seeding and monitoring for bridge movement and sloughing still needs to be monitored.

Assessed Risk: Low

Photos Attached: 5 photos, Bunker_10_15_08 Additional photos for the reporting period can be found in the Environmental monitoring photos folder for access road creeks.

Samples Taken: None

Additional Information Attached: None

Part 3 –Mitigation Requirements

Mitigation Required: .

- Seeding delayed until week of Oct 20th

Mitigation Condition: Good.

Part 4 –Monitoring Requirements
Follow-up Monitoring: *Next Spring* - Monitor condition of silt fencing in spring - Monitor more erodible cutslopes further up chain 10+300 and the sloughing that will likely occur at the cutslopes on the DC. - Monitor ditch water quality during rains and freshet - Monitor sloughing
Monitoring Frequency: As required
Reporting Requirements: As required

	
10_15_08 Facing DC, capped road completed on DC side	10_15_08 Facing d/s, cross-drain for culvert and ditchblock on UC side of bridge
	
10_15_08 Facing UC, old borrow site at km 10+100	10_15_08 Facing UC, Bridge approach capped

10_15_08 Facing UC, Road capping and completed landscaping and pulling over of organics at UC waste site

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 3-4, 2008	Inspector(s): Melissa Kirby and Jennie Gjertsen
Site Name: Bunker Creek	Location/Co-ordinates: Access Road 10+250

Site Location Description:

Bunker Creek, at the bridge crossing, is 4.5m wide across the top of the bank. The stream banks are soft moss-covered with a slight overhang. The riparian area extends 5m on either side. The down chain approach is at a design grade of 6% and has a large collection area for potential runoff. Organics from the up chain side of the bridge are stored at location 10+600.

Up-chain = (UC); down-chain (DC)

Weather Conditions:

Date	Weather Conditions	Average daily temperature (°C)
29-Sep-08	Overcast	0
30-Sep-08	Fog in morning clearing to clouds	7
1-Oct-08	Cloudy	7
2-Oct-08	Some clouds	10
3-Oct-08	Heavy rain overnight, Sun with clouds	5
4-Oct-08	Fog in morning clearing to sun	5

Part 2 – Site Assessment

Activity: (last 2 days)

- Permanent bridge installment onto bin walls, with 4 x 12” boards used to support bridge at bin walls.
- Rip rap placement continued
- Clearing and cutting of (DC) approach

Silt Fence: Silt fence improvements and changes continue to occur

Ditches: To be addressed once approaches are complete.

Site Description: Two bridges now in place, permanent bridge stable and usable. DC and UC approaches still continue to be re-sloped, re-contoured and ditched. Areas adjacent to bridges will need to be cleaned up and re-contoured, once temporary bridge is removed. Silt fencing in place and in tact.

Assessed Risk: Low

Photos Attached: 12 photos, Bunker_10_03_08, Bunker_10_04_08. Additional photos for the reporting period can be found in the Environmental monitoring photos folder for access road creeks.

Samples Taken: None

Additional Information Attached: None

Part 3 –Mitigation Requirements

Mitigation Required:

- Continue to monitor condition of silt fencing, as well as encroachment of construction areas to creek.
- Ensure that sediment is cleaned from temporary bridge and adjacent abutments prior to bridge removal.
- Consider using geotech either under bridge or stretched across creek if sediment is of concern for removal.

Mitigation Condition: Good. Silt fencing in place, and is continually being maintained.

Part 4 –Monitoring Requirements

Follow-up Monitoring:
- Monitor temporary bridge sediment pull back and removal prior to bridge removal.
- Continue to monitor condition of silt fencing, as well as encroachment of construction areas to creek.

Monitoring Frequency: Twice Daily

Reporting Requirements: Every 2 days

	
10_03_08 Facing downstream (DS) , bridge installation, sliding off of low bed into place.	10_03_08 Facing (DS), bridge installation, bridge now in place.
	
10_03_08 Facing (DS), lifting bridge off of low bed and onto bin wall below.	10_03_08 Facing DS, sliding boards under bridge for extra support.

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10_04_08 Facing US, rip rap in place, added boards for support, silt fencing in tact.	10_04_08 Facing DC, bridge installation complete.
	
10_04_08 Facing DC, bridge installation complete.	10_04_08 Facing DC, temporary bridge to be removed.

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 5-6, 2008	Inspector(s): Melissa Kirby and Jennie Gjertsen
Site Name: Bunker Creek	Location/Co-ordinates: Access Road 10+250

Site Location Description:

Bunker Creek, at the bridge crossing, is 4.5m wide across the top of the bank. The stream banks are soft moss-covered with a slight overhang. The riparian area extends 5m on either side. The down chain approach is at a design grade of 6% and has a large collection area for potential runoff. Organics from the up chain side of the bridge are stored at location 10+600.

Up-chain = (UC); down-chain (DC)

Weather Conditions:

Date	Weather Conditions	Average daily temperature (°C)
29-Sep-08	Overcast	0
30-Sep-08	Fog in morning clearing to clouds	7
1-Oct-08	Cloudy	7
2-Oct-08	Some clouds	10
3-Oct-08	Heavy rain overnight, Sun with clouds	5
4-Oct-08	Fog in morning clearing to sun	5
5-Oct-08	Cloudy with some snow	0
6-Oct-08	Sunny with some clouds	0

Part 2 – Site Assessment

Activity: (last 2 days)

Permanent Bridge

-Re contouring and shaping of road and banks UC of bridge as well as ditching

-Rip rap placement around backfill on both bin walls

Temporary Bridge: Area prepped for bridge removal including hand cleaning of bridge of debris and sediment pull back from abutments. Bridge removed to UC side and abutments removed.

Silt Fence: Silt fence monitoring and repairing when required.

Site Description:

Permanent bridge in place and in use. Temporary bridge has been removed to the laydown area at 10+500. Rip rap continues. Site clean-up continues. UC and down-chain (DC) approaches are being contoured, sloped and ditched.

Assessed Risk: Low

Photos Attached: 12 photos, Bunker_10_05_08, Bunker_10_06_08. Additional photos for the reporting period can be found in the Environmental monitoring photos folder for access road creeks.

Samples Taken: None

Additional Information Attached: None

Part 3 –Mitigation Requirements

Mitigation Required:

- DC, US area needs to be filled and sloped. Rip rap to be continued from bin wall around base of slope. Ditching

to continue on left hand side of road down along tree line (approx.).

- Silt fence to be continued where abutments from temporary bridge have been removed on both sides of creek.

- Ditches to be addressed once approaches are complete. Will need to install ditch blocks every 15 m, on the DC approach to bridge along cut slope ditch, to control erosion. Energy dissipater at outflow. Need to add a cross drain half way down slope on UC approach. Ditches on UC approach will need to be rock lined and have small energy dissipaters at the outflow.

Mitigation Condition: Good.

Part 4 –Monitoring Requirements

Follow-up Monitoring:

- Monitor the clean up of both removed and installed bridge areas.

- Monitor condition and augmentation of silt fencing, as well as encroachment of construction areas to creek.

- Monitor more erodible cutslopes further up chain 10+300 and the sloughing that will likely occur at the cutslopes on the DC.

- Ensure ditchblocks are installed at the proper intervals, once road is to grade.

Monitoring Frequency: Once daily.

Reporting Requirements: Every 2 days.

	
10_05_08 Facing UC, re-contouring and ditching road UC from bridge.	10_05_08 Facing DS, clean up to take place.
	
10_05_08 Facing DC, temporary bridge cleaned of debris, both backs with sediment pulled back from abutments and area prepped for bridge removal.	10_05_08 Facing UC, road re-contoured and re-sloped. Cross drain needs to be installed from slope through bank.

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10_06_08 Facing upstream (US), temporary bridge pulled out towards UC, no sediment from bridge or banks reached creek.	10_06_08 Facing US, pulling log abutments back from creek.
	
10_06_08 Facing DC, pulling abutments apart. Area needs to be filled, sloped. Rip rap to be continued from bin wall around base of slope. Ditching to continue on left hand side of road down along tree line (approx.). Silt fence to be continued where abutments have been removed.	10_06_08 Facing DC, clean up of temporary bridge area continues, and permanent bridge in use.

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: April1-April 7	Inspector(s): James Spencer
Site Name: Wolverine Creeks	Location/Co-ordinates: Km32-Km0
Site Location Description: Background snapshot of key drainages along the road	

Weather Conditions:

01-Apr-08	Clear, Sunny	6
02-Apr-08	Clear, Sunny	7
03-Apr-08	Clear, Sunny,	6
04-Apr-08	Clear, Sunny, windy at high elevations, intermittent flurries	8
05-Apr-08	Clear, Sunny	8
06-Apr-08	Clear, Sunny intermittent snow flurries	3
07-Apr-08		

Part 2 – Site Assessment

Activity: Monitor Creek conditions during spring melt

Site Description:

Snow covered Creeks. All Creeks Bunker, Hawkowl and Campbell are confirmed to be running. Go Creek, Pitch Creek and Putt are unconfirmed .

Assessed Risk: N/A

Photos Attached: YES

Samples Taken: No

Additional Information Attached: No

Part 3 –Mitigation Requirements

Mitigation Required: Bunker Creek Ice surface from overflow is very close to the base of the bridge

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Will monitor general condition and progress of the melt as the season progresses

Monitoring Frequency: Weekly

Reporting Requirements: Weekly, individual reports will be issued for problem areas.

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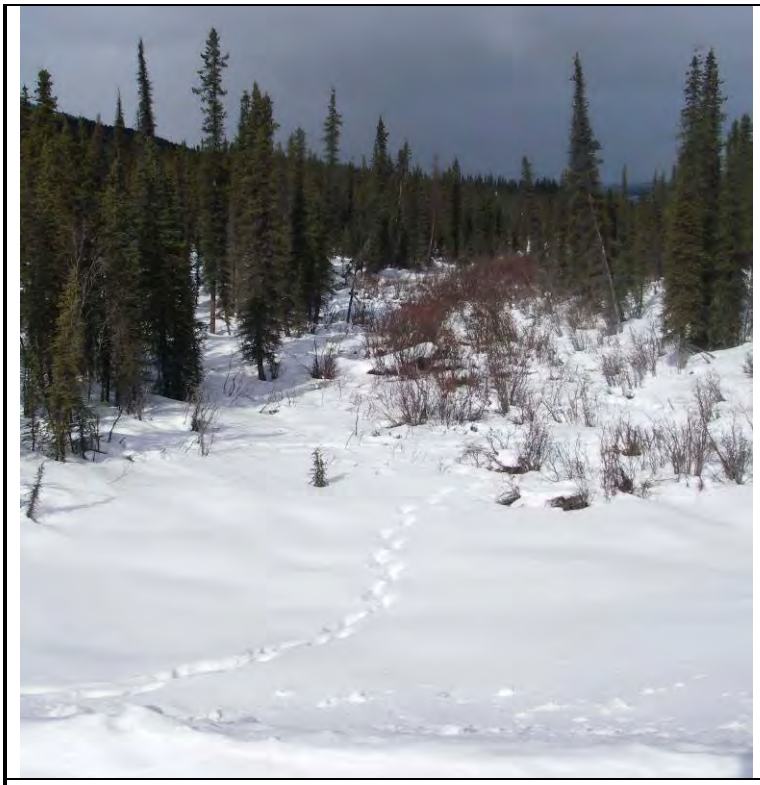
Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creek Background Photos	
	
Bunkerthaw_04_04_08- Looking Empty	Bunkerthaw_04_04_08- Looking DS
	
Bunkerthaw_04_04_08- Looking US	Bunkerthaw_04_04_08- Looking US under bridge

Wolverine Project
Environmental Inspection Form – Photos

Project Name: Access Road Snow Clearing	
	
PitchCreek_04_04_08- Looking US	PitchCreek_04_04_08- Looking DS

	
PuttCreek_04_04_08 – Looking US	**PuttCreek_04_04_08 – Looking DS**

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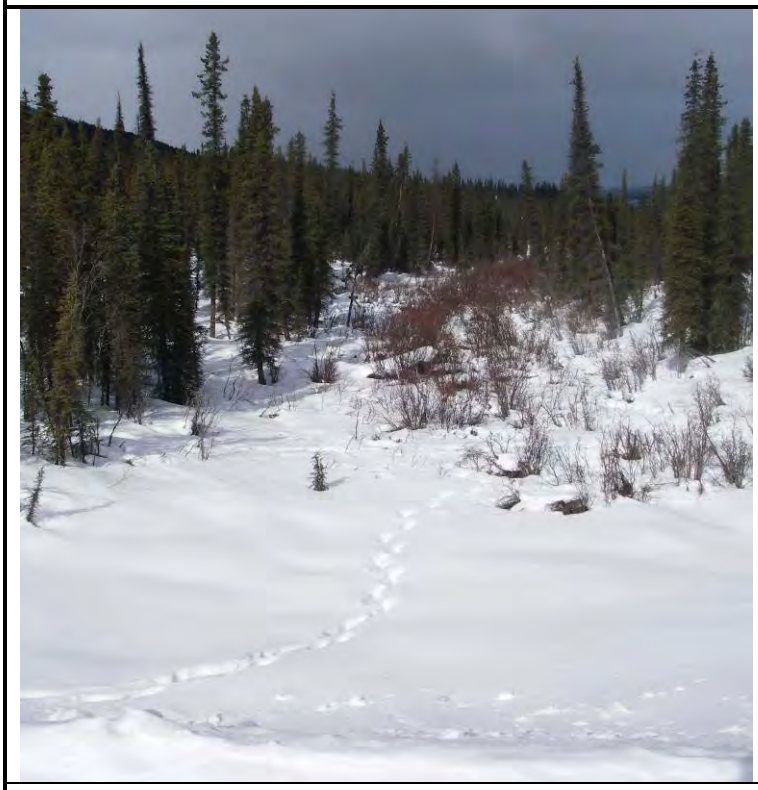
Wolverine Project
Environmental Inspection Form – Photos

Project Name: Access Road Snow Clearing	
	

SHawnsWrk_km 13-Km11- Looking Loaded	SHawnsWrk_km 13-Km11 - Looking Loaded
	
Km17_banks_03_29_08 – Looking Empty	Al'sWrk_km24_04_03_08 – Looking Empty

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Access Road Snow Clearing	

	
GoCreek_04_04_08 - Looking US	**GoCreek_04_04_08_DS – Looking US**
	
Hawkowl_04_04_08 – Looking DS	**km30.5Campbell_04_03_08 – Looking Loaded, US bank**

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Access Road Snow Clearing	
	
GoCreek_04_03_08 - Looking US	**GoCreek_04_03_08_DS – Looking DS**

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: April 11th - April 21st, 2008	Inspector(s): Jennie Gjertsen
Site Name: Wolverine Creeks	Location/Co-ordinates: Km32-Km0

Site Location Description: Background snapshot of key drainages along the road

Weather Conditions:

11-Apr-08	Clear	1
12-Apr-08	Snow in morning, rain in afternoon	0
13-Apr-08	Overcast with clear periods	0
14-Apr-08	Overcast	-2
15-Apr-08	Overcast with sunny periods	2
16-Apr-08	Sunny with high clouds, light winds	1
17-Apr-08	Heavy snowfall overnight, snow and wind	-8
18-Apr-08	Overcast	-5
19-Apr-08	overcast with periods of sun	0
20-Apr-08	overcast with periods of sun	2
21-Apr-08	light snow in morning, clearing in the afternoon	3

Part 2 – Site Assessment

Activity: Monitor Creek conditions during spring melt

Site Description:

Snow covered Creeks. All Creeks Bunker, Hawkowl and Campbell are confirmed to be running. Go Creek, Pitch Creek and Putt are unconfirmed. Pitch and Putt creeks were sampled in March baseline water sampling, Go Creek appeared to be dry.

Assessed Risk: N/A

Photos Attached: YES

Samples Taken: No

Additional Information Attached: No

Part 3 –Mitigation Requirements

Mitigation Required: Bunker Creek Ice surface from overflow is very close to the base of the bridge

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Will monitor general condition and progress of the melt as the season progresses

Monitoring Frequency: Weekly

Reporting Requirements: Weekly, individual reports will be issued for problem areas.

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	
	
Pitch Creek – 04_19_08-Looking US	**Pitch Creek- _04_19_08- Looking DS**

	
Putt_04_19_08- Looking US	**Putt_04_19_08- Looking DS**

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	

	
BunkerCreek_04_19_08- Looking DS-under bridge	**BunkerCreek_04_19_08- Looking US**
	
BunkerCreek_04_19_08- Looking DS	

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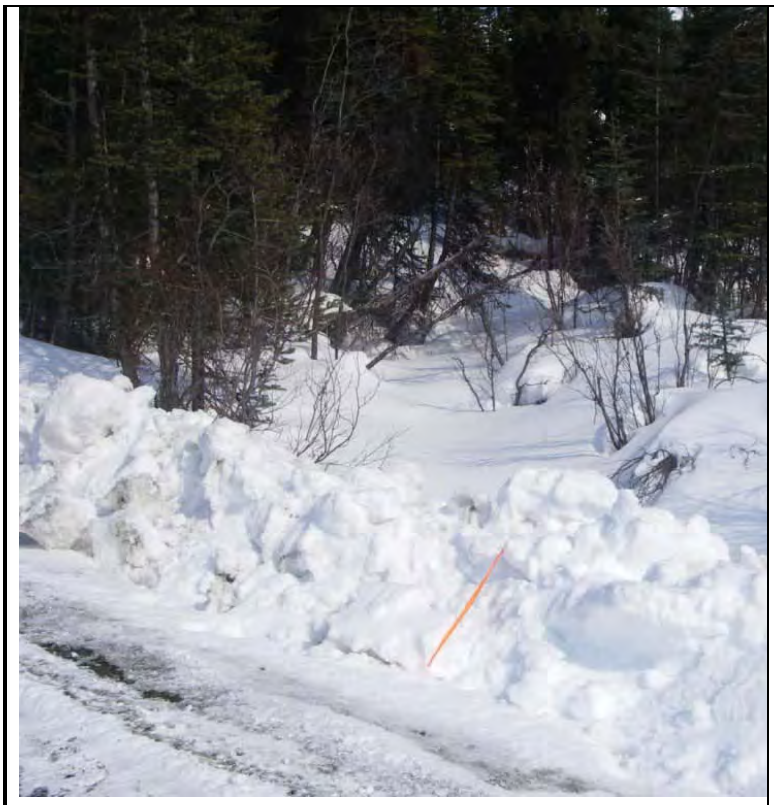
Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	



Hawkowl_04_19_08- Looking US

Hawkowl_04_19_08- Looking DS

GoCreek_04_19_08- Looking US

GoCreek_04_19_08- Looking DS

Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	
	
Km30.5Campbell_04_19_08 – US end	Km30.5Campbell_04_19_08 – DS end

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: April 22nd – May 5t, 2008	Inspector(s): James Spencer
Site Name: Wolverine Creeks	Location/Co-ordinates: Km32-Km0
Site Location Description: Background snapshot of key drainages along the road	

Weather Conditions:

22-Apr-08	Sunny and cool	-5
23-Apr-08	Sunny still cool	-1
24-Apr-08	Sunny,light overcast in afternoon	2
25-Apr-08	Sunny and mild	4
26-Apr-08	Breezy warming	6
27-Apr-08	Warming but overcast	7
28-Apr-08	Warm and sunny…melting	12
29-Apr-08	Raining in morning snow and overcast	2
30-Apr-08	Overcast and flurries	0
01-May-08	Overcast	0
02-May-08	Overcast rain and light snow	5
03-May-08	Snowing	0
04-May-08	Sunny cool in morning	5
05-May-08	Sunny all day	12

Part 2 – Site Assessment

Activity: Monitor Creek conditions during spring melt

Site Description:

Snow covered Creeks. Due to poor road conditions only monitored Go Creek, Campbell Creek and Hawkowl Creek.

Assessed Risk: N/A

Photos Attached: YES

Samples Taken: No

Additional Information Attached: No

Part 3 –Mitigation Requirements

Mitigation Required: Hawkowl Culverts to be installed, Campbell Creek crossditch to be opened, Go Creek lower access road to be decommisioned

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Will monitor general condition and progress of the melt as the season progresses

Monitoring Frequency: Weekly

Reporting Requirements: Weekly, individual reports will be issued for problem areas.

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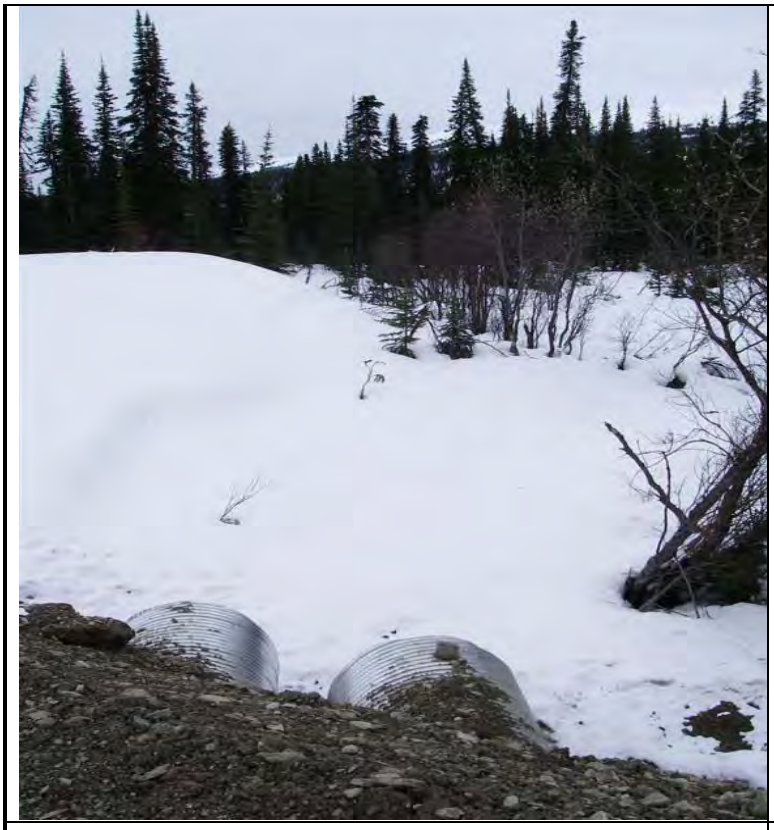
Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	
	
Km30.5 – 05_05_08- DS Looking North	Pitch Creek- _04_19_08- US Looking North

	
GoCreek_05_03_08- Looking DS	**GoCreek_05_03_08- Looking US**

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	

	
Hawkowl_05_04_08- Looking DS	**Hawkowl_05_04_08- Looking US**

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: May 6th – May 12th, 2008	Inspector(s): J.G
Site Name: Wolverine Creeks	Location/Co-ordinates: Km32-Km0
Site Location Description: Background snapshot of key drainages along the road	

Weather Conditions:

6-May-08	Sunny with some cloud in afternoon	8
7-May-08	Cloudy	6
8-May-08	Sunny with clouds, light winds	8
9-May-08	Sunny with some cloud	8
10-May-08	Overcast	8
11-May-08	Sunny	10
12-May-08	Sunny in morning, overcast in afternoon	8

Part 2 – Site Assessment

Activity: Monitor Creek conditions during spring melt

Site Description:
Snow and ice melt increasing at all sites, all creeks running

Assessed Risk: N/A

Photos Attached: YES

Samples Taken: No

Additional Information Attached: No

Part 3 –Mitigation Requirements

Mitigation Required: Hawkowl Culverts to be installed, Go Creek lower access road to be decommisioned

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Will monitor general condition and progress of the melt as the season progresses

Monitoring Frequency: Weekly

Reporting Requirements: Weekly, individual reports will be issued for problem areas.

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	
	
Pitch Creek 05/11/08 – Looking US	**Pitch Creek 05/11/08 – Looking DS**
	
Putt Creek 05/11/08 – Looking US	**Putt Creek 05/11/08 – Looking DS**

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	
	
Bunker Creek 05/11/08 – Looking US	**Bunker Creek 05/11/08 – Looking DS**

	
Go Creek 05/06/08 –US at airstrip	**Go Creek 05/06/08 –DS at airstrip**

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: May 12th – May 19th, 2008	Inspector(s): J.G
Site Name: Wolverine Creeks	Location/Co-ordinates: Km32-Km0

Site Location Description: Background snapshot of key drainages along the road

Weather Conditions:

13-May-08	Overcast	7
14-May-08	Overcast, some light snow in afternoon	6
15-May-08	Cloudy	6
16-May-08	Sunny in morning, cloudy in afternoon	8
17-May-08	Cloudy with rain in the afternoon	4
18-May-08	Wet snow, then rain	1
19-May-08	Snow, rain, sleet, hail, freezing rain, sun in late afternoon	2

Part 2 – Site Assessment

Activity: Monitor Creek conditions during spring melt

Site Description:
Snow and ice melt increasing at all sites, all creeks running, increase in flows observed.
Culverts at Campbell Creek steamed open May 15th, 2008

Assessed Risk: N/A

Photos Attached: YES

Samples Taken: No

Additional Information Attached: No

Part 3 –Mitigation Requirements

Mitigation Required: Hawkowl Culverts to be installed, Go Creek lower access road to be decommisioned

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Will monitor general condition and progress of the melt as the season progresses

Monitoring Frequency: Weekly

Reporting Requirements: Weekly, individual reports will be issued for problem areas.

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	
	
Hawkowl Creek – 05/13/08 looking US	**Hawkowl Creek – 05/13/08 looking DS**
	

Hawkowl Creek – 05/17/08 looking US	Hawkowl Creek – 05/17/08 looking DS

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	
	
Bunker Creek – 05/17/08 looking US	**Bunker Creek – 05/17/08 looking DS**

	
Campbell Creek 05/17/08 – looking US	**Campbell Creek 05/17/08 – looking DS**

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos	

	
Go Creek (upper) – 05/13/08 looking US	**Go Creek (upper) – 05/13/08 looking DS**
	
Go Creek (lower) – 05/17/08 looking US	**Go Creek (lower) – 05/17/08 looking DS**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: May 28th, 2008	Inspector(s): James Spencer, Mary McDougall
Site Name: Wolverine Creeks	Location/Co-ordinates: Km32-Km0
Site Location Description: Key drainages along the road and areas of concern during freshet	
Weather Conditions:	
Part 2 – Site Assessment	
Activity: Monitor Creek conditions during spring melt	
Site Description: Flows are high at all creeks and along the access road. Water has started to cross the access road where ditching is not adequate and/or culverts are not installed	
Assessed Risk: N/A	
Photos Attached: YES	
Samples Taken: No	
Additional Information Attached: No	
Part 3 –Mitigation Requirements	
Mitigation Required: Ditching and armouring of banks to be improved; culverts to be installed as neccessary	
Mitigation Condition: N/A	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Will monitor general condition and progress as the season progresses	
Monitoring Frequency: Weekly	
Reporting Requirements: Weekly, individual reports will be issued for problem areas.	

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos and areas of concern – All photos taken May 28, 2008

Pitch Creek upslope

Pitch Creek downslope

Putt Creek upslope

Putt Creek downslope

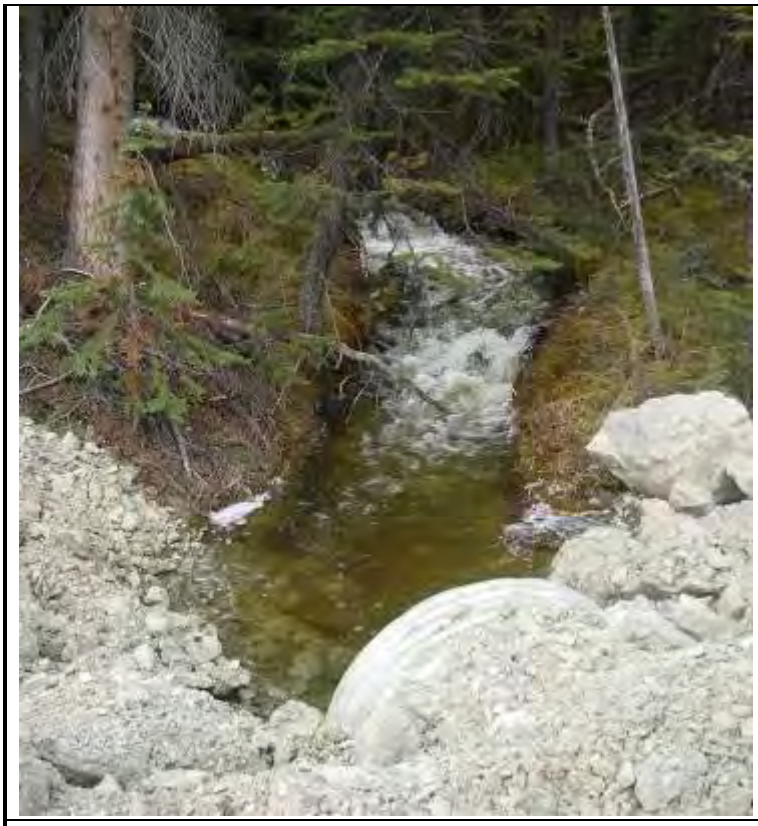
Project Name: Site Creeks Photos and areas of concern – All photos taken May 28, 2008	
	
Putt Creek downslope ditch (re-seeded May 25th)	**Km 9 sloughing; facing south-west**
	
Km 9 sloughing; facing east, downslope	**Bunker Creek under the bridge; facing downstream**

Bunker Creek upslope

Bunker Creek downslope

Km 12 – facing south

Km 14.5 – facing north



Chip Creek facing upslope

Chip Creek facing downslope

Bogey Creek facing upslope

Bogey Creek facing downslope

	
Road crossing at km 16.5	**Road crossing at km 16.6**
	
Hawkowl Creek – 24” culvert at left of photo; ditch plug just beyond culvert	**Hawkowl Creek – 24” culvert with ditch plug**

	
Hawkowl Creek – main stream following 36" overflow culvert installation and cobbling of stream	**Hawkowl Creek - main channel downstream**
	
Hawkowl Creek – 24" culvert downstream	**Hawkowl Creek – main channel downstream**

	
Go Creek @ km 26 – upstream	**Go Creek @ km 26 - downstream**
	
Go Creek @ airstrip – upstream	**Go Creek @ airstrip - downstream**

	
Campbell Creek– upstream	**Campbell Creek - downstream**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: June 2, 2008	Inspector(s): James Spencer,
Site Name: Wolverine Creeks/Problem Areas	Location/Co-ordinates: Km32-Km0
Site Location Description: Key drainages along the road and areas of concern during freshet	
Weather Conditions: 02-Jun-08 Overcast in morning , clear breaks in afternoon 14	
Part 2 – Site Assessment	
Activity: Monitor Creek/Road conditions during spring melt	
Site Description: Flows are subsiding and modest at all creeks and problem areas. No major areas of concern except km 9 stress fractures and sloughing.	
Assessed Risk: N/A	
Photos Attached: YES	
Samples Taken: No	
Additional Information Attached: No	
Part 3 –Mitigation Requirements	
Mitigation Required: Ditching and armouring of banks to be improved; culverts and pipe to be installed as necessary, soft sections removed and repacked, Wear surface needed. Grading and ditch maintenance. Seeding and rip rap.	
Mitigation Condition: N/A	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: None needed specifically unless change in condition noted. Inspect the re-vegetation of Pitch/Putt .	
Monitoring Frequency: Change in Condition	
Reporting Requirements: Change in Conditiony, individual reports will be issued for problem areas.	

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Wolverine Project
Environmental Inspection Form – Photos

Project Name: Site Creeks Photos and areas of concern – All photos taken June 02, 2008

Pitch Creek upstream

Pitch Creek downstream

Putt Creek upstream

Putt Creek downstream

Project Name: Site Creeks Photos and areas of concern – All photos taken May 28, 2008

Putt Creek downslope ditch (seed from fall sprouting)

Mulligan Creek Looking u/s

Km 9 sloughing; facing south-west

Bunker Creek looking u/s

Bunker Creek looking d/s

Km12 looking empty (notice no flow from km 12.5 culvert install)

Km 12.5 – Culvert with ditch block (to mitigate km 12)

Km 14 – Gathering/sorting material for km 9 repair

Bogey Creek – looking u/s

Bogey Creek – looking d/s

Road crossing at km 16.5 looking empty

Road crossing at km 16.6 looking empty

	
Hawkowl looking d/s	**Hawkowl looking u/s (flows subsiding)**
	
Go Creek Access – looking u/s	**Go Creek Access – looking d/s**

	
Go Creek Airstrip – culverts pulled looking d/s (more rip/rap and cobble needed on outside turn of bank)	**Go Creek Airstrip - looking u/s**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 2, 2008	Inspector(s): Mary McDougall
Site Name: Creeks along site & access road	Location/Co-ordinates: Km32-Km0

Site Location Description: Key drainages along the road

Weather Conditions:

Date	Weather Conditions	Temperature
02-Nov-08	Snowing all day, windy at portal	-4

Part 2 – Site Assessment

Activity: Monitor Creek/Road conditions for background purposes

Site Description:

Winter has begun, and this monitoring was performed to get an idea of flows prior to winter freeze up. Temperatures have been mild (~ -5 C), and extreme cold temperatures are expected to begin within the month.

Assessed Risk: N/A

Photos Attached: Yes

Samples Taken: No

Additional Information Attached: No

Part 3 –Mitigation Requirements

Mitigation Required: none

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: next monitoring during spring freshet

Monitoring Frequency: none

Reporting Requirements: none

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Wolverine Project
Environmental Inspection Form – Photos

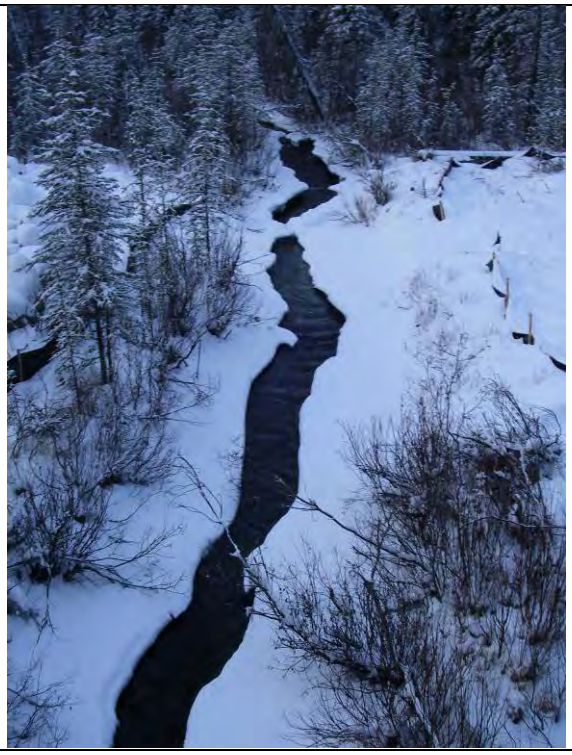
Project Name: Site Creeks Photos – All photos taken November 02, 2008

Campbell Creek - upstream

Go Creek - upstream

Go Creek - downstream

Hawkowl - downstream

Project Name: Site Creeks Photos – All photos taken November 02, 2008	
	
Bunker creek - upstream	Bunker creek - downstream
	
Putt creek - upstream	Putt creek - downstream

Project Name: Site Creeks Photos – All photos taken November 02, 2008	
	
Pitch creek - upstream	Pitch creek - downstream

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: May 26-May 28 2008	Inspector(s): James Spencer
Site Name: Go Creek	Location/Co-ordinates: Lower Airport, Access Road crossing at Go Creek (old crossing)
Site Location Description: Stream 2-3m wide. Good stream bed material. Pit run with little rip rap. Straight section of stream, some braiding d/s. Willows dominate vegetation. North side bank 1:5 to 1 and southside badly scoured and undercut. Gravelly sand with cobble just being eaten away.	
Weather Conditions: 24-May-08Sunny 24-May-08 25-May-08Sunny 25-May-08 26-May-08Sunny 26-May-08 27-May-08Sunny, windy at summit 27-May-08 28-May-08Overcast in morning cooler 28-May-08	
Part 2 – Site Assessment	
Activity: Pull 3 x 36" culverts from lower airport access road.	
Site Description: 3 x 36" culverts at Go Creek are not handling the spring flows and susceptible to an unpredictable washout or flooding of the airstrip. Headwall of culvert being scoured. Fairly straight section of stream, some braiding downstream during high flows. Banks on outside edge of flow below culverts experiencing bad scouring. Road Top is too narrow for traffic. Culverts pulled and mound of cobble (approx. $3m^3$ placed on outside edge of the bank to prevent excessive scouring).	
Assessed Risk: Med	
Photos Attached:	
Samples Taken: No	
Additional Information Attached: No	
Part 3 –Mitigation Requirements	
Mitigation Required: When high flows subside additional cobble or riprap required on sensitve outside curve of stream bank just d/s of the culvert.	
Mitigation Condition: Fair – Inspect scouring area	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Inspect scouring area	
Monitoring Frequency: As conditions change	
Reporting Requirements: No	

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Go Creek	
	
Photo 1 - 24/05/08 – Go Creek Culverts discharge	**Photo 2 - 28/05/08 - Culverts removed looking u/s**
	
Photo 3 - 28/05/08 – Culverts removed see undercut bank on Southside bank	**Photo 4 - 28/05/08 - Mound of cobble placed on south side bank (bank stabilization)**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: May 27 – June 03 , 2008	Inspector(s): James Spencer
Site Name: Hawkowl Creek	Location/Co-ordinates: Access Road crossing at Hawkowl Creek ~ km 23.3
Site Location Description: The stream bed is fairly bony, large cobble , and suggests fast flows. Willows dominate the riparian shrubs. Road is quite narrow at this location due to short culvert installed during 2007 Access Road construction.	

Weather Conditions:

20-May-08Coolish in evening	10
21-May-08Warming sunny	12
22-May-08Sunny	16
23-May-08Sunny	17
24-May-08Sunny	18
25-May-08Sunny	22
26-May-08Sunny	22

Part 2 – Site Assessment

Activity:

Culvert Installation, armouring and creek alignment.

Site Description:

A 48” culvert has been installed. Need a 24” culvert to intercept ditch water and a 36” overflow. May 26th realized that the stream flow needed aligning with the 48” culvert to prevent damage to the headwall. Also need to armour headwall and add an overflow culvert(flows too high to install at creek bed depth). High Flows continue and appeared to Peak on May 27th/28th. Culvert aligned with streambed and discharge end kept close to grade of outfall 36” overflow and a 24” to intercept ditch water. Major headwall armouring and diversion of flow to align majority of flow with the 48” culvert rather than with the 36” culvert.

Assessed Risk: Med

Photos Attached:

Samples Taken: No

Additional Information Attached: No

Part 3 –Mitigation Requirements

Mitigation Required: All ESC practices that could reasonably be incorporated were put in place. Work performed in dry by plugging upstream side while work in progress minimize erosion. Need to seed this area. Some more rip rap on the discharge end. Mark culverts for winter and install heat trace?

Mitigation Condition: Fair.

Part 4 –Monitoring Requirements

Follow-up Monitoring: None Specifically required

Monitoring Frequency: Change in Condition

Reporting Requirements: Change in Condition

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Hawkowl Creek	
	
Photo 1 - 05/27/08 – Looking south insert 24” culvert	**Photo 2 - 05/27/08 - Placing Culvert 24” to handle ditch flow**
	
Photo 3 - 05/27/08 - Hawkowl Looking U/S waiting for ditch flow to clear	**Photo 4 - 05/27/08 - Placing Cobble to align stream to 48” culvert.**

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Go Creek	
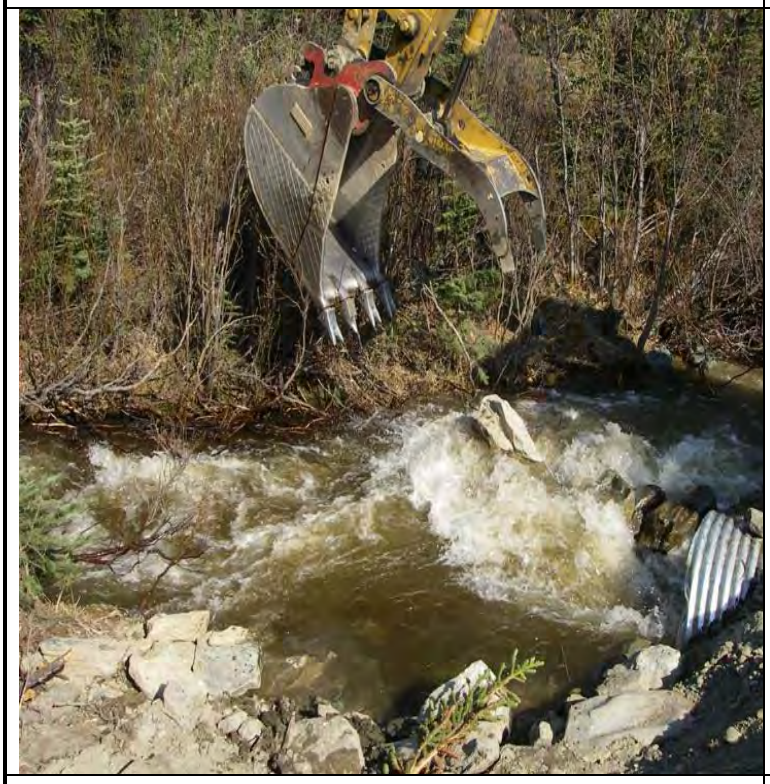	
Photo 5 - 05/27/08 - Placing Cobble to align stream to 48” culvert. Looking u/s	**Photo 6 - 05/27/08 - Placing Cobble to align stream to 48” culvert complete, headwall protected. Looking u/s**
	
Photo 7 - 05/28/08 – 36” overflow installed, and flows peaking, some armouring added looking u/s	**Photo 8 - 05/28/08 – 36” overflow installed, and flows peaking, some armouring added looking d/s**

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: May 21 – June 9	Inspector(s): James Spencer
Site Name: stn 9+500	Location/Co-ordinates: Slope above lake
Site Location Description: A steep slope with a natural grade of 1.5 :1. With standing timber and willows, shrubs. Road was cut minimally and lots of fill that extends downslope 15m+ to where it settles on existing ground. Intermittent permafrost zone. Old Fred Magnum Lake at toe of slope which drains in to and joins Bunker Creek.	
Weather Conditions: Mixed, very dry spring and average melt, no excessive flows.	
Part 2 – Site Assessment	
Activity: The result of cutting a road through steep permafrost ground with lots of fill and minimal cut. No bench for the material to stabilize steep bank and fill slope.	
Site Description: The fill slope is through intermittent permafrost and dry gravelly soils at a grade of between 1.25:1 and 1.06:1. Well beyond a prescribed1.5:1 slope that will hold. The area has experienced a sloughing of a slab of fill material Approx. 20' wide that slid off the shoulder of the road and slid approx 15 m downslope. This area shows stress cracking near the fracture. The fill slope has the same issues with steepness and in addition has exposed permafrost but appears to be holding. Work done on June 3, 2007 to repair the sloughed section. An entire 20' section of the road was removed. A bench was cut in to existing ground at a 90 degree angle to the natural repose of the slope. This bench was stabilized with angular Rip-Rap (5' + diam.) The base layer was driven in to the bench and then built up. Material (pulled out from the road) was re-packed in sequential lifts. The angle of the fill slope in this location was reduced slightly and the tighter packing of material should help stabilize this section.	
Assessed Risk: High	
Photos Attached: Yes	
Samples Taken: None	
Additional Information Attached: None	
Part 3 –Mitigation Requirements	
Mitigation Required: **Cut Slope**: Permafrost areas need to be left alone as much as possible and left as steep or vertical cuts allowing the moss and organic mat to cover the slope as the frost melts and under cuts the bank. **Fill Slope:** This area has been pushed downslope due to the large fills required here. May need additional ESC practices to stabilize area if problems persist. Phase 2 may have to involve a realignment and engineered stabilization, Gabions, Shotcrete etc. to prevent washouts and manage the haul truck weights.	
Mitigation Condition: Fair	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Monitor condition of Banks and look for stress fractures. Look for signs of movement. Trees angled loose rocks etc.	
Monitoring Frequency: As conditions Change.	
Reporting Requirements: As required	

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Wolverine Project
Environmental Inspection Form – Photos

Site: 9+500	
	
6_21_08 Fill Slope Sloughing, looking Loaded	06_21_08 Fill slope Sloughing, looking Empty
	
06_06_08 Compacted and repaired section looking empty	06_06_08 Compacted and repaired section looking em

	
06_06_08 Cut Slope shaping looking empty	06_06_08 Toe of repaired section, notice large rip-rap repaired section where bench was cut.

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: September 04, 2008	Inspector(s): James Spencer
Site Name: km15+100 (km15+100)	Location/Co-ordinates:
Site Location Description: Along the steep approach just downchain of knob hill. Steep erodible slope.	
Weather Conditions: 4-Sep-08Fog in morning followed by cloud in afternoon 13	
Part 2 – Site Assessment	
Activity: None at present. When punched road through in fall of 2007 the culvert was put in hurriedly, knowing that road would be re-aligned	
Site Description: Culvert outflow is eroding the lower shoulder of the road and causing tension cracks and making the outside shoulder unsafe for traffic due to under cutting. Problem will persist without installing slope drains on these steep sections of road.	
Assessed Risk: High	
Photos Attached: Yes	
Samples Taken:	
Additional Information Attached:	
Part 3 –Mitigation Requirements	
Mitigation Required: Area has been marked with caution tape…when new alignment is complete here all culverts on this steep section of road **MUST HAVE SLOPE DRAINS.**	
Mitigation Condition: N/A	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Monitor integrity of shoulder and any changes in condition	
Monitoring Frequency: Weekly	
Reporting Requirements: As required	

	
Km 15+100_09_04_08	Km 15+100_09_04_08

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: September 18, 2008	Inspector(s): Jennie Jgertsen/Billie Maje
Site Name: Knob Hill (km15+200)	Location/Co-ordinates:
Site Location Description: Outcrop 50mx50m with very thin organic layer and stunted spruce trees.	
Weather Conditions: Sunny and warm. 12	
Part 2 – Site Assessment	
Activity: Strip and stockpile organics—very thin layer difficult to strip properly. Drill to drill down to new road grade and blast. Slopes here will be re-graded to 10%.	
Site Description: Steep area blasting and excavating will need to be done carefully to avoid material travelling downslope. Road dropped down below the knob and fill used downchain to bring grade up. Cut slope will be reclaimed before road is dropped to avoid access issues later on.	
Assessed Risk: Med	
Photos Attached: Yes	
Samples Taken:	
Additional Information Attached:	
Part 3 –Mitigation Requirements	
Mitigation Required: Reclaim cutslope from old alignment.	
Mitigation Condition: N/A	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Monitor for material stability and encroachment of fill in to steep valley.	
Monitoring Frequency: Daily	
Reporting Requirements: As required	

Km15drilling_09_18_08

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: September 22nd – 29th, 2008	Inspector(s): Jennie Gjertsen and Billie Maje
Site Name: Knob Hill (km15+200)	Location/Co-ordinates:

Site Location Description: Rock outcropping just past km 15, 50mx50m with very thin organic layer and stunted spruce trees. Steep slopes drain ground and surface water, including Bogey Creek, down towards valley bottom where the creek flows into Old Fred Megun lake. Original phase I road was laid to the upslope side of the rock outcrop, while the final design is for the road to be below the rock outcropping.

Weather Conditions:

Date		avg. daily temp
23-Sep-08	Sun and cloud	8
24-Sep-08	Some light snow, mix of sun and cloud	5
25-Sep-08	Foggy in the morning, heavy snow around noon, clearing	4
26-Sep-08	High overcast with periods of sun.	8
27-Sep-08	High overcast	4
28-Sep-08	Sunny with clouds	4
29-Sep-08	Overcast	0

Part 2 – Site Assessment

Activity:

-Road construction in the area started with drilling and blasting to the rock outcrop, in the week previous to this report. This was continued and then followed with stripping/clearing along the steep down slope side.

-Main cross road culvert was blocked to remove surface water from location of work and redirected down chain to the following culvert.

- Water flow under Phase I road was discovered once clearing continued, increased ditching upslope to the existing road was done to minimize flow, followed by installation of a rock drain.

- Road construction, including; cutting, filling, blasting and drilling, to continue.

Site Description:

Most of surface flows are being diverted to down chain culvert, however some water is still travelling under the existing road. Before the rock drain was installed, water running through work area was picking up sediment before travelling into heavy vegetation; it is now running clear. Silt fencing was installed where the water runs into vegetation. Water running down upslope ditch remains clear.

Assessed Risk: Low

Photos Attached: Km 15_09_26_08 to Km15_09_29_08

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Ditch upslope to try and intercept more water. Mitigation to occur while existing road is being removed to use for fill on new alignment, which can cause conditions to change.

Mitigation Condition: G

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor for material stability and encroachment of fill in to steep valley. Monitor for groundwater flow during decommissioning of current road alignment.

Monitoring Frequency: 2-3 times a week

Reporting Requirements: Weekly while work to site is occurring or conditions change.

	
09_26_08 Before stripping and clearing (facing down chain (DC))	09_27_08 Before Stripping and clearing (Facing DC)
	
09_27_08 Upslope ditching not done, water draining underground (facing DC)	09_27_08 Upslope ditching not done, water draining underground (facing DC)

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09_27_08 Culvert blocked, clearing and stripping in works (Facing upchain (UC))	09_27_08 Down slope cut, water coming under road into work area and picking up sediment
	
09_27_08 Down slope cut, Trough cut to minimize sediment loading (Facing UC)	09_28_08 Water running under road before upslope ditch improvements

	
09_28_08 Deeper ditching upslope to intercept surface flow (facing UC)	09_28_08 Equipment not in water crossing area until rock drain installation (facing UC)
	
09_29_08 Some of rock drain installed at crossing (facing UC)	09_29_08 Continued work to rock drain (facing UC)

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: Sept. 30th – October 6th , 2008	Inspector(s): Jennie Gjertsen and Melissa Kirby
Site Name: Knob Hill (km15+200)	Location/Co-ordinates:

Site Location Description: Rock outcropping just past km 15, 50mx50m with very thin organic layer and stunted spruce trees. Steep slopes drain ground and surface water, including Bogey Creek, down towards valley bottom where the creek flows into Old Fred Megun lake. Original phase I road was laid to the upslope side of the rock outcrop, while the final design is for the road to be below the rock outcropping.

Weather Conditions:

Date		avg. daily temp
30-Sep-08	Fog in morning clearing to clouds	7
01-Oct-08	Cloudy	7
02-Oct-08	Some clouds	10
03-Oct-08	Heavy rain overnight, Sun with clouds	5
04-Oct-08	Fog in morning clearing to sun	5
05-Oct-08	Cloudy with some snow	0
06-Oct-08	Sunny with some clouds	0

Part 2 – Site Assessment

Activity:

Continued road construction

- drilling and blasting to the rock outcrop
- cutting and filling of road to grade
- decommissioning of original upslope access road

Site Description:

Some surface flow continues to travel under the road, but is being well maintained by the initial rock drain.

Increased ditching on the upslope side on October 1st, as well as the removal of the road bed on the preexisting road caused a heavy sediment pulse which cleared noticeably in the subsequent days. The down chain (DC) end of the work area had a low lying area with some standing water, and some groundwater flow. It is unclear as to what measures were taken to ensure road stability before filling, and needs to be followed up with Arctic construction, before the next monitoring report is issued.

Assessed Risk: Low

Photos Attached: Km 15_10_01_08 to Km15_10_05_08

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Ditching upslope to try and intercept more water. Mitigation to occur while existing road is being removed to use for fill on new alignment, which can cause conditions to change.

Mitigation Condition: G

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor for material stability and encroachment of fill in to steep valley. Monitor for groundwater flow during decommissioning of current road alignment.

Monitoring Frequency: 2-3 times a week

Reporting Requirements: Weekly while work to site is occurring or conditions change.

	
10_01_08 Sediment pulse from ditching (facing up chain (UC))	10_01_08 Wetted area showing standing water and flow under road surface (Facing DC)
	
10_01_08 Wetted area showing standing water (facing DC)	10_01_08 Realigning of road (facing DC)

	
10_01_08 Up chain view of road alignment	10_02_08 Water running clearer after ditching the previous day (facing UC)
	
10_02_08 Water running clearer after ditching the previous day (Facing DC)	10_05_08 Up chain approach showing lower road alignment then the pre-existing road on the top left (facing DC)

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October7-13, 2008	Inspector(s): James Spencer
Site Name: Knob Hill (km15+200)	Location/Co-ordinates:

Site Location Description: Rock outcropping just past km 15, 50mx50m with very thin organic layer and stunted spruce trees. Steep slopes drain ground and surface water, including Bogey Creek, down towards valley bottom where the creek flows into Old Fred Megun lake. Original phase 1 road was laid to the upslope side of the rock outcrop, while the final design is for the road to be below the rock outcropping.

Weather Conditions:

Date		avg. daily temp
07-Oct-08	High Overcast	-7
08-Oct-08	Cool, sunny most of day, light flurries in morning	-8
09-Oct-08	overcast most of day	-6
10-Oct-08	Cool and windy	-7
11-Oct-08	Overcast and fog snow	-4
12-Oct-08	mixed sun and cloud	0
13-Oct-08	Light flurries, sun, cloud very mixed	-4

Part 2 – Site Assessment

Activity:

Continued road construction

- drilling and blasting the rock outcrop
- cutting and filling of road to grade from km 15 to km 15+300, also slashing and then stripping and widening road up towards km14 from the new alignment around knob hill
- sump dug in at km 15 +200 to decrease sediment flow
- Km 15+ 100 original culvert removed was extended and road widened , silt fence installed to minimize sediment flow

Site Description:

Last blast occurred at km 15 on October 13th

km 14 there is some slashing going on for widening, they will now strip and pad that before widening.

Grade of road around new alignment nearly complete

Still straightening at km 14, km 15 +100 to km15+350, some filling and cutting to complete

Assessed Risk: Low

Photos Attached:8 Km 15_07_08_08 to Km15_10_13_08

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Some scaling of loose rock required, ensure cut and fill slopes can be reclaimed if possible-difficult now due to freezing conditions…may have to wait until spring. Can only stockpile .

Mitigation Condition: G

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor for material stability and encroachment of fill in to steep valley. Monitor for suspended sediment in ditch flow along cutslope. Ensure km 15+100 culvert is free and clear of obstruction

Monitoring Frequency: 2-3 times a week
Reporting Requirements: Weekly while work to site is occurring or conditions change.

	
10_08_08 Up chain approach showing lower road alignment then the pre-existing road on the top left (facing DC)	10_08_08 Alignment of lower road (Facing UC)
	
10_09_08 On new alignment lower road after recent blast (facing DC)	10_09_08 Blast rock on fill slope. (facing DC)

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10_11_08 Looking DC at km15 blast rig new alignment	10_11_08 Looking DC at cutslope ditch heavy siltation from earthworks no immediate d/s effects after culvert crossing after pool in background
	
10_13_08 Facing UC @ km 15+200 looking at cutslope ditchpool was dredged out to improve settlement before culvert inlet	10_11_08 Facing fill slope @ km 15+300 road widening originally bucking then decided to strip whole area

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October13-20, 2008	Inspector(s): James Spencer
Site Name: Knob Hill (km15+300)	Location/Co-ordinates:

Site Location Description: Rock outcropping just past km 15, 50mx50m with very thin organic layer and stunted spruce trees. Steep slopes drain ground and surface water, including Bogey Creek, down towards valley bottom where the creek flows into Old Fred Megun lake. Original phase 1 road was laid to the upslope side of the rock outcrop, while the final design is for the road to be below the rock outcropping.

Weather Conditions:

Date		avg. daily temp
07-Oct-08	High Overcast	-7
08-Oct-08	Cool, sunny most of day, light flurries in morning	-8
09-Oct-08	overcast most of day	-6
10-Oct-08	Cool and windy	-7
11-Oct-08	Overcast and fog snow	-4
12-Oct-08	mixed sun and cloud	0
13-Oct-08	Light flurries, sun, cloud very mixed	-4

Part 2 – Site Assessment

Activity:

Continued road construction

- drilling and blasting the rock outcrop
- cutting and filling of road to grade from km 15 to km 15+300, also slashing and then stripping and widening road from km15+100 to km 14+200 from the new alignment around knob hill
- sump dug in at km 15 +100 to decrease sediment flow
- Km 15+ 200 original culvert removed and flow diverted downstream towards culvert at km15+100 , silt fence installed to minimize sediment flow

Site Description:

Last blast occurred at km 15 +300 on October 13th

km 14+200 to 15+100 there is some slashing going on for widening, they will now strip and pad that before widening.

Grade of road around new alignment nearly complete

Still straightening at km 14+200, km 15 +100 to km15+350, some filling and cutting to complete

Assessed Risk: Low

Photos Attached:8 Km 15_07_08_08 to Km15_10_13_08

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Some scaling of loose rock required, ensure cut and fill slopes can be reclaimed if possible- difficult now due to freezing conditions…may have to wait until spring. Can only stockpile .

Mitigation Condition: G

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor for material stability and encroachment of fill in to steep valley. Monitor for

suspended sediment in ditch flow along cutslope. Ensure km 15+100 culvert is free and clear of obstruction
Monitoring Frequency: 2-3 times a week
Reporting Requirements: Weekly while work to site is occurring or conditions change.

	
10_08_08 Up chain approach km15+300 showing lower road alignment then the pre-existing road on the top left (facing DC)	10_08_08 Alignment of lower road at km15+200(Facing UC)
	
10_09_08 On new alignment lower road after recent blast (facing DC)	10_09_08 Blast rock on fill slope. (facing DC)

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10_11_08 Looking DC at km15+300 blast rig new alignment	10_11_08 Looking DC at km 15cutslope ditch heavy siltation from earthworks no immediate d/s effects after culvert crossing after pool in background
	
10_13_08 Facing UC @ km 15looking at cutslope ditchpool was dredged out to improve settlement before culvert inlet	10_11_08 Facing fill slope @ km 15+000 road widening originally bucking then decided to strip whole area

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October15-20, 2008	Inspector(s): James Spencer
Site Name: Knob Hill (km15+300)	Location/Co-ordinates:

Site Location Description: Rock outcropping just past km 15, 50mx50m with very thin organic layer and stunted spruce trees. Steep slopes drain ground and surface water, including Bogey Creek, down towards valley bottom where the creek flows into Old Fred Megun lake. Original phase 1 road was laid to the upslope side of the rock outcrop, while the final design is for the road to be below the rock outcropping.

Weather Conditions:

Date	Condition	avg. daily temp
14-Oct-08	Sunny most of day	-5
15-Oct-08	Clear in the morning , clouds roll in afternoon	-2
16-Oct-08	Light snow in morning, clearing in the afternoon	-1
17-Oct-08	Snowing lightly all day slippery roads	-2
18-Oct-08	Snowed morning, clearing in the afternoon	-4
19-Oct-08	Snowing lightly most of day windy	-7
20-Oct-08	Clear most of day mix sun and flurries	-7

Part 2 – Site Assessment

Activity:

Oct 14-18

- cutting and filling of road to grade from km 15 to km 15+300
- Concerns with groundwater or subsurface flow from the creek that used to run across the road through a culvert at km 15+100 is now running along the high side of the road and along a ditch line set back from the road. Problem is water is seeping through the bank and showing glaciation that could pose a winter maintenance issue.
- The routing requires stripping back a 20m swath approximately 75 m long. This will allow the high ditch to be excavated another 2m,and get the slope angles graded, in an attempt to intercept the water seeping through the bank here
- In the meantime a diversion was created on the high bank to allow for “dry” work
- Scaling complete

Oct 15-20

- cutting and filling of road to grade from km 15 to km 15+300
- cut down the ditch line 2m to capture groundwater and prevent glaciation
- diversion to be routed back to the excavated ditch line
- km 15+300 grades complete.

Site Description:

Site complete diversion to be routed back to the excavated ditch.

Assessed Risk: Low

Photos Attached:8 Km15_10_15_08 to Km15_10_20_08

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Ensure cut and fill slopes can be reclaimed in the spring.

Mitigation Condition: G

Part 4 –Monitoring Requirements
Follow-up Monitoring: Monitor for material stability, monitor ditch flow in spring.
Monitoring Frequency: As required
Reporting Requirements: As required

	
10_15_08 Looking UC at km15 widening of the road	10_15_08 Looking DC at km 15+300 final scaling and loose rock clean-up
	
10_17_08 Facing UC km 15+100 looking at the diversion for excavating the high ditch further downslope, but still offset from the road.	10_17_08 Facing fill slope km 15+100 20m stripping swath above glaciation seep through the bank below excavator

	
10_19_08 Looking DC at km15+100 cutting down the permanent ditch to capture groundwater seepage	10_19_08 Looking DC at km 15+200 Organics windrowed above the diversion
	
10_19_08 Facing UC km 15+100 looking at the roadside ditch which will not carry any water. Useable ditch runs behind (upslope) of rock outcrop on horizon	10_19_08 Facing DC at km 15+300 final grade 98% done

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 21-27th, 2008	Inspector(s): Billie Maje and Melissa Kirby
Site Name: Knob Hill (km15+300)	Location/Co-ordinates:

Site Location Description: Rock outcropping just past km 15, 50mx50m with very thin organic layer and stunted spruce trees. Steep slopes drain ground and surface water, including Bogey Creek, down towards valley bottom where the creek flows into Old Fred Megun lake. Original phase 1 road was laid to the upslope side of the rock outcrop, while the final road is below the rock outcropping.

Weather Conditions:

Date		avg. daily temp
21-Oct-08	Clear most of day mix sun and flurries	-7
22-Oct-08	High over cast and very windy.	-8
23-Oct-08	Overcast,windy and snowy all day	-5
24-Oct-08	Overcast,windy and snowy all day	-4
25-Oct-08	Overcast and strong winds	-14
26-Oct-08	Heavy snow and very strong winds (25-30km/hr)	-16
27-Oct-08	Broken cloud and sun	-5

Part 2 – Site Assessment

Activity:

Oct 21-27

- Continued grading of road surface
- Diversion of creek rerouted to the excavated ditch

Site Description:

Site has been completed until spring maintenance schedule

Assessed Risk: Low

Photos Attached: 8 creek@15_10_21_08 and K15_10_27_08

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Ensure cut and fill slopes can be reclaimed in the spring.

Mitigation Condition: G

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor for material stability, monitor ditch flow in spring.

Monitoring Frequency: As required

Reporting Requirements: As required

10_21_08 Looking downchain (DC) towards highway at re-diverted ditch

10_21_08 Looking upchain (UC) towards mine site at new ditching and re-diverted flow

10_21_08 Facing UC at rediverted ditch water

10_27_08 Facing DC at ditching

10_27_08 Looking DC final road slope

10_27_08 looking UC at original road laid last year

10_27_08 Facing UC at ditch flow

10_27_08 Facing DC: final grade complete

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: September 9-22, 2008	Inspector(s): James Spencer/Billie Maje
Site Name: km 18 Borrow Pit (stn: 18)	Location/Co-ordinates:
Site Location Description: At the plateau of the road in the saddle of two peaks. Large flat expanse. Mostly all willows. Very wet area with lots of subsurface flow at bedrock ~ 1 -2m below surface. Good mixture of material. Thin organic layer.	
Weather Conditions: Mixed fall weather, lots of rain early during development of pit. See daily log.	
Part 2 – Site Assessment	
Activity: Strip and stockpile organics—very thin layer difficult to strip properly. Screen plant set- up and will stockpile fines, 3”-1”, 6”-3” and 6”+. Want to run plant until freeze up	
Site Description: Site is being developed approximately 75m x 150m. Using the top 6’ of material. Stockpiles of material being used for binwalls, road surfacing, septic, greywater, and camp services. Water entering the site will flood in spring therefore a channel was cut to tie in to the road ditch. No water courses nearby, large swampy areas predominate that recharge GW or subsurface flow. No major surface flows.	
Assessed Risk: Low	
Photos Attached: Yes	
Samples Taken:	
Additional Information Attached:	
Part 3 –Mitigation Requirements	
Mitigation Required: Mark project claim boundaries.	
Mitigation Condition: N/A	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Monitor for separation of strippings and subsoil into windrows for ease of reclamation. Ensure that work boundaries are maintained within project claims.	
Monitoring Frequency: Monthly	
Reporting Requirements: As required	

Km 18 screening 09_10_08

Km 18 borrow pit 09_20_08

Km 18 Stockpiles_09_20_08

Km 18 Stockpiles_09_22_08

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 6-20, 2008	Inspector(s): James Spencer
Site Name: km 18 Borrow Pit (stn:18)	Location/Co-ordinates:

Site Location Description: At the plateau of the road in the saddle of two peaks. Large flat expanse. Mostly all willows. **North side**: Very wet area with lots of subsurface flow at bedrock ~ 1 -2m below surface. Good mixture of material. Thin organic layer. **South Side**: Much drier conditions and finer soils

Weather Conditions:

06-Oct-08	Sunny with some clouds	0
07-Oct-08	High Overcast	-7
08-Oct-08	Cool, sunny most of day, light flurries in morning	-8
09-Oct-08	overcast most of day, flurries	-6
10-Oct-08	Cool and windy	-7
11-Oct-08	Overcast and fog snow	-4
12-Oct-08	mixed sun and cloud	0
13-Oct-08	Light flurries, sun, cloud very mixed	-4
14-Oct-08	Sunny most of day	-5
15-Oct-08	Clear in the morning , clouds roll in afternoon	-2
16-Oct-08	Light snow in morning, clearing in the afternoon	-1
17-Oct-08	Snowing lightly all day slippery roads	-2
18-Oct-08	Snowed morning, clearing in the afternoon	-4
19-Oct-08	Snowing lightly most of day windy	-7
20-Oct-08	Clear most of day mix sun and flurries	-7

Part 2 – Site Assessment

Activity:

Oct 6-Oct 11 - Still working material on the north side of the road, fair amount of groundwater

Oct 12 -18 - Move over to the south side of the road. Much finer material and good sand for buried services. No groundwater encountered

Oct 19 - Plant shut down for Winter

Site Description: On both sides of road at km 18. Size of borrows and stockpiles to be determined. Work has been kept with in project claims and stripping performed adequately.

Assessed Risk: Low

Photos Attached: 4 photos 10_11_08 to 10_19_08

Samples Taken:

Additional Information Attached:

Part 3 –Mitigation Requirements

Mitigation Required: Reclaim when complete

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Spring: Monitor for separation of strippings and subsoil into windrows for ease of reclamation. Ensure that work boundaries are maintained within project claims.

Monitoring Frequency: As required

Reporting Requirements: As required

	
10_11_08 Looking North at screen set-up on North side of road	10_11_08 Looking South at clearing on south side of road for move of screening plant
	
10_15_08 Looking South at screening plant set-up on south side of road	10_19_08 Looking South at screening plant set-up on south side of road shutting down.

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 28 – Nov 2, 2008	Inspector(s): Mary McDougall
Site Name: km 18 Borrow Pit	Location/Co-ordinates:

Site Location Description: At the plateau of the road in the saddle of two peaks. Large flat expanse. Mostly all willows. **North side**: Very wet area with lots of subsurface flow at bedrock ~ 1 -2m below surface. Good mixture of material. Thin organic layer. **South Side**: Much drier conditions and finer soils

Weather Conditions:

Date	Weather Conditions	Temperature
28-Oct-08	Sunny in am, clouding over throughout the day, snowing in evening	-8
29-Oct-08	Sunny in am, clouding over throughout the day	-4
30-Oct-08	light snow all day, warm	-5
31-Oct-08	Cold, overcast, windy	-15
01-Nov-08	Broken overcast, no wind	-4
02-Nov-08	Snowing all day, windy at portal	-4

Part 2 – Site Assessment

Activity: Screening complete – load and hauling with two haul trucks from Coates Transportation to area north of the portal at old fuel cache area for use as road bed material during the winter 2009 ramp development program.

Site Description: On both sides of road at km 18.

Assessed Risk: Low

Photos Attached: Yes

Samples Taken:

Additional Information Attached:

Part 3 –Mitigation Requirements

Mitigation Required: Reclaim when complete

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring:

<u>Spring</u>

Monitor for separation of strippings and subsoil into windrows for ease of reclamation. Ensure that work boundaries are maintained within project claims.

Monitoring Frequency: As required

Reporting Requirements: As required

11-02-08 Northside borrow, facing N

11-02-08 Northside borrow, facing NE

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: November 4-17, 2008	Inspector(s):James Spencer
Site Name: km 18 Borrow Pit (stn:18)	Location/Co-ordinates:
Site Location Description: At the plateau of the road in the saddle of two peaks. Large flat expanse. Mostly all willows. **North side**: Very wet area with lots of subsurface flow at bedrock ~ 1 -2m below surface. Good mixture of material. Thin organic layer. **South Side**: Much drier conditions and finer soils	
Weather Conditions: 04-Nov-08 Broken in morning overcast by late afternoon 05-Nov-08 Overcast, foggy and light wind from the south 06-Nov-08 Overcast, foggy in morning, clearing in afternoon 07-Nov-08 Moderate snow most of day 08-Nov-08 Sunny in morning, starting to cloud over in afternoon 09-Nov-08 Sunny all day 10-Nov-08 Sunny in morning, clouds in afternoon light snow 11-Nov-08 High overcast, light snow in the afternoon 12-Nov-08 Cool morning, windy afternoon 13-Nov-08 High overcast with some breaks 14-Nov-08 Clear sky with wind	
Part 2 – Site Assessment	
Activity: Screening complete – Nov 4-14:load and hauling with two haul trucks from Coates Transportation to area north of the portal at old fuel cache area for use as road bed material and to the new camp site for buried services bedding material. Coates finished Nov 12-14	
Site Description: On both sides of road at km 18.	
Assessed Risk: Low	
Photos Attached: Yes	
Samples Taken:	
Additional Information Attached:	
Part 3 –Mitigation Requirements	
Mitigation Required: Reclaim when complete	
Mitigation Condition: N/A	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: <u>Spring</u> Monitor for separation of strippings and subsoil into windrows for ease of reclamation. Ensure that work boundaries are maintained within project claims.	
Monitoring Frequency: As required	
Reporting Requirements: As required	

11-15-08 Southside borrow, facing NE

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 7-20, 2008	Inspector(s): James Spencer
Site Name: km 19 Blast Site	Location/Co-ordinates:

Site Location Description: At the crest of the road UC of the plateau. Windswept, willows and lichen. Thin organic layer. Mixed bedrock and till material. Likely some subsurface flow along the bedrock.

Weather Conditions:

06-Oct-08	Sunny with some clouds	0
07-Oct-08	High Overcast	-7
08-Oct-08	Cool, sunny most of day, light flurries in morning	-8
09-Oct-08	overcast most of day	-6
10-Oct-08	Cool and windy	-7
11-Oct-08	Overcast and fog snow	-4
12-Oct-08	mixed sun and cloud	0
13-Oct-08	Light flurries, sun, cloud very mixed	-4
14-Oct-08	Sunny most of day	-5
15-Oct-08	Clear in the morning , clouds roll in afternoon	-2
16-Oct-08	Light snow in morning, clearing in the afternoon	-1
17-Oct-08	Snowing lightly all day slippery roads	-2
18-Oct-08	Snowed morning, clearing in the afternoon	-4
19-Oct-08	Snowing lightly most of day windy	-7
20-Oct-08	Clear most of day mix sun and flurries	-7

Part 2 – Site Assessment

Activity: Drill and blast, clearing and grubbing for drilling and for cut and fill to lower grade at km 19.

Site Description: Site is being developed for blast and cut and fill

Assessed Risk: Low

Photos Attached: 7 photos 10_08_08 to 10_19_08

Samples Taken:

Additional Information Attached:

Part 3 –Mitigation Requirements

Mitigation Required: Shape shoulders and develop ditch work for water control

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Inspect for water seams that are uncovered from blasting activities

Monitoring Frequency: Every 2 days

Reporting Requirements: Weekly

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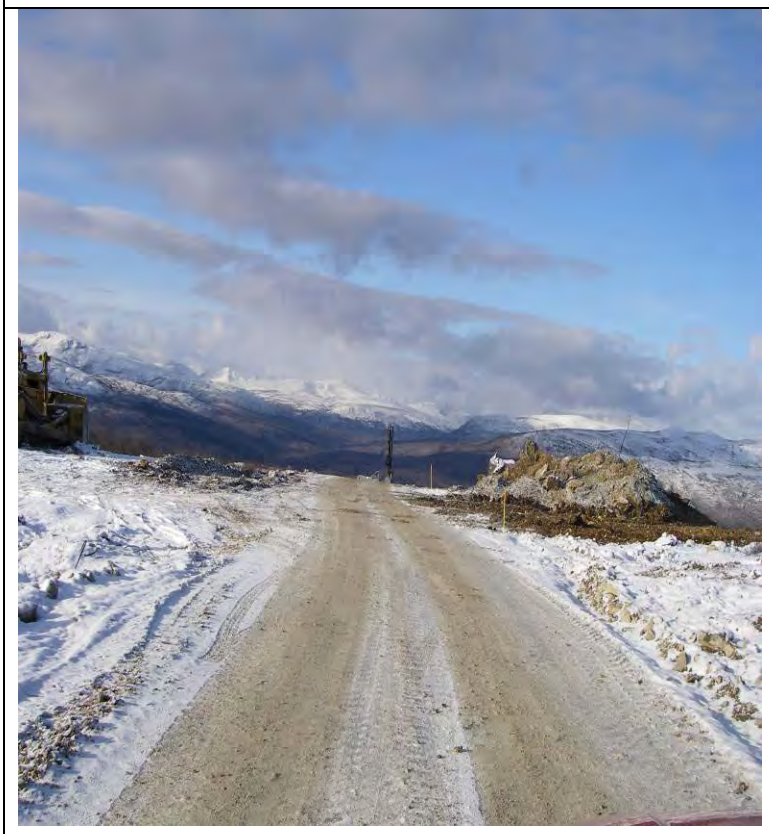
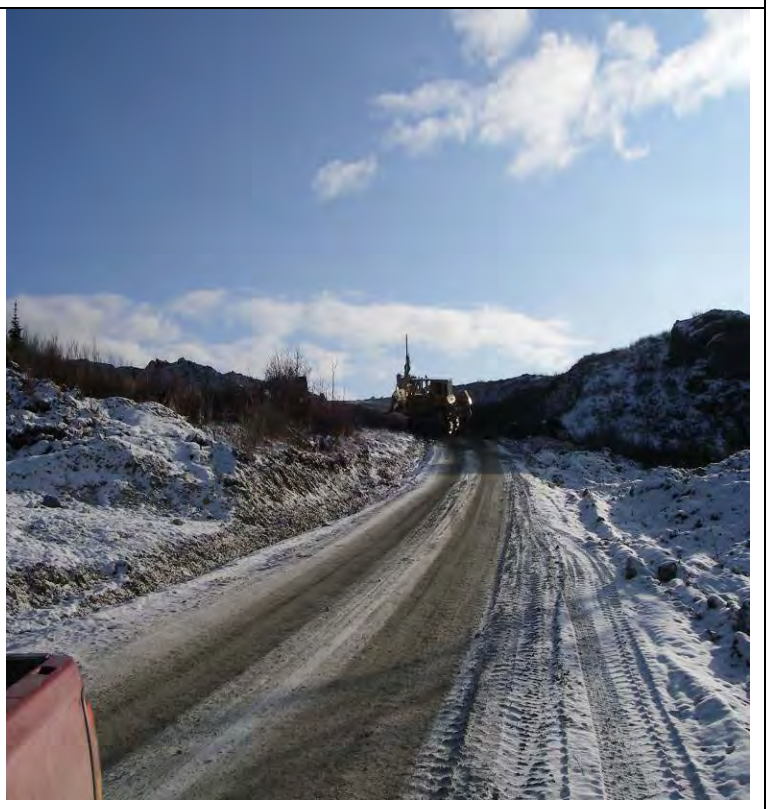
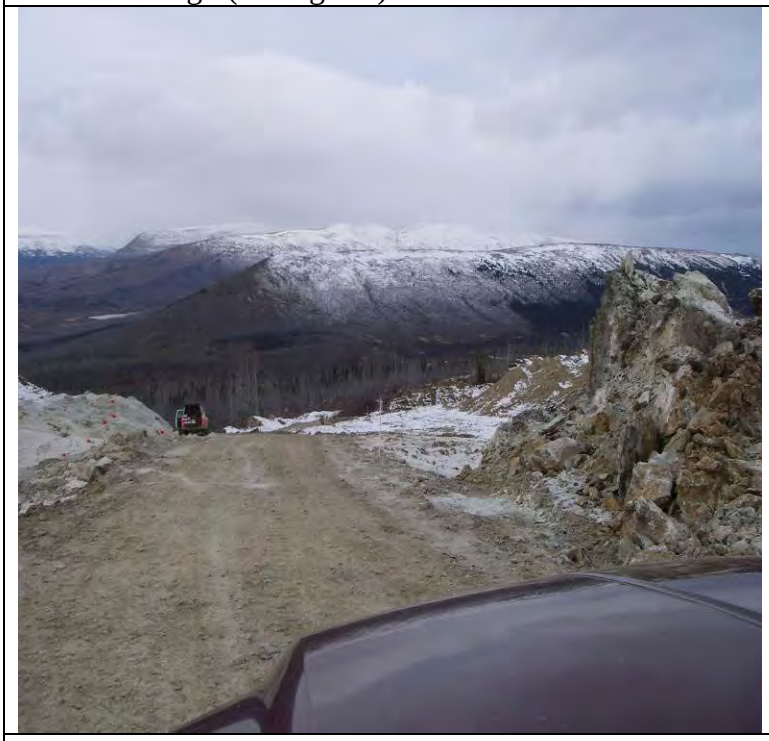
	
10_08_08 Drill site for blast, drill in background, cleared area on the right(Facing UC)	10_08_08 drill site for blast (Facing DC)
	
10_15_08 Facing UC looking from crest	10_15_08 Facing UC looking from crest at Drill rig

	
10_17_08 Facing UC looking at crest and drill rig	10_17_08 Facing UC cleared area for blast stockpile below crest
	
10_19_08 Facing UC looking at crest and drill rig	

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 21-27, 2008	Inspector(s): Billie Maje and Melissa Kirby
Site Name: km 19 Blast Site	Location/Co-ordinates:

Site Location Description: At the crest of the road UC of the plateau. Windswept, willows and lichen. Thin organic layer. Mixed bedrock and till material. Likely some subsurface flow along the bedrock.

Weather Conditions:

Date	Weather Conditions	Avg. daily temp.
21-Oct-08	Clear most of day mix sun and flurries	-7
22-Oct-08	High over cast and very windy.	-8
23-Oct-08	Overcast,windy and snowy all day	-5
24-Oct-08	Overcast,windy and snowy all day	-4
25-Oct-08	Overcast and strong winds	-14
26-Oct-08	Heavy snow and very strong winds (25-30km/hr)	-16
27-Oct-08	Broken cloud and sun	-5

Part 2 – Site Assessment

Activity: Drill and blast, clearing and grubbing for drilling and for cut and fill to lower grade at km 19.

Site Description: Site is being developed for blast and cut and fill

Assessed Risk: Low

Photos Attached: (4) K19_10_21_08 and K19_10_27_08

Samples Taken:

Additional Information Attached:

Part 3 –Mitigation Requirements

Mitigation Required: Shape shoulders and develop ditch work for water control

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor over winter months for glaciation, and ensure ditching is in place for the spring

Monitoring Frequency: Every 2 days, as final work is completed and then weekly over winter months

Reporting Requirements: Weekly as work is completed and then as changes occurs

	
10_21_08 Facing upchain towards mine site at at blasting and drill area	10_21_08 drill site for blast
	
10_27_08 Facing upchain towards mine site at final road grading	10_27_08 Facing downchain towards highway at final road grading

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 31 - November 2, 2008	Inspector(s): Mary McDougall
Site Name: km 19 Blast Site	Location/Co-ordinates:

Site Location Description: At the crest of the road UC of the plateau. Windswept, willows and lichen. Thin organic layer. Mixed bedrock and till material. Likely some subsurface flow along the bedrock.

Weather Conditions:

Date	Weather Conditions	Temperature
31-Oct-08	Cold, overcast, windy	-15
01-Nov-08	Broken overcast, no wind	-4
02-Nov-08	Snowing all day, windy at portal	-4

Part 2 – Site Assessment

Activity: All works are complete at km 19 – a detour sign was placed at the old road to send traffic along the new route.

Site Description: Activities complete

Assessed Risk: Low

Photos Attached: Yes

Samples Taken:

Additional Information Attached:

Part 3 –Mitigation Requirements

Mitigation Required: None

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor over winter months for glaciation, and ensure ditching is in place for the spring

Monitoring Frequency: Monitoring complete until spring

Reporting Requirements: none

10-31-08 Detour nearing completion (facing d/c)

10-31-08 Detour nearing completion (facing u/c)

11-02-08 Completed road works – facing u/c

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: Jun 3 – June 9 , 2008	Inspector(s): James Spencer/Jennie Gjertsen
Site Name: Km 25	Location/Co-ordinates: Km 25 Soft Section
Site Location Description: This area sits in a shallow valley with a very small creek in the valley floor. The road material is wet and the material saturated. Organics and debris piled near shoulders. No ditch present. No drainage.	
Weather Conditions:	
03-Jun-08 Sunny breaks in afternoon, mild	16
04-Jun-08 Cool cloudy, windy in afternoon	14
05-Jun-08 Mixed sun and cloud	15
06-Jun-08 Mixed sun and cloud	16
07-Jun-08 Mixed sun and cloud	13
08-Jun-08 Cloud with some short periods of rain and snow	6
09-Jun-08 Cloudy, clearing in afternoon to sun with clouds	6
Part 2 – Site Assessment	
Activity:	
Road re-working, remove and reinstall a 40m section of road using geotextile and snow fence to reduce hydraulic pumping of fines and resulting depressions and soft conditions.	
Site Description:	
Road dug out starting at the south end. Lots of organics and woody debris in road base and shoulder. This section was particularly poor. Removed organic material piled on west side of road and allowed area to drain. Snow and puddles in the road base and in shoulder. Create drainage in ditch. New material hauled in approx. 15 loads from borrow pit below WRP. This was placed over geotextile. Wet saturated material removed road and stockpiled to dry. Any dry material was put back in the road base. Lifted and compacted. Slight straightening of road allowed for.	
Assessed Risk: Low	
Photos Attached:	
Samples Taken: No	
Additional Information Attached: No	
Part 3 –Mitigation Requirements	
Mitigation Required: Will need to rework some of the wetter stockpiled material after it has a chance to dry out.	
Mitigation Condition: Good	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: None Specifically required, check stability of road surface	
Monitoring Frequency: Change in Condition	
Reporting Requirements:	

Wolverine Project
Environmental Inspection Form – Photos

Project Name: Km 25	
	
06/06/08 - Facing SE – clearing area to straighten road	**06/06/08 Layer of organics under initial road**
	
06/07/08 – Facing SE – Filling over snow fence and geotextile	**06/07/08 – Facing SE**

Environmental Inspection Form – Photos

Project Name: Km 25	
	
06/08/08 – Facing SE – moving dry material onto road	**06/08/08 – Facing SE – 2nd layer of fill**
	
06/08/08 –Facing NW 2nd layer of geotextile and fill	

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: July 29– Aug 4th, 2008	Inspector(s): J.S.
Site Name: Fuel Cache	Location/Co-ordinates: Just before km 29 heading north on east side road
Site Location Description: A low point of ground that drains through the upper bank and on to the pad during the melt. Also discovered a small spring at the southeast corner of the pad. Total affected area 125m2. Wolverine Creek around 250m downstream through groundwater movement or through organic matter.	

Weather Conditions:

29-Jul-08	Showers and clouds	8
30-Jul-08	Overcast and cool	13
31-Jul-08	Overcast	14
01-Aug-08	Overcast, rain at night	15
02-Aug-08	Overcast in morning, sunny afternoon	18
03-Aug-08	Sunny in morning, mixed cumulus clouds , windy in afternoon	20
04-Aug-08	Sunny, few cumulus clouds	20

Part 2 – Site Assessment

Activity:

Sample #8 received as satisfactory from Steve Colp. Verbal notification to fill in site. Shaped graded and pulled organics over area for rehabilation.

Site Description:
Site has been reclaimed.

Assessed Risk: Low

Photos Attached: Fuel Cache

Samples Taken: none.

Additional Information Attached:

Part 3 –Mitigation Requirements

Mitigation Required:

Seeding of area to follow

Mitigation Condition: G

Part 4 –Monitoring Requirements

Follow-up Monitoring: When seeding takes place

Monitoring Frequency: None

Reporting Requirements: QMLU-0006, QZ01-051

Site Name: Fuel Cache

Photo 1 08/04/08 Reclaimed fuel cache area looking NE

Photo 2 07/15/07 Reclaimed fuel cache area looking SE

Form: EM07-01

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: September 14-22, 2008	Inspector(s): James Spencer/Billie Maje
Site Name: Arctic Septic (stn: 25)	Location/Co-ordinates:

Site Location Description:

Arctic Camp is located at km 25 of the Access road on the West side of the road. The soils in the area of the septic location have a thick organic layer of peat. 1m in depth. Subsurface soils show a colluvial layer with large rounded pit-run and a large clay component at the excavation depth

Weather Conditions:

Date	Weather description	Avg. Daytime Temp. (ºC)
11-Jun-07	Cloudy with sunny periods	15
12-Jun-07	Cloudy in morning, sunny and hot in the afternoon, rain in the evening	18
13-Jun-07	Sunny and warm in morning, cloudy in afternoon, rain in the evening	14
14-Jun-07	Cloudy with some sun, showers in the afternoon, clearing in the evening.	14
15-Jun-07		17
16-Jun-07		16
17-Jun-07		15
18-Jun-07	Rain heavy at times, mixed sun and cloud	14
19-Jun-07	Cloudy with Sunny periods	15
20-Jun-07	Windy from south, mostly sunny	18
21-Jun-07	Hazy, smoke clouds, sun and haze, no rain	20
22-Jun-07	Hot and Sunny, rain storms through day	21

Part 2 – Site Assessment

Activity: Install 3 stage septic system, excavate field and install piping and clean 3”-1” drain rock.

Clearing: Organics were stripped and stockpiled in a windrow north of the excavation

Install: 320 hoe and 270 Hitachi excavate and place drain rock

backfill: Will be backfilled pending approval from Yukon Health and Social Services

Site Description:

Septic system including holding tank and septic tank followed by an absorption bed – installed by Arctic Construction for use with the temporary construction camp owned by Arctic Construction in use downchain of the airstrip.

Assessed Risk: Low

Photos Attached: Yes

Samples Taken: N/A

Additional Information Attached:

Part 3 –Mitigation Requirements

Mitigation Required: N/A

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: N/A

Monitoring Frequency: N/A

Reporting Requirements: N/A

Arctic Septic looking at field location 09_03_08

Trench between primary and secondary tanks 09_05_08

Old primary (yellow), new primary to secondary (cream tanks) and field in background 09_19_08

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 29 – November 3, 2008	Inspector(s): Mary McDougall
Site Name: Arctic Camp Potable Well Location	Location/Co-ordinates:

Site Location Description:

Arctic Camp is located at km 25 of the Access road on the West side of the road.

Weather Conditions:

Date	Weather Conditions	Temperature
29-Oct-08	Sunny in am, clouding over throughout the day	-4
30-Oct-08	light snow all day, warm (relatively!)	-5
31-Oct-08	Cold, overcast, windy	-15
01-Nov-08	Broken overcast, no wind	-4
02-Nov-08	Snowing all day, windy at portal	-4
03-Nov-08	Broken overcast, light wind	-5

Part 2 – Site Assessment

Activity:

Arctic had originally dug a test pit on the East side of the road and were planning on installing a surface well for potable water consumption at the camp. A decision was made (since a drilling crew was on-site) to drill a subsurface well on the camp pad itself, in between the main camp and the Arctic office building. However, the drill crew mobilized off-site October 31, to return November 3, and drilling commenced Nov. 3 in the am, with a pump test being initiated in the afternoon.

Site Description:

Mary OK'd the location on October 29th, and the well was drilled November 3rd.

Assessed Risk: Low

Photos Attached: Yes

Samples Taken: Yes – drinking water kit after pump test

Additional Information Attached:

Part 3 –Mitigation Requirements

Mitigation Required: none

Mitigation Condition: none

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitoring during installation

Water consumption/flows are to be recorded and reported in the A-Licence monthly report

Monitoring Frequency:

Reporting Requirements: A-licence QZ04-065

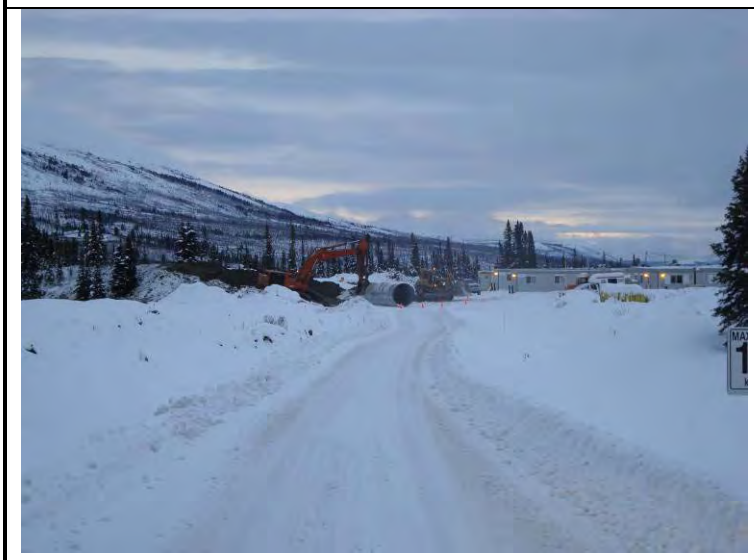
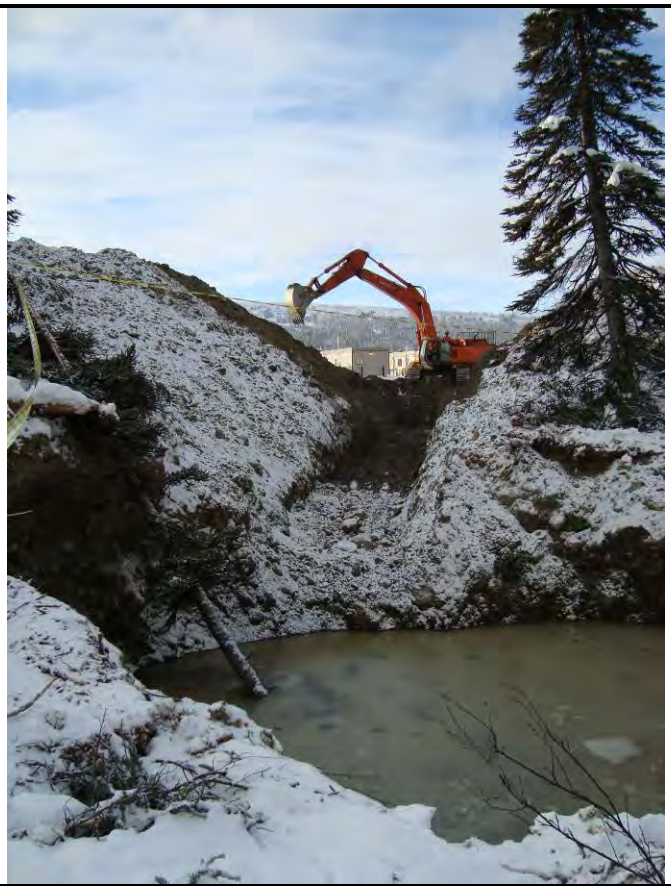
10-29-08 Trailer is in location of planned potable well (facing W) main camp on right, Arctic office on left

11-03-08 Drilling of the potable water well – facing W

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: November 26th – December 8th , 2008	Inspector(s): Jennie Gjertsen
Site Name: Arctic Camp Potable Well Location	Location/Co-ordinates:
Site Location Description: Arctic Camp is located at km 25 of the Access road on the West side of the road. Test pits were dug in September on the East side of the road to determine a suitable well location. The area chosen is a well saturated plain that collects surface water from the hills upslope and drains into the tailings basin where it is diverted into the Go Creek drainage by "Ditch A". The vegetation of the well location is a thick organic matting of mosses and occasional low brushes.	
Weather Conditions: Typical early winter conditions, including snowfall accumulation of 1-2ft and negative temperatures between ~ -5C and -30C.	
Part 2 – Site Assessment	
Activity: - development of the well site started November 26th - a 30ft culvert was installed - area was backfilled with 3-6in screened rock surrounding the installed cribbing - culvert was cut down to fit, and a trench below the frost line was dug across the road to the camp - buried water line was installed and a pump was installed - water treatment was set up but is not operational as it is missing some parts required to commission the well	
Site Description: Work to be completed once parts arrive on site for the water treatment system. Insulating the well opening at surface is also still required once the manpower is available to complete. Likely will not commission the water system until January 2009.	
Assessed Risk: Low	
Photos Attached: Yes (8)	
Samples Taken: No	
Additional Information Attached:	
Part 3 –Mitigation Requirements	
Mitigation Required: none	
Mitigation Condition: none	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Monitoring during installation Water consumption/flows are to be recorded and reported in the A-Licence monthly report	
Monitoring Frequency:	
Reporting Requirements: A-licence QZ04-065	

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Arctic Potable Water	
	
11/2708 Equipment preparing trench for crossing of water lines. Culvert ready for install (facing SE)	**11/2708 Excavated Surface well location**
	
11/2708 Trenching across access road (facing E)	**11/2708 Excavated surface well location and trenching towards camp (facing W)**

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Arctic Potable Water	
	
12/01/08 Backfilled trench for waterlines (facing E)	**12/01/08 30ft culvert installed, before trimming. Can see pump and piping electrical and heat trace (facing E)**
	
12/07/08 Well cribbing remaining at surface after back fill (facing E)	**12/07/08 Pump control/electrical shack at Arctic camp**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date: Drill site A Oct 18-Oct 22, 2008 Drill site B Oct 23-Oct 27, 2008	Inspector(s): Billie Maje and Jennie Gjertsen
Site Name: New camp water drill site A and B	Location/Co-ordinates: Drill Site A: 0440498 6810587 (PW08-1) Drill Site B: 0440366 6810689 (PW08-2)
Site Location Description: Drill site A is located on an old drill road near new camp site, across from waste rock pad, high on a hill. There are no water bodies nearby. Drill site B is located right above the new camp pad in the N.E corner.	
Weather Conditions: winter conditions: -Cooler temperatures during the two weeks of drilling - windy, overcast and snowy below 0° C conditions.	
Part 2 – Site Assessment	
Activity: Drilling for potable water well for new camp site. The drilling started on October 18 at drill site A Any water being found is pumped down the hill into a natural sump. See photo #4 The drilling started October 23 at drill site B	
Site Description: Located on an old drill road., minimal disturbance from activity	
Assessed Risk: Low	
Photos Attached: 8	
Samples Taken: yes, PW08-1 (drill site A) sampled October 26th	
Additional Information Attached: None	
Part 3 –Mitigation Requirements	
Mitigation Required: No mitigation required at drill site A or B	
Mitigation Condition: Good at site A and good at site B	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Monitor volume of water being pumped into natural sump, ensure that site is clean before demobilization	
Monitoring Frequency: As required for water sampling and development of site B well	
Reporting Requirements: Weekly, as work progresses	

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Drill site A for New camp

Photo 1: 10/22/08 Drill site facing U/C looking toward new camp site.

Photo 2: 10/22/08 Drill site A.

Photo 3: 10/22/08 End of pipe looking towards new campsite.

Photo 4: 10/22/08 Natural sump. Looking at new camp road.

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Drill site B for New camp

Photo 5: 10/23/08 Drill site B located above new camp pad. Road up to drill site located on the right side of photo.

Photo 6: 10/23/08 Drill site B looking at drill hole and end of pipe.

Photo 7: 10/23/08 Overview of drill location.

Photo 8: 10/23/08 Natural sump. Looking away from camp pad.

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: October 29-31, 2008	Inspector(s): Mary McDougall
Site Name: Potable wells and groundwater well drilling	Location/Co-ordinates:

Site Location Description:

Two potable wells (PW08-1 & PW08-2) were installed to provide water for the 205 man camp, and two groundwater wells (GW08-13 & GW08-14) were installed to meet upstream and downstream tailings facility monitoring requirements.

Weather Conditions:

Date	Weather Conditions	Temperature
29-Oct-08	Sunny in am, clouding over throughout the day	-4
30-Oct-08	Light snow all day	-5
31-Oct-08	Cold, overcast, windy	-15

Part 2 – Site Assessment

Activity:

All four wells were drilled by Double “D” Drilling. The potable wells were pump tested to estimate flows, and sampled for water quality. The groundwater well installation was supervised by Lorax Environmental and developed by Mary.

Site Description:

The potable well PW08-2 was drilled right on the upper camp pad where the PWTP and raw water storage tank will be located – this will be the primary water supply well to the camp.

Assessed Risk: Low

Photos Attached: Yes

Samples Taken: No

Additional Information Attached:

Part 3 –Mitigation Requirements

Mitigation Required: none

Mitigation Condition: none

Part 4 –Monitoring Requirements

Follow-up Monitoring:

Water consumption/flows are to be recorded and reported in the A-Licence monthly report

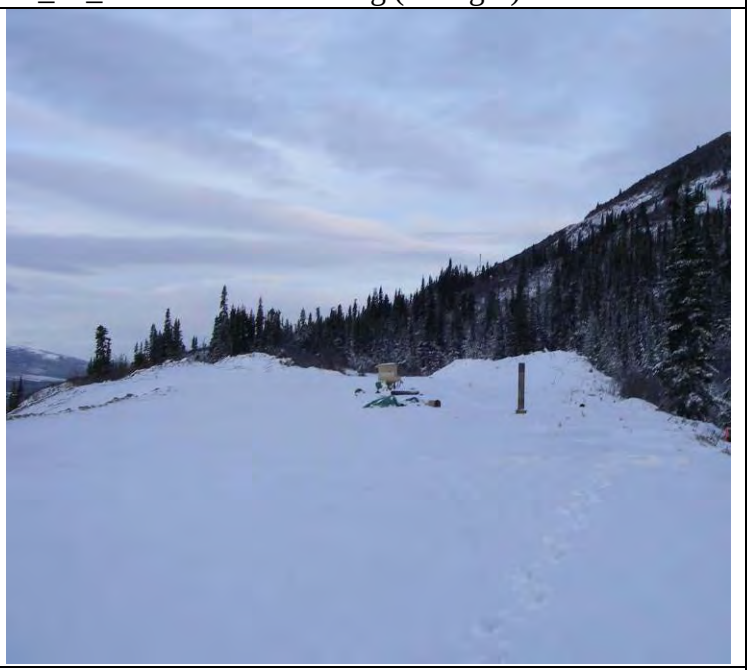
Monitoring Frequency:

Reporting Requirements: A-licence QZ04-065

10_28_08 MW08-13 drilling (facing W)

10_28_08 MW08-13 drilling (facing S)

10-29-08 PW08-1 (under brown tent) (facing E)



10-29-08 PW08-2 on upper camp pad (facing N)

	
10_29_08 MW08-14 drilling (facing E)	10_29_08 MW08-14 complete (facing N)

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: September 15-22, 2008	Inspector(s): James Spencer/Billie Maje
Site Name: Camp Grey Water (stn: 32)	Location/Co-ordinates:
Site Location Description: Behind the kitchen and YZC dry area is already disturbed from previous grubbing. Mostly grasses. Some Spruce trees and willows will be removed for the kitchen grey water field	
Weather Conditions: Mixed fall weather, lots of rain early during development. See daily log.	
Part 2 – Site Assessment	
Activity: Excavate two new greywater fields. Approximately 5m x 5m x 2.5m.	
Site Description: The Grey Water Field from the kitchen showed surface flow and the grey water field for the drys has backed up into the ladies shower. Two 36' culverts 8' tall on end will be installed and surrounded by clean drain rock to promote filtration and drainage in each new grey water excavation pit. Excavated down to solid clay layer. Stratas closer to the surface from 6' to surface show gravelly content, which should act as the conduit for percolation. New pits were backfilled after installation and organics placed back on the completed fields. Waste material from the excavation was used to pad the camp parking lot and camp access roads. Old fields were left as is.	
Assessed Risk: Medium	
Photos Attached: Yes	
Samples Taken:	
Additional Information Attached:	
Part 3 –Mitigation Requirements	
Mitigation Required: Monitor for back-ups and surface flow.	
Mitigation Condition: Excellent	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Monitor if system backs-up or saturation is observed from field	
Monitoring Frequency: Monthly	
Reporting Requirements: As required	

	
Camp Greywater Kitchen Overflow 09_14_08	Drys New Greywater Field 09_19_08

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: September 23rd – October 6th 2008	Inspector(s): Billie Maje and Jennie Gjertsen
Site Name: Camp Grey Water	Location/Co-ordinates: Wolverine Lake Camp 0437295, 6812597
Site Location Description: Within the Wolverine lake camp disturbance, the north side of the kitchen and Yukon zinc dry area. Vegetation in the area is mostly grasses that have established after previous disturbance, some willows and several spruce trees. Area slopes slightly toward lakefront.	
Weather Conditions: Fall conditions. There have been few rainfall events with very little snowfall and no accumulation. Temperatures ranging between -7 and 15 degrees C.	
Part 2 – Site Assessment	
Activity: Excavation of two new grey water fields. Approximately 5m x 5m x 2.5m. Also relaying and insulation of drain pipes from the kitchen and both of the drys.	
Site Description: The grey water field from the kitchen showed surface flow and the grey water field for the drys has backed up into the women's shower. Two 36' culverts 8' tall on end have been installed and surrounded by clean drain rock to promote filtration and drainage in each new grey water excavation pit. The pits were excavated down to solid clay layer. Stratas closer to the surface from 6' to surface show gravelly content, which should act as the conduit for percolation. New pits were backfilled after installation and organics placed back on the completed fields. Waste material from the excavation was used to pad the camp parking lot and camp access roads. Pits have had material placed on top and contoured so that they are no longer a depression that will collect rain and surface water The only work that remains is heat tracing the insulated lines. Old fields were left as is.	
Assessed Risk: Low	
Photos Attached: Campgreywater. Additional photos in the environmental monitoring folder, under site surface.	
Samples Taken: none	
Additional Information Attached: YZC_Exploration Camp Water System_09_30_08, a document sent to Todd Pinkess at Yukon health and social services detailing the water system in camp.	
Part 3 –Mitigation Requirements	
Mitigation Required: Monitor for back-ups and surface flow.	
Mitigation Condition: Excellent	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Monitor if system backs-up or saturation is observed from field	
Monitoring Frequency: Monthly	
Reporting Requirements: Change in condition	

09_26_08 backfilled “Dry” field

09_26_08 backfilled “kitchen” field

09_27_08 Insulating and heat tracing discharge lines

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 2nd - 6th , 2008	Inspector(s): Jennie Gjertsen
Site Name: Genset Excavation	Location/Co-ordinates: Wolverine Camp

Site Location Description:

Location of generators used to power the Wolverine Lake Exploration Camp. Situated on south end of the exploration camp. Approximately 50m from lake edge. Pre-disturbed area bordered with heavy organics and overlaying area of known permafrost. Area has possible hydrocarbon contamination due to generator operation and maintenance for several years (mid 1990s).

Weather Conditions:

Date	Weather conditions	avg. daily temp.
02-Oct-08	Some clouds	10
03-Oct-08	Heavy rain overnight, Sun with clouds	5
04-Oct-08	Fog in morning clearing to sun	5
05-Oct-08	Cloudy with some snow	0
06-Oct-08	Sunny with some clouds	0

Part 2 – Site Assessment

Activity:

- Old generator was removed to so that a new one could be installed and contained within a Seacan
- Area was to be padded and levelled for seacan installation, once this work started some of the surrounding organics needed to be excavated to provide a stable surface area. The depth of the organics ranged from surface to 1m
- Excavated material was moved to the land treatment farm, as is was potentially contaminated
- Geo-textile was laid in the excavated area to cover the permafrost that was discovered and then excavation was filled with material from the Km 18 borrow source

Site Description: Work to area is completed and pad has been sloped so that water does not pool

Assessed Risk: Low

Photos Attached: Genset_10_02_08 and genset_10_03_08 (4 photos)

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: none

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch for signs of permafrost melt effects and direction of water runoff during heavy rainfall. LTF monitoring to be done on excavated material.

Monitoring Frequency: Heavy rainfall periods and during spring melt

Reporting Requirements: none unless site conditions change

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Genset excavation	
	
10/02/08 Location with possible contamination due to genset removal. Before excavation (facing NW)	**10/03/08 Excavation of overburden (facing SE)**
	
10/03/08 Geotextile over permafrost that was found (facing SE)	**10/03/08 Filling of excavated area (facing SE)**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: September 16 - 22 2008	Inspector(s): James Spencer
Site Name: LTF Cell1	Location/Co-ordinates: Near Wolverine Airstrip; 6809380.62 N, 441400.9 E

Site Location Description: Land Treatment Farm (LTF) Cell 1 is located on the north east site of the airstrip within a colluvial deposit located on an elevated bench. Cell 1 was constructed in 2005 by excavating a depression in the elevated bench, then it was lined with geotextile fabric and enviroliner.

Weather Conditions:

Date	Weather Conditions	Average daily temperature (°C)
16-Sep-08	Light rain in the morning, cooling in afternoon	6
17-Sep-08	High overcast, breaking clouds and light rain	6
18-Sep-08	Sunny with some clouds	10
19-Sep-08	High overcast	7
20-Sep-08	Light rain in the morning, sunny with some clouds in afternoon	9
21-Sep-08	Sunny with some cloud	8
22-Sep-08	Sunny with some cloud	7

Part 2 – Site Assessment

Activity: LTF Cell 1 contains 58 m^3 of material from a 2005 diesel spill.

Two main activities have been completed: removal of 58 m^3 bioremediated soil from within the cell, and decommissioning of the containment cell. Removal of the soil involved removal of the protective tarp, excavation with a backhoe/excavator and trucking of the soil to the portal area. Decommissioning of the cell involved removal of the liner, deposition of the liner to temporary storage area for plastics (located near the airstrip), and removal of the underlying soil to re-contour the area to the adjacent topography.

Site Description: Upon completion of site decommissioning the area is flat, and resembles surrounding topography. The remaining material will be used for borrow.

Assessed Risk: Low

Photos Attached: Yes

Samples Taken: No. No visible sign or smell of hydrocarbon contamination below the liner.

Additional Information Attached: August 19th Yukon Environment approval letter for removal of the remediated material

Part 3 –Mitigation Requirements

Mitigation Required: None during soil removal and decommissioning of the cell. Area will be reclaimed once borrow activities from the surrounding colluvial material are complete.

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: None

Monitoring Frequency: N/A

Reporting Requirements: Report during reclamation activities

08/19/07 Cell 1 (blue tarp) prior to soil removal; tarped areas above and below of Cell 1 are the soil storage areas for soil that was moved to Cell 2 in September 2007.

09/15/08 Excavation of underlying material

09/22/08 Cell 1 area following removal of cell material and underlying material.

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 2nd - 6th , 2008	Inspector(s): Jennie Gjertsen
Site Name: New Camp	Location/Co-ordinates: K27+200 of access road

Site Location Description: Large cleared area where work is undergoing to construct new 205 person camp. The west side of the Pad lies above a wetted area, whereas the back east side runs up a steep slope. The lwetted area does not feed directly into any streams.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
02-Oct-08	Some clouds	10
03-Oct-08	Heavy rain overnight, Sun with clouds	5
04-Oct-08	Fog in morning clearing to sun	5
05-Oct-08	Cloudy with some snow	0
06-Oct-08	Sunny with some clouds	0

Part 2 – Site Assessment

Activity:

- Start of preparation of pad for installation of buried services
- Expansion to SE corner of pad
- Surveying of buried services

Site Description:

New camp pad is in good condition, and ready for site works.

Assessed Risk: Low

Photos Attached: Camp_pad_10_05_08 (3)

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: none

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch down slope for signs of erosion and slumping, as well as high sedimentation during rain events. Continue to document progress for as-built reporting.

Monitoring Frequency: Weekly

Reporting Requirements: Weekly as construction progresses.

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Environmental Inspection Form – Photos

Site Name: New Camp	
	
10/05/08 Expansion of SE corner of pad, and staking of buried services layout (facing SE)	**10/05/08 Camp pad (facing south)**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 14 - 20, 2008	Inspector(s): James Spencer
Site Name: New Camp	Location/Co-ordinates: K27+200 of access road

Site Location Description: Large cleared area where work is undergoing to construct new 205 person camp. The west side of the Pad lies above a wetted area, whereas the back east side runs up a steep slope. The wetted area does not feed directly into any streams.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
14-Oct-08	Sunny most of day	-5
15-Oct-08	Clear in the morning , clouds roll in afternoon	-2
16-Oct-08	Light snow in morning, clearing in the afternoon	-1
17-Oct-08	Snowing lightly all day slippery roads	-2
18-Oct-08	Snowed morning, clearing in the afternoon	-4
19-Oct-08	Snowing lightly most of day windy	-7
20-Oct-08	Clear most of day mix sun and flurries	-7

Part 2 – Site Assessment

Activity: No activity previous week…some hauling of materials a bit of Dozer work.

Oct 14-20

- Start to strip and clear upper pad for the Fire Water, WTP 9
- Haul material for buried services, sand and crush
- Excavate 2 trenches for buried services along east edge and North edge of pad
- Pipe installed along east edge and compacted and backfilled
- Drillers looking for water at SE corner of pad start on the 18th, find some water on 19th

Site Description:

On hold from the 17-21 for buried services until new gravel trucks arrive. Upper pad still being prepped and compacted for Fire Water Tank.

Assessed Risk: Low

Photos Attached: 8 photos Camp_pad_10_12_08 to 10_18_08

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: none

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch down slope for signs of erosion and slumping, as well as high sedimentation during rain events. Continue to document progress for as-built reporting.

Monitoring Frequency: Weekly

Reporting Requirements: Weekly as construction progresses.

10_12_08 Looking North along Camp Pad some materials for services at end of pad

10_15_08 Looking North showing road to upper camp pad

10_15_08 Facing North looking at eastern buried service trench

10_15_08 Looking North road to upper camp pad

	
10_15_08 Looking North along upper pad with strippings windrowed towards eastern slope	10_15_08 Looking North from water drill site down to lower camp pad
	
10_17_08 Compacting upper camp pad	10_17_08 Looking North from water drill site down to lower camp pad excavator backfilling services

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 21st – 27th , 2008	Inspector(s): Jennie Gjertsen
Site Name: New Camp	Location/Co-ordinates: K27+200 of access road

Site Location Description: Large cleared area where work is undergoing to construct new 205 person camp. The west side of the Pad lies above a wetted area, whereas the back east side runs up a steep slope. The wetted area does not feed directly into any streams.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
21-Oct-08	Clear most of day mix sun and flurries	-7
22-Oct-08	High over cast and very windy.	-8
23-Oct-08	Overcast,windy and snowy all day	-5
24-Oct-08	Overcast,windy and snowy all day	-4
25-Oct-08	Overcast and strong winds	-14
26-Oct-08	Heavy snow and very strong winds (25-30km/hr)	-16

Part 2 – Site Assessment

Activity:

Oct 21-27

- Continue to level upper pad for the fire water and water treatment plant
- Haul sand and crush material for buried services
- Continue excavation and install of buried services
- Drilling for potable water continues (see EM report for drill sites)

Site Description:

Lower and upper pad work continues

Assessed Risk: negligible

Photos Attached: 8 photos newcamp_10_22_08 to 10_27_08

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: none

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch down slope for signs of erosion and slumping, as well as high sedimentation during rain events. Continue to document progress for as-built reporting.

Monitoring Frequency: Weekly

Reporting Requirements: Weekly as construction progresses.

10_23_08 Stockpiling fill material for excavations (facing southwest)

10_25_08 Excavated trenches (facing west)

10_25_08 Southern trench (facing southwest)

10_26_08 Southern trench

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10_27_08 Facing southwest

10_27_08 Facing west

10_27_08 Northern trench, facing west

10_27_08 Facing south

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Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 29th – November 3rd, 2008	Inspector(s): Mary McDougall
Site Name: New Camp	Location/Co-ordinates: K27+200 of access road

Site Location Description: Large cleared area where work is undergoing to construct new 205 person camp. The west side of the Pad lies above a wetted area, whereas the back east side runs up a steep slope. The wetted area does not feed directly into any streams.

Weather Conditions:

Date	Weather Conditions	Temperature (°C)
29-Oct-08	Sunny in am, clouding over throughout the day	-4
30-Oct-08	light snow all day, warm (relatively!)	-5
31-Oct-08	Cold, overcast, windy	-15
01-Nov-08	Broken overcast, no wind	-4
02-Nov-08	Snowing all day, windy at portal	-4
03-Nov-08	Broken overcast, light wind	-5

Part 2 – Site Assessment

Activity:

- Drill potable water wells (see separate monitoring report)
- Continue excavation and install of buried services

Site Description:

Lower pad work continues

Assessed Risk: minimal

Photos Attached: Yes

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: none

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch down slope for signs of erosion and slumping, as well as high sedimentation during rain events. Continue to document progress for as-built reporting.

Monitoring Frequency: Bi-weekly

Reporting Requirements: Weekly as construction progresses.

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Wolverine Project
Environmental Inspection Form – Photos

	
10-29-08 North side of permanent camp buried services installation (facing W)	10-29-08 Center of permanent camp buried services installation (facing SW)
	
10-29-08 South side of permanent camp buried services installation (facing W) – Hoe is moving benched material back for safety reasons	10-29-08 Upper camp pad at permanent camp (facing SE)

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Environmental Inspection Form – Photos

	
10-30-08 South side of permanent camp buried services installation (facing SW)	11-02-08 Excavation of the east side underground utility corridor – facing SW
	
11-03-08 South side of permanent camp buried services installation (facing SW)	11-02-08 Excavation of the north side underground utility corridor – facing SW

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: Nov 4 – Nov 17, 2008	Inspector(s): James Spencer
Site Name: New Camp	Location/Co-ordinates: K27+200 of access road
Site Location Description: Large cleared area where work is undergoing to construct new 205 person camp. The west side of the Pad lies above a wetted area, whereas the back east side runs up a steep slope. The wetted area does not feed directly into any streams.	

Weather Conditions:

04-Nov-08	Broken in morning overcast by late afternoon	-8
05-Nov-08	Overcast, foggy and light wind from the south	-12
06-Nov-08	Overcast, foggy in morning, clearing in afternoon	-8
07-Nov-08	Moderate snow most of day	-12
08-Nov-08	Sunny in morning, starting to cloud over in afternoon	-10
09-Nov-08	Sunny all day	-10
10-Nov-08	Sunny in morning, clouds in afternoon light snow	-14
11-Nov-08	High overcast, light snow in the afternoon	-12
12-Nov-08	Cool morning, windy afternoon	-14
13-Nov-08	High overcast with some breaks	-13
14-Nov-08	Clear sky with wind	-14
15-Nov-08	Snowing all morning, clearing in afternoon	-7
16-Nov-08	Clear and sunny	-13
17-Nov-08	Clear and sunny	-18

Part 2 – Site Assessment

Activity:

- Drillers complete and running the Step Test Drawdown to check recharge of wells
- Continue excavation and install of buried services
- Blasting on Nov 17 to get through bedrock for final west trench
- Thrust blocks will be poured Nov 19th

Site Description:

Lower pad work continues

Assessed Risk: minimal

Photos Attached: Yes

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: none

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch down slope for signs of erosion and slumping, as well as high sedimentation during rain events. Continue to document progress for as-built reporting.

Monitoring Frequency: Bi-monthly

Reporting Requirements: Weekly as construction progresses.

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Environmental Inspection Form – Photos

	
11-05-08 North side of permanent camp buried services installation (facing NW)	11-05-08 Center of permanent camp buried services installation (facing W)
	
11-05-08 South side of permanent camp buried services installation (facing SW)	11-05-08 Upper camp pad at permanent camp drillers performing the step down recharge test (facing S)

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Environmental Inspection Form – Photos

	
11-07-08 Forming of the thrust blocks for the buried services	11-13-08 South side of permanent camp buried services installation (facing SW)
	
11-13-08 South side trench of permanent camp buried services installation (facing SW)	11-15-08 Excavation and blasting of the west side underground utility corridor – facing SW

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: November 18th-December 8th 2008	Inspector(s): J.S., B.M. and J.G.
Site Name: New Camp	Location/Co-ordinates: K27+200 of access road
Site Location Description: Large cleared area where work is undergoing to construct new 205 person camp. The west side of the Pad lies above a wetted area, whereas the back east side runs up a steep slope. The wetted area does not feed directly into any streams.	
Weather Conditions: Typical early winter weather conditions persist. Snowfall accumulation varies between 1-3ft. Heavy drifting occurs at the site due to high winds exposure. Temperatures ranged from -5C to -30C.	
Part 2 – Site Assessment	
Activity: - Continue excavation and install of buried services - Propane tank and lines installed, all buried services were surveyed - Backfill began and is nearing completion - Thrust blocks were poured Nov 22nd - No blasting occurred during the reporting period - Pressure tested lines and repaired valves Dec 4-6th - Trench dug for waste management piping - Expansion to southwest corner of the pad	
Site Description: Lower pad work continues	
Assessed Risk: minimal	
Photos Attached: 12	
Samples Taken: none	
Additional Information Attached: none	
Part 3 –Mitigation Requirements	
Mitigation Required: none	
Mitigation Condition: N/A	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Watch down slope for signs of erosion and slumping, as well as high sedimentation during rain events. Continue to document progress for as-built reporting.	
Monitoring Frequency: Weekly as construction progresses	
Reporting Requirements: Bi monthly	

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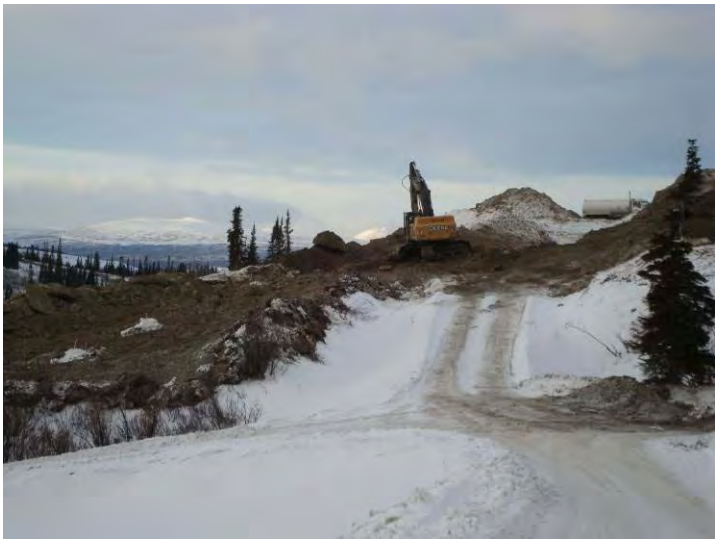
Environmental Inspection Form – Photos

11-22-08 Filling thrust blocks with cement

11-22-08 Filling thrust blocks with cement



11-29-08 Trenching and expansion of southwest corner of pad (facing NE)

12-02-08 Raises in trench (facing W)

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Environmental Inspection Form – Photos

	
12-02-Propane tank installed in background, trenching in foreground	12-02-08 pipe laying in trenches
	
12-02-08 Water line raises	12-02-08 Pipe laying in trenches

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Environmental Inspection Form – Photos

	
12-06-08 Backfilling around raises (facing W)	12-06- Backfilling around raises (facing NW)
	
12-06-08 Backfilling (facing SW)	12-07-08 trenching for water treatment plant discharge – facing NE

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: December 9 - December 22, 2008	Inspector(s): J.S.
Site Name: New Camp	Location/Co-ordinates: K27+200 of access road
Site Location Description: Large cleared area where work is undergoing to construct new 205 person camp. The west side of the Pad lies above a wetted area, whereas the back east side runs up a steep slope. The wetted area does not feed directly into any streams.	
Weather Conditions: Weather Conditions: 10-Dec-08 High over cast -12 11-Dec-08 Sunny with some clouds -11 12-Dec-08 Sunny and clear skies -15 13-Dec-08 Sunny and clear skies -31 14-Dec-08 Sunny and clear skies -26 15-Dec-08 Sunny and clear skies -20 16-Dec-08 Overcast with high winds -21 17-Dec-08 Clear and sunny -25 18-Dec-08 Clear and sunny -35 19-Dec-08 Clear and sunny -33 20-Dec-08 Clear and sunny -30	
Part 2 – Site Assessment	
Activity: - Backfilling of buried services and levelling of pad	
Site Description: Lower pad work complete, stand- ups visible for trailer hook-up	
Assessed Risk: minimal	
Photos Attached:	
Samples Taken: none	
Additional Information Attached: none	
Part 3 –Mitigation Requirements	
Mitigation Required: none	
Mitigation Condition: N/A	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Continue to document progress for as-built reporting.	
Monitoring Frequency: Weekly as construction progresses	
Reporting Requirements: Bi monthly	

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Environmental Inspection Form – Photos

12-14-08 Final grading of new camp pad buried services

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: September 8-22, 2008	Inspector(s): James Spencer/Billie Maje
Site Name: New Portal Pad	Location/Co-ordinates:
Site Location Description: upchain of the portal a material balance was performed by YES to accommodate a 49mx24m building and to excavate a 45mx21m 2000m3 pond. The pad encompasses 120m x 60 m and will also be used as a laydown area.	
Weather Conditions: Variable weather in September lots of rain. Shutdown earthworks at pad for two days during middle of the month.	
Part 2 – Site Assessment	
Activity: Make a competent pad with a lift of 2m above original ground to avoid the water table while digging the 3m deep 2000m3 pond. Also need a stable platform with good compaction to anchor the Sprung building. Portal area to be re-designed to accommodate the earthworks.	
Site Description: **Background-**The two old portal ponds were decommissioned: The PDS on August 4th and the PCS on September 8th. Old liner was hauled to the WRP and buried in the Waste Rock. A new temporary sump approx 100m3 was installed at the portal on September 9th to accept any runoff from the portal pad. This structure will be pumped out as required until the collection ditches are built in the spring. **Pad Construction-** Stripping of the pad area started on September 8th and organics were stockpiled at the crest of the hill above the cut and windrowed upchain of the pad. Some waste material was hauled, from the pad to the old diesel drum fuel site at km 29, as it was unsuitable for pad development. This was wasted at the. The area has been re-contoured but still needs strippings pulled over. Most of the fill was provided from the hill adjacent to the portal. Additional loads were hauled from the old LTF Cell 1 and Cell 2 (Total Approx 250m3). The pad was compacted in lifts using the compacter. **Silt Fence:** Two lengths of 60' of silt fence were installed at the toe of the slope to protect Wolverine Creek from sediment loading during rains and runoff.	
Assessed Risk: Medium	
Photos Attached: Yes	
Samples Taken: No	
Additional Information Attached:	
Part 3 –Mitigation Requirements	
Mitigation Required: Strippings to be pulled back over the waste area and the cut slope. Remove sediment build up behind silt fence when required.	
Mitigation Condition: N/A	
Part 4 –Monitoring Requirements	

Follow-up Monitoring: Inspect silt fence
Monitoring Frequency: Daily
Reporting Requirements: As required

PortalPad_09_07_08 Moving Helicopter Pad

PortalPad_09_09_08 Strippings stored upchain of the Pad

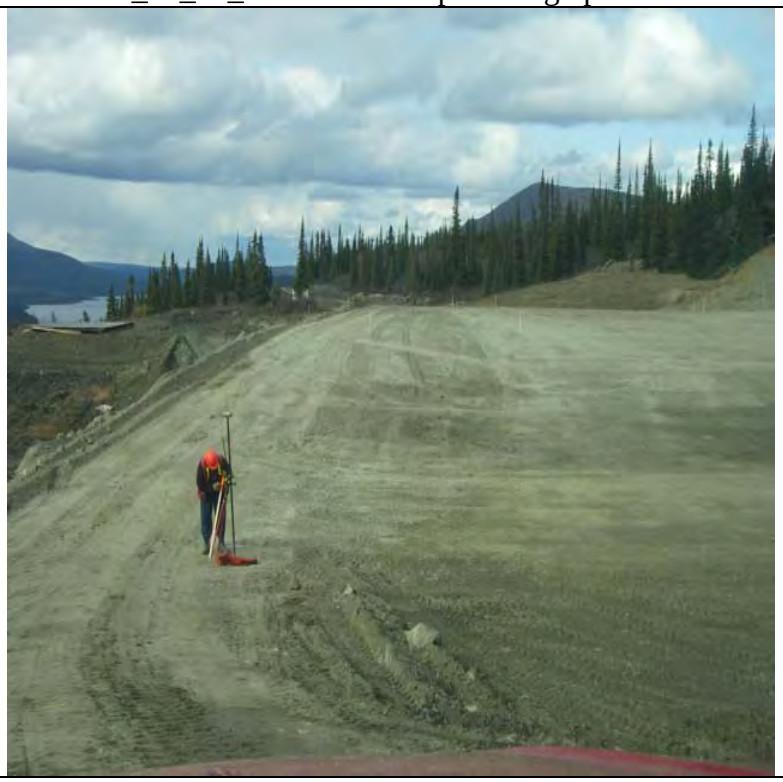
PortalPad_09_09_08 Temporary Sump

PortalPad_09_09_08 Decommisioning PCS preparing to pump water to WRP before liner removal

PortalPad_09_10_08 Silt Fence at toe of pad

PortalPad_09_15_08 Pad build up looking upchain

PortalPad_09_17_08 Compacting the Portal Pad



PortalPad_09_21_08 Working on final grades for Portal Pad

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 6-21, 2008	Inspector(s): James Spencer
Site Name: Portal Area	Location/Co-ordinates:

Site Location Description: Portal Area being re-worked. Grades for new Sprung Structure and temporary sump. Moving of services and multi-plate install require earthworks. Pipeline to run along route from Sump #3 at upper portal to lower portal. Route shown attached

Weather Conditions:

06-Oct-08	Sunny with some clouds	0
07-Oct-08	High Overcast	-7
08-Oct-08	Cool, sunny most of day, light flurries in morning	-8
09-Oct-08	overcast most of day	-6
10-Oct-08	Cool and windy	-7
11-Oct-08	Overcast and fog snow	-4
12-Oct-08	mixed sun and cloud	0
13-Oct-08	Light flurries, sun, cloud very mixed	-4
14-Oct-08	Sunny most of day	-5
15-Oct-08	Clear in the morning , clouds roll in afternoon	-2
16-Oct-08	Light snow in morning, clearing in the afternoon	-1
17-Oct-08	Snowing lightly all day slippery roads	-2
18-Oct-08	Snowed morning, clearing in the afternoon	-4
19-Oct-08	Snowing lightly most of day windy	-7
20-Oct-08	Clear most of day mix sun and flurries	-7

Part 2 – Site Assessment

Activity: Build a temporary sump after all the grading is complete at the sump # 3 level of upper portal. This temporary sump will collect any pad runoff. Portal Pipeline routed and some earthworks to provide a stable platform to lay the pipe. Trenches dug for the pipeline at lower portal. Sprung structure to go up on new pad.

Site Description:

Temporary Sump:

A 7mx 12m x 1.5m sump built Oct 9th to replace old temporary portal sump. Fenced in for safety and wildlife barrier. This will mitigate any run-off in the spring before the collection ditches are built.

Sprung Construction: The Sawmill Creek crew arrived and commenced laying out their materials and arches October 19 on site to prepare for crane delivery and sprung rep to arrive

Pipeline: Oct 18th put in culvert at lower portal to accept the new pipe, Oct 18th cut access for pipe to run along toe of portal pad and then up to berm outside Procon's shop and down to lower portal.

Assessed Risk: Medium

Photos Attached: Yes

Samples Taken: No

Additional Information Attached: PDF of Pipeline Attached

Part 3 –Mitigation Requirements

Mitigation Required: Grades to be finalized on surface and collection ditches to be cut in the spring

Mitigation Condition: N/A
Part 4 –Monitoring Requirements
Follow-up Monitoring: Inspect for sediment flow to Wolverine Creek ensure containment of run-off on upper portal pad
Monitoring Frequency: Daily
Reporting Requirements: As required

10_21_08 View of Sprung set-up layout by Sawmill Creek

10_21_08 View of Temporary Sump with fencing around

10_15_08 Trench at lower portal to accept the new pipeline

10_18_08 Facing North, bench built at toe of portal pad to accept the new pipeline

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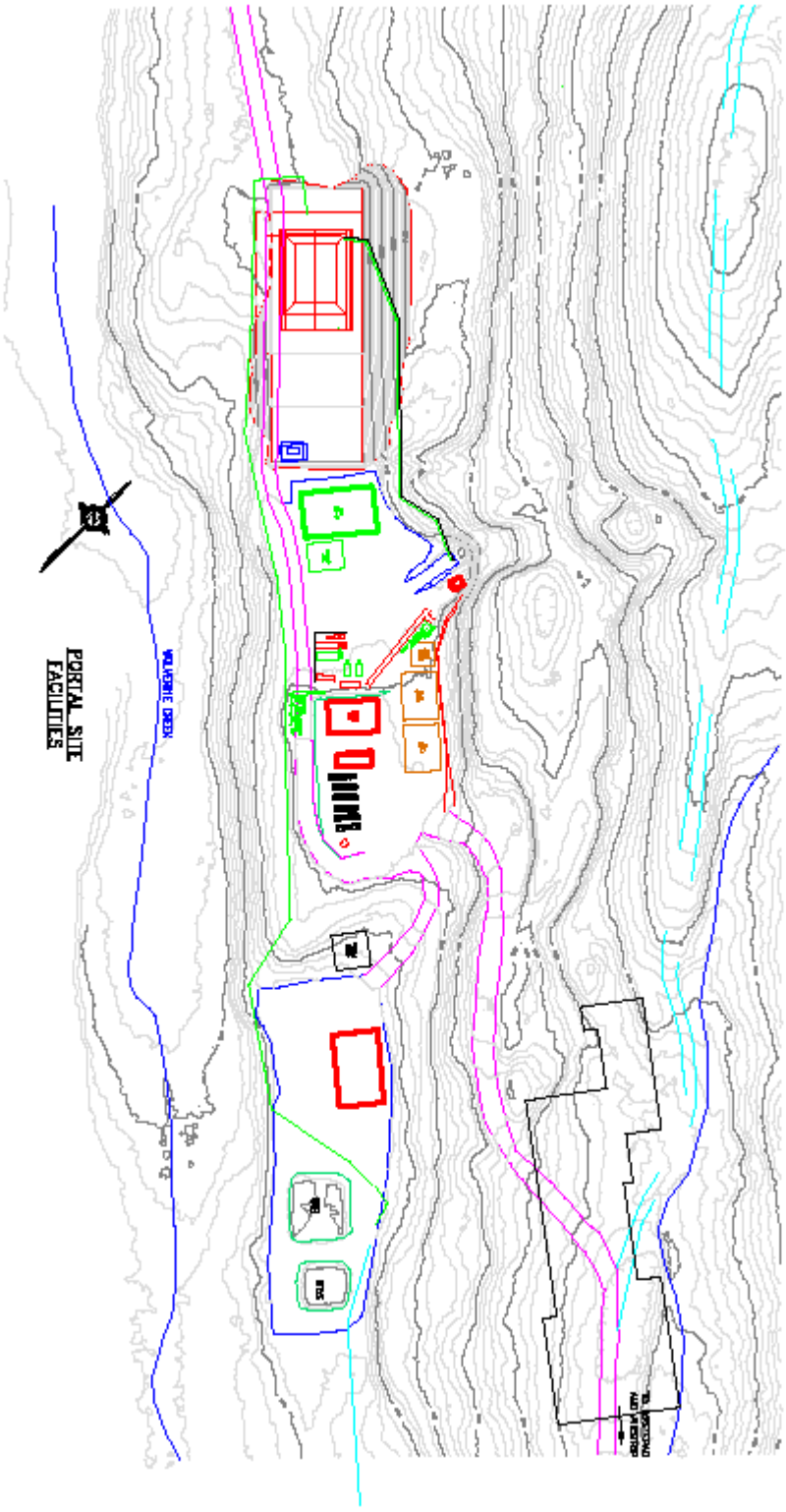
10_18_08 Looking South,Saddle for pipeline on berm outside Procon's shop	


PORTAL SITE
FACILITIES
WALKABLE CREEK

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 20-29, 2008	Inspector(s): Mary McDougall
Site Name: Portal Pad – Diesel Tank Relocation	Location/Co-ordinates:

Site Location Description: The diesel tanks at the portal are being relocated, and the area will be used as a dynamic stockpile for underground material during the mining activities over winter of 2009.

Weather Conditions:

Date	Weather Conditions	Temperature
20-Oct-08	Clear most of day mix sun and flurries	-7
21-Oct-08	Clear most of day mix sun and flurries	-7
22-Oct-08	High over cast and very windy.	-8
23-Oct-08	Overcast,windy and snowy all day	-5
24-Oct-08	Overcast,windy and snowy all day	-4
25-Oct-08	Overcast and strong winds	-14
26-Oct-08	Heavy snow and very strong winds (25-30km/hr)	-16
27-Oct-08	Broken cloud and sun	-5
28-Oct-08	Sunny in am, clouding over throughout the day, snowing in evening	-8
29-Oct-08	Sunny in am, clouding over throughout the day	-4

Part 2 – Site Assessment

Activity: Tanks were moved sometime between October 20 and 27 and the area is not yet levelled.
The area will be fully remediated (i.e. all contaminated soil removed) prior to mill site construction in Spring 2009.

Site Description:

- There is no risk at this site over the winter.
- Remediation and extraction of contaminated material is to occur in the spring.

Assessed Risk: Low

Photos Attached: Yes

Samples Taken: No

Additional Information Attached:

Part 3 –Mitigation Requirements

Mitigation Required: none

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Contaminated material removal in Spring 2009

Monitoring Frequency: none

Reporting Requirements: none

10-29-08 Old diesel tank location prior to leveling (facing WNW)

10-29-08 Old diesel tank location prior to leveling (facing E)

10-29-08 New diesel tank location (facing W)

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 21-27, 2008	Inspector(s): Jennie Gjertsen
Site Name: Portal Area	Location/Co-ordinates:

Site Location Description:

The portal area contains the main entrance to the mine, the Procon shop and offices, the mine services (generators), diesel and gasoline tanks and the lower portal area (containing the 2 sprung buildings for water treatment and the Coverall).

Portal area is located in the Wolverine Creek drainage, and is located up slope of the creek itself. A temporary sump is in place to collect any pad run off to prevent sedimentation and contamination into the creek.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
21-Oct-08	Clear most of day mix sun and flurries	-7
22-Oct-08	High over cast and very windy.	-8
23-Oct-08	Overcast,windy and snowy all day	-5
24-Oct-08	Overcast,windy and snowy all day	-4
25-Oct-08	Overcast and strong winds	-14
26-Oct-08	Heavy snow and very strong winds (25-30km/hr)	-16
27-Oct-08	Broken cloud and sun	-5

Part 2 – Site Assessment

Activity:

Portal Entrance: Backfilling and compaction being completed around the installed multi-plate

Portal Services: Electrical, air, heating lines continued to be relocated to prepare for mill excavation. Second diesel tank relocated October the 27th, (see diesel tank environmental monitoring report).

Sprung Construction: Erection of sprung is ongoing, Sawmill Creek and Sprung rep on site

Pipeline: Sandale “joiner” on site, pipeline install is ongoing

Site Description: Work is ongoing, relocation of services and backfilling of multi-plate near completion

Assessed Risk: none

Photos Attached: Yes

Samples Taken: No

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Collection ditches to be installed in the spring

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Inspect for sediment flow to Wolverine Creek ensure containment of run-off on upper portal pad

Monitoring Frequency: Daily

Reporting Requirements: As required

10_22_08 View of Sprung set-up layout by Sawmill Creek (facing west)

10_23_08 Propane tank mobilized to site

10_24_08 Sprung set up (facing North)

10_24_08 Sprung set up (facing North)

10_28_08 Lower portal pipeline welding

10_28_08 Lower portal pipeline layout

10_28_08 Sprung set up (facing north)

10_28_08 Sprung set up (facing north)

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 28 – November 3, 2008	Inspector(s): Mary McDougall
Site Name: Portal Area	Location/Co-ordinates:

Site Location Description:

The portal area contains the main entrance to the mine, the Procon shop and offices, the mine services (generators), diesel and gasoline tanks and the lower portal area (containing the 2 sprung buildings for water treatment and the Coverall).

Portal area is located in the Wolverine Creek drainage, and is located up slope of the creek itself. A temporary sump is in place to collect any pad run off to prevent sedimentation and contamination into the creek.

Weather Conditions:

Date	Weather Conditions	Temperature
28-Oct-08	Sunny in am, clouding over throughout the day, snowing in evening	-8
29-Oct-08	Sunny in am, clouding over throughout the day	-4
30-Oct-08	light snow all day, warm (relatively!)	-5
31-Oct-08	Cold, overcast, windy	-15
01-Nov-08	Broken overcast, no wind	-4
02-Nov-08	Snowing all day, windy at portal	-4
03-Nov-08	Broken overcast, light wind	-5

Part 2 – Site Assessment

Activity:

Portal Entrance: Multi-plate installation complete

Sprung Construction: Erection of sprung is ongoing, Sawmill Creek and Sprung rep on site; construction of the 2000 m^3 pond began Nov. 3

Superior Propane: Superior is installing a tank and pipeline to feed propane to the radiant heaters which will be installed in the Sprung structure, over the pond.

Pipeline: Sandale technician is on site to weld the 40ft lengths of pipe – insulation of the joints is conducted by YZC

Site Description: Work is ongoing

Assessed Risk: none

Photos Attached: Yes

Samples Taken: No

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Collection ditches to be installed in the spring

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor only for progress – no environmental risk is apparent

Monitoring Frequency: Daily

Reporting Requirements: Weekly

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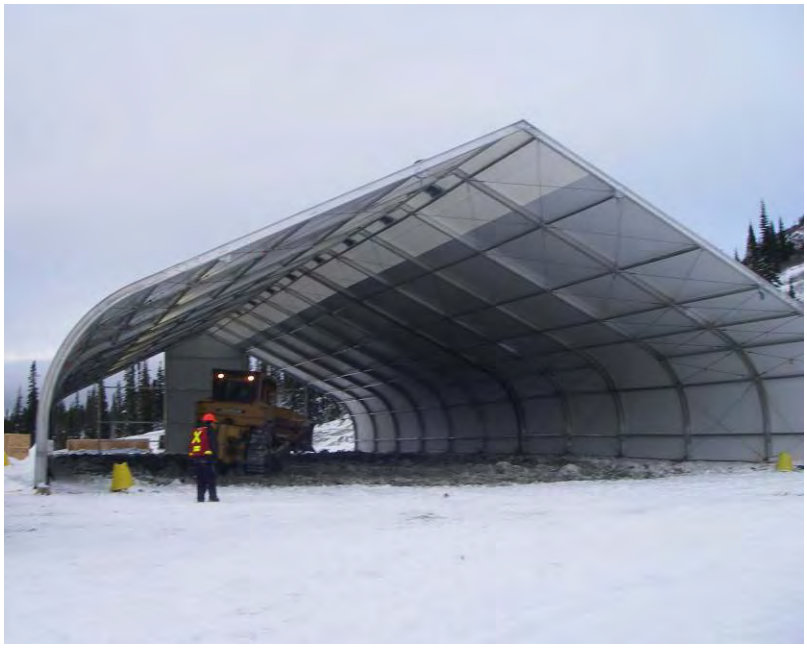
Wolverine Project
Environmental Inspection Form – Photos

10-29-08 Installation of the side panels – facing SE

10-29-08 Installation of the side panels in background, digging of the propane pipeline trench in foreground (with hoe) – facing NNW

10-30-08 Side panels nearing completion – facing SE

11-02-08 Installation of the back panels – facing SE



11-03-08 Beginning of the excavation of the 2000 m^3 sump

10-28-08 Pipeline in trench at lower portal – facing W

10-31-08 Pipeline installation at upper portal – facing S

11-03-08 Pipeline installation at upper portal – facing N

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 4 – November 10, 2008	Inspector(s): James Spencer
Site Name: Portal Area	Location/Co-ordinates:

Site Location Description:

The portal area contains the main entrance to the mine, the Procon shop and offices, the mine services (generators), diesel and gasoline tanks and the lower portal area (containing the 2 sprung buildings for water treatment and the Coverall).

Portal area is located in the Wolverine Creek drainage, and is located up slope of the creek itself. A temporary sump is in place to collect any pad run off to prevent sedimentation and contamination into the creek.

Weather Conditions:

Date	Weather Conditions	Temperature
04-Nov-08	Broken in morning overcast by late afternoon	-8
05-Nov-08	Overcast, foggy and light wind from the south	-12
06-Nov-08	Overcast, foggy in morning, clearing in afternoon	-8
07-Nov-08	Moderate snow most of day	-12
08-Nov-08	Sunny in morning, starting to cloud over in afternoon	-10
09-Nov-08	Sunny all day	-10
10-Nov-08	Sunny in morning, clouds in afternoon light snow	-14

Part 2 – Site Assessment

Activity:

Portal Services: Gensets, moved Nov 4-8, ongoing electrical at Gensets by Procon.

Sprung Construction: Main arches and fabric are up, Nov 4-5: North flat end installed, Nov 5-8: Pond excavation, Nov 8-10: South flat end is up and door is hung clean –up for one day

Superior Propane: Superior is in Nov 5th and starts hanging cables for heaters, Nov 7-10: Start hanging cable and heaters 12 of 18 hung and piped to main feed

Pipeline: Nov 4-5: Jordan and Jean welding labourers iinsulation and shrink wrap the pipe, Nov 6-8: Finish fusing from portal to the Sprung, insulation and shrink wrap on hold until Nov 18th when shrink wrap should arrive. Nov 8: Jordan helps with header..... need to complete header heat trace and insulation and raft and pump install. Want to have pond commissioned December 9th.

IEC: Nov 8 - 10: IEC strarts pulling cable from main gensets to lower portal and new sprung, heat trace feeds pulled, switch over power to new Genset location down to lower portal and to portal services, Distribution shack located at the new sprung, transformer installed 75 kVA at lower portal 30 kva at upper. Pump starters located. Run cable to Procon c-can, Genset work at exploration camp, panels up in new shed

Site Description: Work is ongoing

Assessed Risk: none

Photos Attached: Yes

Samples Taken: No

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Collection ditches to be installed in the spring
Mitigation Condition: N/A
Part 4 –Monitoring Requirements
Follow-up Monitoring: Monitor only for progress – no environmental risk is apparent
Monitoring Frequency: Daily
Reporting Requirements: Weekly

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

11-05-08 View of Elbow insulation kits and heat shrink, adjustments for kits required

11-07-08 6” HDPE being run behind the new Sprung- facing S

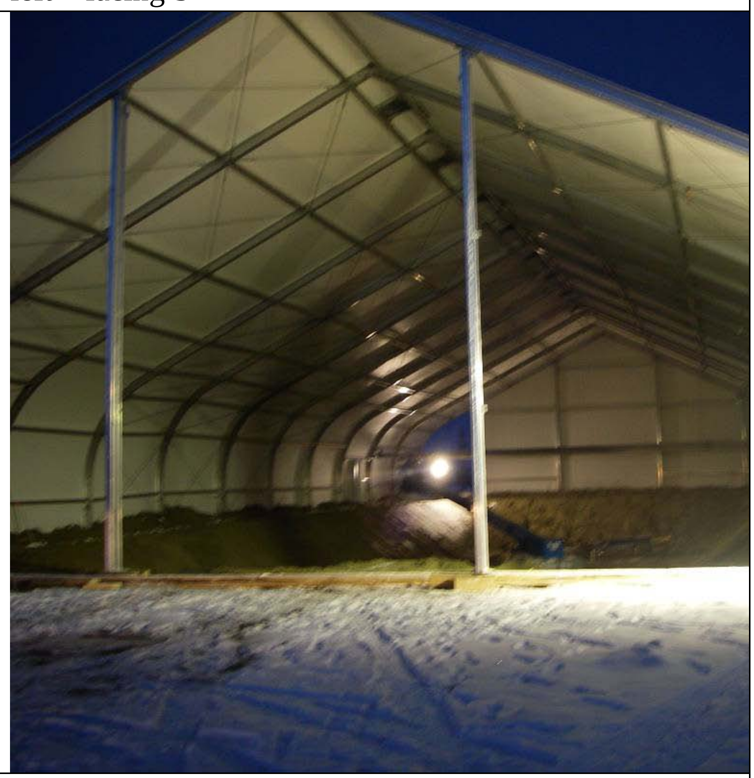
11-05-08 Flat end install North end – facing N

11-05-08 Pond excavation starts – facing E

11-07-08 Excavation of the 2000 m^3 sump – facing NW

11-08-08 Propane tank and vaporizer and pipeline to left – facing S

11-08-08 Superior hanging the first heater – facing N



11-09-08 Work on the South flat end , pond is dug , ramp left in for Superior access– facing N

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 11 – November 17, 2008	Inspector(s): James Spencer
Site Name: Portal Area	Location/Co-ordinates:

Site Location Description:

The upper portal area contains the main entrance to the mine, the Procon shop and offices, the mine services (generators), diesel and gasoline tanks as well as the new Settlement Pond #3. The lower portal area (containing the 2 sprung buildings for water treatment and the Coverall). T

Portal area is located in the Wolverine Creek drainage, and is located up slope of the creek itself.

Weather Conditions:

Date	Weather Conditions	Temperature
11-Nov-08	High overcast, light snow in the afternoon	-12
12-Nov-08	Cool morning, windy afternoon	-14
13-Nov-08	High overcast with some breaks	-13
14-Nov-08	Clear sky with wind	-14
15-Nov-08	Snowing all morning, clearing in afternoon	-7
16-Nov-08	Clear and sunny	-20

Part 2 – Site Assessment

Activity:

Portal Services: Ongoing electrical at Gensets by Procon.

Sprung Construction: Nov 11th Sprung crew is out, Nov.12-13th: John Salo pulls ramp and haul material. Nov 14 -17: Pond ready for lining and backfill, liner heating up and geotech staged in sprung

Temporary Sump: Nov 14: Decommission temporary sump, pull liner and fencing and backfill with material from settlement pond #3

Superior Propane: Nov 11: Superior hanging heaters connecting lines Nov.12-13th: Superior on hold for ramp pull, Nov 14 -16: complete hanging units and fire up all 18 heaters. Len out on Nov 17

Pipeline: On hold until materials arrive Nov 18th – heat shrink ; and Nov 22 – header parts and reducers

IEC: Nov 11-17: IEC installing the panels in the distribution shack, contactors for the thermostats, pump starters, connecting the heaters 95% complete, lights installed , finished work

Site Description: Work is ongoing

Assessed Risk: none

Photos Attached: Yes

Samples Taken: No

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Collection ditches to be installed in the spring

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor only for progress – no environmental risk is apparent

Monitoring Frequency: Daily

Reporting Requirements: Weekly

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

	
11-12-08 View of new Sprung installing door, temporary settlement pond in foreground with fencing (facing N)	11-12-08 6” HDPE and electrical run protective barricades at lower portal area (facing NW)
	
11-12-08 New location of fuel tanks and Gensets (facing S)	11-12-08 New location of fuel tanks and Gensets (facing W)

11-13-08 Pulling ramp and working on entrance for man-lift access– facing N

11-14-08 Backfilling the temporary sump – facing N

11-15-08 Sprung completed, lining of pond and internal piping to finish – facing S

11-14-08 Excavation of the 2000 m^3 sump pulling the ramp - facing E

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 18th-24th, 2008	Inspector(s): Jennie Gjertsen and Billie Maje
Site Name: Portal Area	Location/Co-ordinates:

Site Location Description:

The upper portal area contains the main entrance to the mine, the Procon shop and offices, the mine services (generators), diesel and gasoline tanks as well as the new Settlement Pond #3. The lower portal area (containing the 2 sprung buildings for water treatment and the Coverall). The Portal area is located in the Wolverine Creek drainage, and is located up slope of the creek itself.

Weather Conditions:

Date	Weather Conditions	Temperature
18-Nov-08	Sunny with some cloudy periods	-17
19-Nov-08	High overcast with strong winds	-25
20-Nov-08	High over cast with some breaks, strong winds	-18
21-Nov-08	Windy with heavy fog	-15
22-Nov-08	Clear	-12
23-Nov-08	Overcast with some snow showers	-8
24-Nov-08	Cloudy with breaks	-5

Part 2 – Site Assessment

Activity:

Portal Services: Ongoing electrical at Gensets by Procon.

Sprung Construction:

- Lined sump with geotextile (Nov 20th)
- Lined sump with enviroliner (Nov 23rd)
- Shed built and put over propane vapourizer
- Lock trench back fill to be completed

Pipeline: Insulation to be completed next week and the piping inside the building the following week

Site Description: Work is ongoing

Assessed Risk: none

Photos Attached: Yes (6)

Samples Taken: No

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Collection ditches to be installed in the spring

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor only for progress – no environmental risk is apparent

Monitoring Frequency: Daily

Reporting Requirements: Weekly

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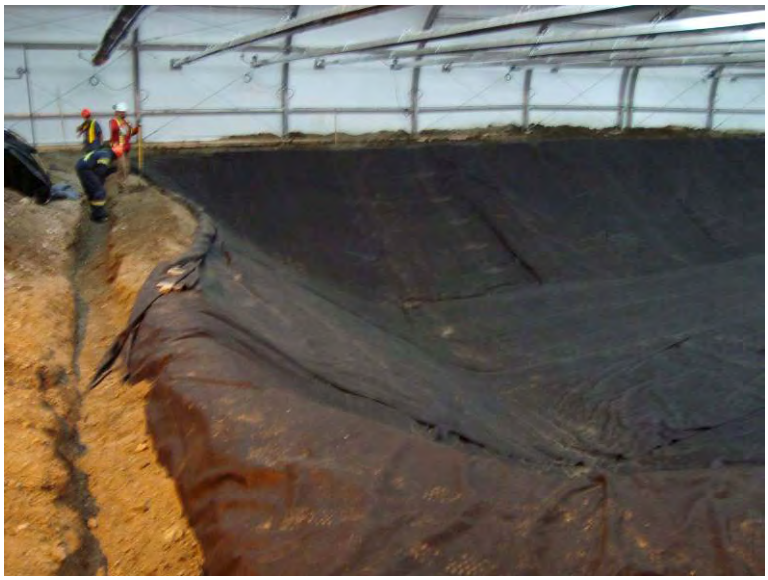
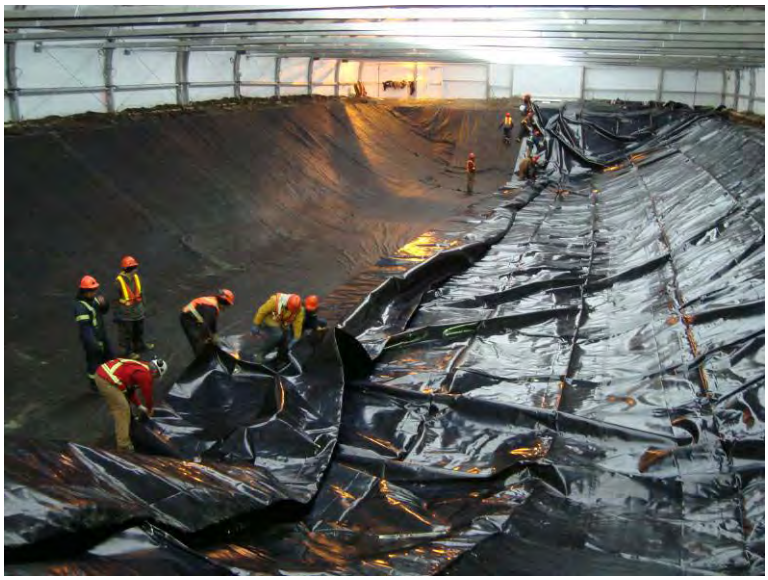
Wolverine Project
Environmental Inspection Form – Photos

	
11-23-08 Geotextile lined sump	11-23-08 Lock trenching geotextile before liner install
	
11-23-08 Rolling out Enviroliner	11-23-08 Enviroliner install

	
11-23-08 Enviroliner install	11-23-08 Finished liner install, still requires backfilling of lock trench
	
11-23-08 Propane vaporizer shed	11-23-08 Vapourizer shed install

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 25th-December 1st, 2008	Inspector(s): Jennie Gjertsen
Site Name: Portal Area	Location/Co-ordinates:

Site Location Description:

The upper portal area contains the main entrance to the mine, the Procon shop and offices, the mine services (generators), diesel and gasoline tanks as well as the new Settlement Pond #3. The lower portal area (containing the 2 sprung buildings for water treatment and the Coverall). The Portal area is located in the Wolverine Creek drainage, and is located up slope of the creek itself.

Weather Conditions:

Date	Weather Conditions	Temperature
25-Nov-08	Cloudy	-5
26-Nov-08	Clear	-8
27-Nov-08	Clear	-7
28-Nov-08	overcast	-4
29-Nov-08	overcast	-4
30-Nov-08	light snow	-5
1-Dec-08	heavy snow	-12

Part 2 – Site Assessment

Activity:

Portal Services:

- Electrical for services has been completed

Sprung Construction:

- Lock trench back fill has been completed
- Hole in liner was found, patch kit has been ordered

Pipeline:

- Insulation and piping inside the building to be completed this week

Site Description: Work is ongoing

Assessed Risk: none

Photos Attached: Yes (6)

Samples Taken: No

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Collection ditches to be installed in the spring

Mitigation Condition: N/A

Part 4 –Monitoring Requirements

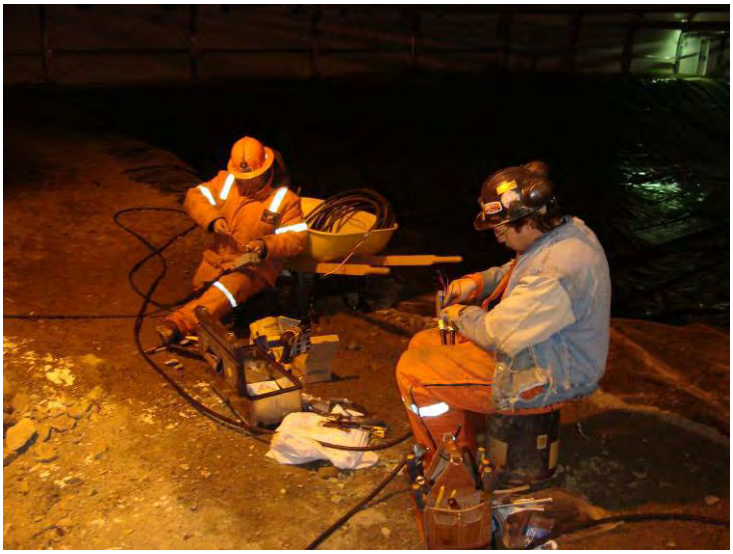
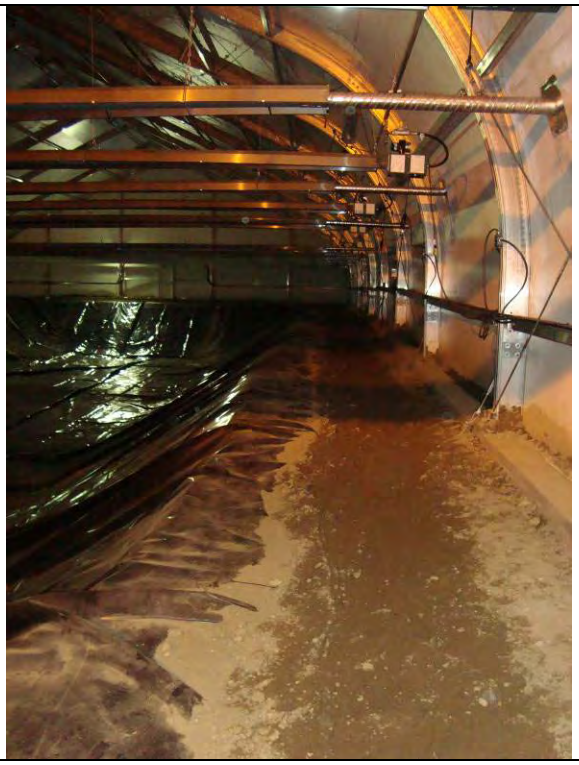
Follow-up Monitoring: Monitor only for progress – no environmental risk is apparent

Monitoring Frequency: Daily

Reporting Requirements: Weekly

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

	
11-26-08 Geotextile lined sump, incomplete locktrench	11-26-08 Geotextile lined sump, incomplete locktrench
	
12-01-08 Electrical work for outside sprung	12-01-08 Filled in lock trench

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: December 2 - December 22, 2008	Inspector(s): James Spencer
Site Name: Portal Area	Location/Co-ordinates:

Site Location Description:

The upper portal area contains the main entrance to the mine, the Procon shop and offices, the mine services (generators), diesel and gasoline tanks as well as the new Settlement Pond #3 (CPS). The lower portal area (containing the 2 sprung buildings for water treatment and the Coverall). The Portal area is located in the Wolverine Creek drainage, and is located up slope of the creek itself.

Weather Conditions:

02-Dec-08	Clear, windy	-15
03-Dec-08	Clear, windy, snow at night	-20
04-Dec-08	Heavy snow	-13
05-Dec-08	Light, high overcast	-5
06-Dec-08	High cloud in the morning, heavy snow in the afternoon	-4
07-Dec-08	Heavy snow all day	-8
08-Dec-08	Light snow	-22
09-Dec-08	Stormy, snowing major wind chill	-25
10-Dec-08	High over cast	-12
11-Dec-08	Sunny with some clouds	-11
12-Dec-08	Sunny and clear skies	-15
13-Dec-08	Sunny and clear skies	-31
14-Dec-08	Sunny and clear skies	-26
15-Dec-08	Sunny and clear skies	-20
16-Dec-08	Overcast with high winds	-21
17-Dec-08	Clear and sunny	-25
18-Dec-08	Clear and sunny	-35
19-Dec-08	Clear and sunny	-33
20-Dec-08	Clear and sunny	-30

Part 2 – Site Assessment

Activity:

Complete the connections from HDPE pipe to steel at the Pond #3 and lower portal

Dec 3-8: Procure materials, build stand and install and strap down header, penetrate pipe through east and north wall of Sprung, run pipe along inside of Sprung, weld short pieces to make connections to the HDPE pipe, started to install pipe at portal adit for Drill water return and UG discharge. Hole in liner repaired with 20:1 repair kit

Dec 10 - 16: Finish connecting pipes at the portal adit, heat trace and remove old insulation from existing pipe, splice in the heat trace, insulate and poly this line, weld pipe and elbow fitting. Make straight in connection at the lower portal to tie in new HDPE line, insulate and run new heat trace circuit, New heat trace circuit added to upper portal. Build bumpers for the raft and weld shackle and protect with 1" drillers hose. Launch Raft and attach header to raft. Build hoses and install ladder and silt curtain

Dec 17 – 22 : Work on the access walkway to the header for ferric access to the injector pump assembly. Get tie down ropes away from perimeter path of pond #3. Now for reporting requirements referred to as Collection Portal Sump (PCS)

Site Description: Work is 99% finished: need to install additional ladder, fire extinguisher and life ring….on order.
Assessed Risk: none
Photos Attached: Yes (6)
Samples Taken: No
Additional Information Attached: none
Part 3 –Mitigation Requirements
Mitigation Required: Excavate liner edge at the south end of the pond and raise the berm at the South end to increase holding capacity. Low spot is preventing maximum usage of space.
Mitigation Condition: N/A
Part 4 –Monitoring Requirements
Follow-up Monitoring: Usual network monitoring for water treatment
Monitoring Frequency: As required
Reporting Requirements: As required

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Wolverine Project
Environmental Inspection Form – Photos

12-05-08 Header Install and pipe penetration on East side of building

12-05-08 HDPE to Steel line connection outside Sprung for UG discharge and Mine Water Return

12-07-08 Header Install with Ferric Injection Splice

12-07-08 Liner puncture repair at Southwest corner of pond using 20:1 3M repair kit

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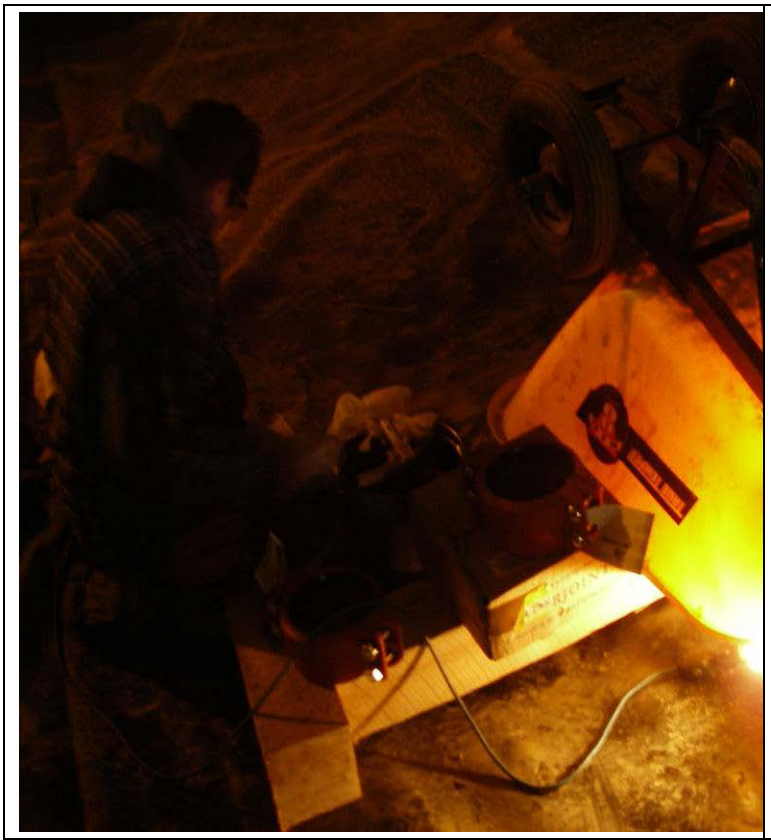
Wolverine Project
Environmental Inspection Form – Photos



12-08-08 Repair curing for 2 days at 20 deg. C

12-13-08 HDPE to Steel tie in at Lower Portal u/s of pump shack (facing NE)

12-13-08 Looking at Pond # 3 structure facing SE

12-13-08 Pond #3 1/8 full with drill contacted water, milky suspended sediment (facing N)

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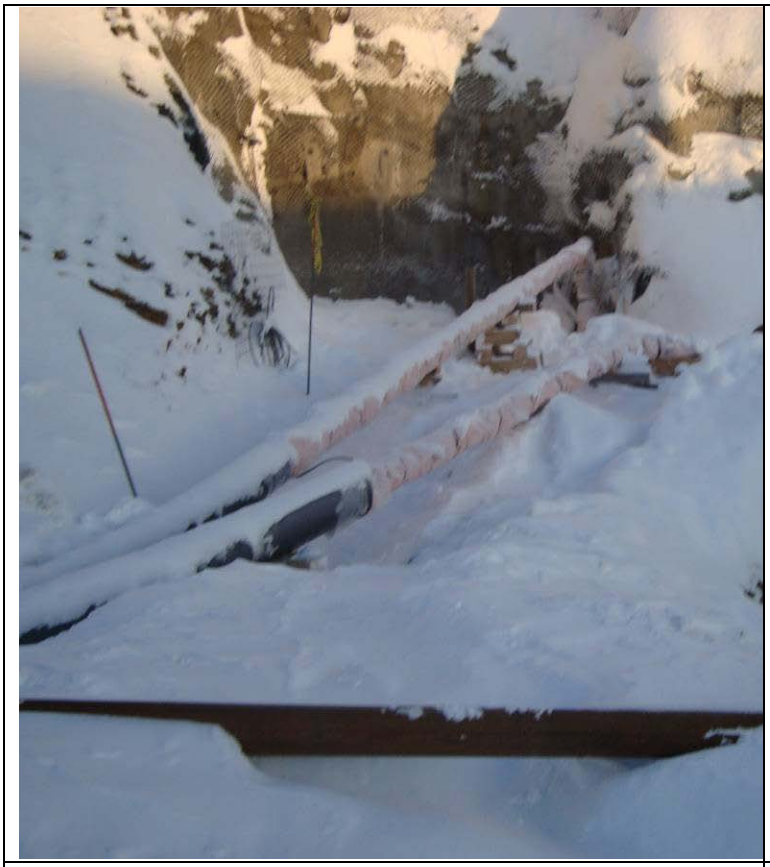
Wolverine Project
Environmental Inspection Form – Photos



12-13-08 Steel to HDPE connections at Portal adit above the multiplate (facing E)

12-13-08 Steel to HDPE connections at Portal adit adjacent to the multiplate (facing SW)

12-13-08 HDPE to Steel connection at Lower Portal (facing NE)

12-14-08 Raft Modifications using tubular steel and rubber drill hose

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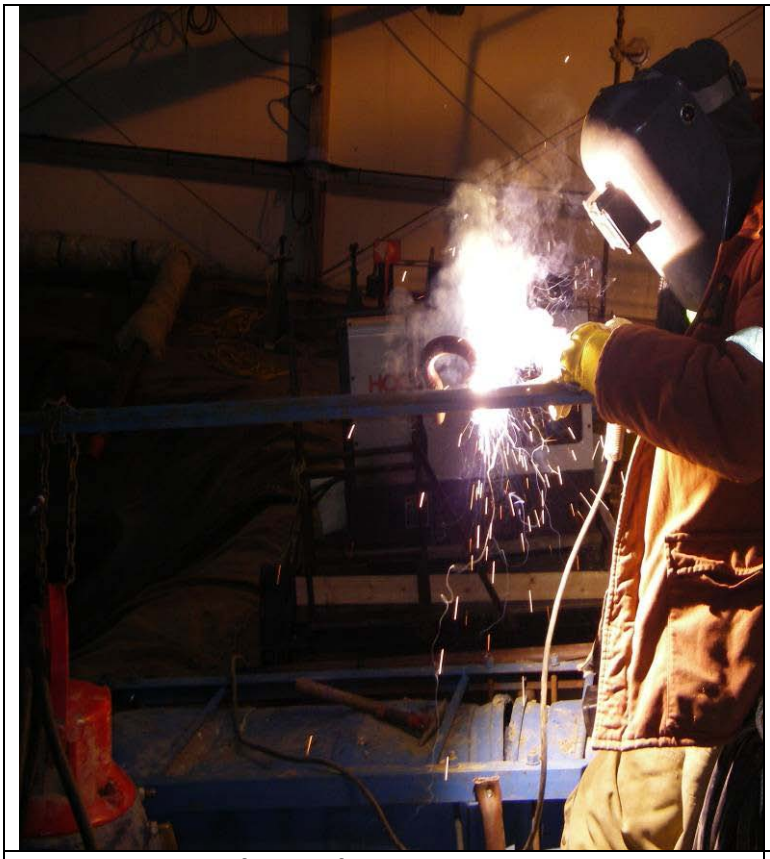
Wolverine Project
Environmental Inspection Form – Photos



12-15-08 08 Raft Modifications using tubular steel and rubber drill hose

12-20-08 Header install with hoses attached and ferric injector installed

12-20-08 Header install with hoses attached and ferric injector installed

Wolverine Project
Environmental Inspection Form

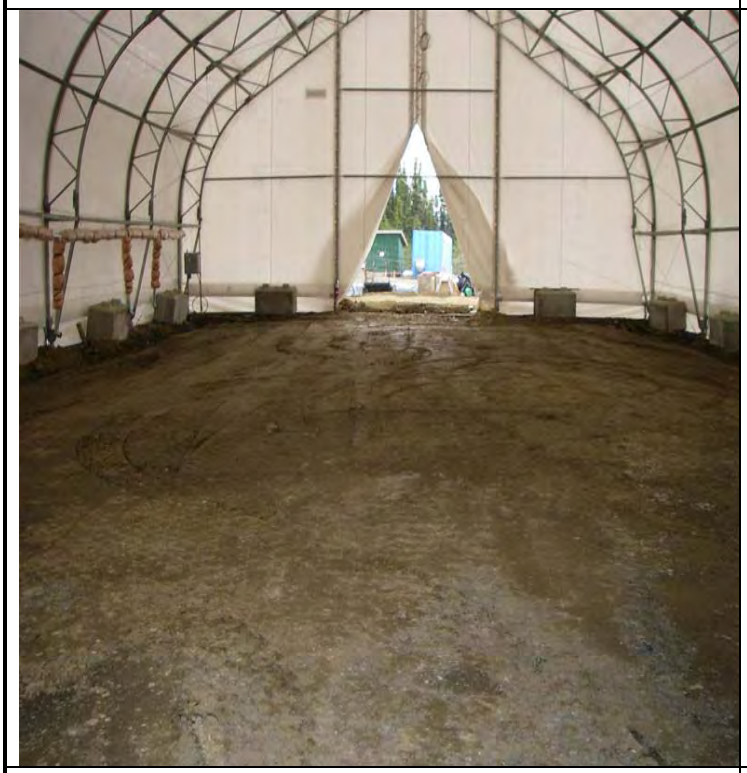
Part 1 – Site Description	
Date and Time: July 29– August 4th, 2008	Inspector(s): J.S.
Site Name: Coverall Dirty Sump (CDS)	Location/Co-ordinates: lower laydown area
Site Location Description: A settling pond built within a pre-existing coverall at the lower laydown area Flat low lying area collects some runoff	

Weather Conditions:

29-Jul-08	Showers and clouds	-4
30-Jul-08	Overcast and cool	0
31-Jul-08	Overcast	5
01-Aug-08	Overcast, rain at night	-2
02-Aug-08	Overcast in morning, sunny afternoon	-3
03-Aug-08	Sunny in morning, mixed cumulus clouds , windy in afternoon	-1
04-Aug-08	Sunny, few cumulus clouds	-5

Part 2 – Site Assessment
Activity: Fill in Sump to make room for storage
Site Description: Sump was built below water table and collecting groundwater. Not suitable for water treatment so must build up the grade and place material (approx 800m3) to level and surface the coverall
Assessed Risk: low
Photos Attached: Yes
Samples Taken: No
Additional Information Attached:
Part 3 –Mitigation Requirements
Mitigation Required: No
Mitigation Condition:
Part 4 –Monitoring Requirements
Follow-up Monitoring: Check that ground does not saturate
Monitoring Frequency: None required, Complete
Reporting Requirements: B-Licence

Wolverine Project
Environmental Inspection Form – Photos

Site Name: CDS	
	
08/04/08 CDS filled and coverall graded looking SW	

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: October 21st – 27h , 2008	Inspector(s): Jennie Gjertsen/Melissa Kirby
Site Name: Tailings Facility	Location/Co-ordinates:

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 2km of site scheduled for disturbance of some kind, with the pond itself being ~400m. Area is currently uncleared, and vegetation includes a thick mat or sphagnum and other mosses, willow bushes and some sparse pines. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
21-Oct-08	Clear most of day mix sun and flurries	-7
22-Oct-08	High over cast and very windy.	-8
23-Oct-08	Overcast,windy and snowy all day	-5
24-Oct-08	Overcast,windy and snowy all day	-4
25-Oct-08	Overcast and strong winds	-14
26-Oct-08	Heavy snow and very strong winds (25-30km/hr)	-16
27-Oct-08	Broken cloud and sun	-5

Part 2 – Site Assessment

Activity:

- Central ditching and finger ditching started October the 21st to drain the water from the area over the course of the winter (completed Oct 24th)
- A culvert was installed in the road at the south end to allow for drainage (Oct 22nd)
- A sediment control sump was dug at the south end, on the south side of the culvert (Oct 23rd)
- Work scheduled to start on Ditch A on October 28, 2008
- Work to commence on groundwater monitoring wells in the upcoming week

Site Description:

- Finger ditching and central ditching is complete. Ditching ranges from .5m-1.5m in depth
- Sediment control sump has been excavated
- No visible sediment is entering Go Creek, however water draining from fingers remains high in organic sediment
- Sediment control sump is glaciating as freezing temperatures continue, but seems to be effectively removing heavy sediment load

Assessed Risk: Low

Photos Attached: Tailings (11)

Samples Taken: none, however W16 (downstream of drainage) water quality samples were taken October 27th

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Further mitigation to be determined once Ditch A diverts the majority of water source, may want to make adjustments to the sediment control sump or install silt fencing once flow has subsided.

Mitigation Condition: fair, some sediment loading in water continues as work is completed

Part 4 –Monitoring Requirements
Follow-up Monitoring: Monitor for sediment drainage into the wetland area and into Go Creek, monitor groundwater monitoring well installation.
Monitoring Frequency: Daily during periods of work on site
Reporting Requirements: Weekly while construction/development continues

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
10/23/08 South end central drainage (facing North from lower road)	**10/23/08 Sediment control pool at south end of tailings area (facing south)**
	
10/23/08 Sediment control pool at south end of tailings area (facing North downstream of pool)	

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
10/24/08 Finger ditching (facing west from road)	**10/24/08 Finger ditching (facing west from road)**
	
10/24/08 sediment in water coming from southern culvert (downstream end)	**10/24/08 Sediment trapping in sediment control pool (facing north)**

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
10/24/08 Finger ditching	**10/24/08 Ditching (facing east)**
	
10/25/08 Upstream end of southern culvert (facing north)	**10/25/08 Downstream end of southern culvert (facing south)**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 1-3 , 2008	Inspector(s): Jennie Gjertsen/Melissa Kirby
Site Name: Tailings Facility	Location/Co-ordinates:

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 2km of site scheduled for disturbance of some kind, with the pond itself being ~400m. Area is currently uncleared, and vegetation includes a thick mat or sphagnum and other mosses, willow bushes and some sparse pines. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A.

Weather Conditions:

Date	Weather Conditions	Temperature (°C)
01-Nov-08	Broken overcast, no wind	-4
02-Nov-08	Snowing all day, windy at portal	-4
03-Nov-08	Broken overcast, light wind	-5

Part 2 – Site Assessment

Activity:

- Re-design of Ditch A had the construction crew on hold for the last week
- Mobilization of culverts to Ditch A began November 1
- Stripping of Ditch A (0+400 – 0+475) and tailings facility began November 2 and 3
- Ditch A stripping was complete on Nov. 3 and put on hold until further design drawings are received

Site Description:

- Finger ditching and central ditching is complete. Ditching ranges from .5m-1.5m in depth
- Sediment control sump has been excavated
- No visible sediment is entering Go Creek, however water draining from fingers remains high in organic sediment
- Sediment control sump is glaciating as freezing temperatures continue, but seems to be effectively removing heavy sediment load

Assessed Risk: Low

Photos Attached: Tailings

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Further mitigation to be determined once Ditch A diverts the majority of water source, may want to make adjustments to the sediment control sump or install silt fencing once flow has subsided

Mitigation Condition: fair

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor for sediment drainage into the wetland area and into Go Creek, monitor groundwater monitoring wells as per A-Licence (quarterly).

Monitoring Frequency: Daily during periods of work on site

Reporting Requirements: Weekly while construction/development continues

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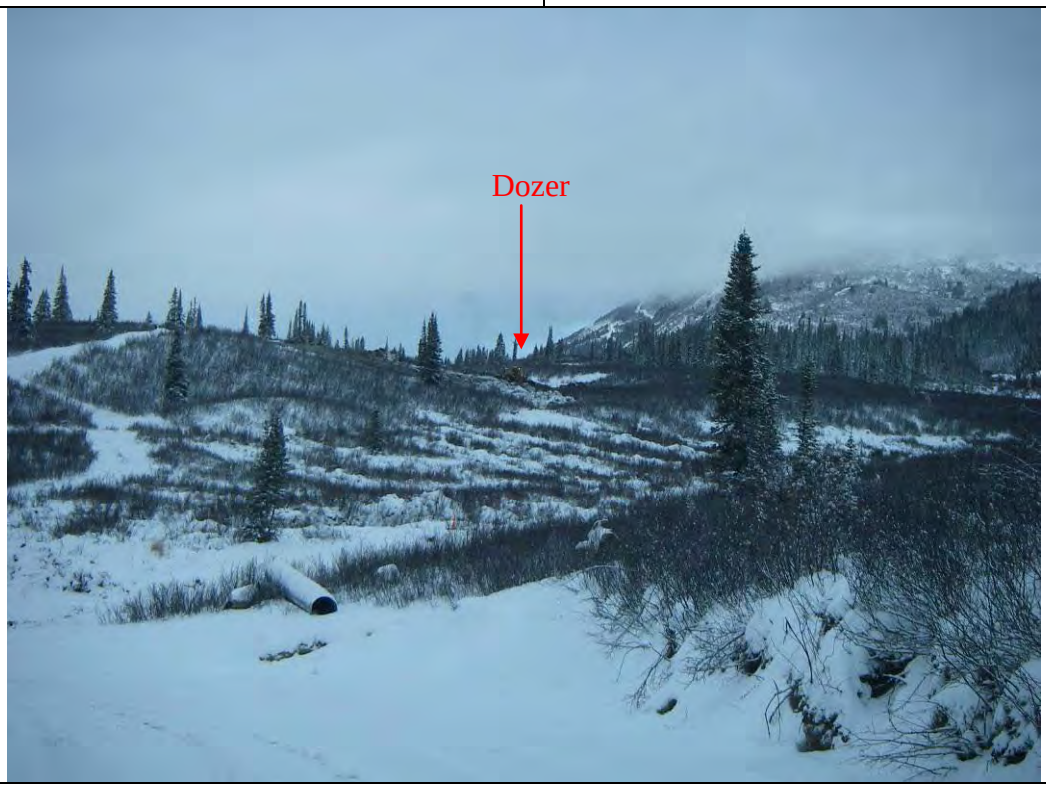
Wolverine Project
Environmental Inspection Form – Photos

	
11-01-08 Mobilization of culverts to lower extent of Ditch A - facing N	11-02-08 Stripping of Ditch A from 0+400 – 0+475 – facing N
	
11-02-08 Stripping of Ditch A from 0+400 – 0+475 – facing N	11-03-08 Stripping complete on Ditch A from 0+400 – 0+475 – facing NW

Wolverine Project
Environmental Inspection Form – Photos

11-03-08 Stripping complete on Ditch A from 0+400 – 0+475 – facing SW

11-02-08 Stripping of tailings facility, upstream side – facing NW



11-02-08 Stripping of tailings facility, upstream side – facing N

11-03-08 Stripping of tailings facility - facing W

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 4-10 , 2008	Inspector(s): James Spencer
Site Name: Tailings Facility	Location/Co-ordinates:

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 30 hectares of site scheduled for disturbance, with the pond itself being 25 hectares. Area is vegetation includes a thick mat or sphagnum and other mosses, willow bushes and some stands of Spruce and Balsam. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
04-Nov-08	Broken in morning overcast by late afternoon	-8
05-Nov-08	Overcast, foggy and light wind from the south	-12
06-Nov-08	Overcast, foggy in morning, clearing in afternoon	-8
07-Nov-08	Moderate snow most of day	-12
08-Nov-08	Sunny in morning, starting to cloud over in afternoon	-10
09-Nov-08	Sunny all day	-10
10-Nov-08	Sunny in morning, clouds in afternoon light snow	-14

Part 2 – Site Assessment

Activity:

- Re-design of Ditch A finally received on Nov 8, and staked out
- Organics windrowed along length of tailings valley bottom to be hauled
- Stripping of tailings organics Nov 4-9, Start hauling organics Nov 8 to south strippings location (30000m^3 in total will be sited here)
- Logging of tree stand on North-east bank Nov 8-9, approx 40 trees > 8" dbh (diameter at breast height)
- Organic Stockpile identified for Northern half of strippings (approx. 15000m^3 to be sited)

Site Description:

- Sediment control sump has been monitored daily and minimal sediment loading has been observed
- The stockpiles so far have very little woody debris but need to ensure it is crushed, lying flat and not an impediment to wildlife or the natural contours of the land
- Logged trees to be piled to prevent rotting

Assessed Risk: Low

Photos Attached: Tailings

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Further mitigation to be determined once Ditch A diverts the majority of water source, may want to make adjustments to the sediment control sump or install silt fencing once flow has subsided

Also will need to monitor the strippings piles for sediment control and may need to re-contour and seed in the spring. Contact RRDC re: tree harvesting.

Mitigation Condition: fair

Part 4 –Monitoring Requirements
Follow-up Monitoring: Monitor for sediment drainage into the wetland area and into Go Creek, monitor groundwater monitoring wells as per A-Licence (quarterly).
Monitoring Frequency: Daily during periods of work on site
Reporting Requirements: Weekly while construction/development continues

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
11/07/08 Road access towards north end of tailings, 850 hoe casting strippings (facing N)	**11/07/08 Stripping west side of Tailings, building windrows for hauling (facing NW)**
	
11/07/08 Windrowed stippings at valley bottom for hauling to organic stockpiles	**11/07/08 Sediment control pool at south end of tailings area, water beneath ice running clear (facing south)**

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
11/09/08 Stand of trees on north east bank (facing NE)	**11/09/08 Southern organic stockpile to hold approx 30000m3 (facing NE)**
	
11/10/08 Logged stand of trees on north east bank (facing NE)	**11/10/08 Sediment trapping in sediment control pool (facing SW)**

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Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 11-17 , 2008	Inspector(s): James Spencer
Site Name: Tailings Facility	Location/Co-ordinates:

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 30 hectares of site scheduled for disturbance, with the pond itself being 25 hectares. Vegetated area includes a thick mat of sphagnum and other mosses, willow bushes and some stands of Spruce and Balsam. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
11-Nov-08	High overcast, light snow in the afternoon	-12
12-Nov-08	Cool morning, windy afternoon	-14
13-Nov-08	High overcast with some breaks	-13
14-Nov-08	Clear sky with wind	-14
15-Nov-08	Snowing all morning, clearing in afternoon	-7
16-Nov-08	Clear and sunny	-20

Part 2 – Site Assessment

Activity:

- Organics windrowed along length of tailings valley bottom to be hauled
- Stripping of tailings organics Nov 11-17, continue hauling to south strippings location (30000m^3 in total will be sited here)
- Hauling of strippings to Northern stockpile location
- Organic Stockpile for Northern half of strippings flagged and expanded Nov 16 (approx. 15000m^3 to be sited)

Site Description:

- Sediment control sump has been monitored daily and minimal sediment loading has been observed
- The stockpiles so far have very little woody debris but need to ensure it is crushed, lying flat and not an impediment to wildlife or the natural contours of the land
- Logged trees to be piled to prevent rotting
- Ensure that limits for the Northern Stockpile are adhered to as proximity to Go Creek is a concern

Assessed Risk: Low

Photos Attached: 9 photos

Samples Taken: none

Additional Information Attached: none.

Part 3 –Mitigation Requirements

Mitigation Required: Further mitigation to be determined once Ditch A diverts the majority of water source, may want to make adjustments to the sediment control sump or install silt fencing once flow has subsided

Also will need to monitor the strippings piles for sediment control and may need to re-contour and seed in the spring. Contact RRDC re: tree harvesting.

Mitigation Condition: fair

Part 4 –Monitoring Requirements
Follow-up Monitoring: Monitor for sediment drainage into the wetland area and into Go Creek, monitor groundwater monitoring wells as per A-Licence (quarterly). Also monitor Ditch A when water is diverted to this structure
Monitoring Frequency: Daily during periods of work on site
Reporting Requirements: Weekly while construction/development continues

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
11/11/08 Road access towards north end of tailings (facing SE)	**11/11/08 Northern Strippings location west side of Tailings, (facing NW)**
	
11/15/08 Windrowed stippings at valley bottom for hauling to organic stockpiles, 850 Hoe in background starting on Ditch A (facing NE)	**11/16/08 Sediment control pool at south end of tailings area (facing SW)**

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
11/16/08 Strippings being hauled from West bank of Tailings to Northern Stockpile (facing SE)	**11/16/08 Northern organic stockpile to hold approx 15000m3. Dozer working the pile for dumping (facing SE)**
	
11/16/08 Ditch A in background strippings being loaded in foreground (facing NE)	**11/16/08 Southern Stockpile area (facing SW)**

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings

11/16/08 Overall layout of Tailings, Ditch A work to far right, Northern Stockpile hauling in center background with Northern Stockpile hauling in foreground to the left. Notice windrows of strippings (facing SE)

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 18th - 24th, 2008	Inspector(s): Jennie Gjertsen and Billie Maje
Site Name: Tailings Facility	Location/Co-ordinates:

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 30 hectares of site scheduled for disturbance, with the pond itself being 25 hectares. Vegetated area includes a thick mat of sphagnum and other mosses, willow bushes and some stands of Spruce and Balsam. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
18-Nov-08	Sunny with some cloudy periods	-17
19-Nov-08	High overcast with strong winds	-25
20-Nov-08	High over cast with some breaks, strong winds	-18
21-Nov-08	Windy with heavy fog	-15
22-Nov-08	Clear	-12
23-Nov-08	Overcast with some snow showers	-8
24-Nov-08	Cloudy with breaks	-5

Part 2 – Site Assessment

Activity:

- Load and haul of strippings to southern stockpile
- Southern stockpile was surveyed to determine size and insert on area maps

Site Description:

- Sediment control sump shows minimal sediment loading
- 50% complete tailings stripping

Assessed Risk: Low

Photos Attached: 4 photos

Samples Taken: none

Additional Information Attached: none.

Part 3 –Mitigation Requirements

Mitigation Required:

- Ensure stockpiles are crushed, lying flat and not an impediment to wildlife or the natural contours of the land
- Logged trees to be piled to prevent rotting
- Ensure that limits for the Northern Stockpile are adhered to, due to proximity to Go Creek
- Determine further mitigation once Ditch A diverts the majority of the water source
- Monitor stripping piles for sediment control and determine need to re-contour and seed in the spring.

Mitigation Condition: good

Part 4 –Monitoring Requirements
Follow-up Monitoring: Monitor for sediment drainage into the wetland area and into Go Creek, monitor groundwater monitoring wells as per A-Licence (quarterly). Monitor Ditch A once water is diverted.
Monitoring Frequency: Daily during periods of work on site
Reporting Requirements: Weekly while construction/development continues

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
11/21/08 Hoe piling organics for hauling (facing South)	**11/21/08 South strippings stockpile (facing SW)**
	
11/22/08 Loading of rock trucks for organics haul (facing West)	**11/22/08 Left side of picture showing loading, haul road along right hand side (facing SE)**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 25th – December 1st, 2008	Inspector(s): Jennie Gjertsen
Site Name: Tailings Facility	Location/Co-ordinates:

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 30 hectares of site scheduled for disturbance, with the pond itself being 25 hectares. Vegetated area includes a thick mat of sphagnum and other mosses, willow bushes and some stands of Spruce and Balsam. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
25-Nov-08	Cloudy	-5
26-Nov-08	Clear	-8
27-Nov-08	Clear	-7
28-Nov-08	Overcast	-4
29-Nov-08	Overcast	-4
30-Nov-08	light snow	-5
1-Dec-08	heavy snow	-12

Part 2 – Site Assessment

Activity:

- Load and haul of strippings to southern and northern stockpile
- Northern stockpile extended along toe of slope and a third site was proposed
- Tailings access road was started (stripping and clearing) at North end of tailings to allow for construction access from the Arctic camp to Ditch A
- Tailings access road was started at the southern end (stripping and clearing)

Site Description:

- 75% complete tailings stripping

Assessed Risk: Low

Photos Attached: 8 photos

Samples Taken: none

Additional Information Attached: none.

Part 3 –Mitigation Requirements

Mitigation Required:

- Ensure stockpiles are crushed, lying flat and not an impediment to wildlife or the natural contours of the land, logged trees to be piled to prevent rotting
- Ensure that limits for the Northern Stockpile are adhered to, due to proximity to Go Creek
- Determine further mitigation once Ditch A diverts the majority of the water source
- Monitor stripping piles for sediment control and determine need to re-contour and seed in the spring.

Mitigation Condition: good

Part 4 –Monitoring Requirements
Follow-up Monitoring: Monitor for sediment drainage into the wetland area and into Go Creek, monitor groundwater monitoring wells as per A-Licence (quarterly). Monitor Ditch A once water is diverted.
Monitoring Frequency: Daily during periods of work on site
Reporting Requirements: Weekly while construction/development continues

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
11/27/08 Flagging showing alignment of access road into the tailings from south (facing SE)	**11/27/08 North strippings stockpile (facing S)**
	
11/29/08 Loading of rock trucks for organics haul (facing NW)	**11/29/08 Northern Ditch A access road from Arctic Camp (facing S)**

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
11/29/08 Stripping of southern tailings access road (facing SE)	**11/30/08 Culverts where proposed 3rd stockpile location if needed (facing S)**
	
12/01/08 Northern access road to ditch A (facing NE)	**12/01/08 Loading and hauling of organics to Northern stockpile (facing SW)**

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: December 2nd –December 8th, 2008	Inspector(s): Jennie Gjertsen
Site Name: Tailings Facility	Location/Co-ordinates:

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 30 hectares of site scheduled for disturbance, with the pond itself being 25 hectares. Vegetated area includes a thick mat of sphagnum and other mosses, willow bushes and some stands of Spruce and Balsam. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
2-Dec-08	Clear, windy	-15
3-Dec-08	Clear, windy, snow at night	-20
4-Dec-08	Heavy snow	-13
5-Dec-08	Light, high overcast	-5
6-Dec-08	High cloud in the morning, heavy snow in the afternoon	-4
7-Dec-08	Heavy snow all day	-8
8-Dec-08	Light snow, then clearing	-15

Part 2 – Site Assessment

Activity:

- Load and haul of strippings to northern organic stockpile (N1)
- A third stockpile (N2) was flagged just north of the original northern stockpile, and load and haul continued to that location
- Tailings access road was started at the southern end (stripping and clearing) to allow access to the seepage dam location (23+000 to 23+800)

Site Description:

- 85% complete tailings stripping

Assessed Risk: Low

Photos Attached: 7 photos

Samples Taken: none

Additional Information Attached: none.

Part 3 –Mitigation Requirements

Mitigation Required:

- Ensure stockpiles are crushed, lying flat and not an impediment to wildlife or the natural contours of the land, logged trees to be piled to prevent rotting
- Ensure that limits for the Northern Stockpiles are adhered to, due to proximity to Go Creek
- Determine further mitigation once Ditch A diverts the majority of the water source
- Monitor stripping piles for sediment control and determine need to re-contour and seed in the spring
- No more work is to be done to the access roads into the tailings until the YES plans are approved

Mitigation Condition: good
Part 4 –Monitoring Requirements
Follow-up Monitoring: Monitor for sediment drainage into the wetland area and into Go Creek, monitor groundwater monitoring wells as per A-Licence (quarterly). Monitor Ditch A once water is diverted.
Monitoring Frequency: Daily during periods of work on site
Reporting Requirements: Weekly while construction/development continues

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
12/02/08 Load and haul for organics haul to north stockpile (facing NW)	**12/02/08 Construction access road to Ditch A (facing S)**
	
12/02/08 Clearing for southern access road 23+000-23+800 (facing NW)	**12/02/08 Stockpile N1 (facing S)**

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Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
12/06/08 Third stockpile for organics (facing N) Arctic construction camp in back right	**12/06/08 southern access road (facing NW)**
	
12/06/08 southern access road (facing NW)	

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: December 8 –December 22, 2008	Inspector(s): Jennie Gjertsen
Site Name: Tailings Facility	Location/Co-ordinates:

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 30 hectares of site scheduled for disturbance, with the pond itself being 25 hectares. Vegetated area includes a thick mat of sphagnum and other mosses, willow bushes and some stands of Spruce and Balsam. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A.

Weather Conditions:

Date	Weather conditions	avg. daily temp.
09-Dec-08	Stormy, snowing major wind chill	-25
10-Dec-08	High over cast	-12
11-Dec-08	Sunny with some clouds	-11
12-Dec-08	Sunny and clear skies	-15
13-Dec-08	Sunny and clear skies	-31
14-Dec-08	Sunny and clear skies	-26
15-Dec-08	Sunny and clear skies	-20
16-Dec-08	Overcast with high winds	-21
17-Dec-08	Clear and sunny	-25
18-Dec-08	Clear and sunny	-35
19-Dec-08	Clear and sunny	-33
20-Dec-08	Clear and sunny	-30

Part 2 – Site Assessment

Activity:

Dec 8-22

- Load and haul of strippings to northern organic stockpile
- Pushed out northern stockpile area towards area C at the North west corner of the tailings area just south of the airstrip (Dec 4), pushed out slightly farther on Dec 11 area not required
- Added more rip rap to sediment stilling basin at end of Ditch A as per Matthew Jenner's request
- New Alignment of Access road, previously referred to as Tailings Access Road put on hold until final design for road alignment around tailings area
- Strippings haulage finished Dec 16, De-mobilize
- Trees for Ross River Denna ready for pick-up

Site Description:

- 98% complete tailings stripping. Some small areas to hit in spring

Assessed Risk: Low

Photos Attached: Yes

Samples Taken: none

Additional Information Attached: Sketch of extension.

Part 3 –Mitigation Requirements

Mitigation Required: - Determine further mitigation once Ditch A diverts the majority of the water source - Monitor stripping piles for sediment control and determine need to re-contour and seed in the spring
Mitigation Condition: good
Part 4 –Monitoring Requirements
Follow-up Monitoring: Monitor for sediment drainage into the wetland area and into Go Creek, monitor groundwater monitoring wells as per A-Licence (quarterly). Monitor Ditch A in spring.
Monitoring Frequency: Daily when work re-commences in New year
Reporting Requirements: Weekly when construction/development commences

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings	
	
12/14/08 Load and haul for organics haul from basin to stockpile area C (Facing W).	**12/14/08 Looking at Organics extension from Access road re-alignment. (Facing ESE)**
	
12/14/08 Looking at Organic Stockpile area C (Facing W).	**12/15/08 Tailings Basin completely stripped (Facing N)**

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Tailings

12/15/08 End of Northern Stockpile Limit at location C, extended Dec 11, 2008. Slopes will be rounded slightly and sloped back. (Facing N)

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 12-17, 2008	Inspector(s): Billie Maje/James Spencer
Site Name: Ditch A	Location/Co-ordinates: N 6808908 E 442178

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 30 hectares of site scheduled for disturbance, with the pond itself being 25 hectares. Vegetation includes a thick mat of sphagnum and other mosses, willow bushes and some stands of Spruce and Balsam. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A. Ditch A runs in a NE to SW direction and will capture runoff from contacting the tailings facility

Weather Conditions:

Date	Weather conditions	avg. daily temp.
12-Nov-08	Cool, clear morning, windy afternoon	-14
13-Nov-08	High overcast with some breaks	-13
14-Nov-08	Clear sky with high winds	-14
15-Nov-08	Snowing all day, clearing in the afternoon	-13
16-Nov-08	Sunny all day	-14
17-Nov-08	Clear with some cloud	-22
18-Nov-08		-

Part 2 – Site Assessment

Activity:

- Re-design of Ditch A received on Nov 8, and staked out
- 850 Hoe has been excavating and shaping the ditch 0+000m to 0+225m
- The D9 CAT has been moving dirt for the larger cuts to get down to grade
- All material stockpiled to be used for Dam construction
- Strippings removed and stockpiled at the Northern Stockpile location

Site Description:

- Ditch A runs from 0+000m to 0+500m and will be an open ditch from 0+000m to 0+225m @ a - 0.5% grade. From 0+225m to 0+500m the ditch wil be culverted using an 800mm CSP running at -8.2%. The final 50 m running into the creek will grade break to -0.45% and a stilling basin built to minimize sedimentation of Go Creek

Assessed Risk: Low

Photos Attached: 8

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Further mitigation to be determined once Ditch A is complete and diverts the majority of water source, will need to monitor closely as work daylights at Go Creek and stilling basin is built.

Mitigation Condition: fair

Part 4 –Monitoring Requirements

Follow-up Monitoring: Monitor for sediment drainage into Go Creek,
Monitoring Frequency: Daily during the construction of Ditches A and B
Reporting Requirements: Weekly while construction/development continues

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Ditch A	
	
11/15/08 The start of ditch A 0+000m. The main water course still runs down the center line of the Tailings. (facing NE)	**11/15/08 Rough grading of ditch A at 0+125m (facing SW)**
	
11/15/08 Rough grading of ditch A at 0+150m (facing SW)	**11/16/08 View of Ditch A work up to 0+200m, large piles stockpiled for dam material (facing W)**

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Ditch A	
	
11/16/08 850 Hoe working on fine ditch work at 0+050m (facing NE)	**11/17/08 Ditch A rough grading up to 0+225m (facing W)**

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 18th-24th , 2008	Inspector(s): Billie Maje/Jennie Gjertsen
Site Name: Ditch A	Location/Co-ordinates: N 6808908 E 442178

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 30 hectares of site scheduled for disturbance, with the pond itself being 25 hectares. Vegetation includes a thick mat of sphagnum and other mosses, willow bushes and some stands of Spruce and Balsam. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A. Ditch A runs in a NE to SW direction and will capture runoff from contacting the tailings facility

Weather Conditions:

Date	Weather conditions	avg. daily temp.
18-Nov-08	Sunny with some cloudy periods	-17
19-Nov-08	High overcast with strong winds	-25
20-Nov-08	High over cast with some breaks, strong winds	-18
21-Nov-08	Windy with heavy fog	-15
22-Nov-08	Clear	-12
23-Nov-08	Overcast with some snow showers	-8
24-Nov-08	Cloudy with breaks	-5

Part 2 – Site Assessment

Activity:

- Ditch A complete from 0+000m to 0+200m (Nov 21st)
- Stilling basin for SW end started and completed (Nov 22nd and 23rd). An area of 25m by 25m for the stilling basin was cleared with organics moved to northern stockpile. Ground was levelled and geotextile was placed. 3-6 inch cobble was placed on top of the geotextile and surrounding the area in a berm. Larger rip rap was used to build up the perimeter and dispersed throughout.
- Culvert sections on site (Nov 23rd)
- Ditching for culvert install at stilling basin end commences (Nov 24th)
- Access road from Arctic camp to Ditch A for culvert install commenced (Nov 23rd)

Site Description:

- Ditch A runs from 0+000m to 0+500m and will be an open ditch from 0+000m to 0+225m @ a - 0.5% grade. From 0+225m to 0+500m the ditch is to be culverted using an 800mm CSP running at -8.2%. The final 50 m running into the creek will grade break to -0.45% and a stilling basin built to reduce water flow speed and prevent erosion of soils into Go Creek

Assessed Risk: Low

Photos Attached: 8

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Further mitigation to be determined once Ditch A is complete and diverts the majority of water source, will need to monitor closely as water flow starts going through ditch A towards Go Creek.

Mitigation Condition: Good

Part 4 –Monitoring Requirements
Follow-up Monitoring: Monitor for sediment drainage into Go Creek
Monitoring Frequency: Daily during the construction
Reporting Requirements: Weekly while construction/development continues

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Ditch A	
	
11/21/08 The completion of ditch A 0+000m to 0+200. The main water course still runs down the center line of the Tailings. (facing SW)	**11/22/08 Initial clearing of stilling basin at the SW end of Ditch A. (facing SW)**
	
11/23/08 3-6 inch cobble overlaying geotextile for stilling basin. (facing N)	**11/23/08 3-6 inch cobble overlaying geotextile for stilling basin. (facing N)**

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Ditch A	
	
11/23/08 Stakes on bank indicating where culvert will enter the stilling basin (facing E)	**11/24/08 Start of ditching for culvert install at SW end of Ditch A (facing W)**
	
11/24/08 Completed stilling basin (facing N)	**11/24/08 Start of ditch A access road from Arctic camp approx. 200m (Facing S)**

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: November 25th-December 1st , 2008	Inspector(s): Jennie Gjertsen
Site Name: Ditch A	Location/Co-ordinates: N 6808908 E 442178

Site Location Description:

Large valley that will be the site of the future tailings facility. The entire tailings area covers approximately 30 hectares of site scheduled for disturbance, with the pond itself being 25 hectares. Vegetation includes a thick mat of sphagnum and other mosses, willow bushes and some stands of Spruce and Balsam. An ephemeral creek runs through the low-lying area and is scheduled to be diverted from the area and into Go Creek with the completion of ditch A. Ditch A runs in a NE to SW direction and will capture runoff from contacting the tailings facility

Weather Conditions:

Date	Weather conditions	avg. daily temp.
25-Nov-08	Cloudy	-5
26-Nov-08	Clear	-8
27-Nov-08	Clear	-7
28-Nov-08	Overcast	-4
29-Nov-08	Overcast	-4
30-Nov-08	light snow	-5
1-Dec-08	heavy snow	-12

Part 2 – Site Assessment

Activity:

Completion of culvert ditching and install (November 30th)

Site Description:

- Ditch A runs from 0+000m to 0+500m and is an open ditch from 0+000m to 0+225m at a - 0.5% grade. From 0+225m to 0+500m the ditch is now culverted using an 800mm CSP running at -8.2%. The final 50 m is at -0.45% and a stilling basin has been built to reduce water flow speed and prevent erosion of soils into Go Creek
- Ditch will not be complete until more work has been done to the stilling basin and wildlife protection measures have been put in place at the openings of the culvert

Assessed Risk: Low

Photos Attached: 8

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Further mitigation to be determined once Ditch A is complete and diverts the majority of water source, will need to monitor closely as water flow starts going through ditch A towards Go Creek.

Mitigation Condition: Good

Part 4 –Monitoring Requirements

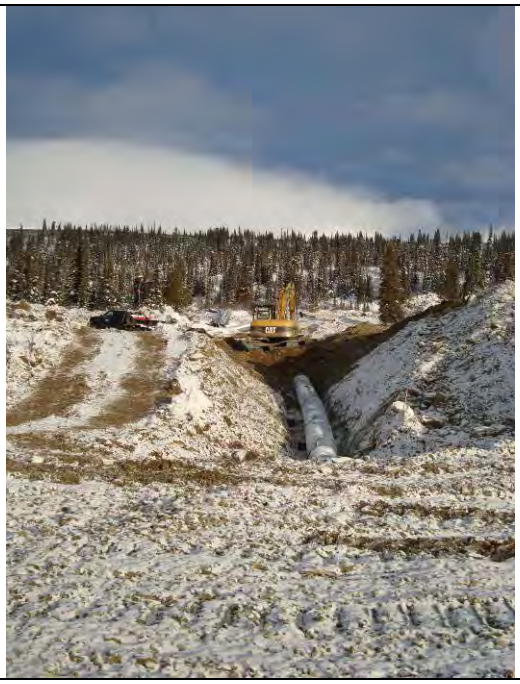
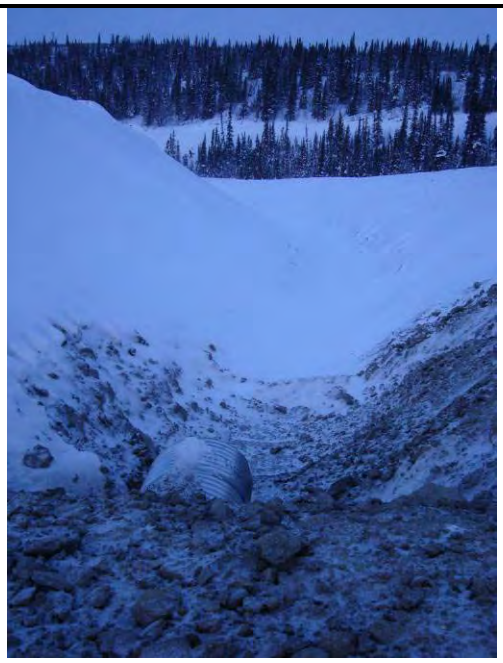
Follow-up Monitoring: Monitor for sediment drainage into Go Creek

Monitoring Frequency: Daily during the construction

Reporting Requirements: Weekly while construction/development continues

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: Ditch A	
	
11/27/08 Ditching and culvert installation (facing E)	**11/27/08 Ditching and culvert installation (facing E)**
	
11/2708 Completed stilling basin with culvert opening (Facing SW)	**12/01/08 NE culvert opening (upslope end) from open ditch (Facing E)**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: April 22-28,2008	Inspector(s): J.S.
Site Name: WRP	Location/Co-ordinates: Water at north end of pad
Site Location Description: Approximately 250m3 area built out of the WRP and bermed with a large earthen/clay dyke to contain water. Used as contingency for water storage. Ore and waste rock piled ~100' high and very steep (1.3:1) to south end. Liner and clay lined sides and bottom.	
Weather Conditions: Still 2-3' snow but surface melt starting at lower elevations.	
Part 2 – Site Assessment	
Activity: Monitoring started as we built the earthen Dam to separate ore impacted water from unimpacted run-off	
Site Description: Surface melt continues. Levels rising in pond. About 1m freeboard at the WRP on 26th	
Assessed Risk: Med	
Photos Attached: WRP	
Samples Taken: Yes, Sampled on April 28th	
Additional Information Attached:	
Part 3 –Mitigation Requirements	
Mitigation Required: Pump out water to water truck and to ponds for treatment if test results show water is contaminated. If water meets discharge requirements then we will discharge to the vegetation over the western edge of the WRP.	
Mitigation Condition: F	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Watch for slumping of earthen dyke and watch water levels	
Monitoring Frequency: Daily, during rain events or when mitigation applied	
Reporting Requirements: QMLU-0006, QZ01-051	

Wolverine Project

Environmental Inspection Form – Photos

Site Name: WRP	
	
04/24/08 WRP snow clearing for berm placement	**04/24/08 WRP snow clearing for berm placement**
	
04/24/08 WRP berm being compacted and shaped	**04/24/08 WRP berm being compacted and shaped**

Wolverine Project

Environmental Inspection Form – Photos

Site Name: WRP	
	
04/24/08 WRP berm building	**04/28/08 WRP berm complete separating Impacted and non – impacted water**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: April 29- May 5, 2008	Inspector(s): J.S.
Site Name: WRP	Location/Co-ordinates: Water at north end of pad
Site Location Description: Approximately 250m3 area built out of the WRP and bermed with a large earthen/clay dyke to contain water. Used as contingency for water storage. Ore and waste rock piled ~100' high and very steep (1.3:1) to south end. Liner and clay lined sides and bottom.	
Weather Conditions: Still 2' snow in areas, down to earth where disturbed	
Part 2 – Site Assessment	
Activity: Monitoring started as we built the earthen Dam to separate ore impacted water from unimpacted run-off	
Site Description: Surface melt continues. Levels rising in pond. About 0.75m freeboard at the WRP on May 5th	
Assessed Risk: Low	
Photos Attached: WRP	
Samples Taken: Yes, Sampled on May 5th from north end of berm (WRSS1b) to assess if water is contaminated	
Additional Information Attached: Results from April 28 (WRSS) show TSS and Se over limits Shortcut to L624317.lnk	
Part 3 –Mitigation Requirements	
Mitigation Required: Monitor levels….if critical will pump out water from WRSS to water truck and to PDS for treatment. For WRSS-1b If water meets discharge requirements then we will discharge to the vegetation over the western edge of the WRP if not we will truck to PDS for treatment.	
Mitigation Condition: F	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Watch for slumping of earthen dyke and watch water levels	
Monitoring Frequency: Daily, during rain events or when mitigation applied	
Reporting Requirements: QMLU-0006, QZ01-051	

Wolverine Project

Environmental Inspection Form – Photos

Site Name: WRP	
	
05/01/08 WRP looking Northeast	**05/02/08 WRP berm looking North**
	
05/03/08 WRP berm looking west	

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: May 6th – May 12th, 2008	Inspector(s): J.G.
Site Name: WRP	Location/Co-ordinates: Water at north end of pad

Site Location Description: Approximately 250m3 area built out of the WRP and bermed with a large earthen/clay dyke to contain water. Used as contingency for water storage. Ore and waste rock piled ~100' high and very steep (1.3:1) to south end. Liner and clay lined sides and bottom.

Weather Conditions:

6-May-08	Sunny with some cloud in afternoon	8
7-May-08	Cloudy	6
8-May-08	Sunny with clouds, light winds	8
9-May-08	Sunny with some cloud	8
10-May-08	Overcast	8
11-May-08	Sunny	10
12-May-08	Sunny in morning, overcast in afternoon	8

Part 2 – Site Assessment

Activity:

Monitoring of water levels and earthen berm stability

Results received from lab show that the TSS is over discharge limits on both sides of the berm, and WRSS 1 water is contaminated with Se.

Site Description:

Surface melt continues. Levels rising in pond. Approx 0.5m freeboard at the WRP berm on May 12th, fractures have appeared in berm, showing potential saturation and instability.

Assessed Risk: High

Photos Attached: WRP

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Monitor water level, and berm stability. Contact government regarding discharge of high TSS values, and pumping WRSS 1b water into vegetation. Move WRSS 1 water to PDS for settling and treatment.

Mitigation Condition: F

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch for slumping of earthen dyke and watch water levels

Monitoring Frequency: Daily, during rain events or when mitigation applied

Reporting Requirements: QMLU-0006, QZ01-051

Wolverine Project

Environmental Inspection Form – Photos

Site Name: WRP	

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: May 13th – May 19th, 2008	Inspector(s): J.G.
Site Name: WRP	Location/Co-ordinates: Water at north end of pad

Site Location Description: Approximately 250m3 area built out of the WRP and bermed with a large earthen/clay dyke to contain water. Used as contingency for water storage. Ore and waste rock piled ~100' high and very steep (1.3:1) to south end. Liner and clay lined sides and bottom.

Weather Conditions:

13-May-08	Overcast	7
14-May-08	Overcast, some light snow in afternoon	6
15-May-08	Cloudy	6
16-May-08	Sunny in morning, cloudy in afternoon	8
17-May-08	Cloudy with rain in the afternoon	4
18-May-08	Wet snow, then rain	1
19-May-08	Snow, rain, sleet, hail, freezing rain, sun in late afternoon	2

Part 2 – Site Assessment

Activity:

- Monitoring of water levels and earthen berm stability
- May 16th – memo to EMR regarding waste water discharge
- May 18th - Pumped out WRSS 1B 1800-2000 (~72m3), into vegetation
- May 19th - Pumped out WRSS 1B 1030-2000 (~280m3), 5 water truck loads from WRSS 1(dirty) to PDS, sampled WRSS 1

Site Description:

Water levels were threatening collapse of berm and overflow onto access road at northern end of pad.

WRSS1B water was pumped into vegetation up on western bank of pad.

Assessed Risk: Med

Photos Attached: WRP

Samples Taken: WRSS 1

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Continue to monitor water level, and berm stability. Continue pumping WRSS 1b water into vegetation. Continue to move WRSS 1 water to PDS for settling and treatment.

Mitigation Condition: F

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch for slumping of earthen dyke and watch water levels

Monitoring Frequency: Daily, during rain events or when mitigation applied

Reporting Requirements: QMLU-0006, QZ01-051

Wolverine Project

Environmental Inspection Form – Photos

Site Name: WRP	
	
05/15/08 WRP looking Northeast	**05/17/08 WRP berm looking Northeast**
	
05/18/08 Disposal of WRSS1B into vegetation	

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: Aug 13th – Aug 25th, 2008	Inspector(s): J.G.
Site Name: WRP	Location/Co-ordinates: Water at north end of pad

Site Location Description: Approximately 250m3 area built out of the WRP and bermed with a large earthen/clay dyke to contain water. Used as contingency for water storage. Ore and waste rock piled ~100' high and very steep (1.3:1) to south end. Liner and clay lined sides and bottom.

Weather Conditions:

13-Aug-08	Cloudy	13
14-Aug-08	Rain overnight, cloudy	13
15-Aug-08	Sunny with clouds	15
16-Aug-08	frost in the morning, warming with rain in the evening	13
17-Aug-08	warm and humid, showers in the afternoon	12
18-Aug-08	Cloudy	12
19-Aug-08	Cloudy with sunny periods	12
20-Aug-08	Cloudy, with some showers	9
21-Aug-08	Cloudy	8
22-Aug-08	Cloudy with some showers	12
23-Aug-08	Sunny with clouds	15
24-Aug-08	Heavy rain	12
25-Aug-08	Cloudy with showers	9

Part 2 – Site Assessment

Activity: Removing water and lining exposed geotech and liner with a clay layer for protection

Site Description:
Phase II was almost completed with the exception of one exposed corner on a steep section

Assessed Risk: Low

Photos Attached: WRP

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Clay lining needs to be completed, and water levels must be kept to a minimum before commencing work.

Mitigation Condition: F

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch for slumping of earthen dyke and watch water levels

Monitoring Frequency: during rain events or when mitigation applied

Reporting Requirements: QMLU-0006, QZ01-051

Wolverine Project

Environmental Inspection Form – Photos

Site Name: WRP	
	
08/14/08 Looking NW	**08/15/08 Looking NW**
	
08/16/08 Looking NW	**09/01/08 section not lined looking SE**

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: September 27th – 30th, 2008	Inspector(s): Jennie Gjertsen
Site Name: WRP	Location/Co-ordinates: Upchain of Km 27, Waste Rock Pad

Site Location Description: Approximately 250m3 area built out of the WRP and bermed with a large earthen/clay dyke to contain water. Used as contingency for water storage. Ore and waste rock piled ~100' high and very steep (1.3:1) to south end. Entire pad area is lined with enviroliner and clay.

Weather Conditions:

Date	Weather Conditions	avg. temp (c)
27-Sep-08	High overcast	4
28-Sep-08	Sunny with clouds	4
29-Sep-08	Overcast	0
30-Sep-08	Fog in morning clearing to clouds	8

Part 2 – Site Assessment

Activity:

Completion of clay lining of Phase II

- material loaded and hauled from the west (or back) side of the waste rock pad
- Used Arctic's D8 to spread material, and then packed with packer

Repairs to Phase I

- Material put on portion of slope that had sloughed down liner

No additional water was removed from the pad before clay lining

Site Description:

Clay lining complete on both Phase I &II

Clay berm remains separating both phases, and may be moved closer to toe of the waste rock pile before winter drill program commences.

Assessed Risk: Low

Photos Attached: WRP

Samples Taken: none

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Water that was removed to the waste rock sump needs to be taken to the water treatment sumps for mixing and discharge

Mitigation Condition: G

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch for slumping of earthen dyke and watch water levels

Monitoring Frequency: during rain events or when mitigation applied

Reporting Requirements: QMLU-0006, QZ01-051

Wolverine Project

Environmental Inspection Form – Photos

Site Name: WRP	
	
09/27/08 D8 spreading clay over exposed liner and geotextile (facing SE)	**09/27/08** D8 spreading clay over exposed liner and geotextile (facing NW)
	
09/29/08 Completed Phase II lining(Facing SE) 944	**09/29/08** Completed Phase II lining (Facing NW) 942

Wolverine Project

Environmental Inspection Form – Photos

Site Name: WRP	
	
09/29/08 Completed Phase II lining (Facing NW) 942	**09/29/08** Completed Phase II lining (Facing NW) 943
	
09/29/08 Packing clay liner, completed Phase I repairs (Facing NW) 1615	**09/29/08** Waste rock Sump 1615

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: April 22-28,2008	Inspector(s): J.S.
Site Name: WRS	Location/Co-ordinates: Water at southwest corner of pad
Site Location Description: Approximately 221m3 lined sump. Designed to collect contaminated storage from waste rock pile. All water there drains through to the WRS Ore and waste rock piled ~100' high and steep (1.5:1) at north end of sump. Sits in Go Creek drainage.	
Weather Conditions: Still 2-3' snow but surface melt starting at lower elevations.	
Part 2 – Site Assessment	
Activity: Monitoring started as we monitor the surface melt and ground melt through spring run-off.	
Site Description: Surface melt starting to show wetting in sump around 1m freeboard, levels rising ~2" day	
Assessed Risk: Med	
Photos Attached: WRS	
Samples Taken: No	
Additional Information Attached:	
Part 3 –Mitigation Requirements	
Mitigation Required: Pump out water to Water truck and to WIS/WDS if levels threaten to overflow. Will not treat in-situ	
Mitigation Condition: F	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Watch water levels	
Monitoring Frequency: Daily, during rain events or when mitigation applied	
Reporting Requirements: QMLU-0006, QZ01-051	

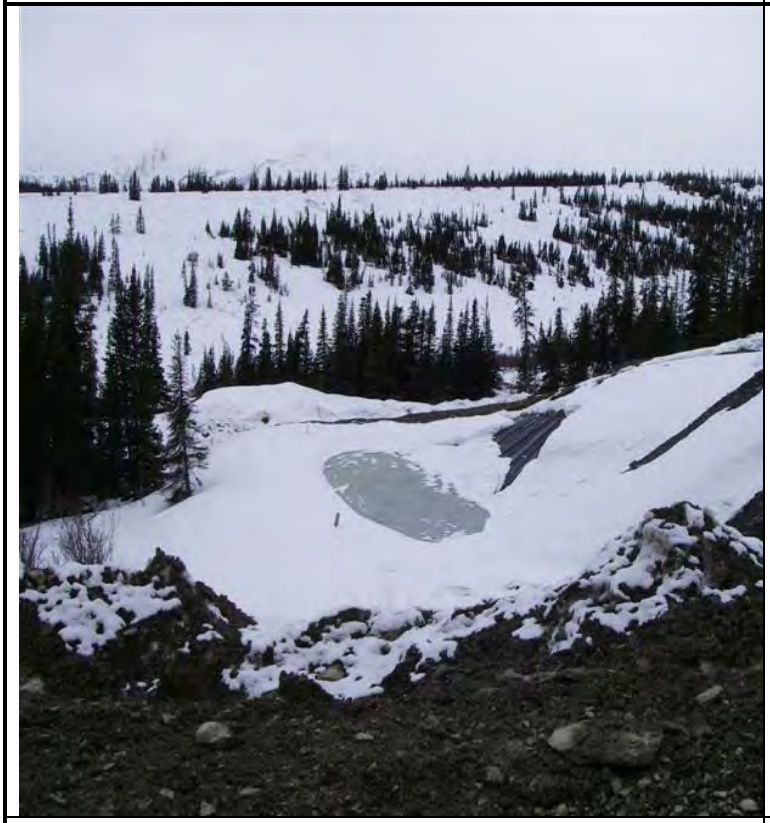
Wolverine Project
Environmental Inspection Form – Photos

Site Name: WRS	
	
04/25/07 West WRS	**04/28/07 West WRS**

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: April 29-May 05,2008	Inspector(s): J.S.
Site Name: WRS	Location/Co-ordinates: Water at southwest corner of pad
Site Location Description: Approximately 221m3 lined sump. Designed to collect contaminated storage from waste rock pile. All water there drains through to the WRS Ore and waste rock piled ~100' high and steep (1.5:1) at north end of sump. Sits in Go Creek drainage.	
Weather Conditions: Still 2'+ snow in areas, some earth in cleared area	
Part 2 – Site Assessment	
Activity: Monitoring started as we monitor the surface melt and ground melt through spring run-off. Took one load of 17m3 to the WIS on May 4th, 2008.	
Site Description: Surface melt starting distinct outline of water rising ~2"/day	
Assessed Risk: Med	
Photos Attached: WRS	
Samples Taken: Yes on May 5th	
Additional Information Attached:	
Part 3 –Mitigation Requirements	
Mitigation Required: Pump out water to Water truck and to PDS if levels threaten to overflow. Will not treat in-situ	
Mitigation Condition: F	
Part 4 –Monitoring Requirements	
Follow-up Monitoring: Watch water levels	
Monitoring Frequency: Daily, during rain events or when mitigation applied	
Reporting Requirements: QMLU-0006, QZ01-051	

Wolverine Project
Environmental Inspection Form – Photos

Site Name: WRS	
	
05/01/08 WRS looking East	**05/02/08 WRS looking West**
	
05/02/08 WRS looking West	

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description	
Date and Time: May 6th – 12th, 2008	Inspector(s): J.G.
Site Name: WRS	Location/Co-ordinates: Water at southwest corner of pad
Site Location Description: Approximately 221m3 lined sump. Designed to collect contaminated storage from waste rock pile. All water there drains through to the WRS. Ore and waste rock piled ~100' high and steep (1.5:1) at north end of sump. Sits in Go Creek drainage.	

Weather Conditions:

6-May-08	Sunny with some cloud in afternoon	8
7-May-08	Cloudy	6
8-May-08	Sunny with clouds, light winds	8
9-May-08	Sunny with some cloud	8
10-May-08	Overcast	8
11-May-08	Sunny	10
12-May-08	Sunny in morning, overcast in afternoon	8

Part 2 – Site Assessment

Activity: Ongoing site monitoring, 34m3 (two loads with water truck) moved from sump to PDS on May 6th.

Site Description: Rising water threatens to overflow the berm once increased snowmelt occurs

Assessed Risk: Med

Photos Attached: WRS

Samples Taken: Yes on May 12th

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Pump out water to Water truck and to PDS if levels threaten to overflow. Will not treat in-situ

Mitigation Condition: F

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch water levels

Monitoring Frequency: Daily, during rain events or when mitigation applied

Reporting Requirements: QMLU-0006, QZ01-051

Wolverine Project
Environmental Inspection Form – Photos

Site Name: WRS	

Wolverine Project
Environmental Inspection Form

Part 1 – Site Description

Date and Time: May 13th – 19th, 2008	Inspector(s): J.G.
Site Name: WRS	Location/Co-ordinates: Water at southwest corner of pad

Site Location Description: Approximately 221m3 lined sump. Designed to collect contaminated storage from waste rock pile. All water there drains through to the WRS. Ore and waste rock piled ~100' high and steep (1.5:1) at north end of sump. Sits in Go Creek drainage.

Weather Conditions:

13-May-08	Overcast	7
14-May-08	Overcast, some light snow in afternoon	6
15-May-08	Cloudy	6
16-May-08	Sunny in morning, cloudy in afternoon	8
17-May-08	Cloudy with rain in the afternoon	4
18-May-08	Wet snow, then rain	1
19-May-08	Snow, rain, sleet, hail, freezing rain, sun in late afternoon	2

Part 2 – Site Assessment

Activity: 6 water truck loads from WRS to PDS (102m3), on May 16th.

Site Description: Rising water threatens to overflow the berm once increased snowmelt occurs. Snow has melted from sides of the stockpile, however water level will continue to increase as water contained in within the melts

Assessed Risk: Med

Photos Attached: WRS

Samples Taken: Yes on May 19th

Additional Information Attached: none

Part 3 –Mitigation Requirements

Mitigation Required: Pump out water to Water truck and to PDS if levels threaten to overflow. Will not treat in-situ

Mitigation Condition: F

Part 4 –Monitoring Requirements

Follow-up Monitoring: Watch water levels

Monitoring Frequency: Daily, during rain events or when mitigation applied

Reporting Requirements: QMLU-0006, QZ01-051

Yukon Zinc CORPORATION

Wolverine Project
Environmental Inspection Form – Photos

Site Name: WRS	
	
05/15/08 WRS looking South	

Appendix B Acid Base Accounting and Shake Flask Testing Lab Reports

ALS Chemex
EXCELLENCE IN ANALYTICAL CHEMISTRY
ALS Canada Ltd.
212 Brooksbank Avenue
North Vancouver BC V7J 2C1
Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

D: YUKON ZINC CORPORATION
701-475 HOWE ST
VANCOUVER BC V6C 2B3

Finalized Date: 29-SEP-2008
Account: MPO

CERTIFICATE VA08115508

Project: Wolverine

P.O. No.:

This report is for 9 Rock samples submitted to our lab in Vancouver, BC, Canada on 15-AUG-2008.

The following have access to data associated with this certificate:

PAMELA LADYMAN	MARY MCDOUGALL	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
S-GRA06	Sulfate Sulfur-carbonate leach	LECO
S-GRA06a	Sulfate Sulfur (HCl leachable)	
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-CAL06	Sulfide Sulfur (calculated)	LECO

To: YUKON ZINC CORPORATION
ATTN: PAMELA LADYMAN
701-475 HOWE ST
VANCOUVER BC V6C 2B3

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

ALS Chemex
EXCELLENCE IN ANALYTICAL CHEMISTRY
ALS Canada Ltd.
212 Brooksbank Avenue
North Vancouver BC V7J 2C1
Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: YUKON ZINC CORPORATION
701-475 HOWE ST
VANCOUVER BC V6C 2B3

Finalized Date: 29-SEP-2008
Account: MPO

Project: Wolverine

CERTIFICATE OF ANALYSIS VA08115508

Sample Description	Method / Analyte / Units / LOR	WEI-21 Recvd Wt. kg 0.02	OA-VOL08 MPA tCaCO3/1000t 0.3	OA-VOL08 NNP tCaCO3/1000t 1	OA-VOL08 FIZZ RAT Unity 1	OA-VOL08 NP tCaCO3/1000t 1	OA-ELE07 pH Unity 0.1	OA-VOL08 Ratio (N Unity 0.01	S-IR08 S % 0.01	S-GRA06 S % 0.01	S-CAL06 S % 0.01	S-GRA06a S % 0.01
Bunker Creek		0.50	0.3	8	1	8	7.8	25.60	0.01	0.03	<0.01	0.01
13+675		0.78	<0.3	23	2	23	8.8	147.20	<0.01	0.01	<0.01	0.02
13+975		0.50	<0.3	12	1	12	8.4	76.80	<0.01	0.01	<0.01	0.01
TP07-3		0.76	59.1	-53	1	6	6.6	0.10	1.89	1.87	0.02	0.18
TP07-6		0.48	2.5	1	1	3	6.5	1.20	0.08	0.01	0.07	0.08
TP07-7		0.70	2.5	3	1	5	7.0	2.00	0.08	<0.01	0.08	0.08
TP07-8		0.70	7.2	-2	1	5	7.7	0.70	0.23	0.26	<0.01	0.24
TP07-9		0.56	0.6	7	1	8	7.8	12.80	0.02	<0.01	0.02	<0.01
TP07-11		0.82	1.3	6	1	7	7.7	5.60	0.04	<0.01	0.04	0.02

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Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: YUKON ZINC CORPORATION
701-475 HOWE ST
VANCOUVER BC V6C 2B3

Finalized Date: 22-NOV-2008
Account: MPO

CERTIFICATE VA08143497

Project: Wolverine

P.O. No.:

This report is for 1 Rock sample submitted to our lab in Vancouver, BC, Canada on 8-OCT-2008.

The following have access to data associated with this certificate:

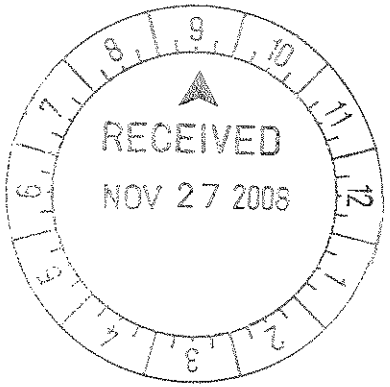
PAMELA LADYMAN	MARY MCDOUGALL	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-31	Pulverize split to 85% <75 um
SPL-21	Split sample - riffle splitter
CRU-31	Fine crushing - 70% <2mm
LOG-22	Sample login - Rcd w/o BarCode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
S-GRA06	Sulfate Sulfur-carbonate leach	LECO
S-GRA06a	Sulfate Sulfur (HCl leachable)	
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-CAL06	Sulfide Sulfur (calculated)	LECO



To: YUKON ZINC CORPORATION
ATTN: PAMELA LADYMAN
701-475 HOWE ST
VANCOUVER BC V6C 2B3

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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ALS Canada Ltd.
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North Vancouver BC V7J 2C1
Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: YUKON ZINC CORPORATION
701-475 HOWE ST
VANCOUVER BC V6C 2B3

Finalized Date: 22-NOV-2008
Account: MPO

Project: Wolverine

CERTIFICATE OF ANALYSIS VA08143497

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	OA-VOL08 MPA tCaCO3/1000t 0.3	OA-VOL08 NNP tCaCO3/1000t 1	OA-VOL08 FIZZ RAT Unity 1	OA-VOL08 NP tCaCO3/1000t 1	OA-ELE07 pH Unity 0.1	OA-VOL08 Ratio (N Unity 0.01	S-IR08 S % 0.01	S-GRA06 S % 0.01	S-CAL06 S % 0.01	S-GRA06a S % 0.01
KM18		5.74	0.6	3	1	4	6.6	6.40	0.02	0.01	0.01	0.01

ALS Chemex

EXCELLENCE IN ANALYTICAL CHEMISTRY

ALS Canada Ltd.

212 Brooksbank Avenue
North Vancouver BC V7J 2C1
Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: YUKON ZINC CORPORATION
701-475 HOWE ST
VANCOUVER BC V6C 2B3

Finalized Date: 27-NOV-2008
Account: MPO

CERTIFICATE VA08158246

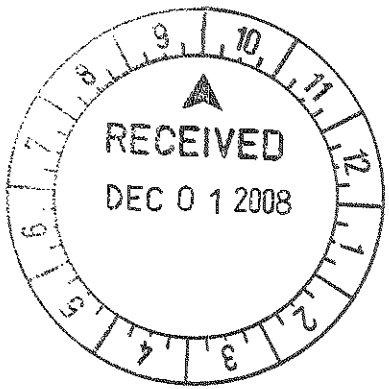
Project: Wolverine

P.O. No.:

This report is for 5 Soil samples submitted to our lab in Vancouver, BC, Canada on 5-NOV-2008.

The following have access to data associated with this certificate:

PAMELA LADYMAN	MARY MCDOUGALL	



To: **YUKON ZINC CORPORATION**
ATTN: PAMELA LADYMAN
701-475 HOWE ST
VANCOUVER BC V6C 2B3

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
SCR-41	Screen to -180um and save both
LOG-22	Sample login - Rcd w/o BarCode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	
S-GRA06a	Sulfate Sulfur (HCl leachable)	
OA-VOL08	Basic Acid Base Accounting	
S-IR08	Total Sulphur (Leco)	LECO
OA-ELE07	Paste pH	
S-CAL06	Sulfide Sulfur (calculated)	LECO
S-GRA06	Sulfate Sulfur-carbonate leach	LECO

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

ALS Chemex
EXCELLENCE IN ANALYTICAL CHEMISTRY
ALS Canada Ltd.
212 Brooksbank Avenue
North Vancouver BC V7J 2C1
Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: YUKON ZINC CORPORATION
701-475 HOWE ST
VANCOUVER BC V6C 2B3

Finalized Date: 27-NOV-2008
Account: MPO

Project: Wolverine

CERTIFICATE OF ANALYSIS VA08158246

Sample Description	Method / Analyte / Units / LOR	WEI-21 Recvd Wt. kg 0.02	OA-VOL08 MPA tCaCO3/1000t 0.3	OA-VOL08 NNP tCaCO3/1000t 1	OA-VOL08 FIZZ RAT Unity 1	OA-VOL08 NP tCaCO3/1000t 1	OA-ELE07 pH Unity 0.1	OA-VOL08 Ratio (N Unity 0.01	S-IR08 S % 0.01	S-GRA06 S % 0.01	S-CAL06 S % 0.01	S-GRA06a S % 0.01
BH08-1		1.44	0.3	4	1	4	5.4	12.80	0.01	<0.01	0.01	0.02
BH08-2		2.18	9.7	-2	1	8	7.0	0.83	0.31	<0.01	0.31	0.01
BH08-5		2.70	7.5	-7	1	1	5.2	0.13	0.24	0.05	0.19	0.02
BH08-6		2.28	52.2	-50	1	2	5.5	0.04	1.67	1.09	0.58	0.35
TP08-4		1.64	1.3	1	1	2	5.4	1.60	0.04	0.04	<0.01	0.01

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Certificate of Analysis

YUKON ZINC CORPORATION
ATTN: PAMELA LADYMAN
701 - 475 HOWE STREET
VANCOUVER BC V6C 2B3

Reported On: 21-OCT-08 06:04 PM
Revision: 1

Lab Work Order #: **L691233** **Date Received:** **03-OCT-08**

Project P.O. #:
Job Reference:
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

Please note that samples formed a precipitate upon acidification.

Some of the metals detection limits were increased due to high levels of metals in these samples.

ADDITIONAL 17-OCT-08 14:37
Please note that this report has been revised. PH data has been added to the report and no other data has been changed.

LINDSAY JONES
Account Manager

ALS Canada Ltd.
Part of the ALS Laboratory Group
1988 Triumph Street, Vancouver, BC V5L 1K5
Phone: +1 604 253 4188 Fax: +1 604 253 6700 www.alsglobal.com
A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

Grouping	Analyte	Sample ID / Description / Sampled Date / Sampled Time / Client ID				
		L691233-1	L691233-2	L691233-3	L691233-4	L691233-5
		BUNKER CREEK	TP07-3	TP07-6	TP07-7	TP07-8
SOIL						
Physical Tests	% Moisture (%)	0.41	0.88	0.85	0.56	0.44
Leachable Anions & Nutrients	pH (pH)	7.92	7.02	6.75	7.18	7.47
Leachable Metals	Aluminum (Al)-Leachable (mg/L)	12.5	16.5	11.6	10.4	11.3
	Antimony (Sb)-Leachable (mg/L)	0.00362	0.0011	0.00562	0.00472	0.0182
	Arsenic (As)-Leachable (mg/L)	0.0106	<0.010	0.0110	0.0110	0.0382
	Barium (Ba)-Leachable (mg/L)	0.499	41.5	2.18	2.70	9.41
	Beryllium (Be)-Leachable (mg/L)	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025
	Bismuth (Bi)-Leachable (mg/L)	<0.0025	<0.0050	0.0073	0.0031	0.0054
	Boron (B)-Leachable (mg/L)	<0.050	<0.10	<0.050	<0.050	<0.050
	Cadmium (Cd)-Leachable (mg/L)	0.00040	<0.00050	0.00749	0.00333	0.00887
	Calcium (Ca)-Leachable (mg/L)	8.54	2.9	2.70	5.44	6.27
	Chromium (Cr)-Leachable (mg/L)	0.0649	0.0392	0.0277	0.0190	0.0207
	Cobalt (Co)-Leachable (mg/L)	0.00858	0.0143	0.0102	0.00859	0.0137
	Copper (Cu)-Leachable (mg/L)	0.120	0.199	0.690	0.332	0.505
	Iron (Fe)-Leachable (mg/L)	9.26	9.84	5.27	6.60	14.1
	Lead (Pb)-Leachable (mg/L)	0.0190	0.0368	0.0933	0.0830	0.374
	Lithium (Li)-Leachable (mg/L)	<0.025	<0.050	<0.025	<0.025	<0.025
	Magnesium (Mg)-Leachable (mg/L)	8.48	5.71	6.56	5.89	5.30
	Manganese (Mn)-Leachable (mg/L)	0.378	2.96	0.688	0.596	0.995
	Molybdenum (Mo)-Leachable (mg/L)	0.00755	0.0180	0.00896	0.0112	0.0203
	Nickel (Ni)-Leachable (mg/L)	0.0459	0.0612	0.0189	0.0198	0.0309
	Phosphorus (P)-Leachable (mg/L)	<0.30	<0.30	<0.30	<0.30	0.34
	Potassium (K)-Leachable (mg/L)	14.0	5.11	19.1	11.8	13.9
	Selenium (Se)-Leachable (mg/L)	<0.0025	<0.0050	0.0077	0.0050	0.0075
	Silicon (Si)-Leachable (mg/L)	9.42	11.9	12.9	11.0	9.90
	Silver (Ag)-Leachable (mg/L)	0.00028	<0.00050	0.00171	0.00094	0.00585
	Sodium (Na)-Leachable (mg/L)	8.17	4.02	7.54	6.93	5.44
	Strontium (Sr)-Leachable (mg/L)	0.0402	0.166	0.0263	0.0369	0.0734
	Thallium (Tl)-Leachable (mg/L)	<0.00050	<0.0010	0.00185	0.00068	0.00073
	Tin (Sn)-Leachable (mg/L)	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025
	Titanium (Ti)-Leachable (mg/L)	0.122	0.331	0.108	0.149	0.167
	Uranium (U)-Leachable (mg/L)	0.00130	0.00198	0.00288	0.00172	0.00379
	Vanadium (V)-Leachable (mg/L)	0.0476	0.052	0.0340	0.0319	0.0402
	Zinc (Zn)-Leachable (mg/L)	<0.050	0.28	0.827	0.438	1.03

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L691233-6	L691233-7			
	Description					
	Sampled Date					
	Sampled Time					
	Client ID	TP07-9	TP07-11			
Grouping	**Analyte**					
SOIL						
Physical Tests	% Moisture (%)	0.68	0.94			
Leachable Anions & Nutrients	pH (pH)	7.55	7.53			
Leachable Metals	Aluminum (Al)-Leachable (mg/L)	9.04	9.33			
	Antimony (Sb)-Leachable (mg/L)	0.00343	0.00136			
	Arsenic (As)-Leachable (mg/L)	0.0273	0.0074			
	Barium (Ba)-Leachable (mg/L)	0.842	1.61			
	Beryllium (Be)-Leachable (mg/L)	<0.0025	<0.0025			
	Bismuth (Bi)-Leachable (mg/L)	<0.0025	<0.0025			
	Boron (B)-Leachable (mg/L)	<0.050	<0.050			
	Cadmium (Cd)-Leachable (mg/L)	0.00188	0.00043			
	Calcium (Ca)-Leachable (mg/L)	8.82	10.2			
	Chromium (Cr)-Leachable (mg/L)	0.0329	0.0337			
	Cobalt (Co)-Leachable (mg/L)	0.0106	0.00972			
	Copper (Cu)-Leachable (mg/L)	0.145	0.130			
	Iron (Fe)-Leachable (mg/L)	8.82	8.29			
	Lead (Pb)-Leachable (mg/L)	0.0457	0.0177			
	Lithium (Li)-Leachable (mg/L)	<0.025	<0.025			
	Magnesium (Mg)-Leachable (mg/L)	7.21	6.14			
	Manganese (Mn)-Leachable (mg/L)	0.354	0.312			
	Molybdenum (Mo)-Leachable (mg/L)	0.0120	0.00900			
	Nickel (Ni)-Leachable (mg/L)	0.0275	0.0273			
	Phosphorus (P)-Leachable (mg/L)	<0.30	<0.30			
	Potassium (K)-Leachable (mg/L)	4.39	4.23			
	Selenium (Se)-Leachable (mg/L)	0.0029	<0.0025			
	Silicon (Si)-Leachable (mg/L)	8.92	10.5			
	Silver (Ag)-Leachable (mg/L)	0.00048	0.00028			
	Sodium (Na)-Leachable (mg/L)	7.73	5.68			
	Strontium (Sr)-Leachable (mg/L)	0.0324	0.0411			
	Thallium (Tl)-Leachable (mg/L)	<0.00050	<0.00050			
	Tin (Sn)-Leachable (mg/L)	<0.0025	<0.0025			
	Titanium (Ti)-Leachable (mg/L)	0.276	0.260			
	Uranium (U)-Leachable (mg/L)	0.000896	0.00113			
	Vanadium (V)-Leachable (mg/L)	0.0439	0.0411			
	Zinc (Zn)-Leachable (mg/L)	0.129	0.059			

Reference Information

Additional Comments for Sample Listed:

Samplenum	Matrix	Report Remarks	Sample Comments

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
MET-SHKFLSK-ICP-VA	Soil	Metals by ICPOES (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-SHKFLSK-MS-VA	Soil	Metals by ICPMS (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using inductively coupled plasma - mass spectrophotometry (EPA Method 6020A).

MOISTURE-VA	Soil	Moisture content	ASTM METHOD D2794-00

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

MOISTURE-VA	Soil		ASTM METHOD D2794-00

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

PH-SHKFLSK-MAN-VA	Soil	pH by Manual Meter (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

ALS Environmental
ANALYTICAL CHEMISTRY & TESTING SERVICES

www.alsenviro.com

Vancouver BC, 1988 Triumph Street, V5L 1K5, Tel: 604-253-4188 Toll Free: 1-800-665-0243 Fax: 604-253-6700
Fort St. John BC, Box 256, 9831 - 98A Avenue, V1J 6W7, Tel: 250-261-5517 Fax: 250-261-5587
Grand Prairie AB, 9505 - 111 Street, T8V 5W1, Tel: 780-539-5196 Toll Free: 1-800-668-9878 Fax: 780-513-2191
Fort McMurray AB, Bay 1, 245 Macdonald Cr, T9H 4B5, Tel: 780-791-1524 Fax: 780-791-1586
Edmonton AB, 9936 - 67th Avenue, T6E 0P5, Tel: 780-413-5227 Toll Free: 1-800-668-9878 Fax: 780-437-2311
Calgary AB, Bay 7, 1313 - 44th Avenue NE, T2E 6L5, Tel: 403-291-9897 Toll Free: 1-800-668-9878 Fax: 403-291-0298
Saskatoon SK, 819 - 58th Street East, S7K 6X5, Tel: 306-668-8370 Toll Free: 1-800-667-7645 Fax: 306-668-8383

L691233

SEND REPORT TO:

CHAIN OF CUSTODY FORM

PAGE OF

COMPANY:	Yukon Zinc Coporation			ATTN:	Pamela Ladyman
ADDRESS:	701-475 Howe st.				
CITY:	Vancouver	PROV:	BC	POSTAL CODE:	V6C2B3
TEL:	604-682-5474	FAX:	604-682-5404	SAMPLER:	
PROJECT NAME AND NO.:				QUOTE NO:	
PO NO.:		ALS CONTACT:	Andre Langlais		

REPORT FORMAT: ☐ HARDCOPY ☐ EMAIL - ADDRESS: ☐ FAX ☐ EXCEL ☐ PDF ☐ OTHER:

ANALYSIS REQUESTED:

FOR LAB USE ONLY	WO#	SAMPLE IDENTIFICATION	DATE / TIME COLLECTED YYYY-MM-DD	DATE / TIME COLLECTED TIME	MATRIX	Shake Flask+ICPMS/OES Finish	NOTES (sample specific comments, due dates, etc.)
		Bunker Creek			sediment/soil	X	
		TP07-3			sediment/soil	X	
		TP07-6			sediment/soil	X	
		TP07-7			sediment/soil	X	
		TP07-8			sediment/soil	X	
		TP07-9			sediment/soil	X	
		TP07-11					

TURN AROUND REQUIRED: ◉ ROUTINE ○ RUSH **SPECIFY DATE:** _____ (surcharge may apply)

SEND INVOICE TO: ☑ SAME AS REPORT ☐ DIFFERENT FROM REPORT (provide details below)

INVOICE FORMAT: ☑ HARDCOPY ☐ PDF ☐ FAX

SPECIAL INSTRUCTIONS: Email results to: pamelaladyman@yukonzinc.com, mmcdougall@yukonzinc.com

RELINQUISHED BY: Mary McDougall	DATE: 09/30/08	TIME:	RECEIVED BY:	DATE: Oct 3/08.	TIME: 17:00.
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:

FOR LAB USE ONLY

Cooler Seal Intact? ___Yes ___No ___N/A | Sample Temperature: ____°C Frozen? ___Yes ___No | Cooling Method? ___Icepacks ___Ice ___None

Certificate of Analysis

YUKON ZINC CORPORATION
ATTN: PAMELA LADYMAN
701 - 475 HOWE STREET
VANCOUVER BC V6C 2B3

Reported On: 10-DEC-08 04:39 PM

Lab Work Order #: L713112 **Date Received:** 28-NOV-08

Project P.O. #:
Job Reference: WOLVERINE - 1614
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

Andre Langlais
Account Manager

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L713112-1				
	Description					
	Sampled Date	06-OCT-08				
	Sampled Time					
	Client ID	KM18				
Grouping	**Analyte**					
SOIL						
Physical Tests	% Moisture (%)	0.16				
Leachable Anions & Nutrients	pH (pH)	7.01				
Leachable Metals	Aluminum (Al)-Leachable (mg/L)	9.22				
	Antimony (Sb)-Leachable (mg/L)	0.00016				
	Arsenic (As)-Leachable (mg/L)	0.0023				
	Barium (Ba)-Leachable (mg/L)	0.0761				
	Beryllium (Be)-Leachable (mg/L)	<0.00050				
	Bismuth (Bi)-Leachable (mg/L)	<0.00050				
	Boron (B)-Leachable (mg/L)	0.012				
	Cadmium (Cd)-Leachable (mg/L)	0.000131				
	Calcium (Ca)-Leachable (mg/L)	1.49				
	Chromium (Cr)-Leachable (mg/L)	0.0357				
	Cobalt (Co)-Leachable (mg/L)	0.0141				
	Copper (Cu)-Leachable (mg/L)	0.0592				
	Iron (Fe)-Leachable (mg/L)	6.23				
	Lead (Pb)-Leachable (mg/L)	0.00613				
	Lithium (Li)-Leachable (mg/L)	0.0054				
	Magnesium (Mg)-Leachable (mg/L)	5.70				
	Manganese (Mn)-Leachable (mg/L)	0.450				
	Mercury (Hg)-Leachable (mg/L)	<0.000050				
	Molybdenum (Mo)-Leachable (mg/L)	0.00020				
	Nickel (Ni)-Leachable (mg/L)	0.0259				
	Phosphorus (P)-Leachable (mg/L)	<0.30				
	Potassium (K)-Leachable (mg/L)	2.21				
	Selenium (Se)-Leachable (mg/L)	<0.00050				
	Silicon (Si)-Leachable (mg/L)	17.0				
	Silver (Ag)-Leachable (mg/L)	<0.000050				
	Sodium (Na)-Leachable (mg/L)	2.77				
	Strontium (Sr)-Leachable (mg/L)	0.00449				
	Thallium (Tl)-Leachable (mg/L)	<0.00010				
	Tin (Sn)-Leachable (mg/L)	<0.00050				
	Titanium (Ti)-Leachable (mg/L)	0.548				

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L713112-1				
	Description					
	Sampled Date	06-OCT-08				
	Sampled Time					
	Client ID	KM18				
Grouping	**Analyte**					
SOIL						
Leachable Metals	Uranium (U)-Leachable (mg/L)	0.000291				
	Vanadium (V)-Leachable (mg/L)	0.0223				
	Zinc (Zn)-Leachable (mg/L)	0.035				

Reference Information

Additional Comments for Sample Listed:

Samplenum	Matrix	Report Remarks	Sample Comments

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
HG-SHKFLSK-CVAFS-VA	Soil	Mercury by CVAFS (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-SHKFLSK-ICP-VA	Soil	Metals by ICPOES (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-SHKFLSK-MS-VA	Soil	Metals by ICPMS (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using inductively coupled plasma - mass spectrophotometry (EPA Method 6020A).

MOISTURE-VA	Soil	Moisture content	ASTM METHOD D2794-00

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

MOISTURE-VA	Soil		ASTM METHOD D2794-00

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

PH-SHKFLSK-PCT-VA	Soil	pH by PCT (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

L713112

AURORA LABORATORY SERVICES LTD.
212 Brooksbank Avenue, North Vancouver BC, Canada V7J 2C1
Phone: 604-984 0221 **Fax: 604-984 0218** Website: www.alschemex.com

ALS Chemex

Analysis Request Form

Date: Nov 26th , 2008

Analyzing Laboratory: **ALSE**

Our Reference #: VA08167732-MPO Number of Samples: 1
(ALS Workorder Number)

Analysis Request: Shake Flask Test

Sample Description: KM18

Special Instruction: Project # Wolverine and contact person: Mary McDougall

Sample Type: Coarse reject _____ Country of Origin: Canada _____

Depth of Samples taken: N/a _____ Any heat treatment: None _____

Sample Return Requested: No _X___ Yes ____

Please send results and Certificate of Analysis / Invoice to:

Pamela Ladyman
Address: **Yukon Zinc Corporation**
701-475 Howe Street
Vancouver BC V6C 2B3

BY NOV 28/08 12:00 18°C

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Certificate of Analysis

YUKON ZINC CORPORATION
ATTN: PAMELA LADYMAN
701 - 475 HOWE STREET
VANCOUVER BC V6C 2B3

Reported On: 17-DEC-08 04:12 PM

Lab Work Order #: L713936 **Date Received:** 02-DEC-08

Project P.O. #:
Job Reference: WOLVERINE - 1614
Legal Site Desc:
CofC Numbers:

Other Information:

Comments:

Andre Langlais
Account Manager

ALS Canada Ltd.
Part of the ALS Laboratory Group
1988 Triumph Street, Vancouver, BC V5L 1K5
Phone: +1 604 253 4188 Fax: +1 604 253 6700 www.alsglobal.com
A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L713936-1	L713936-2	L713936-3	L713936-4	L713936-5
	Description					
	Sampled Date	31-OCT-08	31-OCT-08	31-OCT-08	31-OCT-08	31-OCT-08
	Sampled Time					
	Client ID	BH08-1	BH08-2	BH08-5	BH08-6	BH08-4
Grouping	**Analyte**					
SOIL						
Physical Tests	% Moisture (%)	0.21	0.11	0.33	0.22	0.33
Leachable Anions & Nutrients	pH (pH)	6.27	7.77	6.66	6.44	6.66
Leachable Metals	Aluminum (Al)-Leachable (mg/L)	5.56	0.266	0.0086	0.0133	7.13
	Antimony (Sb)-Leachable (mg/L)	0.00051	0.00312	0.00021	0.00019	0.00060
	Arsenic (As)-Leachable (mg/L)	0.0066	0.0017	<0.0010	<0.0010	0.0040
	Barium (Ba)-Leachable (mg/L)	0.661	0.201	0.195	0.432	1.57
	Beryllium (Be)-Leachable (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bismuth (Bi)-Leachable (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00056
	Boron (B)-Leachable (mg/L)	<0.010	<0.010	0.012	<0.010	<0.010
	Cadmium (Cd)-Leachable (mg/L)	0.00113	0.000499	0.000860	0.000419	0.00159
	Calcium (Ca)-Leachable (mg/L)	2.62	11.5	5.67	1.11	2.07
	Chromium (Cr)-Leachable (mg/L)	0.0153	0.00078	<0.00050	<0.00050	0.00651
	Cobalt (Co)-Leachable (mg/L)	0.00830	0.00021	0.00056	0.00142	0.00662
	Copper (Cu)-Leachable (mg/L)	0.103	0.0216	0.0119	0.0011	0.0727
	Iron (Fe)-Leachable (mg/L)	4.82	0.388	<0.030	<0.030	4.23
	Lead (Pb)-Leachable (mg/L)	0.0173	0.00225	0.00011	<0.00010	0.0550
	Lithium (Li)-Leachable (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	0.0053
	Magnesium (Mg)-Leachable (mg/L)	2.41	1.56	1.07	0.333	2.13
	Manganese (Mn)-Leachable (mg/L)	0.474	0.0738	0.206	0.198	0.378
	Mercury (Hg)-Leachable (mg/L)	0.000170	<0.000050	<0.000050	0.000058	0.000078
	Molybdenum (Mo)-Leachable (mg/L)	0.00124	0.0158	0.00014	0.00074	0.00160
	Nickel (Ni)-Leachable (mg/L)	0.0135	0.00107	0.0174	0.00553	0.0158
	Phosphorus (P)-Leachable (mg/L)	<0.30	<0.30	<0.30	<0.30	<0.30
	Potassium (K)-Leachable (mg/L)	1.70	5.04	3.74	3.77	2.70
	Selenium (Se)-Leachable (mg/L)	0.00119	0.00883	0.00862	0.00224	0.00108
	Silicon (Si)-Leachable (mg/L)	9.61	2.91	6.87	4.37	9.78
	Silver (Ag)-Leachable (mg/L)	0.000179	<0.000050	<0.000050	<0.000050	0.000231
	Sodium (Na)-Leachable (mg/L)	1.34	1.92	0.631	0.302	0.834
	Strontium (Sr)-Leachable (mg/L)	0.0218	0.0387	0.0364	0.0375	0.0166
	Thallium (Tl)-Leachable (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	0.00010
	Tin (Sn)-Leachable (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Titanium (Ti)-Leachable (mg/L)	0.304	0.015	<0.010	<0.010	0.088
	Uranium (U)-Leachable (mg/L)	0.000654	0.000819	<0.000010	<0.000010	0.00449
	Vanadium (V)-Leachable (mg/L)	0.0250	<0.0010	<0.0010	<0.0010	0.0120
	Zinc (Zn)-Leachable (mg/L)	0.106	0.017	0.021	<0.010	0.215

Reference Information

Additional Comments for Sample Listed:

Samplenum	Matrix	Report Remarks	Sample Comments

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
HG-SHKFLSK-CVAFS-VA	Soil	Mercury by CVAFS (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using cold vapour atomic fluorescence spectrophotometry (EPA Method 245.7).

MET-SHKFLSK-ICP-VA	Soil	Metals by ICPOES (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

MET-SHKFLSK-MS-VA	Soil	Metals by ICPMS (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using inductively coupled plasma - mass spectrophotometry (EPA Method 6020A).

MOISTURE-VA	Soil	Moisture content	ASTM METHOD D2794-00

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

MOISTURE-VA	Soil		ASTM METHOD D2794-00

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

PH-SHKFLSK-MAN-VA	Soil	pH by Manual Meter (SHAKEFLASK)	BC MINISTRY OF ENERGY AND MINES

This analysis is based upon the extraction procedure outlined in "Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia" BC Ministry of Energy and Mines, (Dr. William A. Price, 1997). In summary, the sample is extracted at a 3:1 liquid to solids ratio for 24 hours using deionized water . The extract is then allowed to settle and subsequently filtered through a 0.45 micron membrane filter and analysed using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA		

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

GLOSSARY OF REPORT TERMS
Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in enviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
The reported surrogate recovery value provides a measure of method efficiency.
mg/kg (units) - unit of concentration based on mass, parts per million
mg/L (units) - unit of concentration based on volume, parts per million
N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

ALS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

ALS Environmental
ANALYTICAL CHEMISTRY & TESTING SERVICES

www.alsenviro.com

Vancouver BC, 1988 Triumph Street V5L 1K5, Tel: 604-253-4188 Toll Free: 1-800-665-0243 Fax: 604-253-6700
Fort St. John BC, Box 256, 9831 - 98A Avenue, V1J 6W7, Tel: 250-261-5517 Fax: 250-261-5587
Grand Prairie AB, 9505 - 111 Street, T8V 5W1, Tel: 780-539-5196 Toll Free: 1-800-668-9878 Fax: 780-513-2191
Fort McMurray AB, Bay 1, 245 Macdonald Cr, T9H 4B5, Tel: 780-791-1524 Fax: 780-791-1586
Edmonton AB, 9936 - 67th Avenue, T6E 0P5, Tel: 780-413-5227 Toll Free: 1-800-668-9878 Fax: 780-437-2311
Calgary AB, Bay 7, 1313 - 44th Avenue NE, T2E 6L5, Tel: 403-291-9897 Toll Free: 1-800-668-9878 Fax: 403-291-0298
Saskatoon SK, 819 - 58th Street East, S7K 6X5, Tel: 306-668-8370 Toll Free: 1-800-667-7645 Fax: 306-668-8383

L7139736

SEND REPORT TO:

CHAIN OF CUSTODY FORM

COMPANY:	Yukon Zinc Corporation			ATTN:	
ADDRESS:	701-475 Howe st.				
CITY:	Vancouver	PROV:	BC	POSTAL CODE:	V6C 2B3
TEL:	604-682-5475	FAX:	604-682-5404	SAMPLER:	
PROJECT NAME AND NO.:	Wolverine - 1614			QUOTE NO:	
PO NO.:		ALS CONTACT:	Andre Langlais		
REPORT FORMAT:	☑ HARDCOPY ☑ EMAIL - ADDRESS: pamelaladyman@yukonzinc.com ☐ FAX ☑ EXCEL ☑ PDF ☐ OTHER:				

ANALYSIS REQUESTED:

FOR LAB USE ONLY WO#	SAMPLE IDENTIFICATION	DATE / TIME COLLECTED YYYY-MM-DD	TIME	MATRIX	Shake Flask+ICPMS/OES finish	NOTES (sample specific comments, due dates, etc.)
	BH08-1	2008-10-31		sediment/soil	X	
	BH08-2	2008-10-31		sediment/soil	X	
	BH08-5	2008-10-31		sediment/soil	X	
	BH08-6	2008-10-31		sediment/soil	X	
	TP08-4	2008-10-31		sediment/soil	X	

TURN AROUND REQUIRED:	◉ ROUTINE ○ RUSH SPECIFY DATE: _____ (surcharge may apply)	RELINQUISHED BY: Mary McDougall	DATE: 11/28/08	TIME: 11:30	RECEIVED BY:	DATE: 09/12/02	TIME: 10:39
SEND INVOICE TO:	☐ SAME AS REPORT ☐ DIFFERENT FROM REPORT (provide details below)	RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
INVOICE FORMAT:	☑ HARDCOPY ☐ PDF ☐ FAX						
SPECIAL INSTRUCTIONS:		FOR LAB USE ONLY Cooler Seal Intact? ✓ Yes ___ No ___ N/A	Sample Temperature: 19 °C Frozen? ___ Yes ✓ No	Cooling Method? ___ Icepacks ___ Ice ✓ None			

Appendix C Humidity Cell Update Reports (AMEC and MEA)

August 28, 2008

Yukon Zinc Corporation
701-475 Howe St.
Vancouver BC V6C 2B3

Dear Pamela Ladyman

Re: Wolverine Project Humidity Cell Update

Introduction

This letter report summarizes the most recent data from the Wolverine humidity cell testing program. Release rates from the humidity cells were last reported in November 2007. Yukon Zinc Corporation (YZC) has requested that the data be updated and interpreted to determine if any significant changes in the cell release rates have occurred, and to provide recommendations for the future operation of the cells.

Twenty-four humidity cells are currently in operation; eight were initiated in December 2005, five in January 2006, six in February 2006, and five in May 2006. Samples of Wolverine mine rock, ore, NP-depleted ore, Dense Media Separation (DMS) float, and backfill have been tested as part of the program. Descriptions of each humidity cell including static test results and test duration are summarized in Tables 1 and 2.

Release rates for all cells were calculated based on the measured concentrations and volumes of leachates produced weekly by each cell. Long term rates were determined for steady-state conditions that exclude the initial 20 weeks of data to account for the flushing of stored oxidation products in the samples that may have accumulated prior to testing. Results for pH, and calculated loadings for sulphate, alkalinity, acidity and regulated metals, plus $(Ca+Mg)/SO_4$ molar ratios for each material type are discussed in the following sections.

Results

Mine Rock

Thirteen humidity cells contain samples of each of the six main rock types in the Wolverine deposit. Descriptions are summarized in Tables 1 and 2. Results are presented in Figures 1 to 16 and discussed in the following sections.

pH

The majority of mine rock samples have reported circum-neutral to alkaline pH values that have been stable since approximately week 40 (Figure 1), with the exception of one rhyolite sample

AMEC Earth & Environmental,
a division of AMEC Americas Limited
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Mississauga, Ontario
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Fax +1 (905) 568-1686
www.amec.com

(HC3) which has had pH values below 6 since week 20. Since the last report, pH values in this cell have decreased to approximately 2.

Alkalinity and Acidity

Alkalinity release rates from mine rock samples showed little variability throughout testing, ranging from between 4 and 40 mg/kg/wk for the various rock types with one exception (Figure 2): the low-pH rhyolite cell (HC3) reported decreasing alkalinity release rates for the first 20 weeks of testing to a low of 0.5 mg/kg/wk. Alkalinity was not detected after this time in this cell.

Acidity release rates from mine rock samples generally varied from an initial 20 week decrease at the start of testing to lows of 0.3 mg/kg/wk, followed by a 20 week increase in release rates to a high of approximately 7 mg/kg/wk. Between weeks 40 and 110, acidity release rates fluctuated between 0.6 mg/kg/wk and 6 mg/kg/wk for the various rock types. After week 110, acidity release rates appear to have decreased to between approximately 0.9 mg/kg/wk and 1.7 mg/kg/wk (Figure 3).

Sulphate

Sulphate release rates for mine rock cells have consistently remained below approximately 50 mg/kg/wk since week 20, with the exception of the low-pH rhyolite sample HC3, which reported sulphate loads between 100 and 200 mg/kg/wk between weeks 20 and 95. After week 100 when pH in this cell dropped to below 2.8, sulphate loads in this cell increased to over 1,000 mg/kg/wk (Figure 4).

Metals

Mine rock samples generally reported release rates below 0.1 mg/kg/wk for Al, Zn, and Fe, and rates below 0.001 mg/kg/wk for Cu, As, Cd, Ni, Pb, Mo, and Se. Selenium loadings were an order of magnitude higher (approximately 0.01 mg/kg/wk) in two rhyolite cells (HC3 and 4) and one magnetite IF cell (HC2). Selenium release rates in these cells showed a general decrease throughout testing (Figures 5 to 15).

Rhyolite sample HC3 reported release rates that were consistently approximately two orders of magnitude higher than those in other mine rock cells for the following metals: Al, Cu, Ni, Zn, Cd, Pb, and Fe. Release rates for the majority of metals decreased up to week 93 following an initial increase before week 40. Silver concentrations before week 93 were generally below detection, with sporadic detectable concentrations. After week 93, cell HC3 reported increased metal loads that corresponded to a decrease in pH to below 3.

Molar Ratios

Molar ratios of $(Ca+Mg)/SO_4$ have remained above 1 for the duration of testing for the mine rock samples, with the exception of the low-pH rhyolite sample (HC3), which has reported molar $(Ca+Mg)/SO_4$ ratios of less than 1 between weeks 10 and 40, and less than 0.1 since that time (Figure 16).

Ore

Three humidity cells contain ore samples from the Wolverine (HC14), Hump (HC15) and Lynx (HC16) mineralized zones within the deposit. Results are presented in Figures 17 to 37 and discussed below.

pH

Ore samples reported pH values that are generally circum-neutral to slightly alkaline, with one sample reporting acidic pH values of 4.9 and 4.3 in weeks 31 and 89 (Figure 17). Since approximately week 50, pH values were stable, ranging from 6.8 to 7.6.

Alkalinity and Acidity

Alkalinity release rates for the ore samples have been generally constant throughout testing, ranging between 3 and 20 mg/kg/wk (Figure 18). Alkalinity release rates since week 102 have ranged from between 5 and 16 mg/kg/wk.

Acidity release rates showed a generally increasing trend during the first 30 weeks of testing (Figure 19). Since that time, release rates were constant to slightly decreasing, ranging from 1 to 13 mg/kg/wk in the last few weeks of testing.

Sulphate

Sulphate release rates decreased throughout testing from initial highs between 180 and 350 mg/kg/wk to between 38 and 51 mg/kg/wk at the end of the current test period (Figure 20). Sulphate release rates have remained generally below 100 mg/kg/wk since week 40.

Metals

Release rates for metals are shown in Figures 21 to 31. During the test period, release rates for Ag, Al, and Fe generally varied over one order of magnitude within each cell. Al and Fe remained below 0.1 mg/kg/wk. Ag remained below 0.001 mg/kg/wk. Cd, Pb, and Zn release rates all increased in the first 40 weeks, followed by a 50 week period of constant to slightly decreased rates. Arsenic release rates decreased throughout testing to less than 0.01 mg/kg/wk in all three cells. Molybdenum release rates also decreased in all three cells to rates of approximately 0.001 mg/kg/wk (HC15) and 0.0005 mg/kg/wk (HC14 and HC16). Copper release rates increased from week 20 lows of less than 0.001 mg/kg/wk in all cells to current rates between 0.002 mg/kg/wk (HC14 and HC15) and 0.01 mg/kg/wk (HC16). Release rates for the majority of metals stabilized in the last ten weeks of testing (excluding As, Mo, and Cu, which continue to fluctuate slightly). Se and Ni also had release rates that decreased throughout testing to stable rates in the last few weeks.

Molar Ratios

Molar ratios of $(Ca+Mg)/SO_4$ ratios fluctuated between 0.7 to 2 mg/kg/wk for the duration of kinetic testing. Ratios in the last several weeks appear to have stabilized in each cell with ratios between 0.8 and 1.4 mg/kg/wk (Figure 32).

NP-Depleted Ore

NP-depleted ore samples consisted of one sample from each of the three Wolverine ore zones that had approximately 85% of their NP artificially removed before humidity cell testing. Results are discussed below, and presented in Figures 33 to 48.

pH

Two of the three NP-depleted ore cells (HC20 and HC22) reported pH values less than 6 since the third week of testing (Figure 33), and values less than 5 since approximately week 10. After

week 30, cell HC20 reported generally constant pH values between 3.7 and 4.0. Cell HC22 reported pH values that decreased slightly from values of approximately 5 in week 30 to 4.3 in week 75, after which time pH decreased to approximately 3.3 to 3.5. Cell HC21 reported neutral pH values that gradually decreased from approximately 7.9 to 7.1 since week 30.

Alkalinity and Acidity

Alkalinity has been detected for between 7 and 100 weeks in the NP-depleted ore cells (Figure 34). Fluctuations in alkalinity release rates within each cell generally spanned an order of magnitude. In cell HC21, alkalinity release rates since week 82 generally remained between 3 and 5 mg/kg/wk, with one week reporting a release rate of 11 mg/kg/wk. In cell HC22, alkalinity values decreased over the first 13 weeks to generally stable rates of approximately 0.4 mg/kg/wk.

Acidity was monitored in all three cells (Figure 35). All three cells reported short term initial increases in acidity. Cell HC21 reported consistently decreasing rates after week 6 to values of approximately 7 mg/kg/wk. Acidity continued to increase in the other two cells to maximum rates of approximately 300 mg/kg/wk by week 60. Release rates then decreased to more stable release rates between 60 and 90 mg/kg/wk for cell HC20. Acidity has generally increased from 4 to 10 mg/kg/wk since week 82 in cell HC21.

Sulphate

Sulphate release rates in NP-depleted cells have also generally decreased throughout testing after an initial 6 week increase to values between 400 and 700 mg/kg/wk (Figure 36). The most recent release rates for the cells appear to have generally stabilized, ranging from 47 to 232 mg/kg/wk.

Metals

The majority of metal release rates from the two weakly acidic cells (HC20 and HC22) were generally at least one to two orders of magnitude higher than release rates from cell HC21 (Figures 37 to 47). Exceptions to this include release rates for alkaline metals Mo and Se, which were higher in cell HC21. Metal release rates in the weakly acidic cells reported initial increases over the first few weeks, followed by steady to slightly decreasing release rates for the remainder of the testing period. Metals release rates from the neutral pH cell (HC21) generally decreased throughout testing, excluding Al, Mo, Se, Pb, and Fe which were generally constant. Release rates for Cu increased after week 20 in the neutral pH cell HC21. Nickel, Zn, and Cd release rates increased after week 80, which appear to correspond to an increase in sulphate and acidity release. Cadmium and Se release rates were highest in cell HC20, which reported pH values of less than 4.

Molar Ratios

Molar ratios of $(Ca+Mg)/SO_4$ ratios have consistently fluctuated between 0.7 to 1.1 mg/kg/wk in neutral pH cell HC21 since week 29. The other two cells reported ratios that have decreased steadily from initial highs of 1 at the start of testing to current values of less than 0.1 mg/kg/wk, where ratios appear to have stabilized (Figure 48).

DMS Float

Three humidity cells contain DMS float rock, which consists of processed reject material from the dense media separation (DMS) stage of the ore processing. The material consists of the low density, non-sulphide bearing fraction of the ore. Results are presented in Figures 49 to 64 and discussed below.

pH

With an exception between weeks 23 and 35 where pH values decreased to approximately 6, pH values from DMS cells were generally circum-neutral to slightly alkaline throughout testing, ranging from 6.6 to 7.6 with an approximate average of 7.2 for all three cells for the last 38 weeks (Figure 49).

Alkalinity and Acidity

Alkalinity release rates in the DMS cells were also generally steady following a slight decrease during the first 13 weeks. Steady release rates were between 4 and 8 mg/kg/wk after the week 73 (Figure 50).

Acidity values decreased from initial highs near 10 mg/kg/wk in the first week of testing to values of 0.5 mg/kg/wk by the week 9. Since that time, acidity release rates varied between 0.3 and 5 mg/kg/wk in all three cells. In the last twelve weeks, fluctuations were less pronounced, with release rates between 1 and 2 mg/kg/wk (Figure 51).

Sulphate

Sulphate release rates decreased in DMS cells from over 100 mg/kg/wk at the start of testing to lows of approximately 10 mg/kg/wk by week 40. Sulphate loads were relatively constant for each cell, generally ranging from between 10 and 30 mg/kg/wk since that time. After week 100, release rates in cell HC18 decreased to lows of approximately 8 mg/kg/wk (Figure 52).

Metals

DMS cells had metals release rates that generally fluctuated within an order of magnitude for each cell (Figures 53 to 63). In general, release rates for As, Cd, Cu, Ni, Pb, Se, and Zn were characterized by an initial decrease, followed by a slight increase and ending with steady release rates after 80 weeks. Ag and Fe leachate concentrations were generally at or below the detection limits, with sporadic values above the detection limit. Silver and Fe concentrations were below the detection limit, with sporadic occurrences where concentrations were above the detection limit. Based on these values, release rates of 0.00002 mg/kg/wk for Ag and 0.005 mg/kg/wk for Fe were estimated.

Aluminium loads tended to fluctuate between 0.0004 and 0.1 mg/kg/wk with an average of 0.0045 mg/kg/wk and no distinct trend.

Arsenic loads were generally constant and averaged approximately 0.001 mg/kg/wk. Molybdenum loads increased slightly to week 58, and decreased since that time to ranges between 0.0006 and 0.003 mg/kg/wk. Between week 100 and 114, Mo values in two cells increased to values of 0.001 and 0.007 mg/kg/wk; in the last 4 weeks, these rates have decreased to between 0.001 and 0.004 mg/kg/wk.

Release rates for Cu, Zn, Cd, Ni, Pb, and Se decreased from the start of testing to approximately week 70, after which time release rates increased slightly and stabilized, or slightly decreased after week 80.

Molar Ratios

All DMS cells reported molar $(Ca+Mg)/SO_4$ ratios that were higher than 1, generally remaining between 1 and 2 for the duration of testing (Figure 64).

Paste Backfill

Two humidity cells contain samples of paste backfill. Results are presented in Figures 65 to 80 and discussed below.

pH

Paste backfill cells initially reported acidic pH values of less than 4 in the first three weeks of testing. With the exception of a low pH value (3.2) in week 6 for one sample, pH values increased to alkaline values by week 30, where they have remained between pH 7.5 and 8 for the duration of testing in both cells. The initial low pH values may have been due either to the presence of accumulated oxidation products, or the presence of thiosalts that were flushed from the samples (Figure 65). A single outlier (pH 6.5) was observed in cell T1 at week 67.

Alkalinity and Acidity

Similar to the pattern observed for pH, alkalinity release rates increased in the first few weeks of testing from lows of less than 1 mg/kg/wk to steady state release rates after week 60 of approximately 19 mg/kg/wk for T1 and 18 mg/kg/wk for T2. Alkalinity release rates in T1 were between 20 and 30 mg/kg/wk in the last 5 weeks (Figure 66).

Acidity release rates decreased from initial values of 40 and 80 mg/kg/wk to steady state release rates that have averaged approximately 3 mg/kg/wk since week 9 (Figure 67).

Sulphate

Paste backfill cells reported sulphate release rates that decreased steadily in the first 80 weeks from approximately 1000 mg/kg/wk to 300 mg/kg/wk. After week 80, sulphate release rates dropped rapidly to current rates of 44 and 72 mg/kg/wk (Figure 68).

Metals

Metal release rates from the paste backfill cells decreased from the start of testing to steady rates by week 50. Exceptions to this include Cd, Zn and Ni, which reported initial increases that ceased after week 40 and began a pattern of decrease that accelerated after week 80 to less than 0.0002 mg/kg/wk for Cd and Ni, and 0.002 for Zn (Figures 69 to 79).

Molar Ratios

Paste backfill cells reported molar $(Ca+Mg)/SO_4$ ratios that were consistent at approximately 1 since week 10 (Figure 80). $(Ca+Mg)/SO_4$ ratios increased to approximately 1.3 in the last 27 weeks of testing, corresponding to the observed decrease in sulphate release rates.

Comparison of Metal Release Rates

Rates were calculated for the period ending June 2008 and compared to rates calculated for the period ending November 2007, as reported previously. These results are presented in Table 3 and are summarized by rock or material type. The relative percent difference (RPD) between rates reported in November 2007 and the current period are also presented in this table.

Generally, the observed metal release rates for the cells have decreased. Sizeable decreases were noted in the backfill tailings cells, apparently related to the large decrease in the sulphate loading rate (rate of sulphide oxidation) from these samples.

Exceptions to this pattern of decreasing loads include notable increases (>20%) to the average release rate for a few metals. This includes sulphate, aluminum, arsenic, iron and silver loading rates for the Rhyolite/Rhyolite Fragmental rock type. However, these increases appear to be related solely to the increased metal loads in acidic cell HC3. Iron and aluminum load increases in the NP-depleted cells appear to be due to decreases in the pH of two of the three cells below 3.5 and 4.0 respectively. Increases in the average nickel and zinc (plus cadmium and copper) release rates in the DMS float cells appears to be due to a slight increase in sulphate loading (sulphide oxidation) in the cells at approximately week 70; this trend appears to be decreasing with time.

Estimates of Sulphide and NP Exhaustion

Estimates of sulphide and NP exhaustion are utilized to assist in the assessment of whether or not a particular rock type or mine waste may generate net acidity in the future. Net acid generation is assumed to begin once the available NP in a sample is exhausted. Results from humidity cell testing are used to determine the depletion rates and exhaustion times. Generally, extrapolation of these laboratory results to the real world cannot be done directly; laboratory testing tends to overestimate the rates of sulphide exhaustion and NP depletion compared to the underground mine environment. However, the results can be used to get a general sense of the possible duration and relative time differential of sulphide and NP exhaustion.

Estimates of sulphide and NP exhaustion were calculated for all 24 humidity cells. The sulphide exhaustion estimates were based on the calculated sulphide depletion rates (based on the measured and predicted loss of sulphate for each sample) and the total amount of sulphide initially measured in each sample.

Estimates of NP exhaustion were based on the calculated calcium plus magnesium depletion rates (based on the measured and predicted loss of calcium and magnesium, and assuming that all NP consists of calcium and magnesium carbonates) and the initial amount of NP measured in each sample. NP depletion calculations accounted for unavailable-NP, where available. Results of the sulphide and NP exhaustion calculations are summarized below:

Estimates of NP and Sulphide Exhaustion

Cell	Sample ID	Rock Type	Years to Depletion	
			NP	Sulphide
HC1	Siliceous Siltstone-2	Rhyolite	27.7	110
HC2	EXMT	Magnetite iron formations and Silica-pyrite exhalite	68.2	258
HC3	Footwall Rhyolite-2	Rhyolite and Rhyolite Fragmental	1.0	4.5
HC4	Footwall Rhyolite-3		8.57	96.9
HC5	EXCP-2	Calcite-pyrite exhalite	90.0	118
HC6	EXCP-3		83.5	44.1
HC7	Argillite-2	Carbonaceous argillites	14.2	45.3
HC8	Argillite-4		21.1	91.9
HC9	A083503	Argillite	7.8	37.1
HC10	A083529		7.4	46.1
HC11	A083504	Magnetite iron formations and Silica-pyrite exhalite	34.6	48.9
HC12	A083505	Interbedded rhyolite/argillites	10.2	49.5
HC13	A083511		27.3	28.5
HC14	Wolverine Feed Ore	Ore	18.5	185
HC15	Hump Feed Ore		32.8	147
HC16	Lynx Feed Ore		21.5	200
HC17	Wolverine Float	Dense Media Separation (DMS)	65.2	26.4
HC18	Hump Float		213	68.5
HC19	Lynx Float		106	57.6
HC20	Wolverine Ore	NP-Depleted Ore	2.2	56.7
HC21	Hump Ore		0.8	88.4
HC22	Lynx Ore		2.1	68.8
T1	Backfill Tailings	Tailings Backfill	3.6	24.8
T2	Backfill Tailings		4.1	8.2

The majority of the humidity cells were calculated to exhaust their NP prior to the exhaustion of their sulphide content. With the exception of the acidic-pH cell HC3, wall rock and ore humidity cell samples report NP exhaustion periods on the order of a decade to several decades. NP-depleted ore samples (HC 17, 18 and 19) have NP exhaustion periods of approximately one to two years whereas the cemented tailings cells (T1, T2) have a NP exhaustion period of approximately 4 years.

Discussion

Leachates from twelve of the thirteen mine rock humidity cells have reported circum-neutral to alkaline pH values throughout testing. One cell (HC3) began producing acidic leachates after approximately 20 weeks of operation. Leachates from this cell maintained a pH of approximately 2.8 until week 90 when the pH again decreased, possibly due to the onset of Fe^{2+}

oxidation in the cell material. This rhyolite sample was selected due to its uncharacteristic low NP qualities and was expected to produce acidity shortly after the start of testing. Sulphate release rates have remained generally constant in the mine rock cells with the exception of acidic cell HC3. As well, metal release rates were generally constant to slightly decreasing throughout testing for the majority of mine rock cells, with the exception of cell HC3. Metal release rates generally increased in this cell in response to decreases in the cell pH. Ratios of $(Ca+Mg)/SO_4$ suggest that the neutralization rate exceeds the acid generation rate in all samples with the exception of cell HC3.

An initial decline in ore sample leachate pH values until week 40 was followed by an increase to stable circum-neutral to alkaline pH conditions in all three cells. This may be a result of the decreasing sulphide oxidation rates in the samples. The majority of metal release rates have generally followed a decreasing trend that follows the pattern of sulphate release. The exception is copper where loads have increased steadily through testing. Increases in initial (pre-week 40) metal loads for Cd, Zn and Pb correspond closely to initial decreases in pH in all three cells. Ratios of $(Ca+Mg)/SO_4$ for the cells suggest that carbonates are being dissolved in response to the production of acidity in the cells.

The NP-depleted ore cells were established to assess the leachate characteristics of ore materials which had been prematurely depleted of their acid neutralizing minerals. Two of the three samples (HC20 and HC22) reported acidic leachate pH values which decreased to relatively constant values of pH 3.5 to 4 for the duration of testing. The third cell (HC21) reported alkaline pH values that have been constant since week 30. Sulphate loads have decreased in all cells throughout testing. Metal release rates were generally lower in the alkaline pH cell by one to two orders of magnitude than the two acidic cells. Patterns of metal release suggest that the rate of release is influenced strongly by the leachate pH and rate of sulphide oxidation. In general, metal release rates have been relatively constant to decreasing after leachate pH values stabilized around week 30. Molar $(Ca+Mg)/SO_4$ ratios were well below 1 for the acidic cells and approximately 1 in the neutral cell, suggesting that calcium- and magnesium-bearing neutralizing minerals are still available in cell HC21 for acid neutralization. This could represent the presence of remnant calcium/magnesium carbonates, or the dissolution of a non-carbonate Ca+Mg-bearing neutralizing mineral.

DMS float cells have reported circum-neutral pH values throughout testing. Sulphate loading rates decreased steadily until approximately week 70 when an abrupt increase in the rates was observed for cells HC17 and HC18. Metal release rates for Cu, Zn, Cd and Ni increased notably in these same cells following the sulphate increase, with no significant change in pH. Rates for these cells generally decreased afterwards, suggesting that disintegration/dissolution of a sulphide mineral grain (or grains) may have occurred with the resulting acidity immediately neutralized by the surrounding materials. Molar $(Ca+Mg)/SO_4$ ratios have remained between 1 and 2 for the duration of testing, suggesting that carbonate minerals are dissolving in reaction to the release of acidity from sulphide oxidation.

Paste backfill cells have reported constant alkaline pH values since approximately week 25. Initial low pH values were likely due to the presence of thiosalts, or accumulated oxidation products due to the long (several months) storage time of the samples prior to their testing. Sulphate release rates declined steadily in the paste backfill cells until week 70 when the rate of

decline began to increase. This significant decrease in sulphide oxidation suggests that the reactive sulphides present in cells could be nearly exhausted. Alternatively, physical processes such as self-sealing of the mineral grains by cement could be reducing the ability of oxygen to permeate the samples.

Calculated NP and sulphide exhaustion periods suggest that most of the mine rock and mine waste materials will deplete their NP supply prior to the depletion of available sulphides. This suggests that these materials could generate net acidity in the future. However, the majority of the mine rock samples and all the ore samples have NP depletion periods on the order of decades, suggesting that these rocks will not generate acid before the mine is flooded at closure. Results for the backfill tailings samples suggest that these materials could generate acidity, under laboratory conditions, after a period of approximately 4 years. However, it is likely that within the conditions of the proposed underground mine the period until NP depletion will be considerably longer. This will likely be a result of the lower temperatures in the mine and the bulk deposition of the backfill into the stopes which will reduce the infiltration of water and oxygen into the mass of the cemented tailings compared to that found in the laboratory humidity cells.

Recommendations

Based on these results, AMEC recommends the termination of 21 of the 24 cells and the continued operation of three cells. The terminated cells should be shut down using the standard MEND shut down procedure and the results from that shut down reported as a final report on those cells. Specifically, the following recommendations are made:

1. Operation of the thirteen mine rock cells (HC1 to HC13) should be terminated, as metal release rates have stabilized, or have continued to decrease.
2. The three ore cells (HC14 to HC16) should be terminated, as pH has been constant and metals and sulphate loads have decreased.
3. Two of the three NP-depleted ore cells (HC20 and HC22) should be shut down. Two of these cells have gone acid and have decreasing to steady metal release rates under acidic conditions. Neutral pH cell HC21 should continue operation for another 20 weeks and the results reviewed at that time.
4. DMS float cells HC17, HC18 and HC19 should be shut down. pH values have remained circum-neutral to alkaline throughout testing. Metals release rates have been constant throughout testing.
5. Paste backfill cells (T1 and T2) should be continued for another 20 weeks to observe the notable decreases in sulphate and metals loads. The results should be reviewed at that time.

Summary of Recommended Actions

Cell	Description	Recommended Action
HC1	Siliceous Siltstone-2	Terminate
HC2	EXMT	Terminate
HC3	Footwall Rhyolite-2	Terminate
HC4	Footwall Rhyolite-3	Terminate
HC5	EXCP-2	Terminate
HC6	EXCP-3	Terminate
HC7	Argillite-2	Terminate
HC8	Argillite-4	Terminate
HC9	A083503	Terminate
HC10	A083529	Terminate
HC11	A083504	Terminate
HC12	A083505	Terminate
HC13	A083511	Terminate
HC14	Wolverine Feed Ore	Terminate
HC15	Hump Feed Ore	Terminate
HC16	Lynx Feed Ore	Terminate
HC17	Wolverine Float	Terminate
HC18	Hump Float	Terminate
HC19	Lynx Float	Terminate
HC20	Wolverine Ore	Terminate
HC21	Hump Ore	Continue Operation
HC22	Lynx Ore	Terminate
T1	Backfill Tailings	Continue Operation
T2	Backfill Tailings	Continue Operation

Closure

The findings and recommendations presented in this letter are based on laboratory analyses and information provided by the Client. If conditions are encountered that appear to be different from those shown and described in this report, or if the assumptions stated herein are not in keeping with the proposed project, this office should be notified in order that the recommendations can be reviewed and adjusted, if necessary. Field conditions, by their nature, can be highly variable across a site. A contingency should always be included in any project to allow for the possibility of condition variations, which may result in modification of the design and construction procedures. This report was prepared exclusively for Yukon Zinc Corporation and their agents, for the proposed project as described in the report. The data and recommendations provided herein should not be used for any other purpose, or by any other parties, without review and advice from qualified personnel. The findings and recommendations of this report were prepared in accordance with generally accepted professional scientific principles and practice. No other warranty, expressed or implied, is given.

We trust this meets your needs at this time. Should you have any questions, please do not hesitate to contact the undersigned.

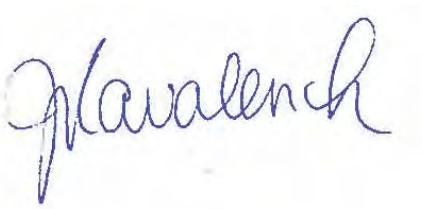

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Table 1: Static Test Summary for Humidity Cell Samples

Cell	Description		AP	NP	CaNP	NPR	Cd	Cu	Pb	Se	Zn
			kg $CaCO_3$/tonne			-	ppm	ppm	ppm	ppm	ppm
	Argillites (n=6)	Median	34.3	28	26	0.80	0.23	69.2	15.9	2.4	132
		90th Percentile	82.5	92	81	0.75	0.33	79.2	24.0	4.9	211
HC9	A083503		16.6	15	20	0.91	0.15	69.2	16.1	1.2	132
HC10	A083529		29.7	22	25	0.74	0.34	62.5	29.2	2.4	192
	Carbonaceous argillites (n=10)	Median	39.4	27	26	0.69	0.25	58.9	19.7	2.7	107
		90th Percentile	58.2	38	44	0.45	2.33	71.5	41.1	5.3	421
HC7	Argillite-2		37.5	18	11	0.48	2.55	54.8	19.7	6.0	855
HC8	Argillite-4		52.8	32	33	0.61	0.35	44.2	34.9	2.7	40
	Calcite-pyrite exhalite (n=9)	Median	138	345	157	2.49	0.29	45.5	184	3.4	165
		90th Percentile	203	524	304	1.50	19.7	75.9	479	4.4	4221
HC5	EXCP-2		138	227	227	1.64	0.73	75.4	256	2.8	239
HC6	EXCP-3		139	350	373	2.52	0.09	55.1	139	2.3	31
	Magnetite iron formations and Silica-pyrite exhalite (n=7)	Median	57.8	80	77	1.38	0.125	44.9	6.55	1.5	96
		90th Percentile	97.0	106	106	0.47	26.0	69.4	176	8.8	1786
HC11	A083504		55.9	89	107	1.59	0.04	70.4	18.8	4.3	106
HC2	EXMT		100	99	77	0.99	37.1	29.0	334	13	3390
	Interbedded rhyolite/argillites (n=5)	Median	28.4	48	52	1.69	0.07	68.0	11.2	2.1	103
		90th Percentile	52.4	130.6	71	0.72	0.192	76.0	40.8	3.8	157
HC12	A083505		28.4	21	39	0.74	0.08	67.9	10.4	2.3	159
HC13	A083511		29.7	67	52	2.26	0.24	68.1	11.9	4.4	153
	Rhyolite and Rhyolite Fragmental (n=16)	Median	20.8	33	39	1.72	0.19	62.5	7.5	1.4	66
		90th Percentile	121	68	76	5.33	2.05	630	58.1	43	254
HC1	Siliceous Siltstone-2		18.8	22	20	1.17	0.32	75.2	8.20	1.9	128
HC3	Footwall Rhyolite-2		238	7.0	4.5	0.03	1.68	166	63.4	40	202
HC4	Footwall Rhyolite-3		113	19	16	0.17	2.52	939	34.0	44	289
Ore Samples											
HC14	Wolverine Feed Ore		523	58	57	0.11	>500	6090	6560	760	>10000
HC15	Hump Feed Ore		413	113	114	0.27	308	6430	3760	540	>10000
HC16	Lynx Feed Ore		900	100	102	0.11	>500	9670	6480	>1000	>10000
DMS Float Samples											
HC17	Wolverine Float		28.1	84	86	3.00	13.8	567.8	140.8	37.2	1248
HC18	Hump Float		55.3	241	248	4.36	15.3	158	130.1	26.5	1229
HC19	Lynx Float		50.6	121	133	2.39	16.4	754.5	198.5	39.6	1577
NP-Depleted Ore Samples											
HC 20	Wolverine Ore		523	7.42		0.01	>500	6090	6560	760	>10000
HC 21	Hump Ore		413	15.6		0.04	308	6430	3760	540	>10000
HC 22	Lynx Ore		900	18.2		0.02	>500	9670	6480	>1000	>10000
Backfill											
T1	Backfill Tailings		608	131	98	0.22	73.2	3130	3030	830	7320
T2	Backfill Tailings		586	131	105	0.22	76.3	3370	2990	830	7850

Table 2: Waste Rock, Ore, Dense Media Separation (DMS) and Backfill Humidity Cell Descriptions

Cell No.	Sample ID	Sample Type	Method Reference	Column Packing			Total Volume of Initial Flushings (mL)	Flushing Rate/Weekly Input* (mL)	Temp (°C)	Sampling Frequency	Start-up date	Duration (weeks)
				Dry Wt. of Sample (kg)	Other Materials Used	Column Material						
1	Siliceous Siltstone-2	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	22-Dec-05	127
2	EXMT	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	22-Dec-05	127
3	Footwall Rhyolite-2	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	22-Dec-05	127
4	Footwall Rhyolite-3	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	22-Dec-05	127
5	Excp-2	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	22-Dec-05	127
6	Excp-3	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	22-Dec-05	127
7	Argillite-2	wasterock	MEND	0.90	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	22-Dec-05	127
8	Argillite-4	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	22-Dec-05	127
9	A083503	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	12-Jan-06	124
10	A083529	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	12-Jan-06	124
11	A083504	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	12-Jan-06	124
12	A083505	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	12-Jan-06	124
13	A083511	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	12-Jan-06	124
14	Wolverine Feed Ore	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	16-Feb-06	119
15	Hump Feed Ore	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	16-Feb-06	119
16	Lynx Feed Ore	wasterock	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	16-Feb-06	119
17	Wolverine Float	DMS	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	23-Feb-06	119
18	Hump Float	DMS	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	23-Feb-06	119
19	Lynx Float	DMS	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	23-Feb-06	119
20	Wolverine Feed Ore NP Removed	wasterock	MEND	0.585	PVC perforated disk & nylon mesh	Plexiglas	440	295	20-22 °C	Weekly	23-May-06	105
21	Hump Feed Ore NP Removed	wasterock	MEND	0.541	PVC perforated disk & nylon mesh	Plexiglas	410	270	20-22 °C	Weekly	23-May-06	105
22	Lynx Feed Ore NP Removed	wasterock	MEND	0.519	PVC perforated disk & nylon mesh	Plexiglas	390	260	20-22 °C	Weekly	23-May-06	105
T1	Backfill A	backfill	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	23-May-06	105
T2	Backfill B	backfill	MEND	1.00	PVC perforated disk & nylon mesh	Plexiglas	750	500	20-22 °C	Weekly	23-May-06	105

Table 3: Mine Rock Release Rates

Mine Rock Release Rates (mg/m^2/wk)*

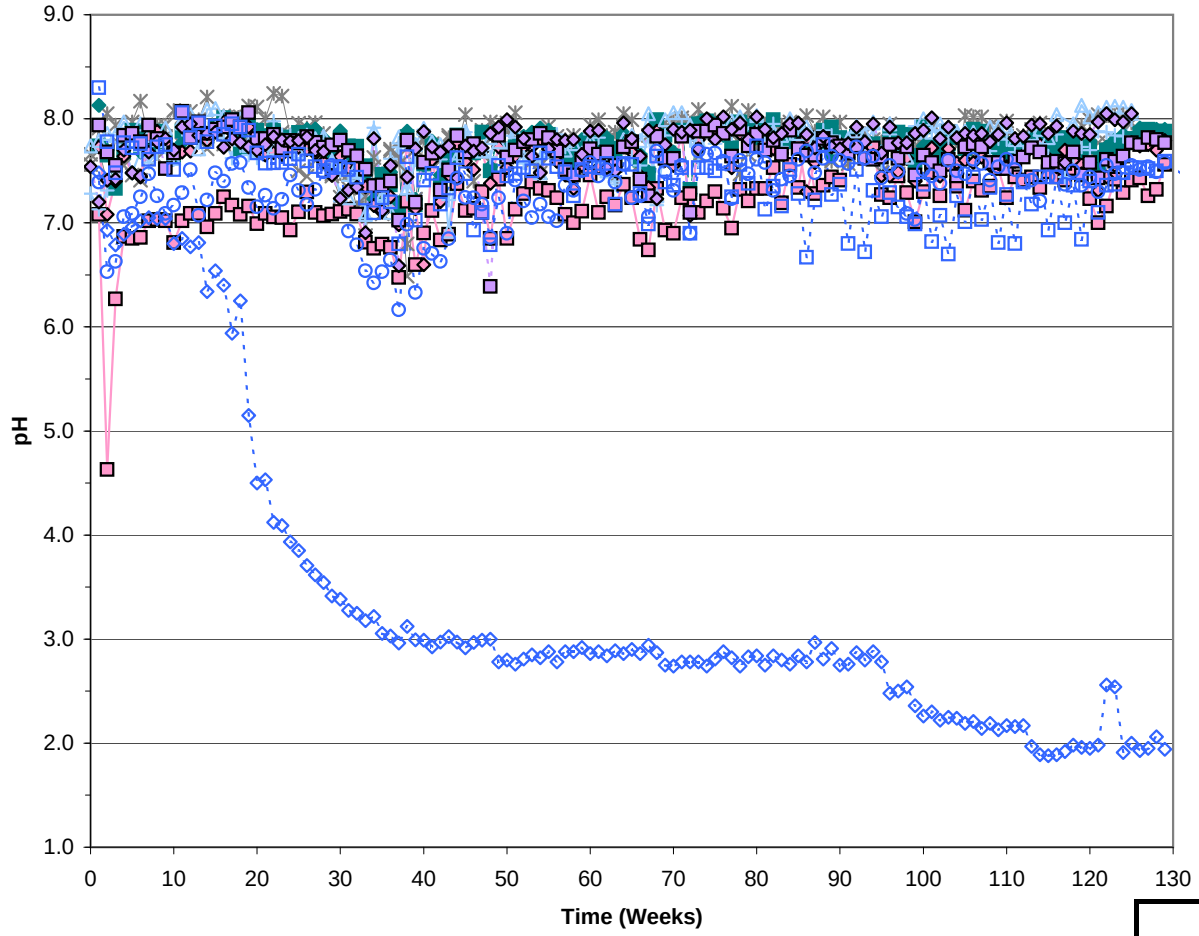
Reported: November 2007		Release Rates (mg/m^2/wk)											
Material Type	Rock Type	Sulphate	Al	As	Cd	Cu	Fe	Pb	Mo	Ni	Se	Ag	Zn
Non-Carbonaceous Argillites	1	0.38	0.00075	0.000011	0.000001	0.000022	0.00021	0.000004	0.00003	0.000008	0.00003	0.000001	0.00006
Carbonaceous Argillites	2	1.61	0.00225	0.000018	0.000014	0.000060	0.00086	0.000015	0.00003	0.000100	0.00015	0.000003	0.00208
Calcite-Pyrite Exhalite	3	4.57	0.00128	0.000012	0.000002	0.000050	0.00072	0.000014	0.00002	0.000013	0.00008	0.000003	0.00015
Iron Formation	4	0.82	0.00130	0.000026	0.000010	0.000030	0.00042	0.000017	0.00004	0.000013	0.00047	0.000002	0.00026
Rhyolite/Argillite	5	0.69	0.00073	0.000011	0.000001	0.000020	0.00029	0.000007	0.00009	0.000008	0.00005	0.000001	0.00007
Rhyolite/Rhyolite Fragmental	6	7.30	0.36155	0.000066	0.000313	0.014907	0.62341	0.005628	0.00001	0.000504	0.00097	0.000003	0.03153
NP Depleted Ore		35.5	0.10473	0.006289	0.059309	0.368860	0.15551	0.002281	0.00002	0.012421	0.10434	0.000022	10.8186
Backfill		12.0	0.00024	0.000448	0.000057	0.000127	0.00088	0.000070	0.00025	0.000033	0.00816	0.000057	0.00346
Ore		10.4	0.00028	0.001159	0.017950	0.000508	0.00103	0.007856	0.00012	0.000256	0.02536	0.006557	0.57981
DMS Float		2.33	0.00070	0.000147	0.000117	0.000133	0.00085	0.000060	0.00033	0.000292	0.00163	0.000005	0.00367

June 2008 (Current)		Release Rates (mg/m^2/wk)											
Material Type	Rock Type	Sulphate	Al	As	Cd	Cu	Fe	Pb	Mo	Ni	Se	Ag	Zn
Non-Carbonaceous Argillites	1	0.36	0.00067	0.000009	0.000001	0.000021	0.00025	0.000005	0.00003	0.000007	0.00002	0.000001	0.00007
Carbonaceous Argillites	2	1.60	0.00193	0.000016	0.000015	0.000057	0.00108	0.000014	0.00003	0.000091	0.00013	0.000003	0.00203
Calcite-Pyrite Exhalite	3	4.46	0.00106	0.000012	0.000003	0.000045	0.00106	0.000013	0.00001	0.000013	0.00006	0.000003	0.00015
Iron Formation	4	0.76	0.00103	0.000023	0.000012	0.000027	0.00045	0.000015	0.00004	0.000012	0.00038	0.000002	0.00029
Rhyolite/Argillite	5	0.63	0.00064	0.000010	0.000001	0.000019	0.00030	0.000007	0.00010	0.000007	0.00005	0.000001	0.00007
Rhyolite/Rhyolite Fragmental	6	27.9	0.49880	0.000393	0.000224	0.013982	7.08745	0.006145	0.00002	0.000736	0.00094	0.000009	0.02228
NP Depleted Ore		24.0	0.14855	0.004574	0.047105	0.436755	0.26315	0.001610	0.00002	0.006645	0.05950	0.000025	8.82466
Backfill		8.34	0.00011	0.000249	0.000043	0.000054	0.00024	0.000004	0.00014	0.000024	0.00419	0.000001	0.00279
Ore		9.23	0.00033	0.001062	0.016995	0.000625	0.00101	0.007078	0.00012	0.000212	0.02160	0.000006	0.53494
DMS Float		2.41	0.00067	0.000144	0.000141	0.000161	0.00080	0.000047	0.00030	0.000432	0.00160	0.000004	0.00495

Relative Percent Difference (%) November 2007 to June 2008

		Release Rates (mg/m^2/wk)											
Material Type	Rock Type	Sulphate	Al	As	Cd	Cu	Fe	Pb	Mo	Ni	Se	Ag	Zn
Non-Carbonaceous Argillites	1	-3.1	-11	-15	8.5	-6.0	20	8.2	-4.6	-12	-11	-0.1	25
Carbonaceous Argillites	2	-0.19	-15	-9.0	4.2	-6.4	22	-4.0	-18	-8.8	-20	-1.4	-2.5
Calcite-Pyrite Exhalite	3	-2.4	-19	-2.0	11	-10	39	-1.8	-12	-1.5	-15	-0.4	0.2
Iron Formation	4	-8.2	-23	-14	19	-9.0	8.2	-12	3.0	-10	-22	-1.4	13
Rhyolite/Argillite	5	-10	-13	-8.2	10	-6.0	4.7	-5.3	12	-16	-13	-2.0	-1.6
Rhyolite/Rhyolite Fragmental	6	117	32	143	-33	-6.4	168	8.8	16	37	-3.6	93	-34
NP Depleted Ore		-39	35	-32	-23	17	51	-34	-12	-61	-55	12	-20
Backfill		-36	-75	-57	-27	-80	-113	-178	-56	-31	-64	-196	-21
Ore		-12	15	-8.8	-5.5	21	-2.6	-10	0.0	-19	-16	-200	-8.0
DMS Float		3.0	-3.9	-1.6	19	19	-6.1	-26	-9.0	39	-2.2	-7.6	30

*Calculated release rates exclude first 20 weeks of data



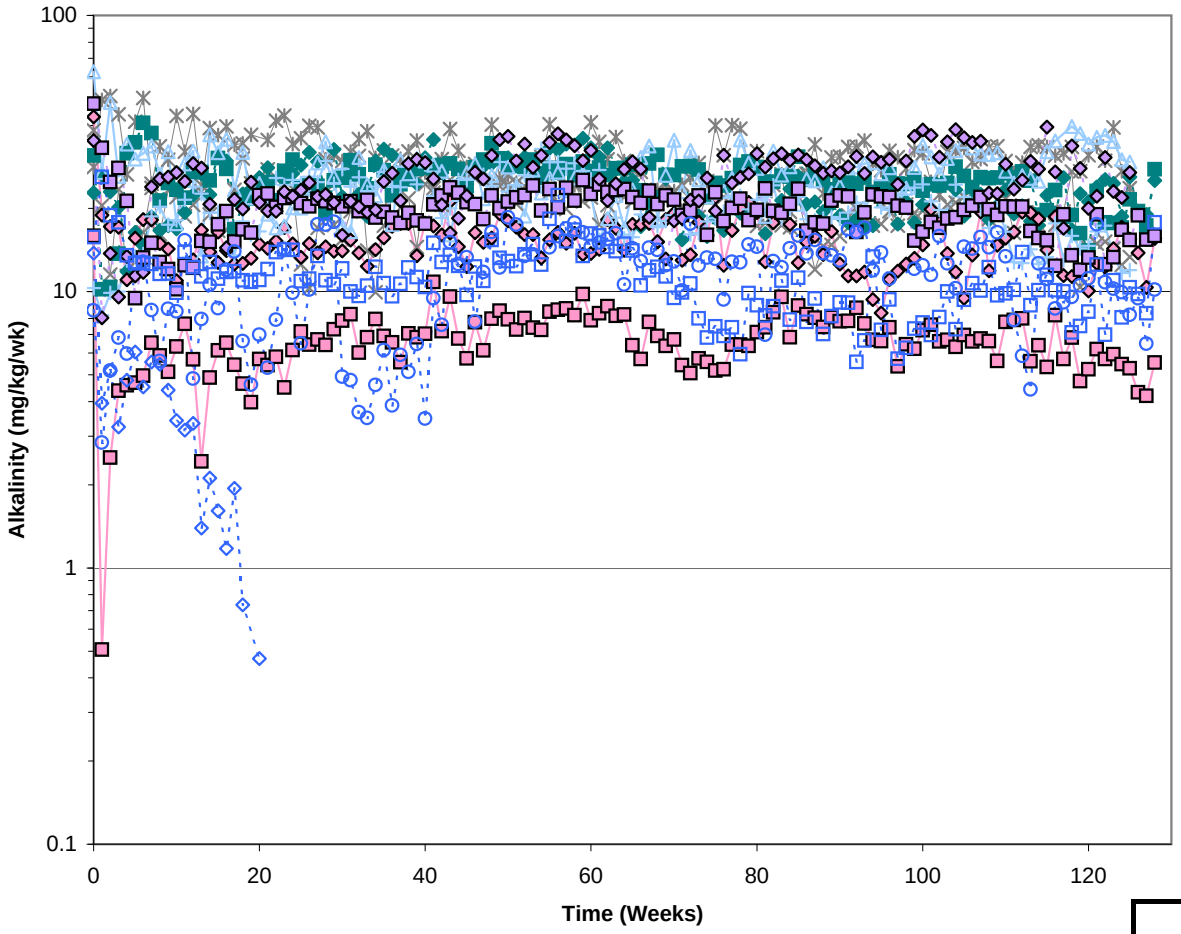
pH

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 1

TC 53920



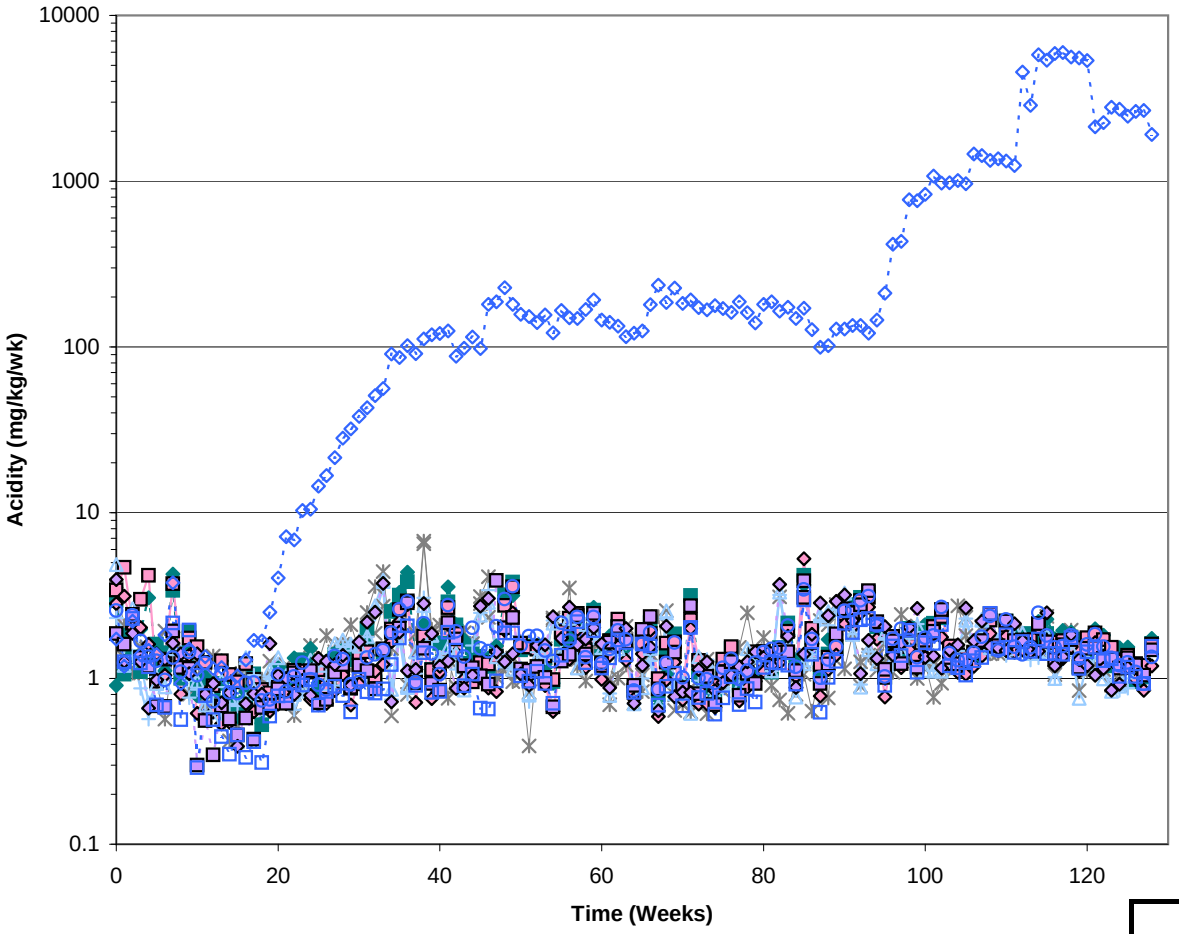
Alkalinity Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 2

TC 53920



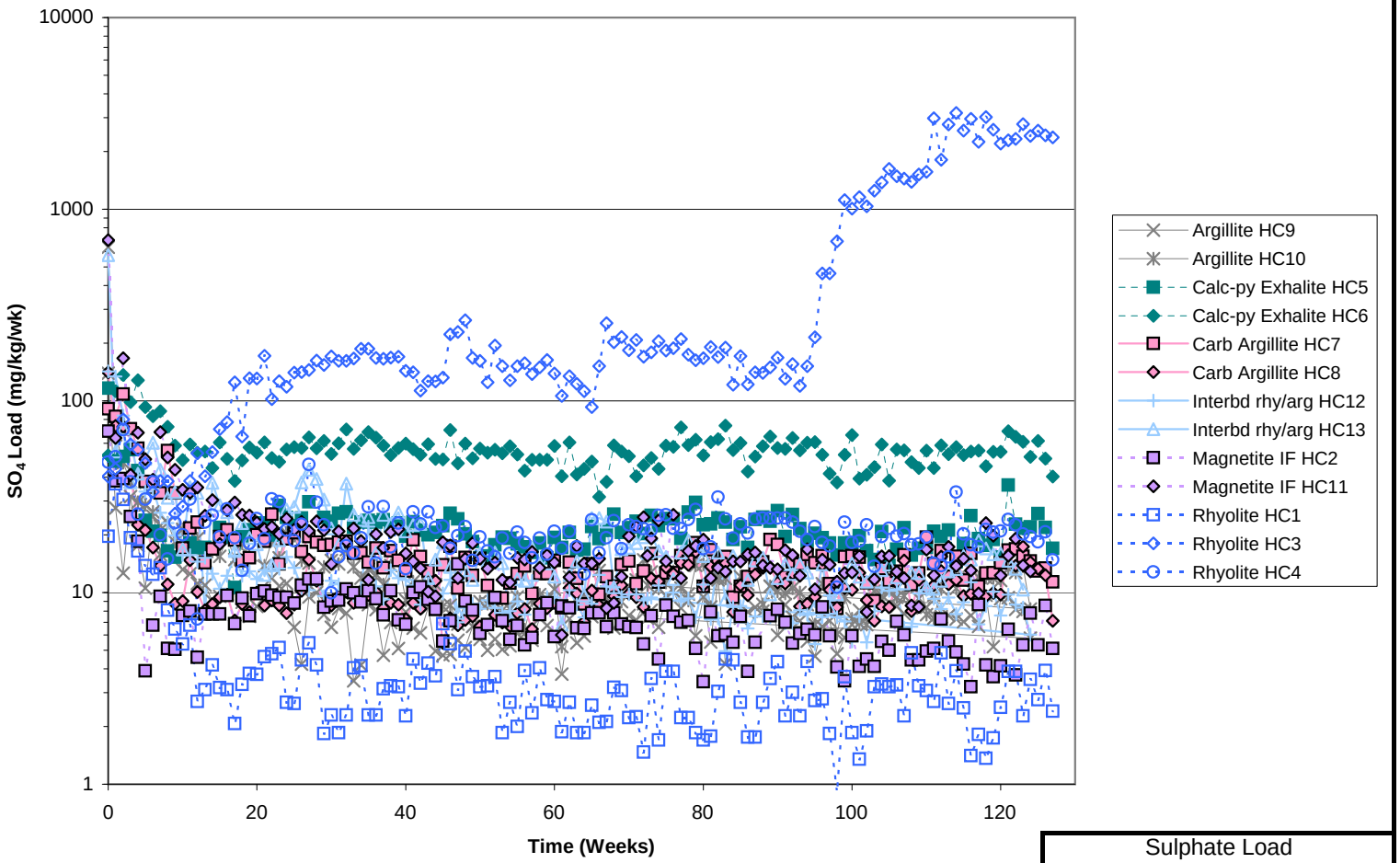
Acidity Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 3

TC 53920



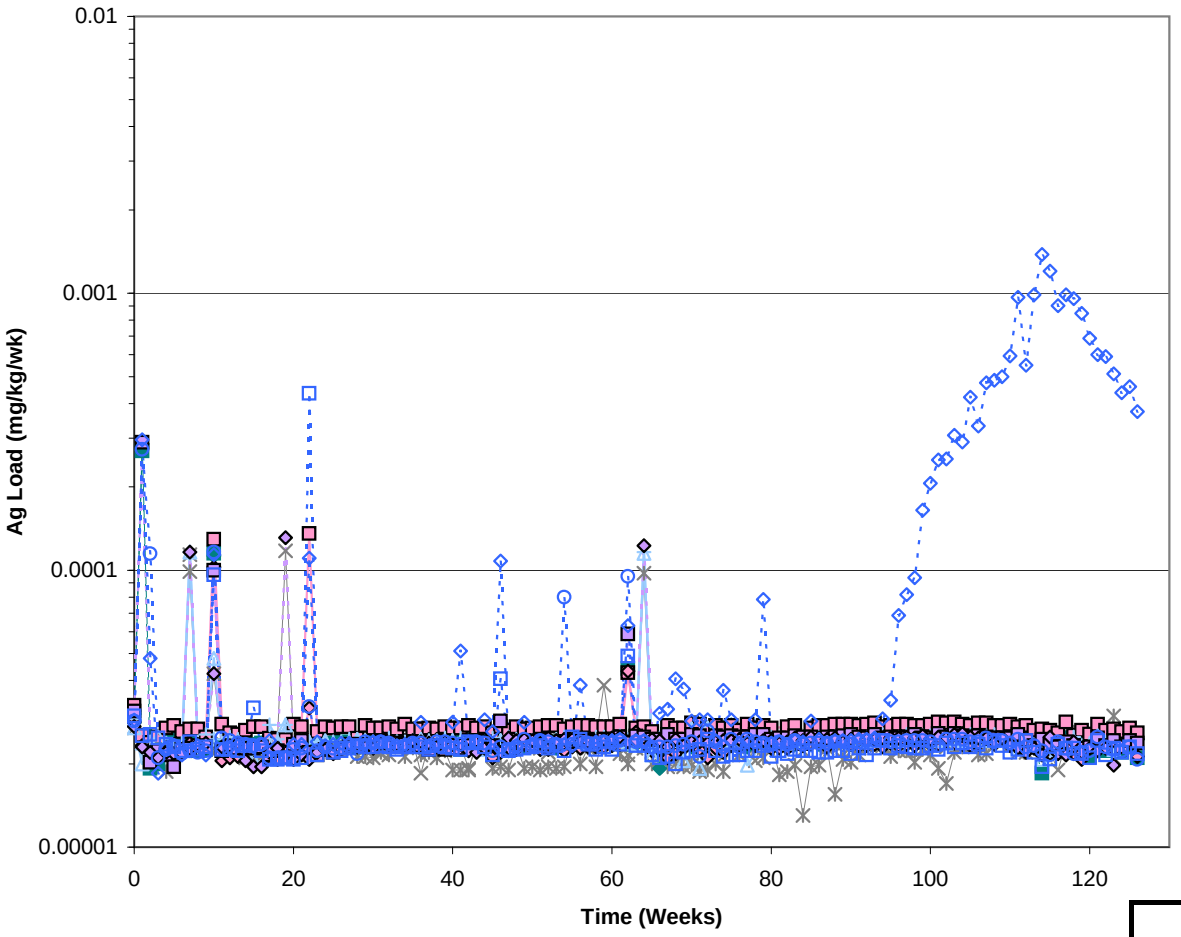
Sulphate Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 4

TC 53920



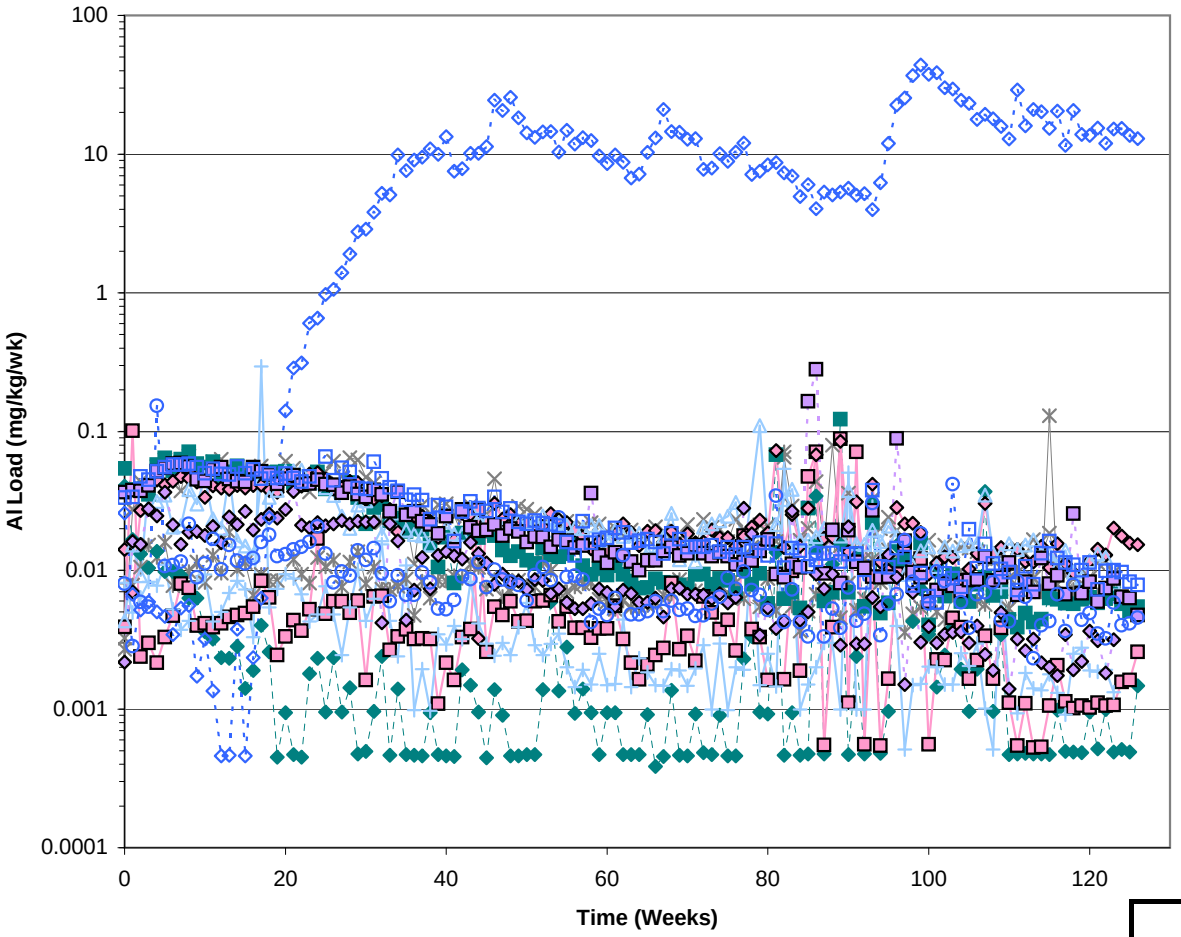
Silver Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 5

TC 53920



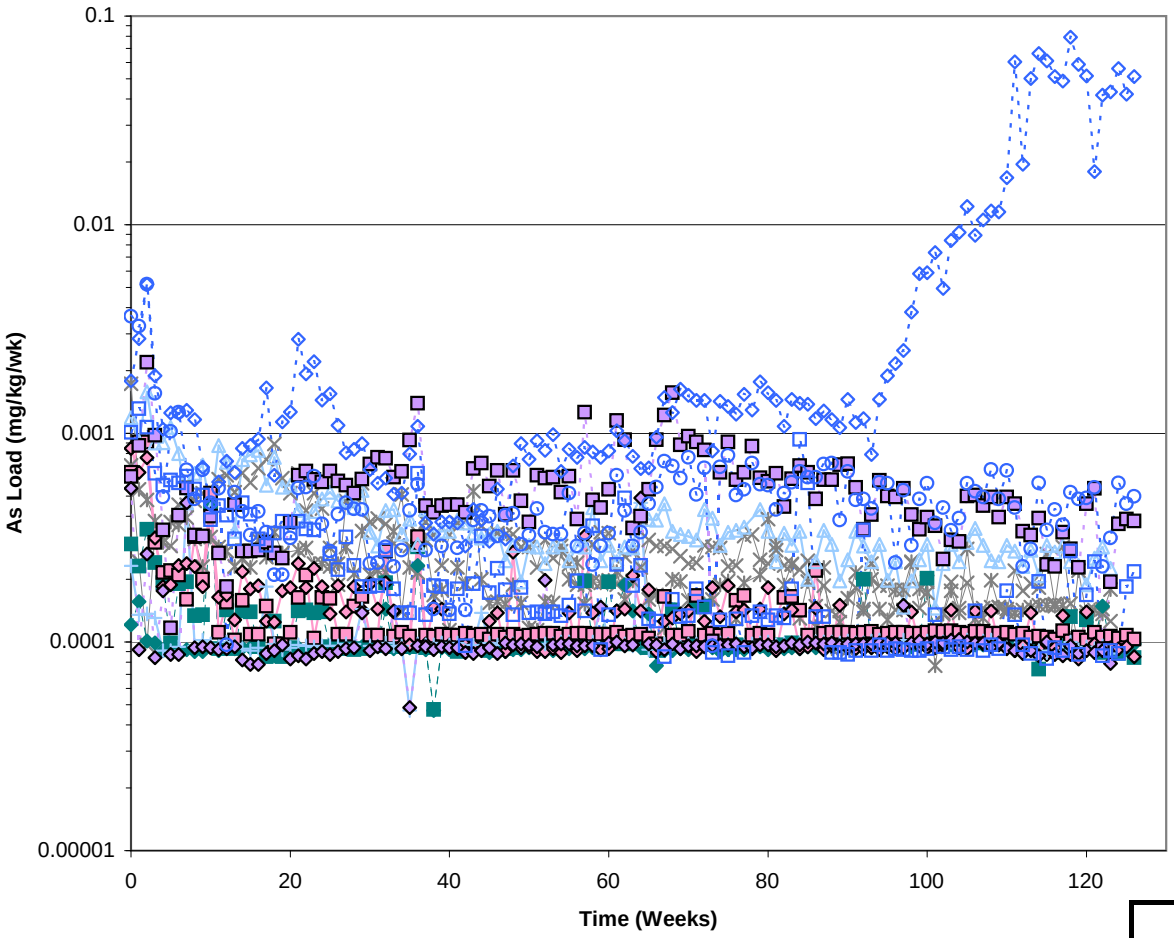
Aluminium Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 6

TC 53920



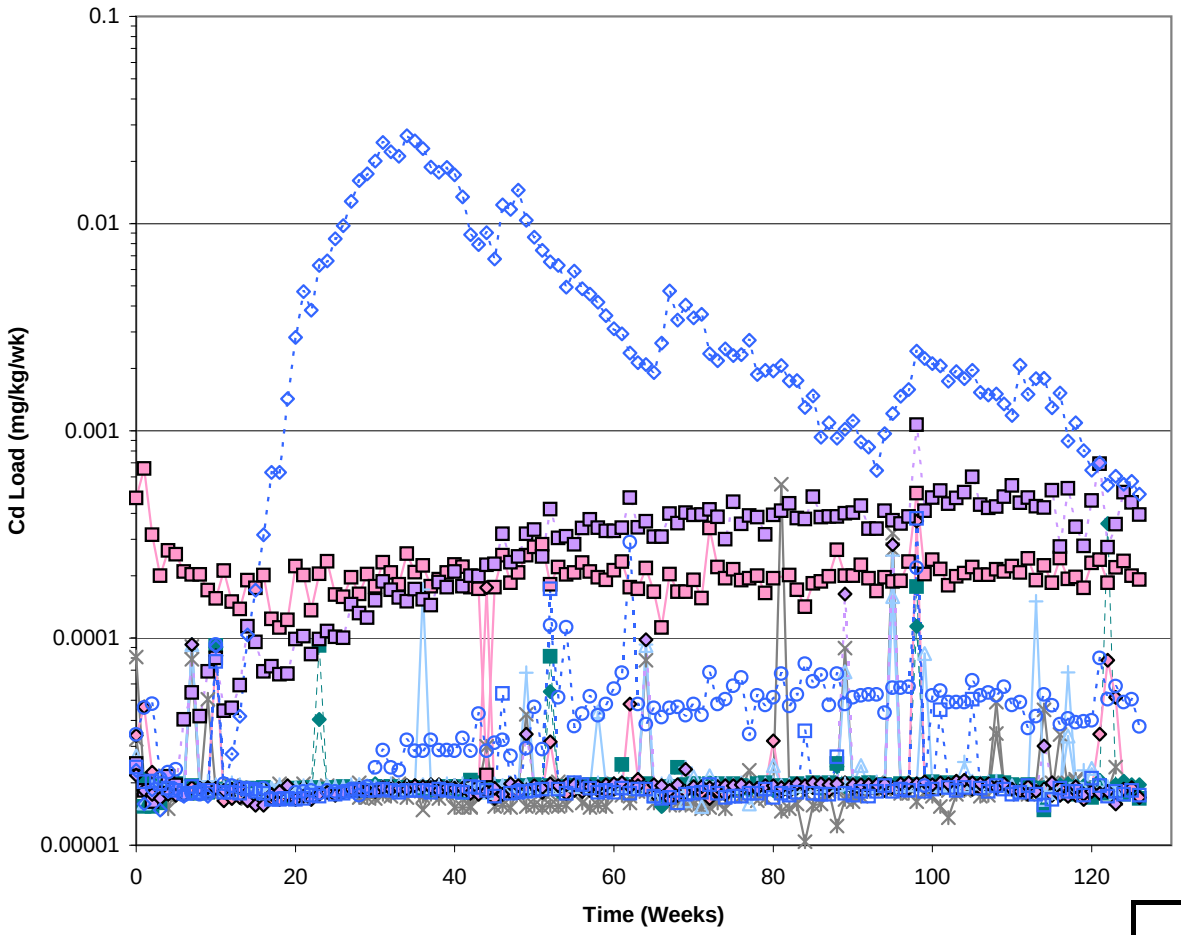
Arsenic Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 7

TC 53920



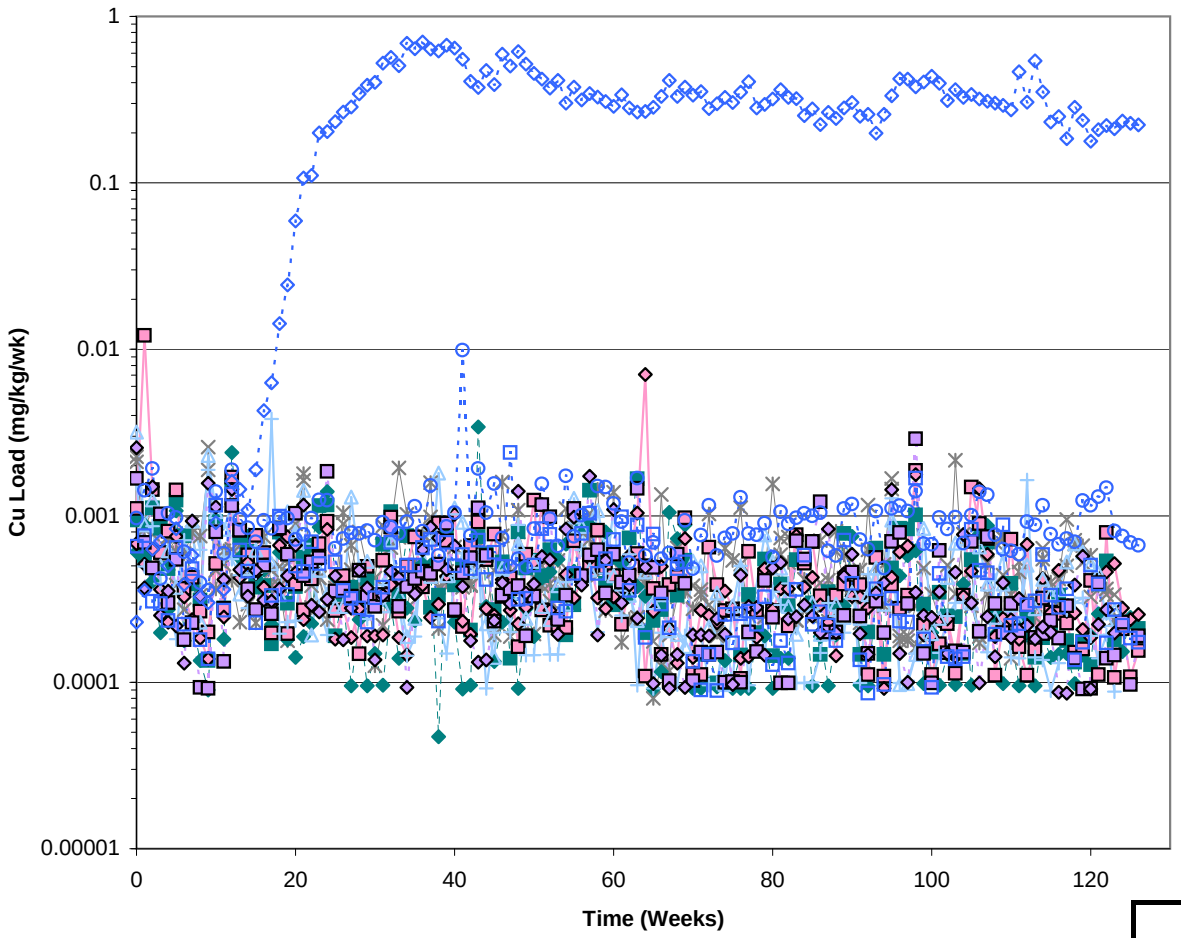
Cadmium Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 8

TC 53920



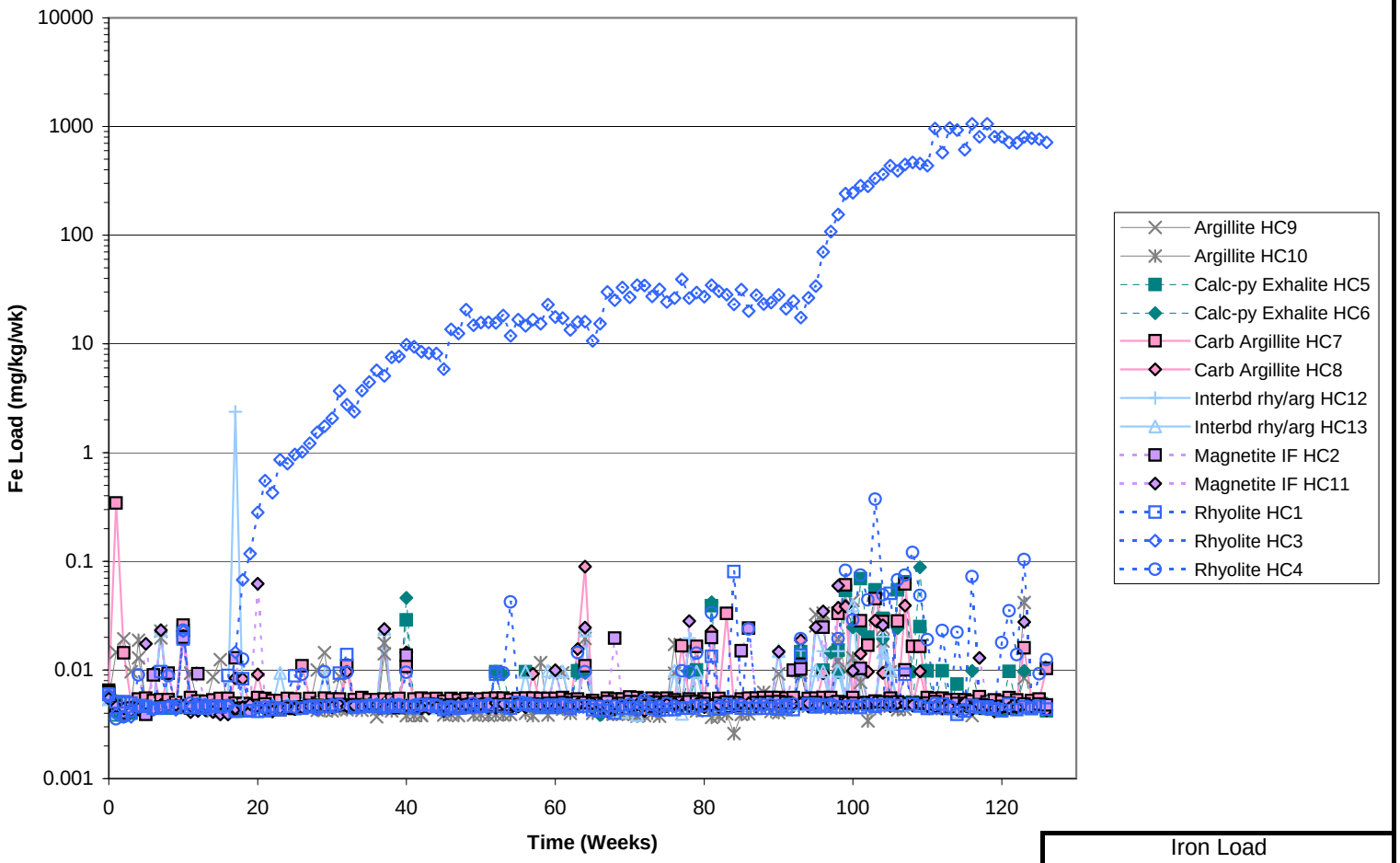
Copper Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 9

TC 53920



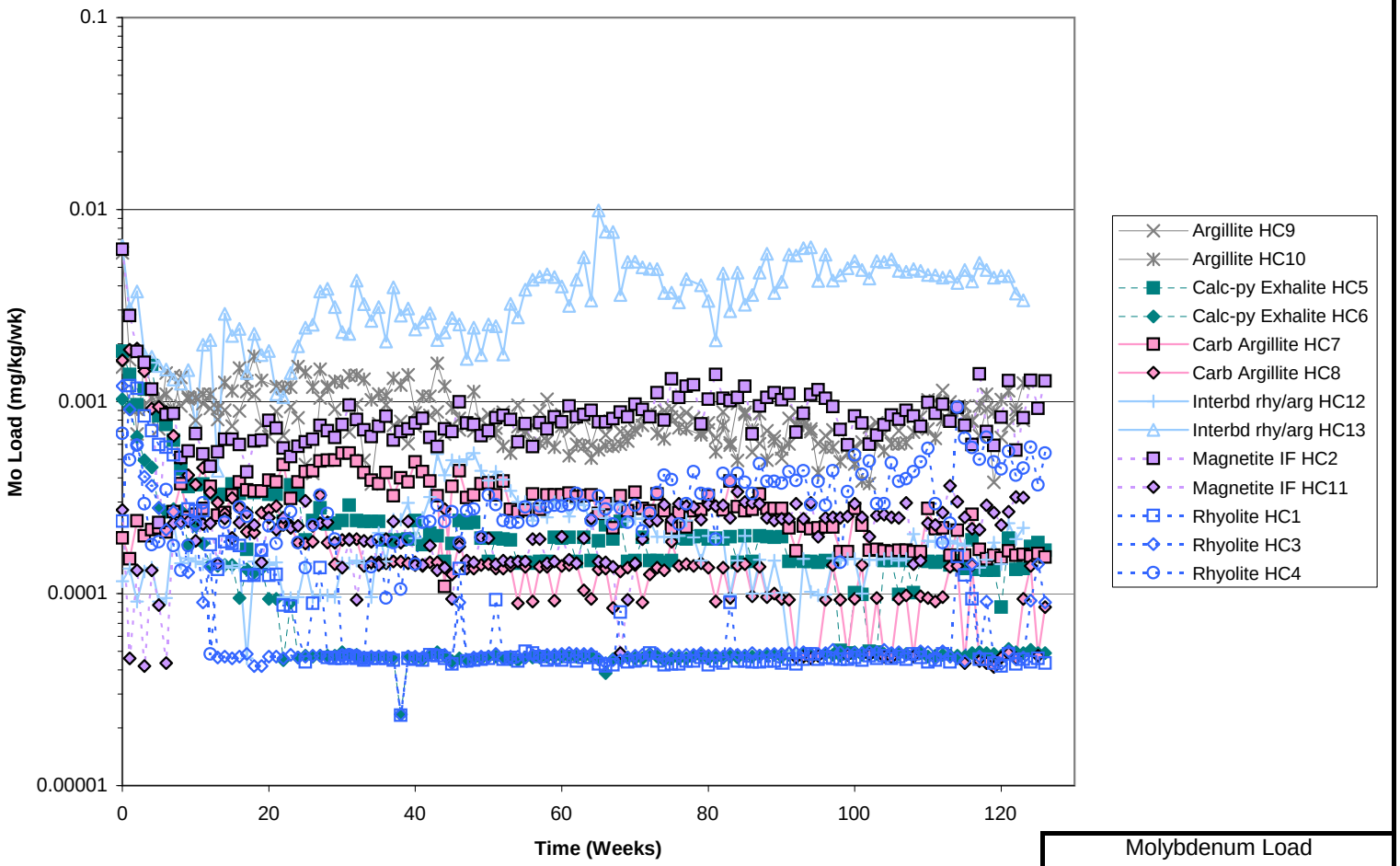
Iron Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 10

TC 53920



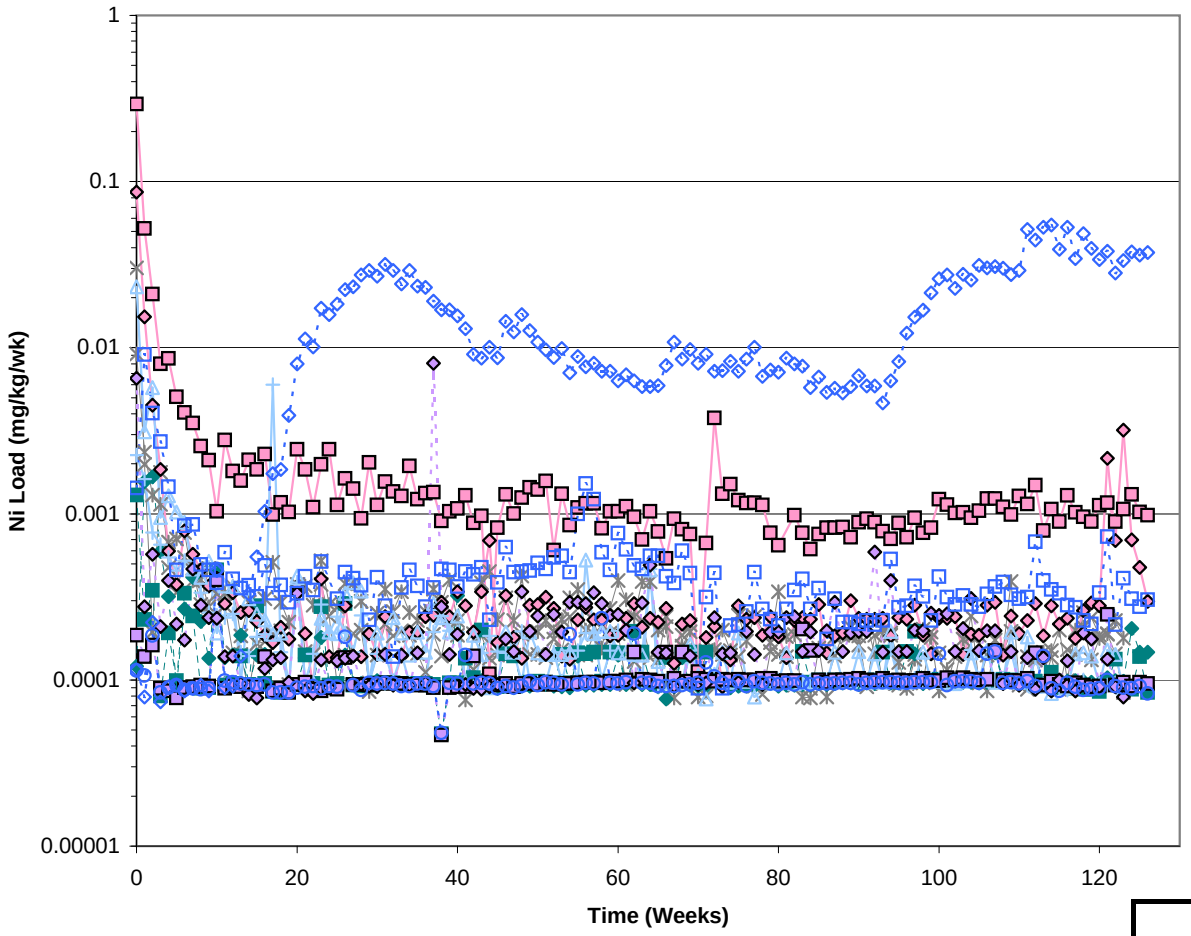
Molybdenum Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 11

TC 53920



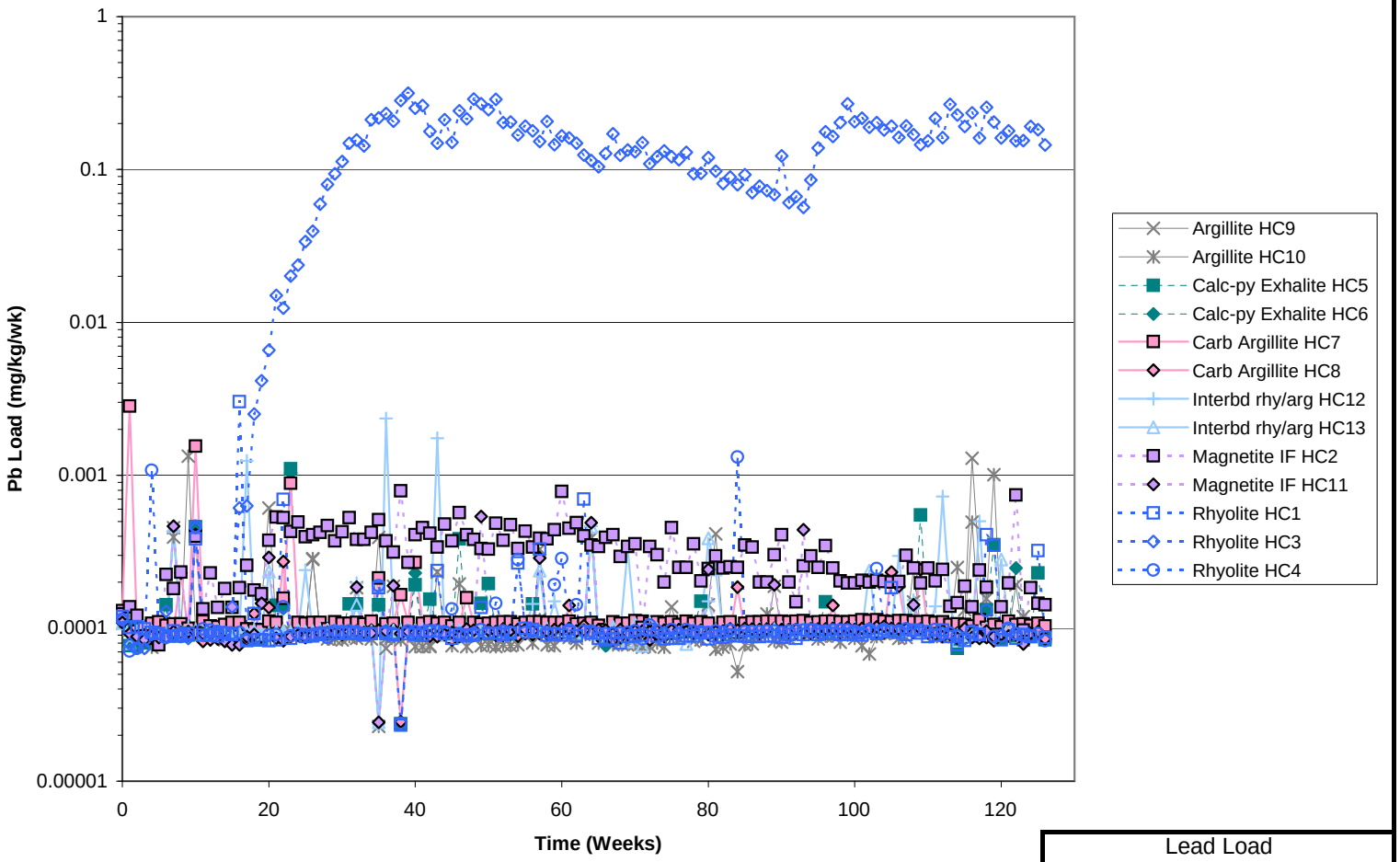
Nickel Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 12

TC 53920



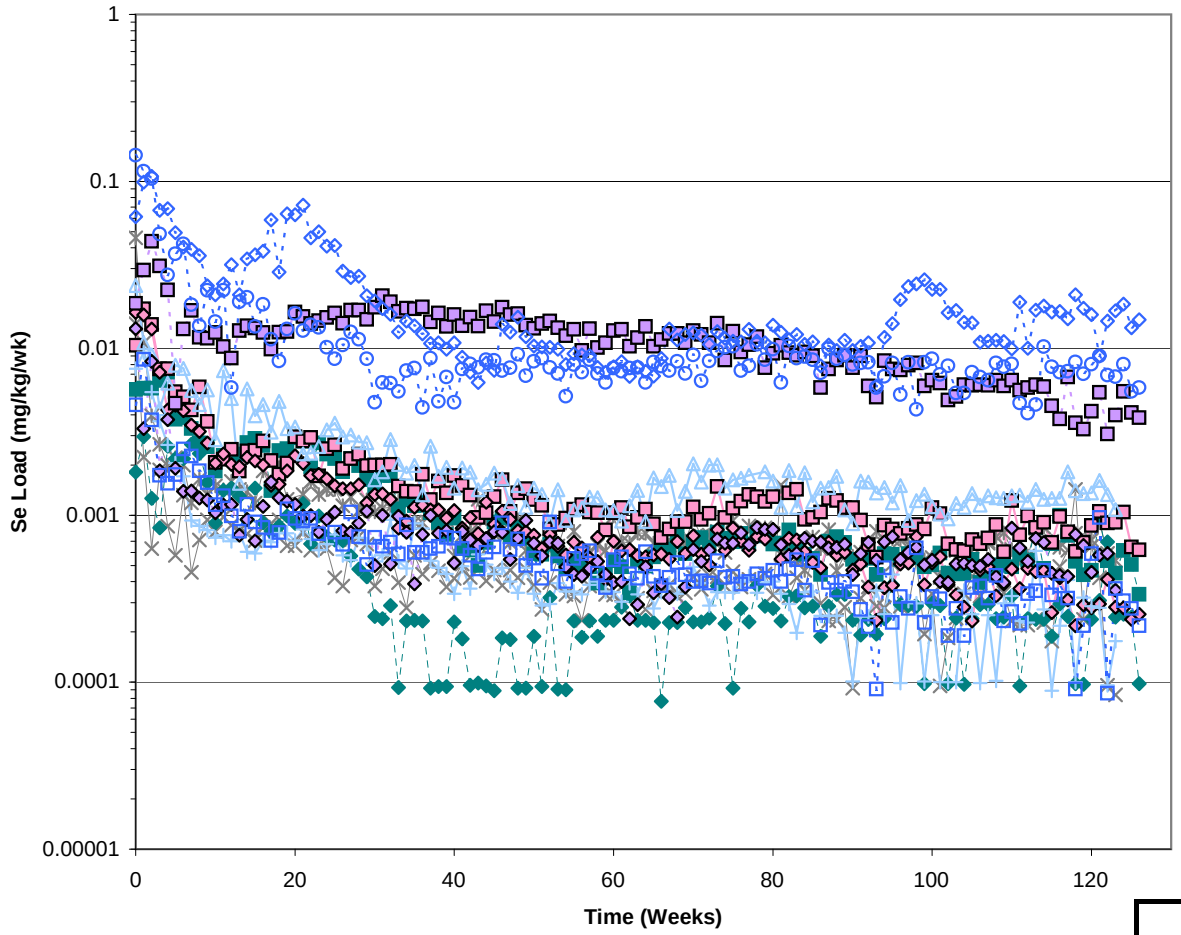
Lead Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 13

TC 53920



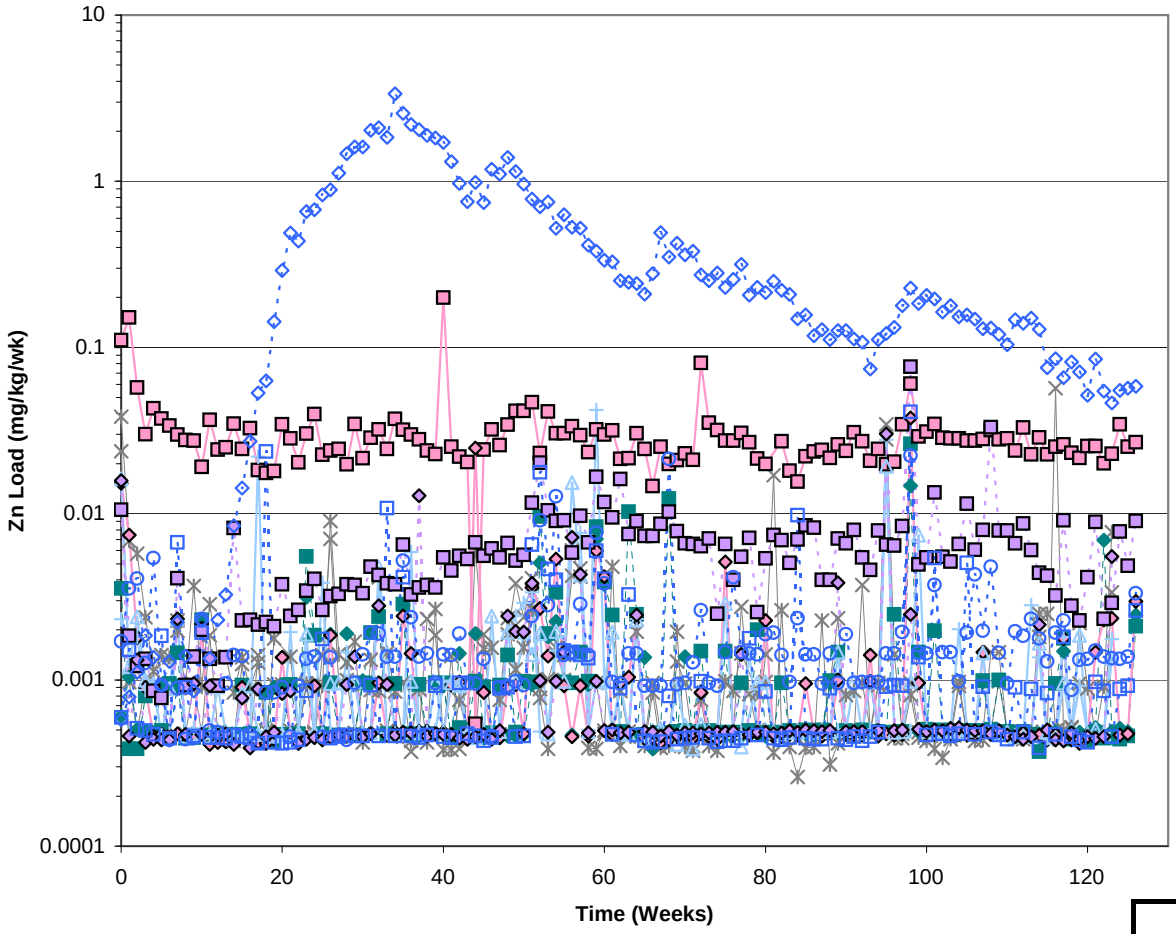
Selenium Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 14

TC 53920



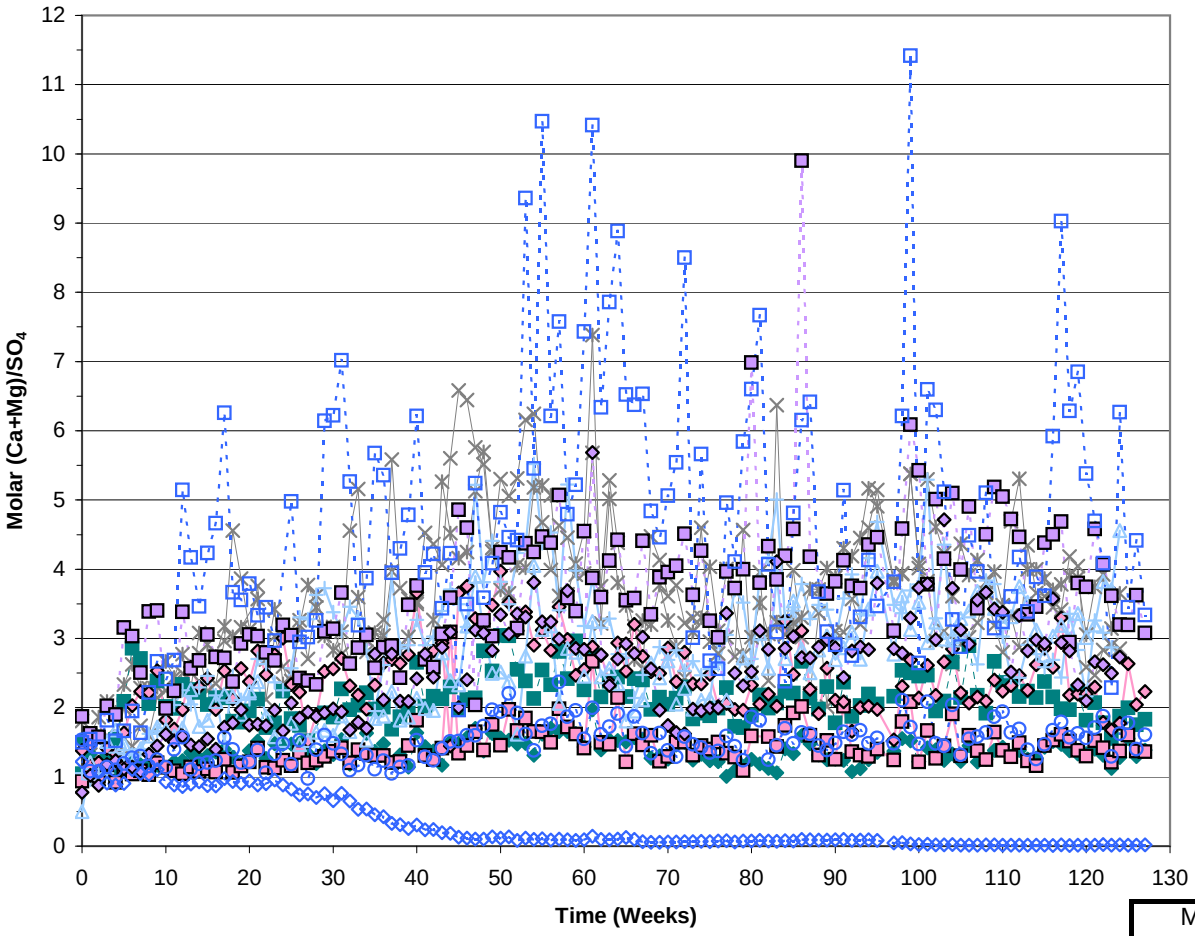
Zinc Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 15

TC 53920



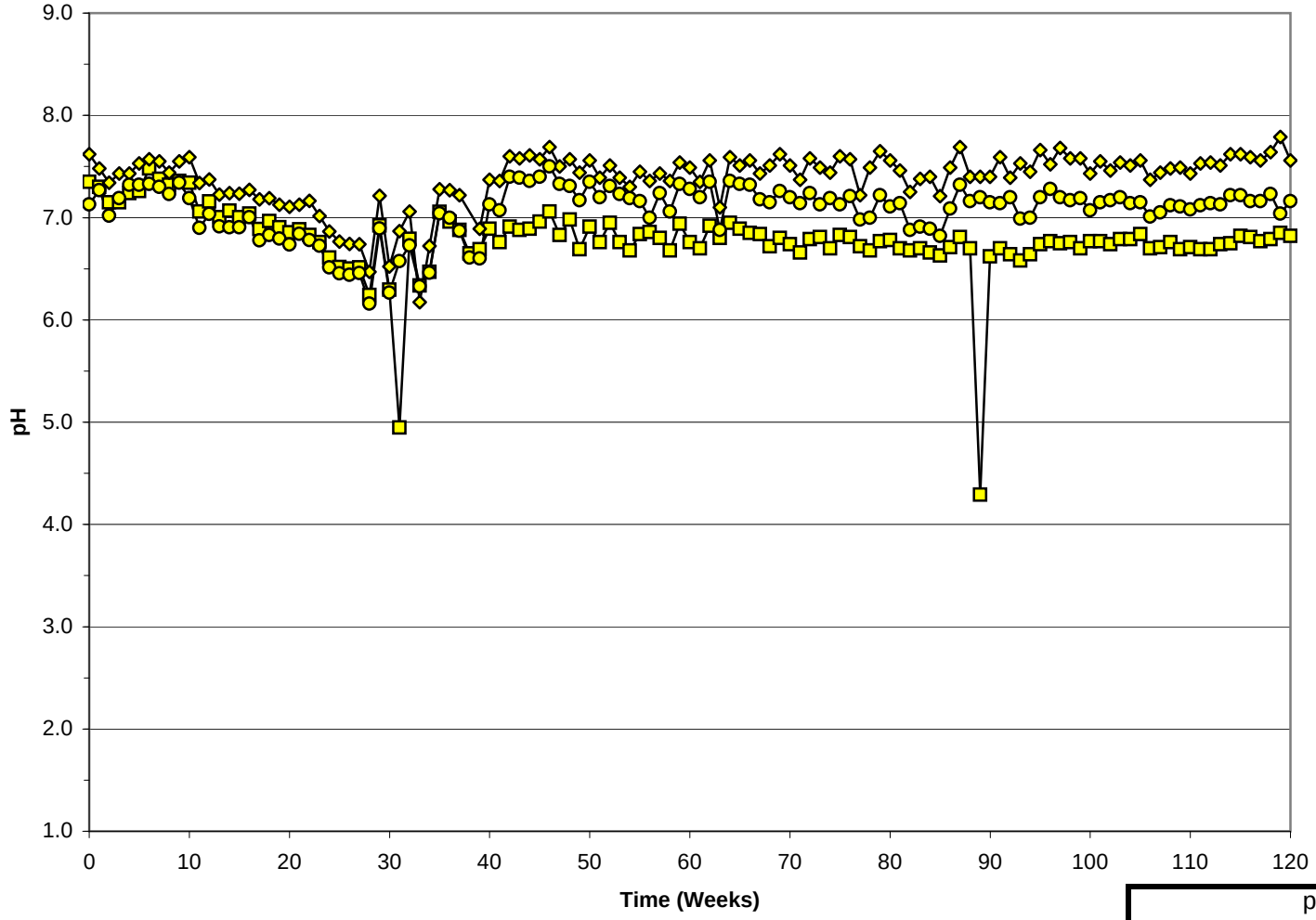
Molar (Ca+Mg)/SO4 Load

Wolverine Mine, YK

Mine Rock

June 2008 | FIGURE 16

TC 53920



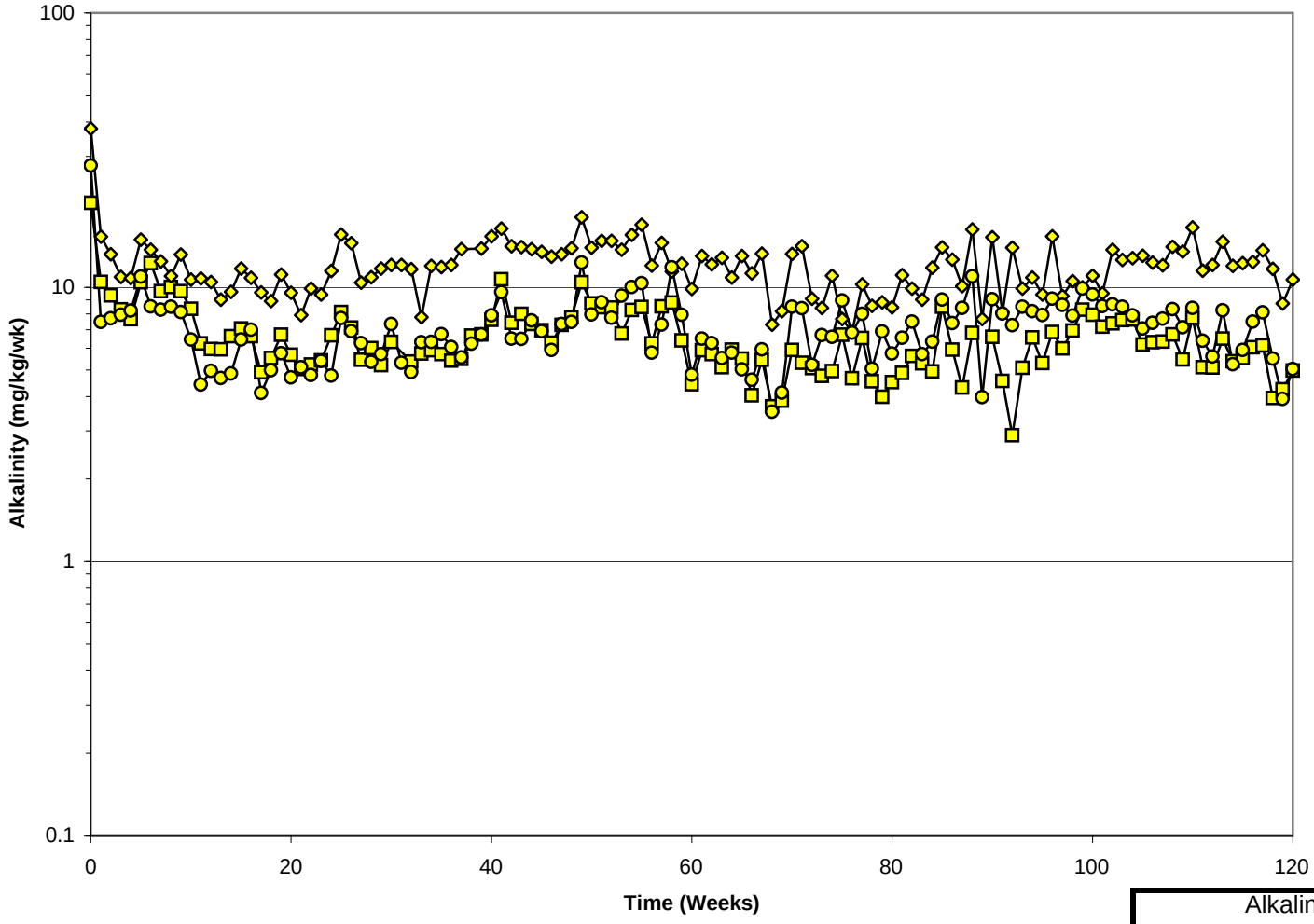
pH

Wolverine Mine, YK

Ore

June 2008 | FIGURE 17

TC 53920



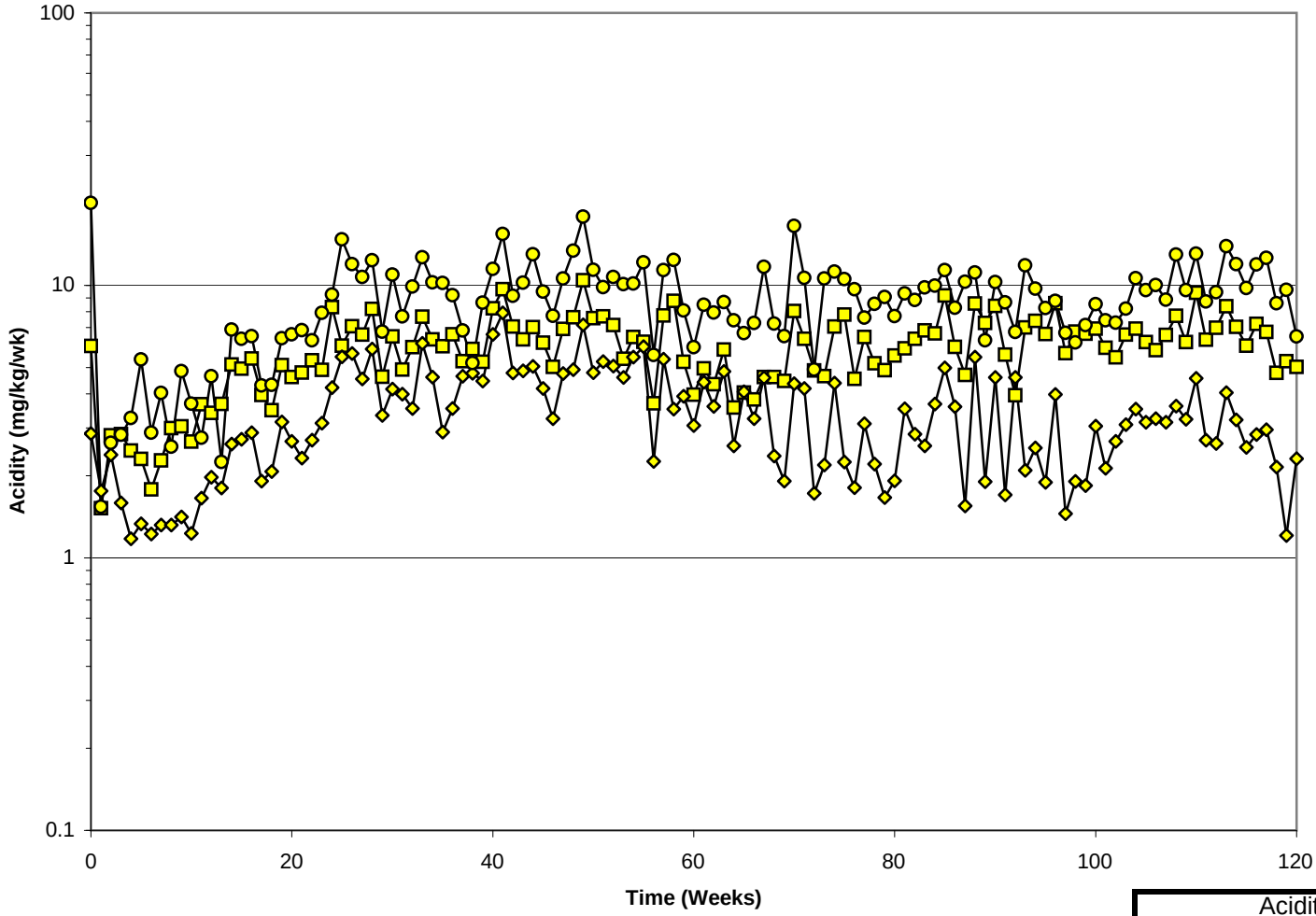
Alkalinity Load

Wolverine Mine, YK

Ore

June 2008 | FIGURE 18

TC 53920

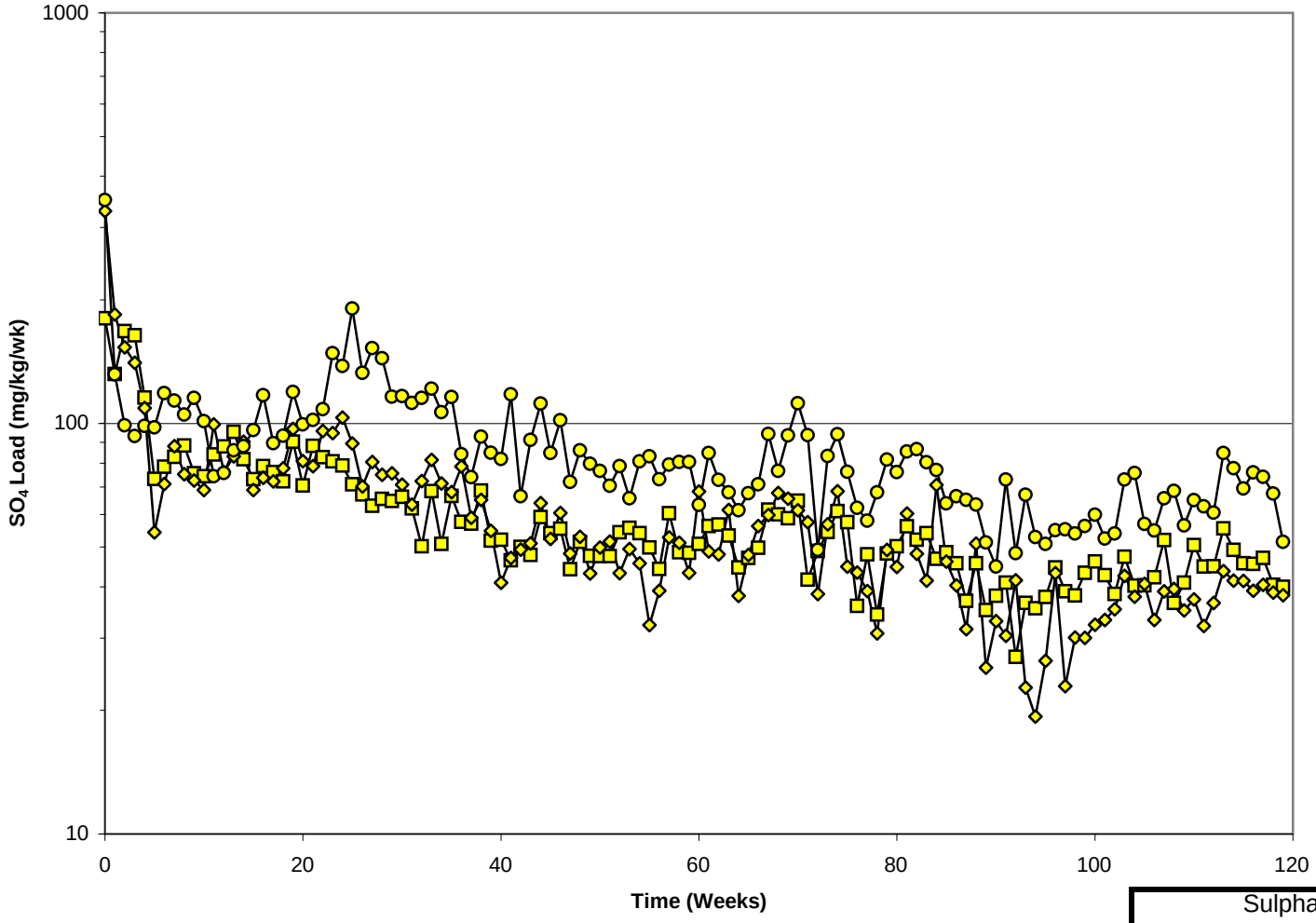


Acidity Load

Wolverine Mine, YK

Ore

June 2008 | FIGURE 19



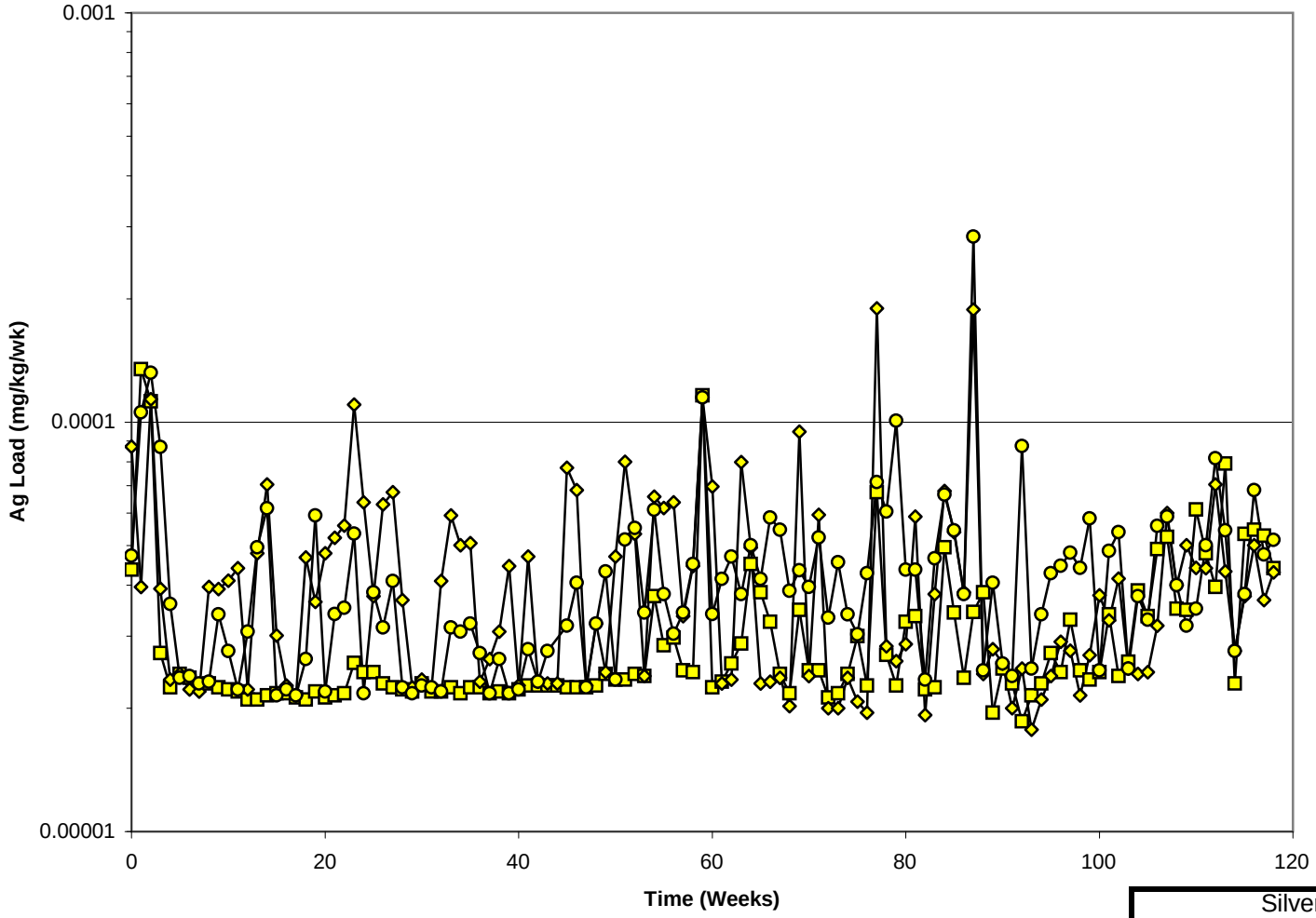
Sulphate Load

Wolverine Mine, YK

Ore

June 2008 | FIGURE 20

TC 53920



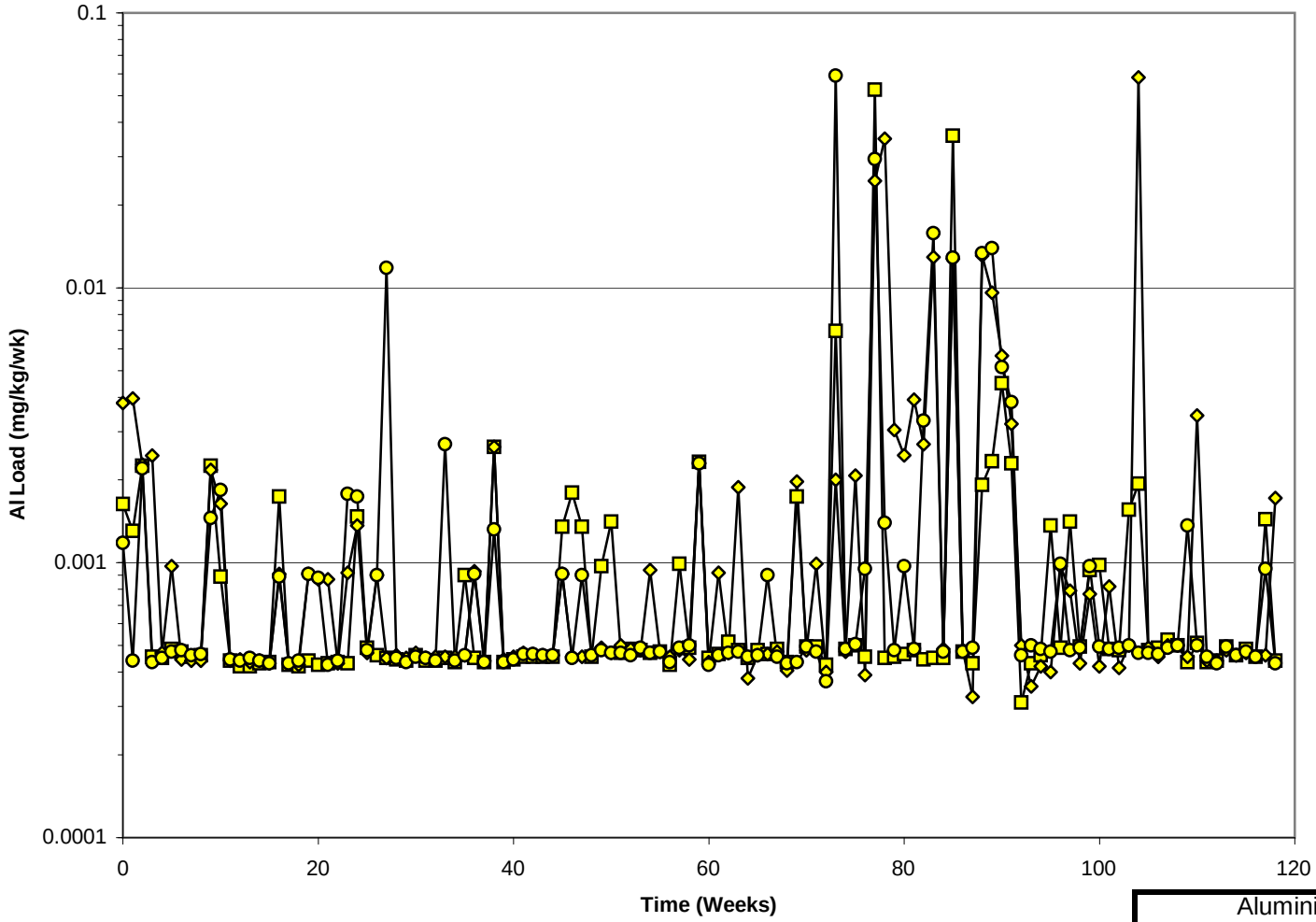
Silver Load

Wolverine Mine, YK

Ore

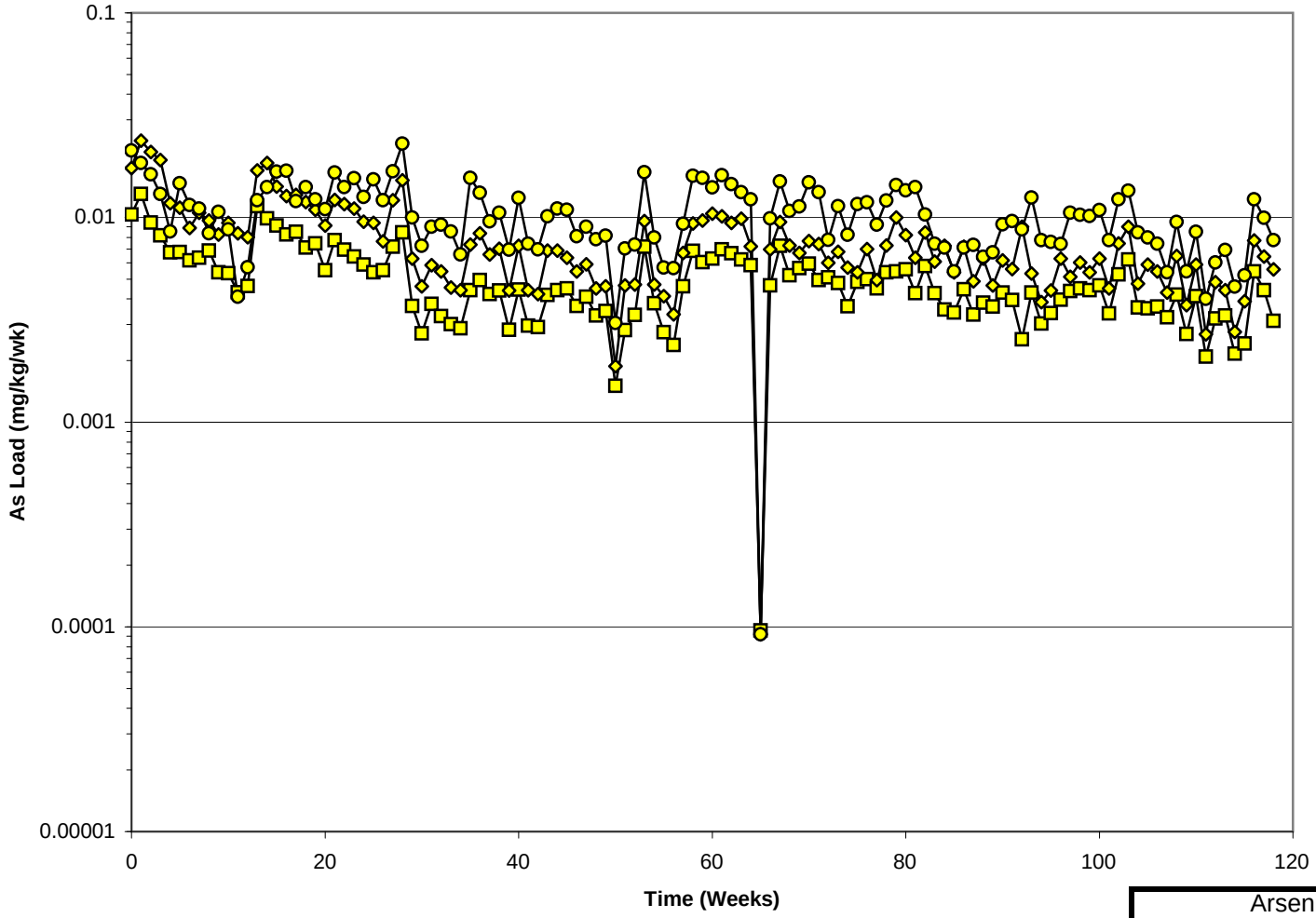
June 2008 | FIGURE 21

TC 53920



Aluminium Load	
Wolverine Mine, YK	
Ore	
June 2008	FIGURE 22

TC 53920



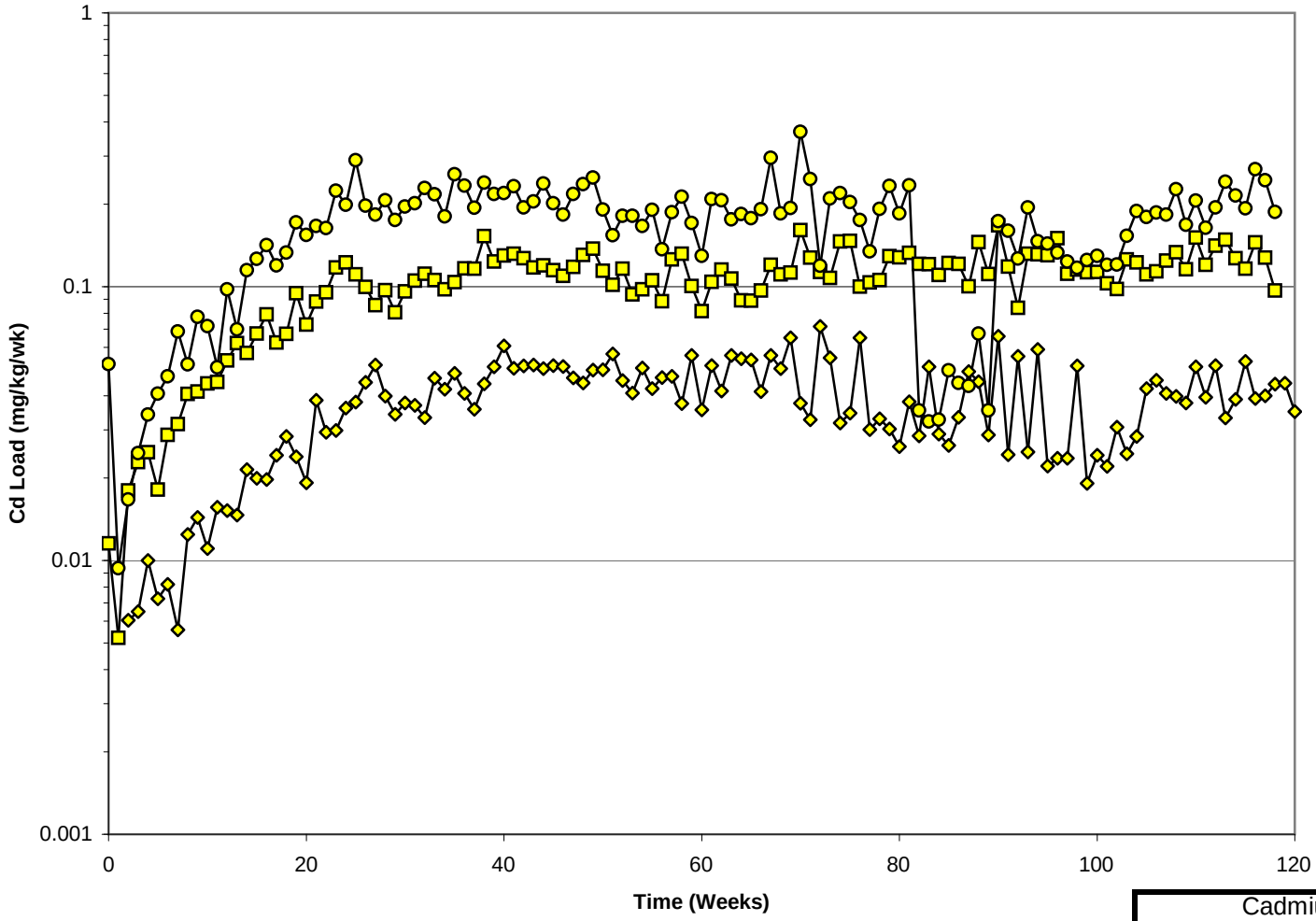
Arsenic Load

Wolverine Mine, YK

Ore

June 2008 | FIGURE 23

TC 53920

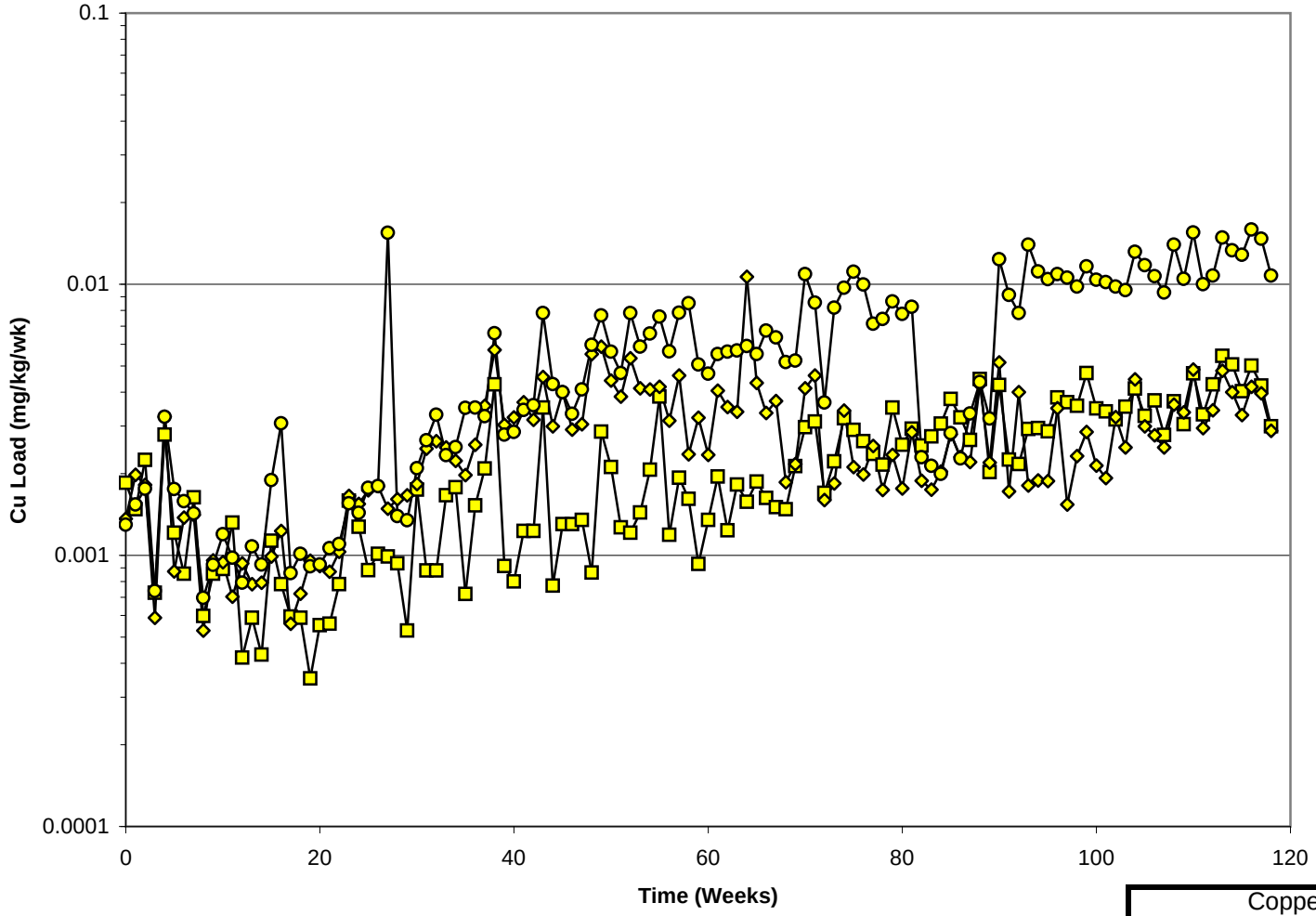


Cadmium Load

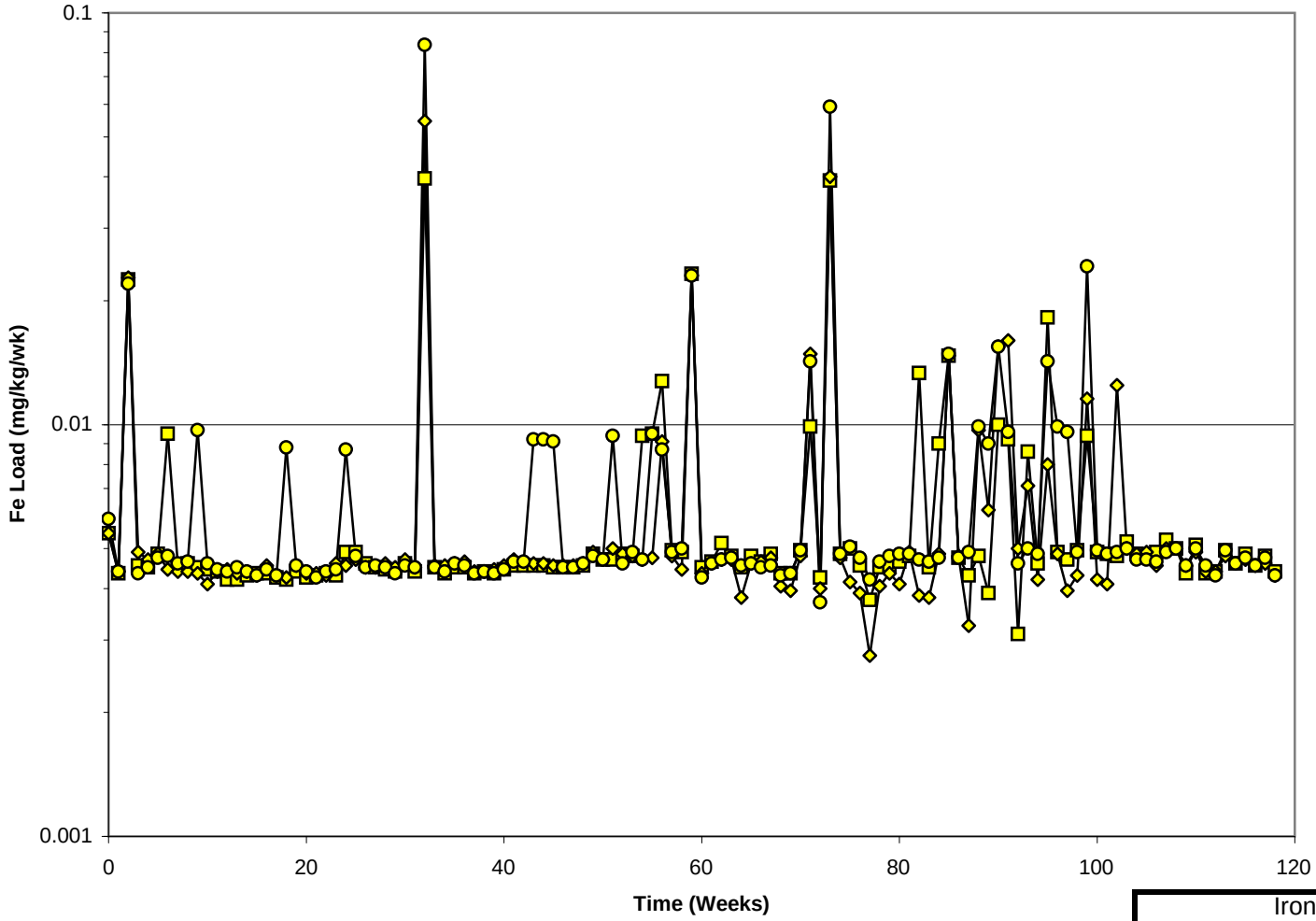
Wolverine Mine, YK

Ore

June 2008 | FIGURE 24

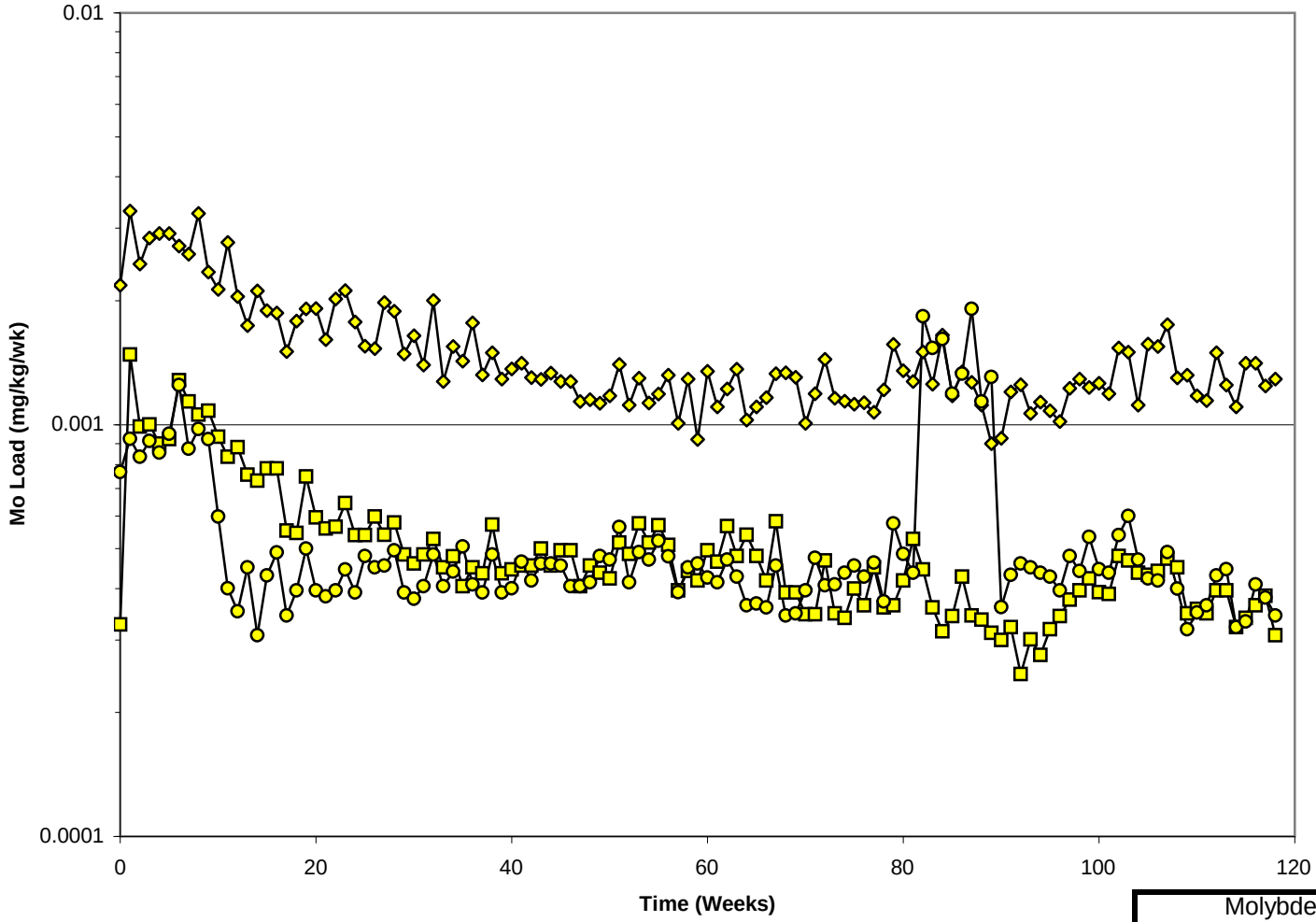


Copper Load	
Wolverine Mine, YK	
Ore	
June 2008	FIGURE 25



Iron Load June 2008 Wolverine Mine, YK	
Ore	
June 2008	FIGURE 26

TC 53920



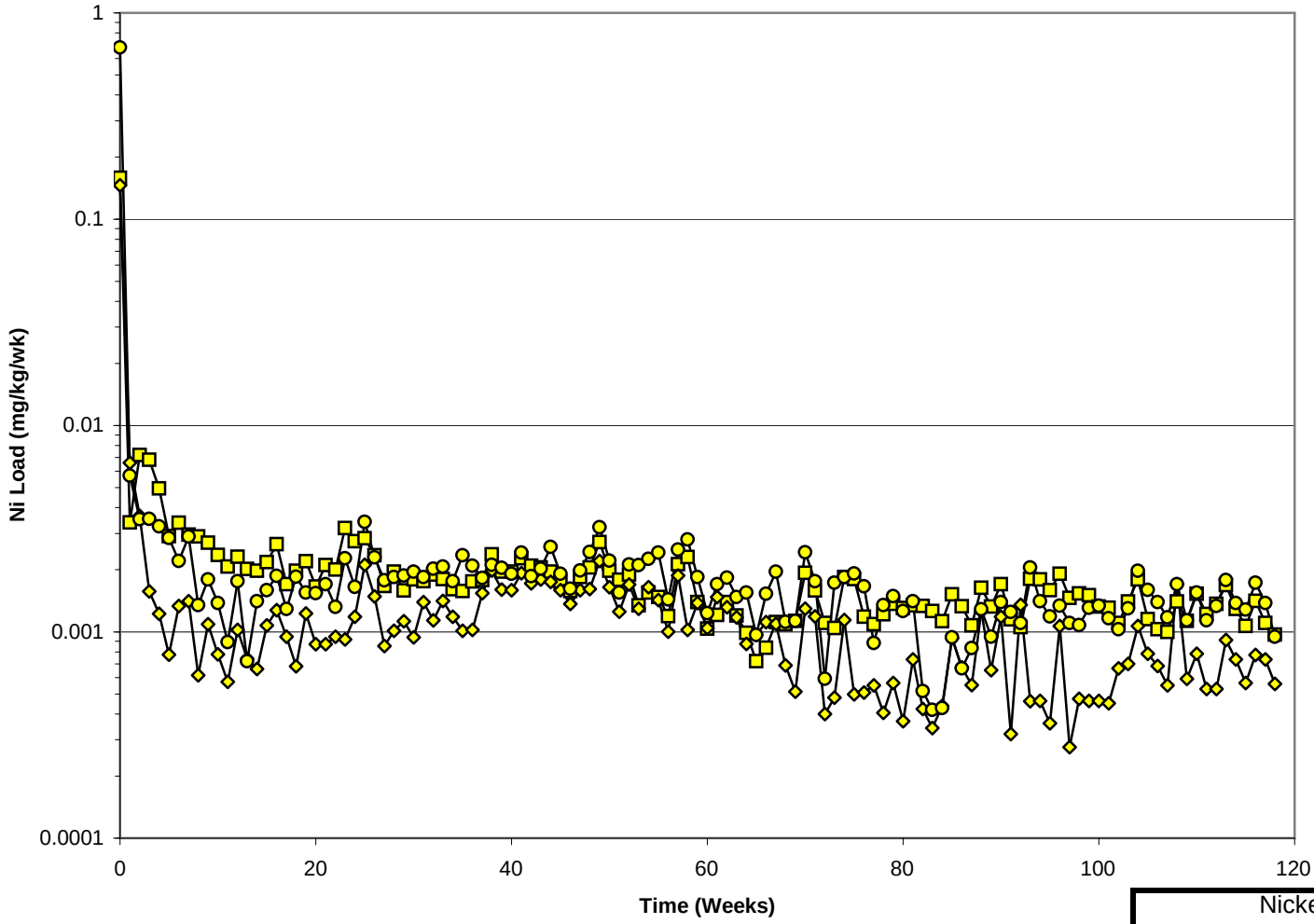
Molybdenum Load

Wolverine Mine, YK

Ore

June 2008 | FIGURE 27

TC 53920

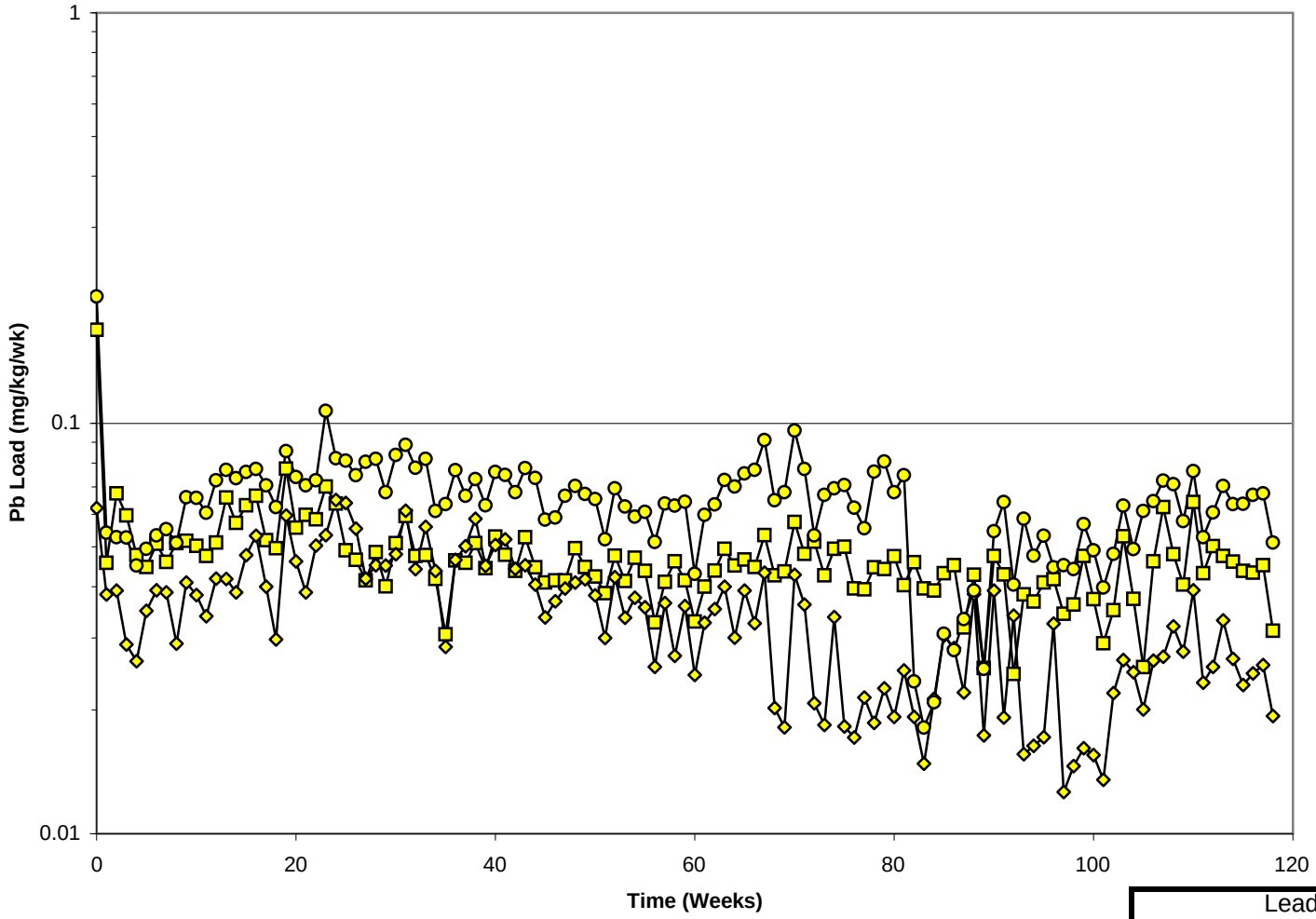


Nickel Load

Wolverine Mine, YK

Ore

June 2008 | FIGURE 28



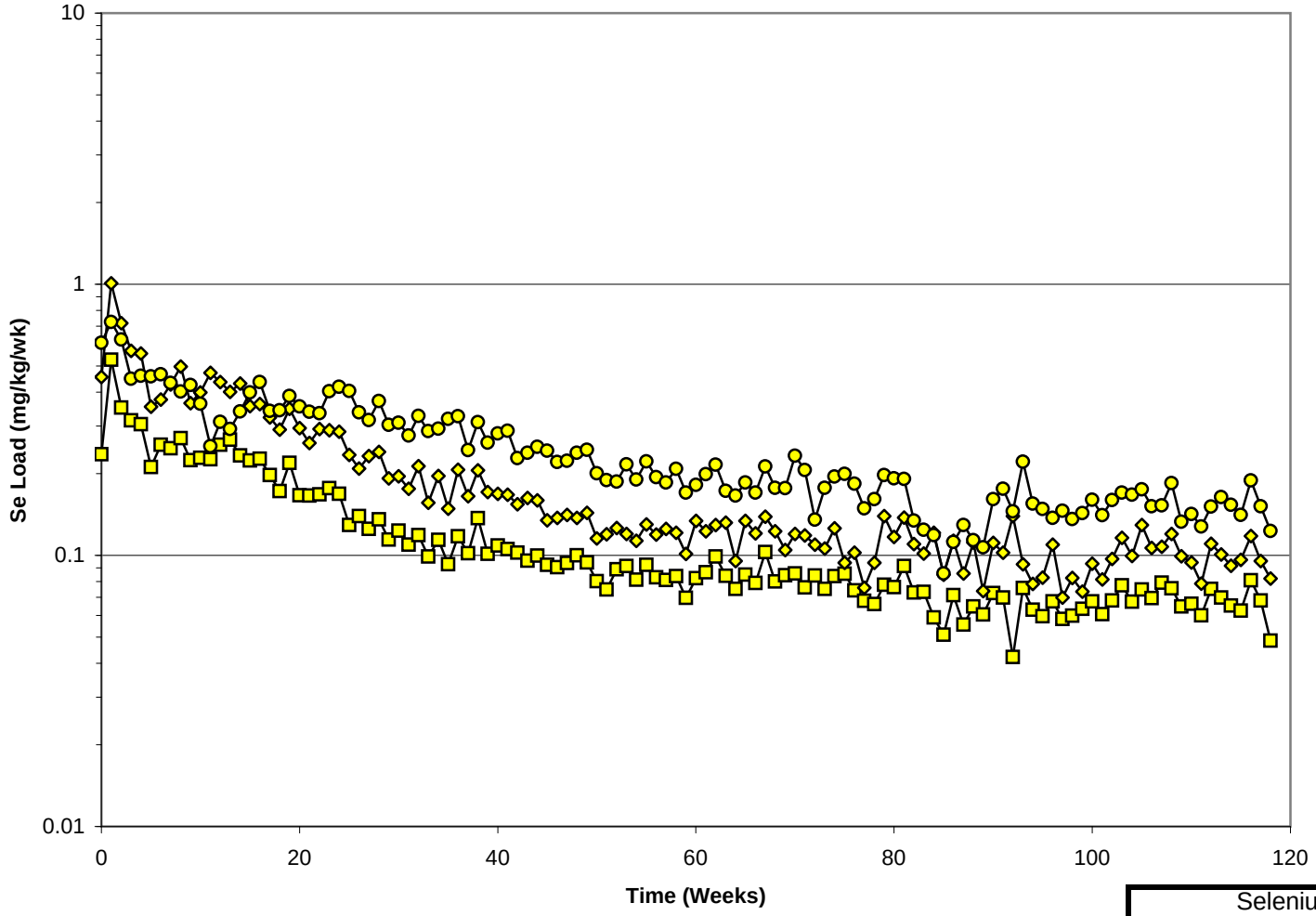
Lead Load

Wolverine Mine, YK

Ore

June 2008 | FIGURE 29

TC 53920



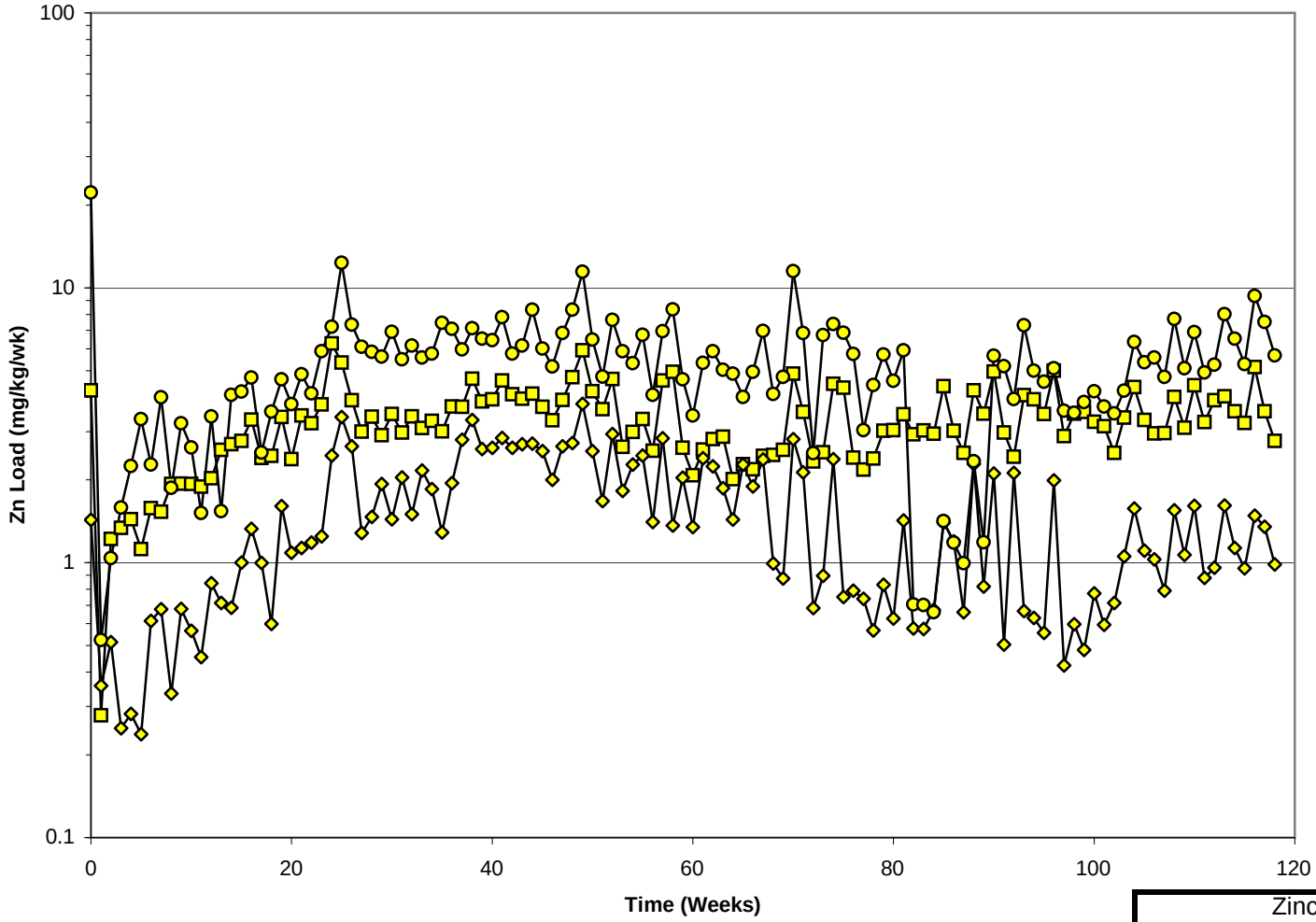
Selenium Load

Wolverine Mine, YK

Ore

June 2008 | FIGURE 30

TC 53920



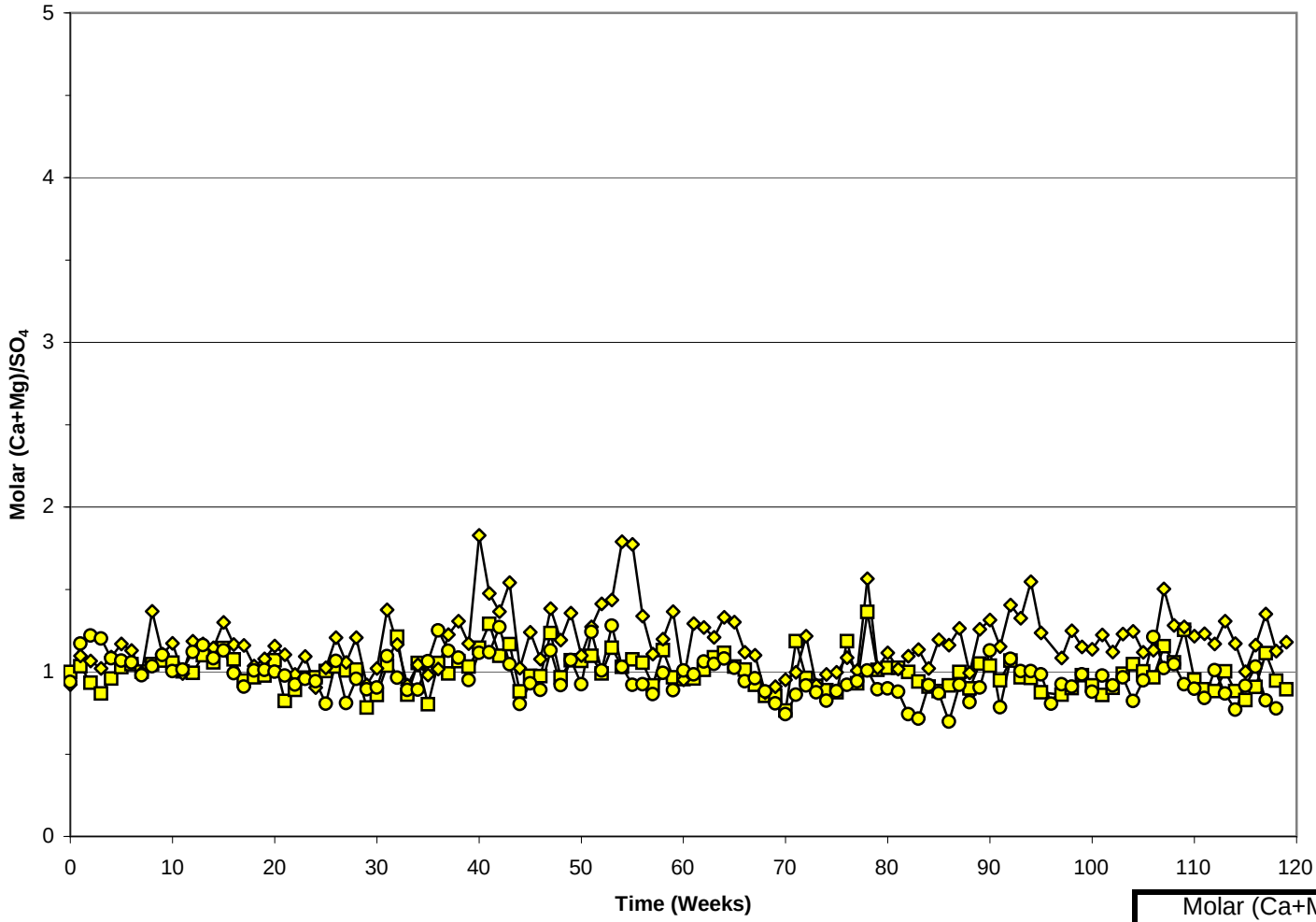
Zinc Load

Wolverine Mine, YK

Ore

June 2008 | FIGURE 31

TC 53920



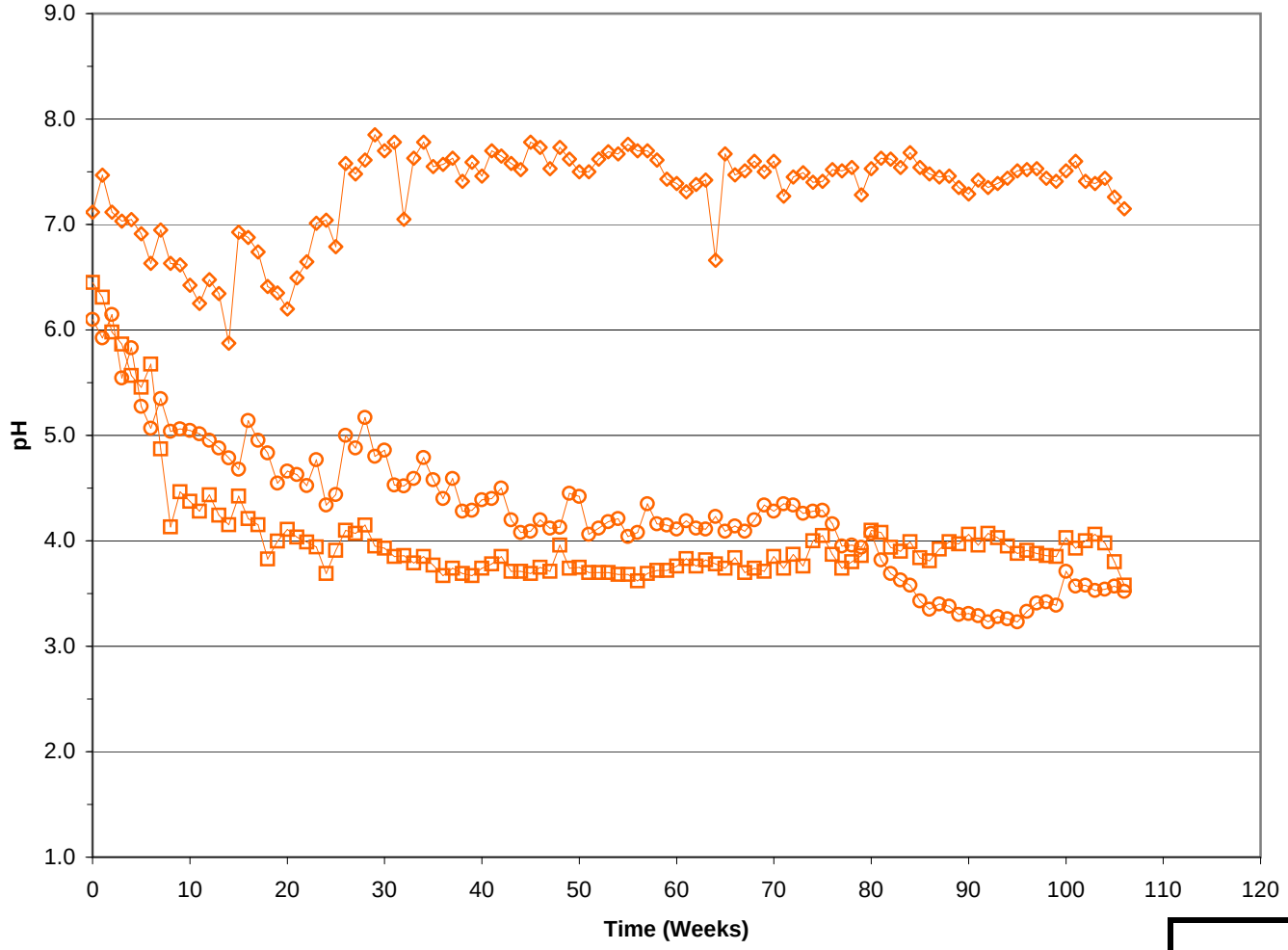
Molar (Ca+Mg)/SO4 Ratio

Wolverine Mine, YK

Ore

June 2008 | FIGURE 32

TC 53920



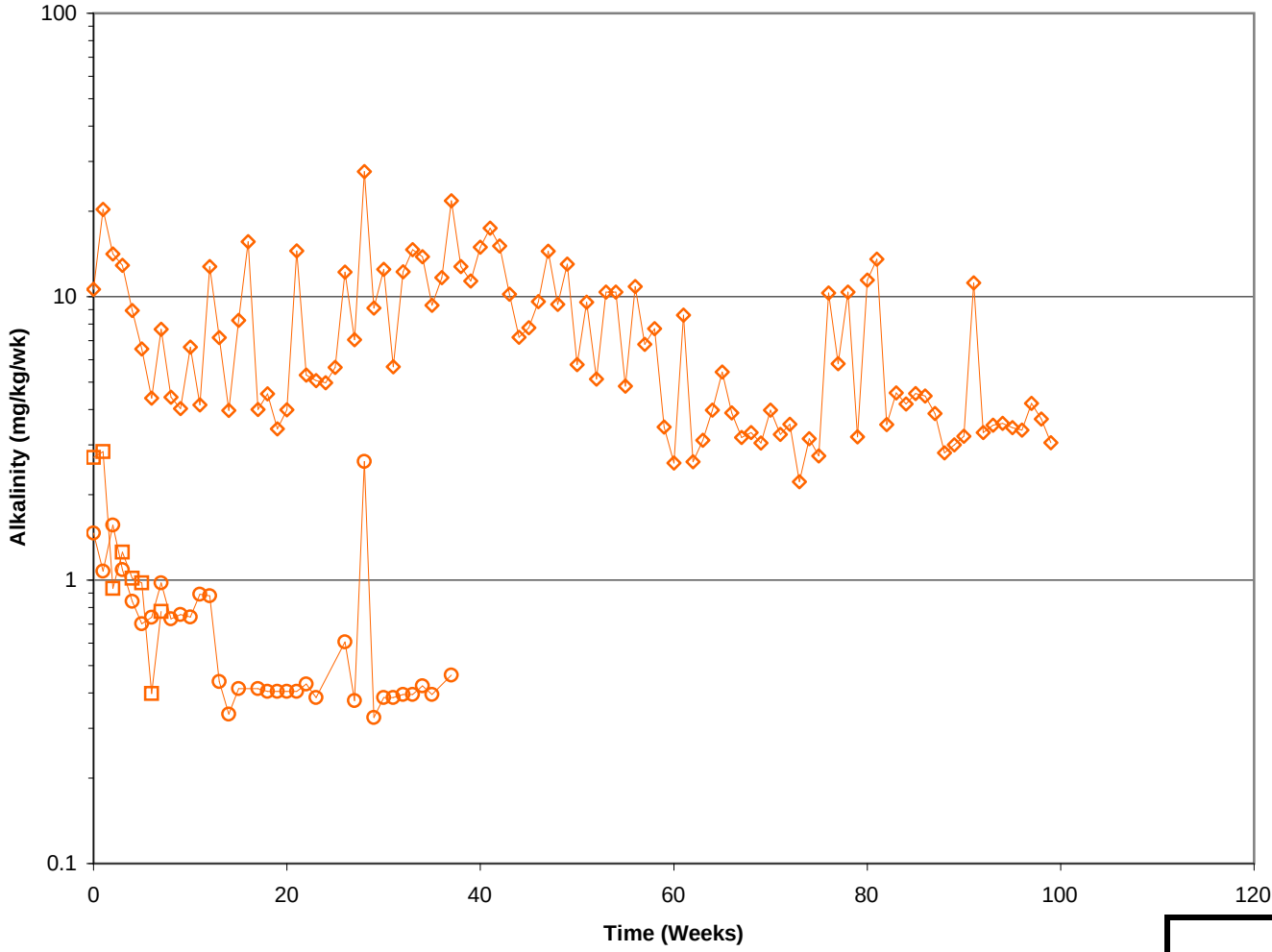
pH

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 33

TC 53920



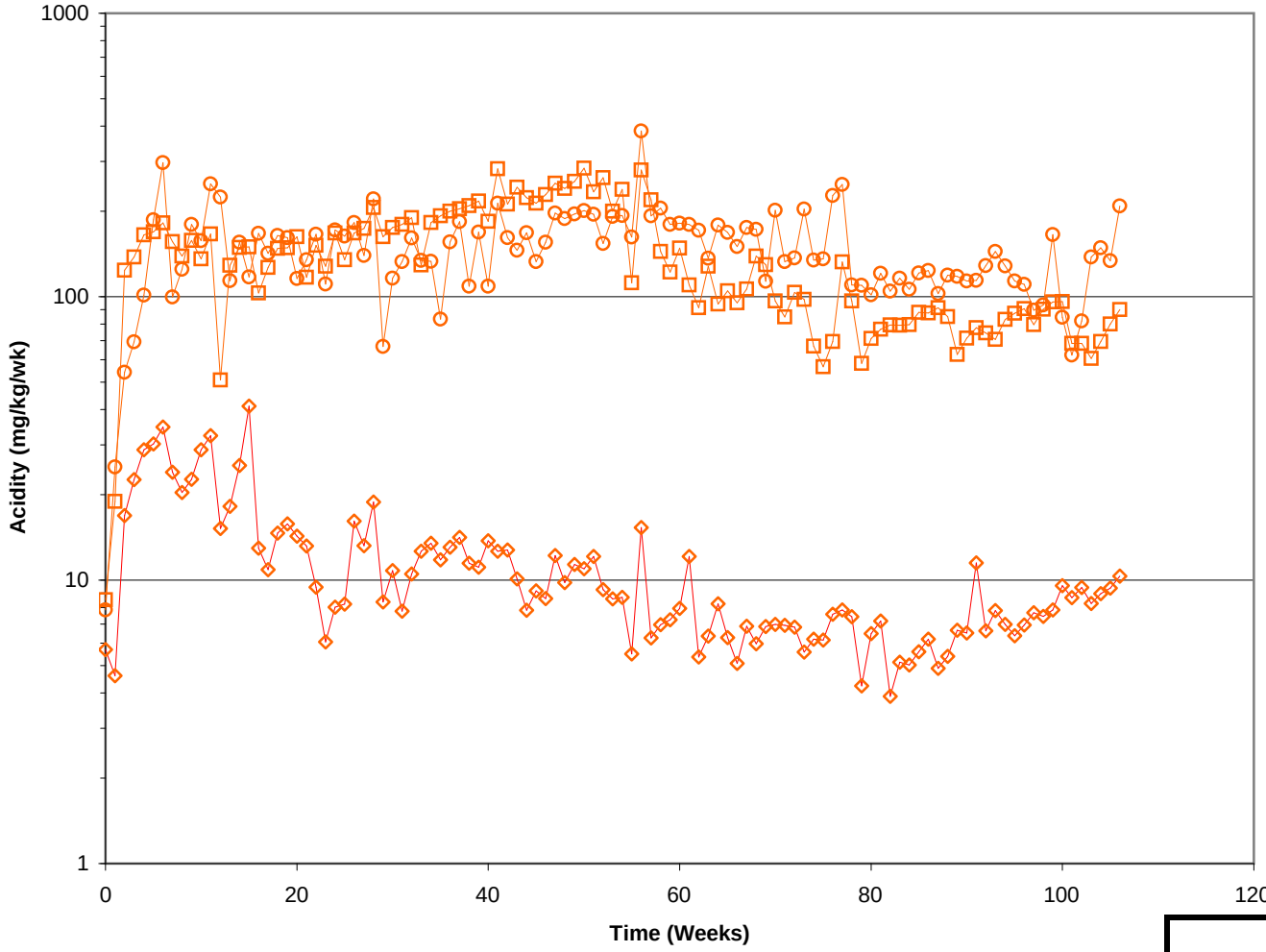
Alkalinity Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 34

TC 53920



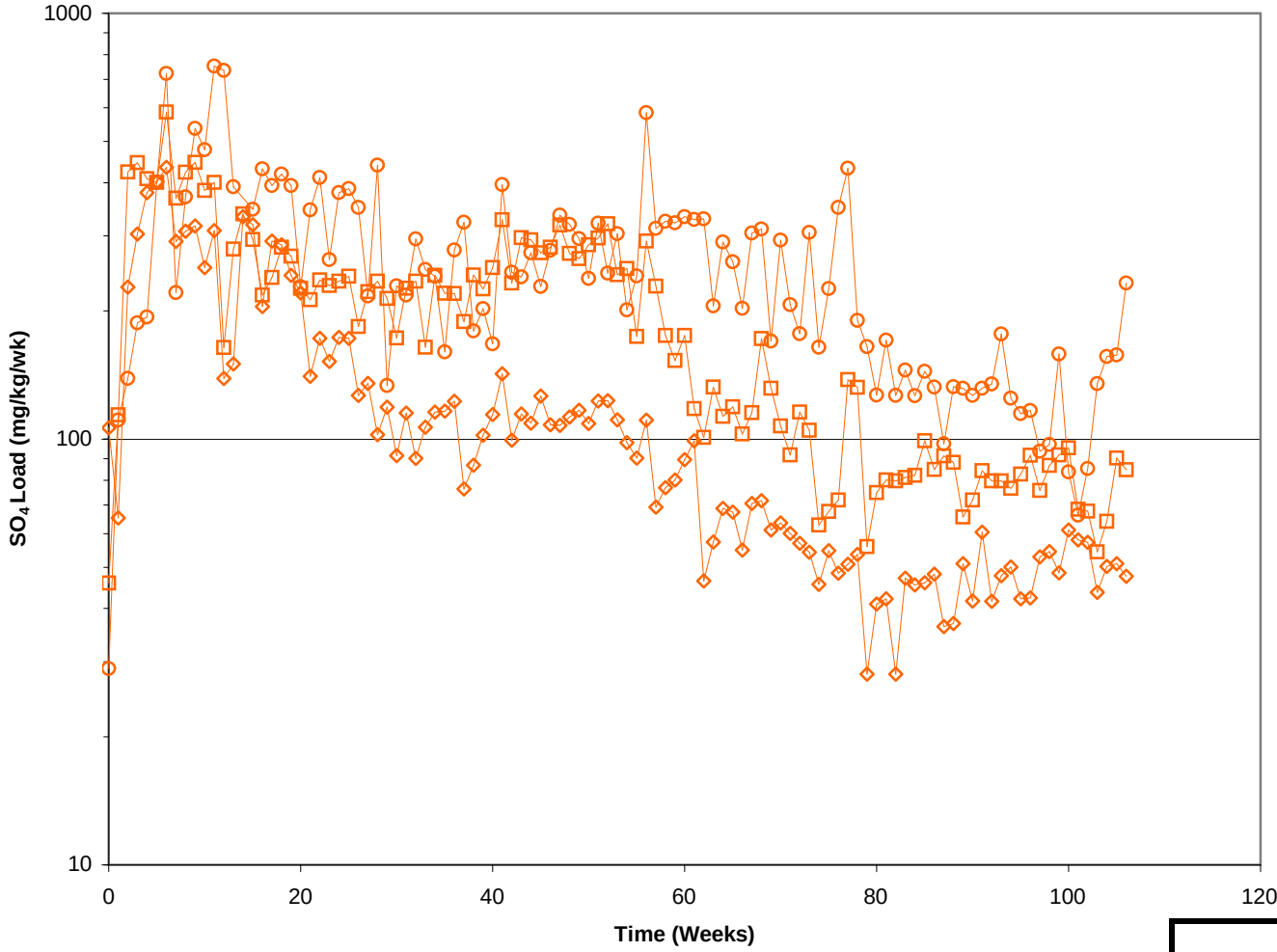
Acidity Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 35

TC 53920



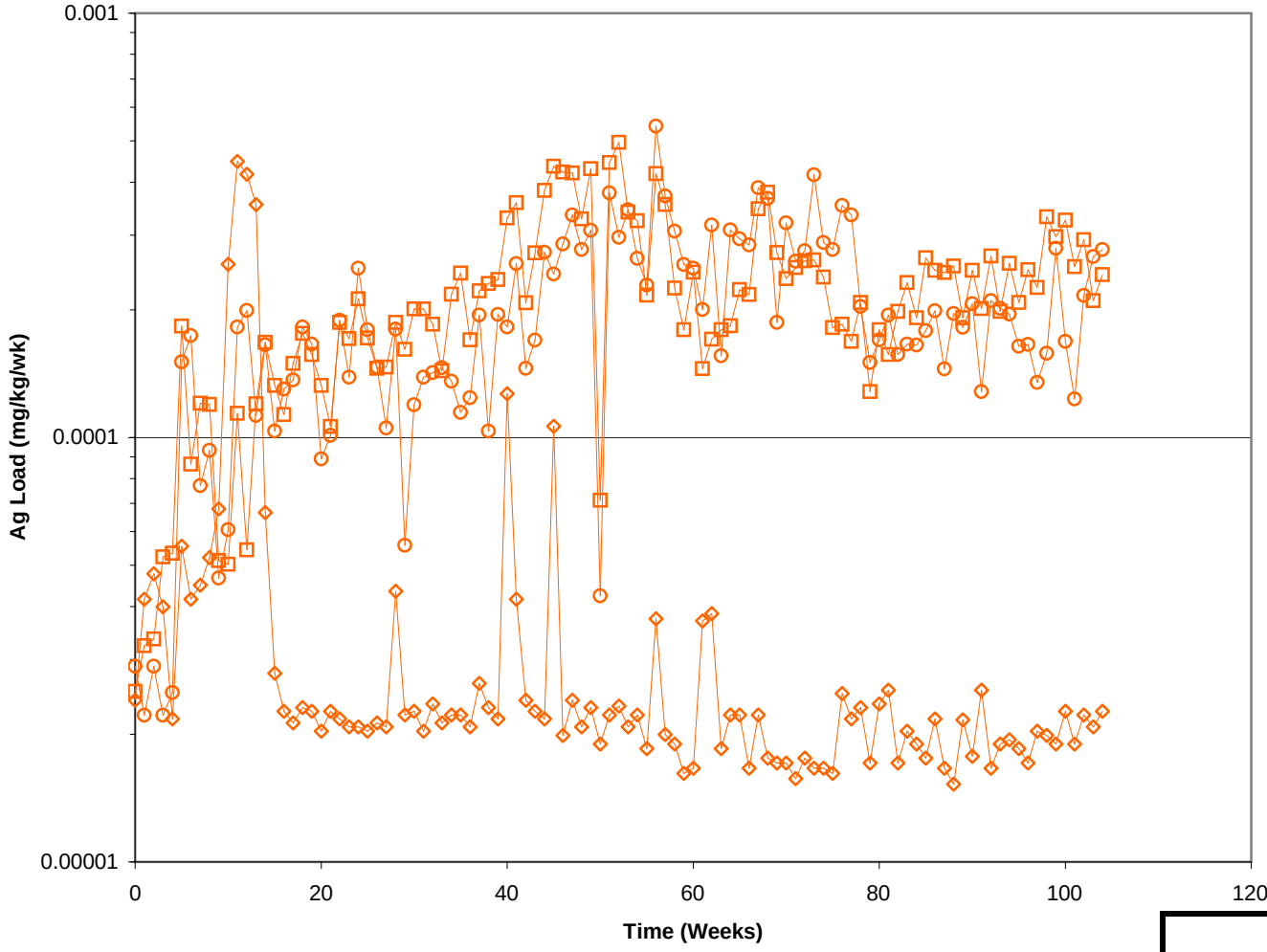
Sulphate Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 36

TC 53920



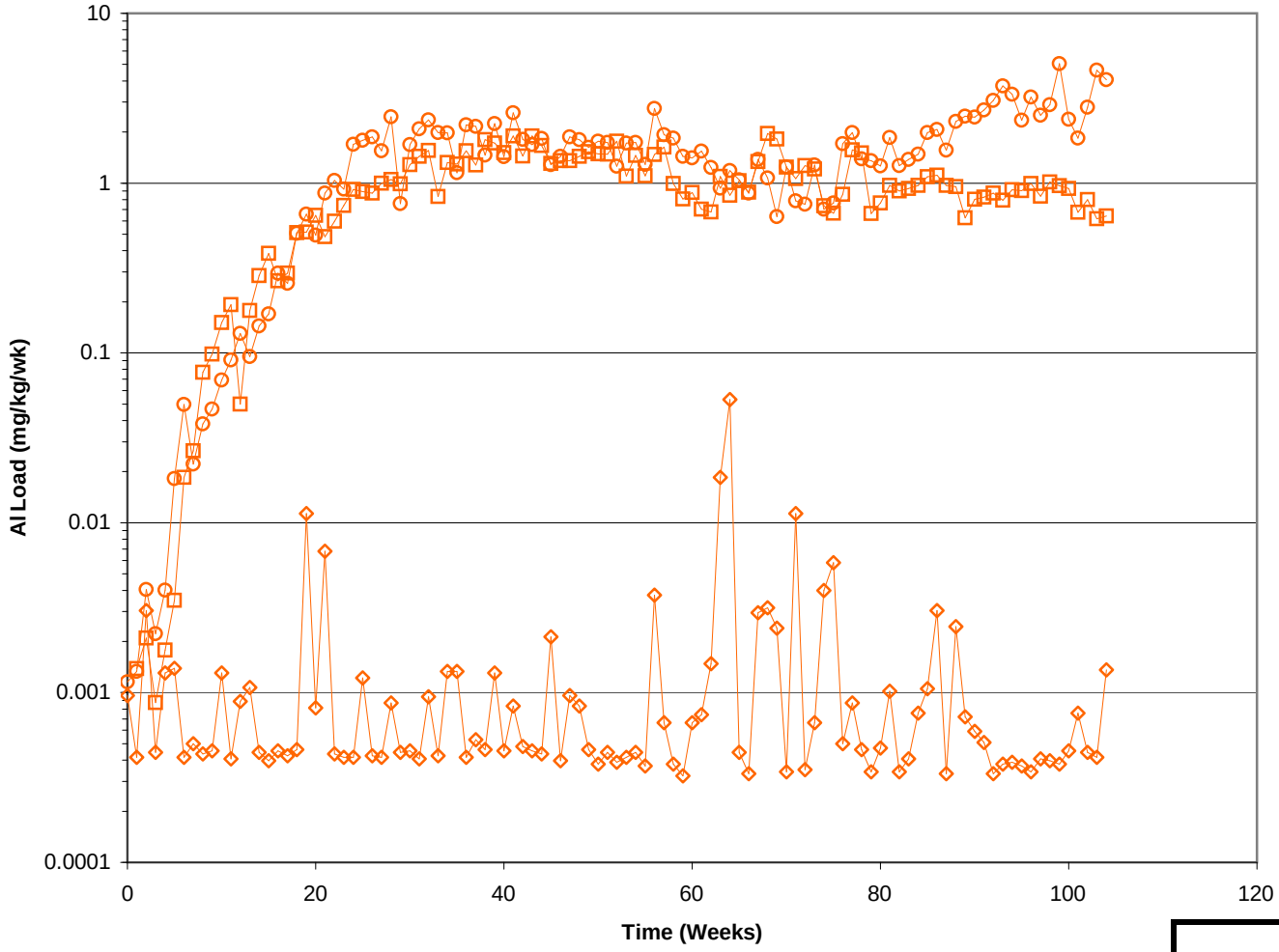
Silver Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 37

TC 53920

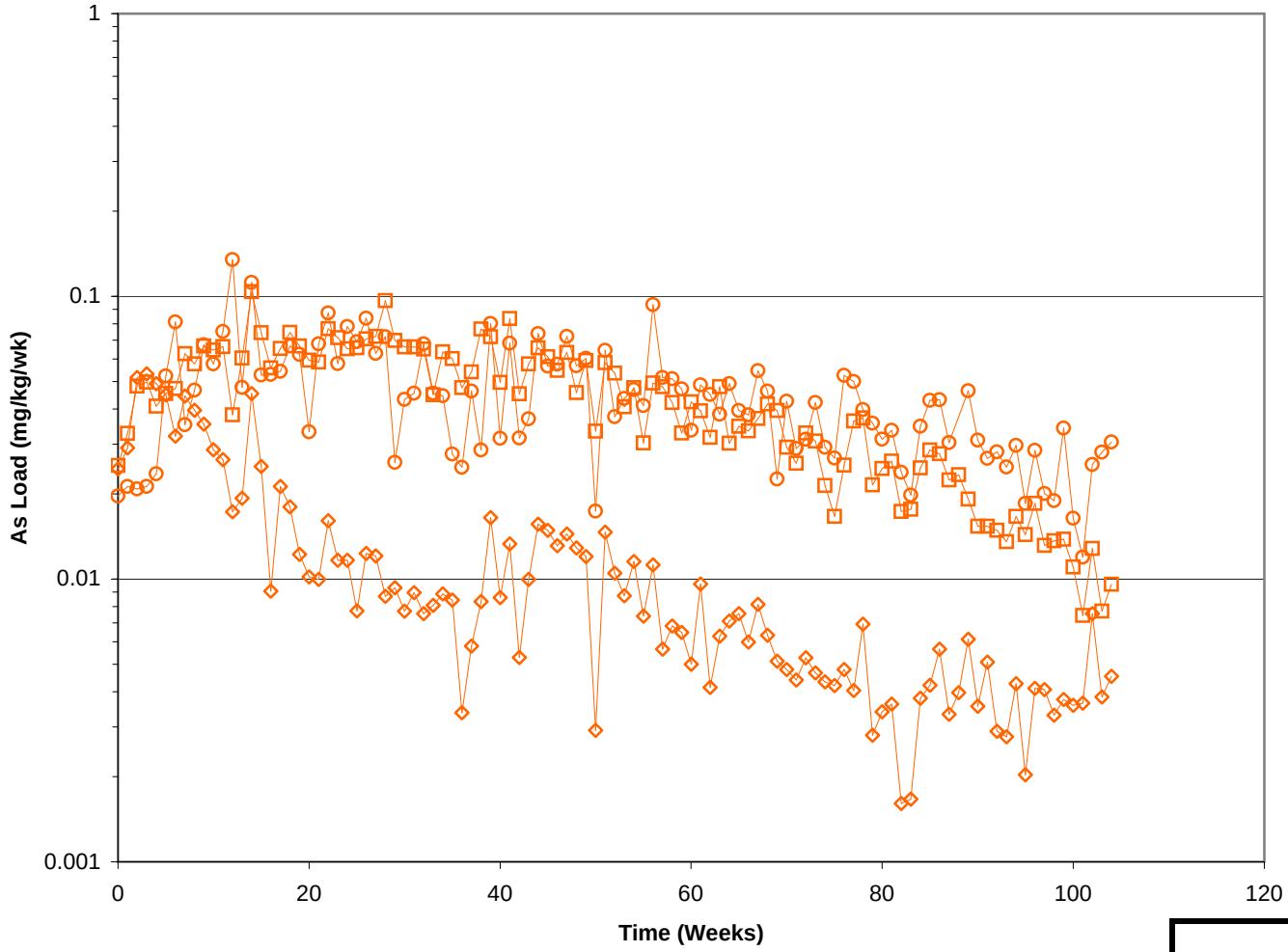


Aluminium Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 38



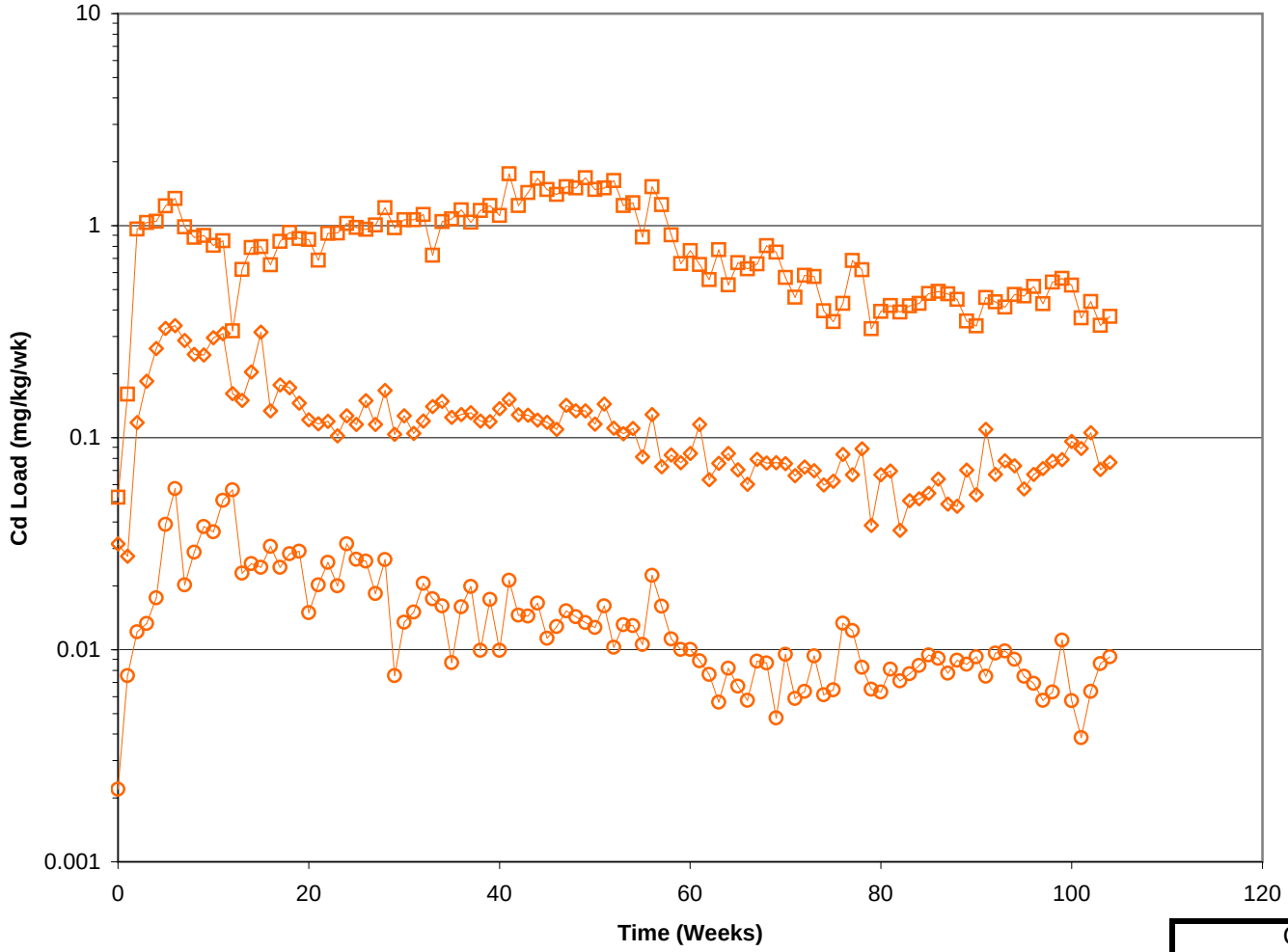
Arsenic Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 39

TC 53920



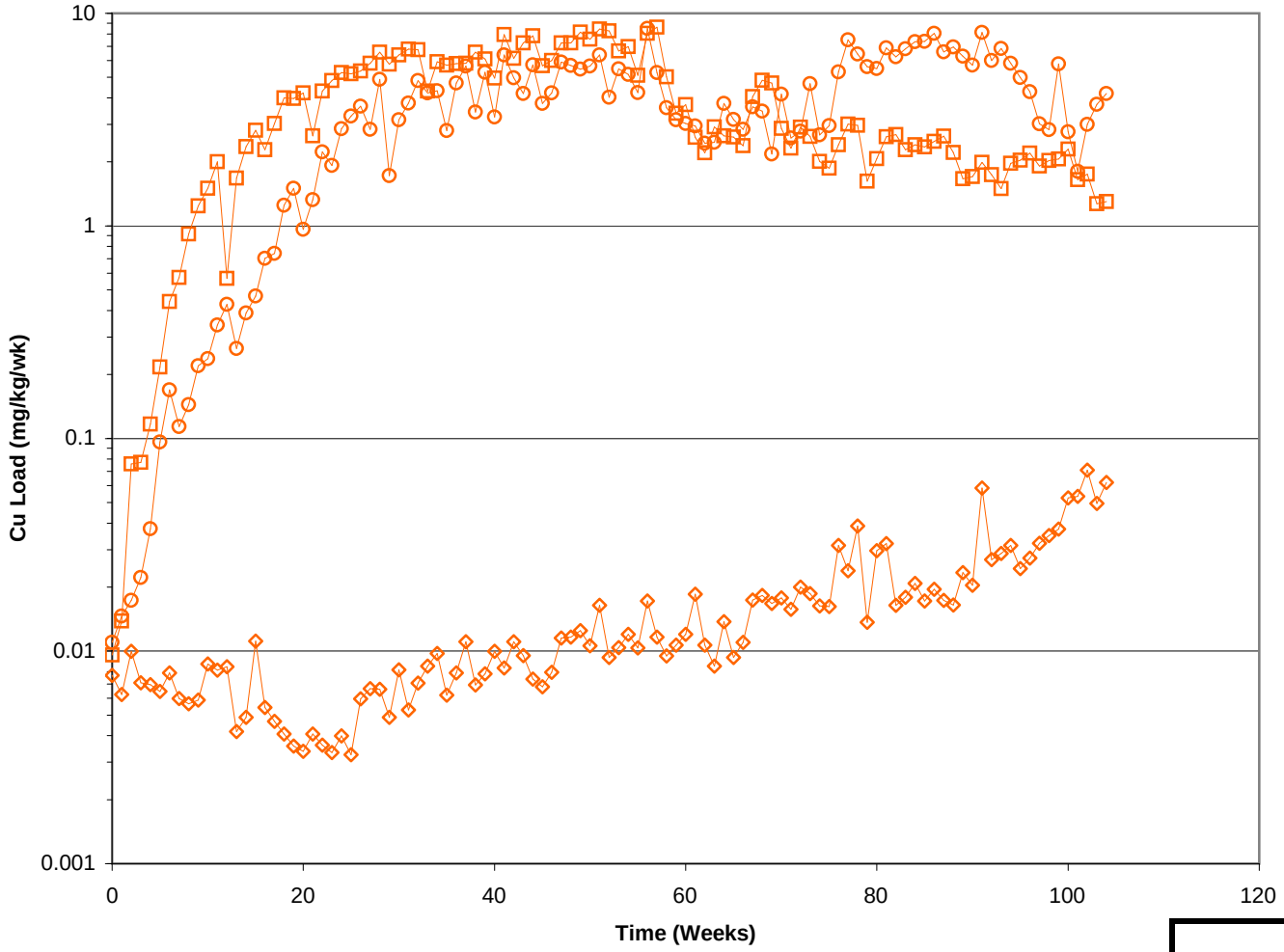
Cadmium Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 40

TC 53920

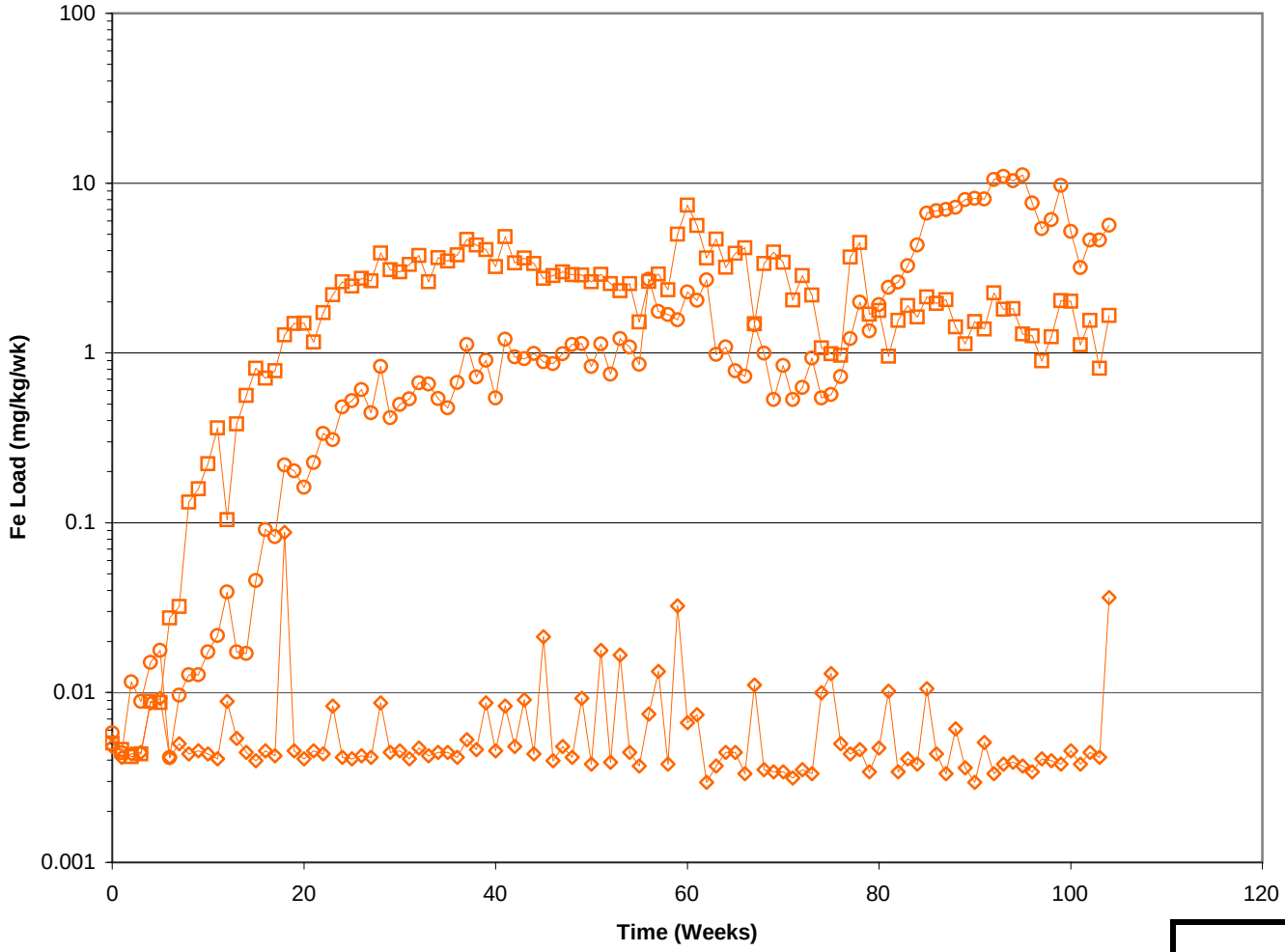


Copper Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 41

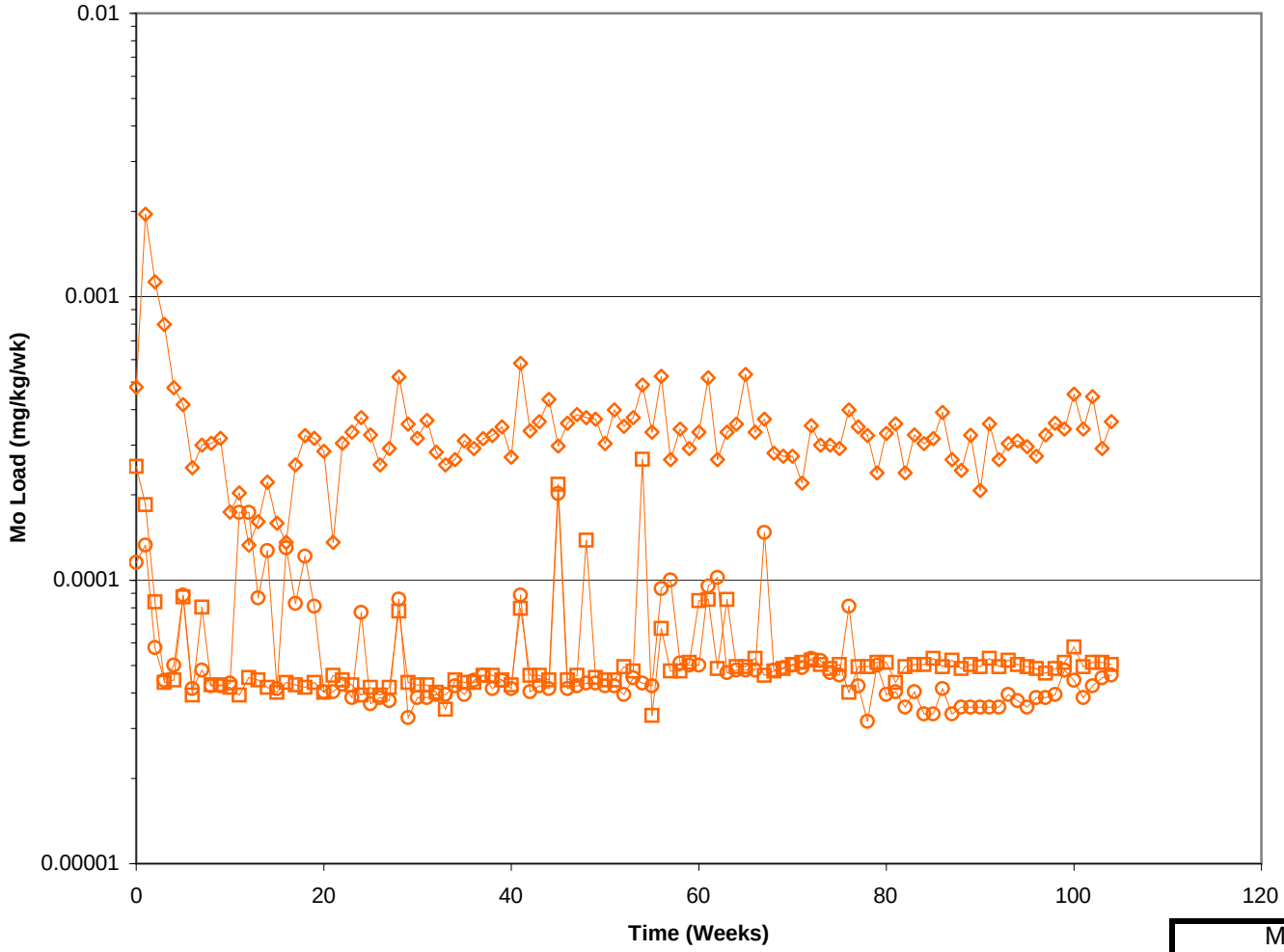


Iron Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 42



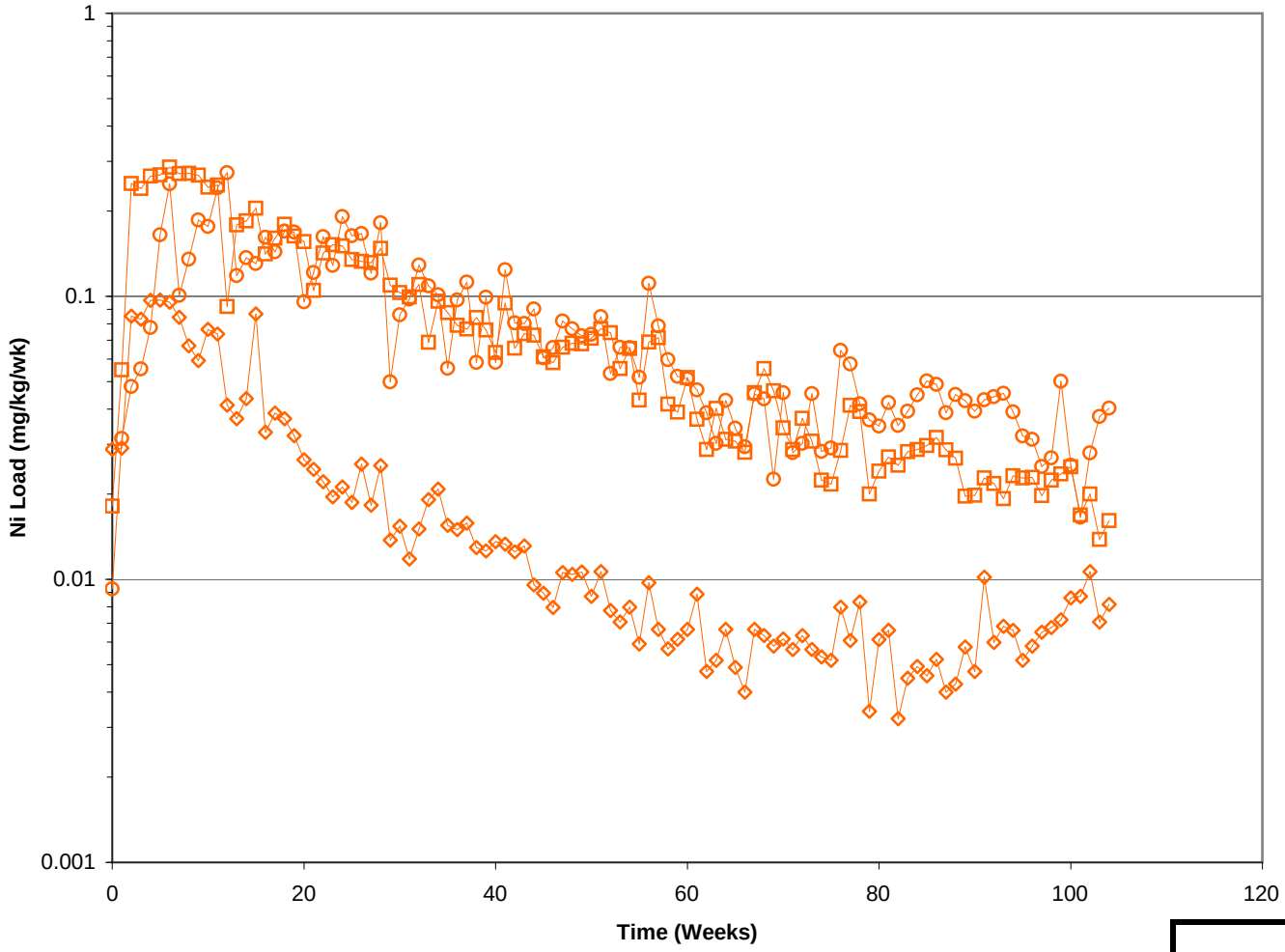
Molybdenum Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 43

TC 53920



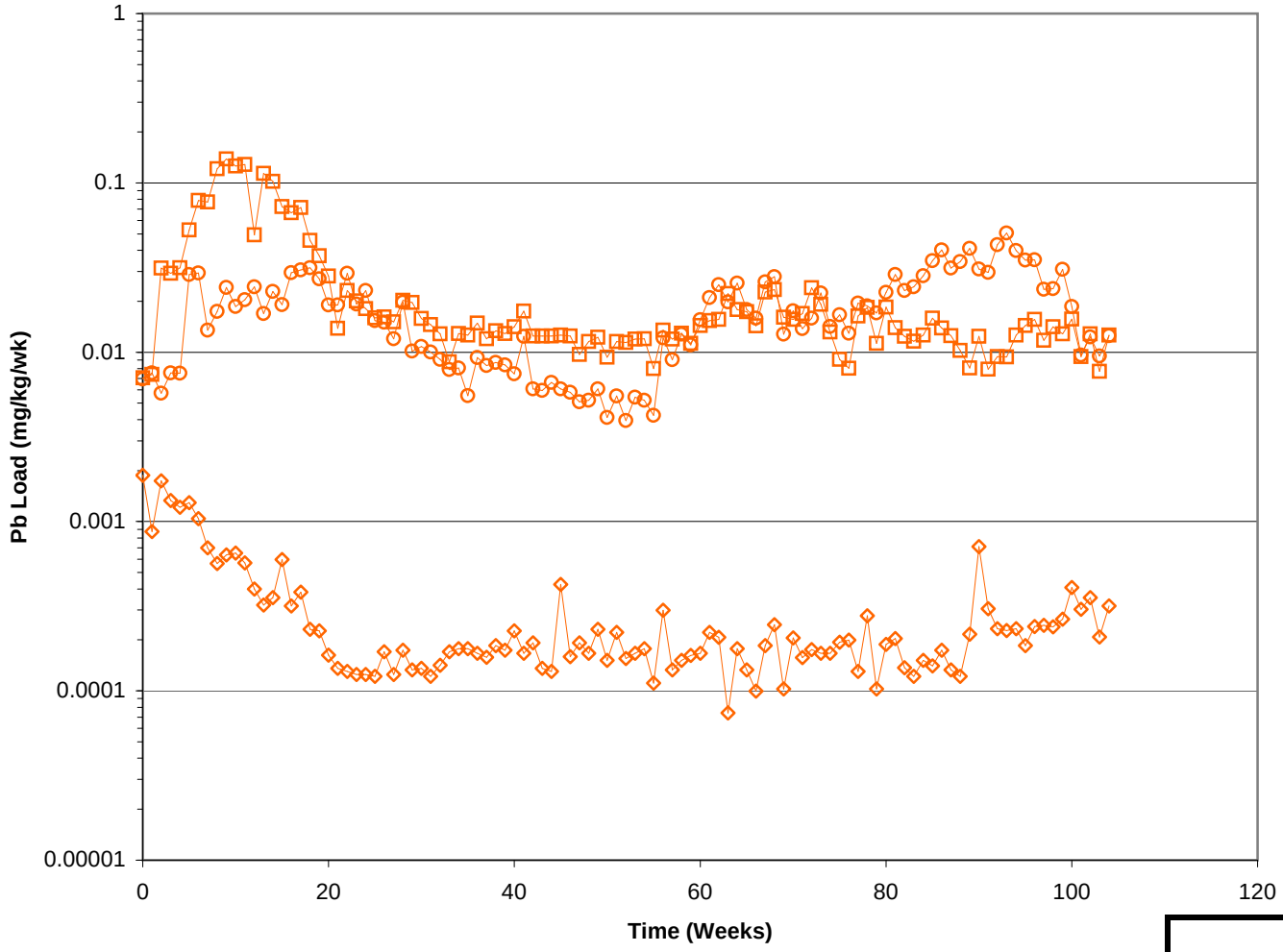
Nickel Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 44

TC 53920

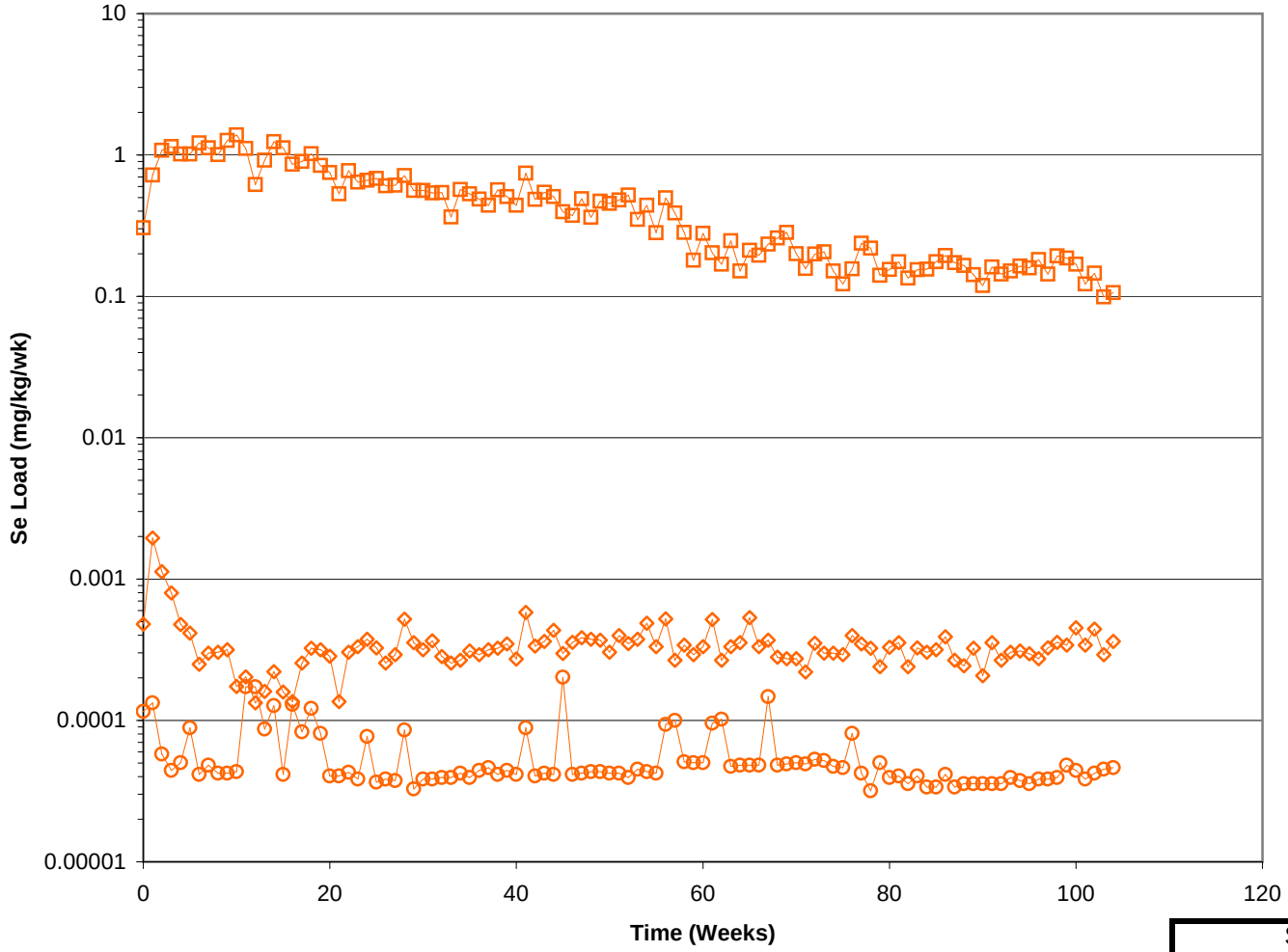


Lead Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 45



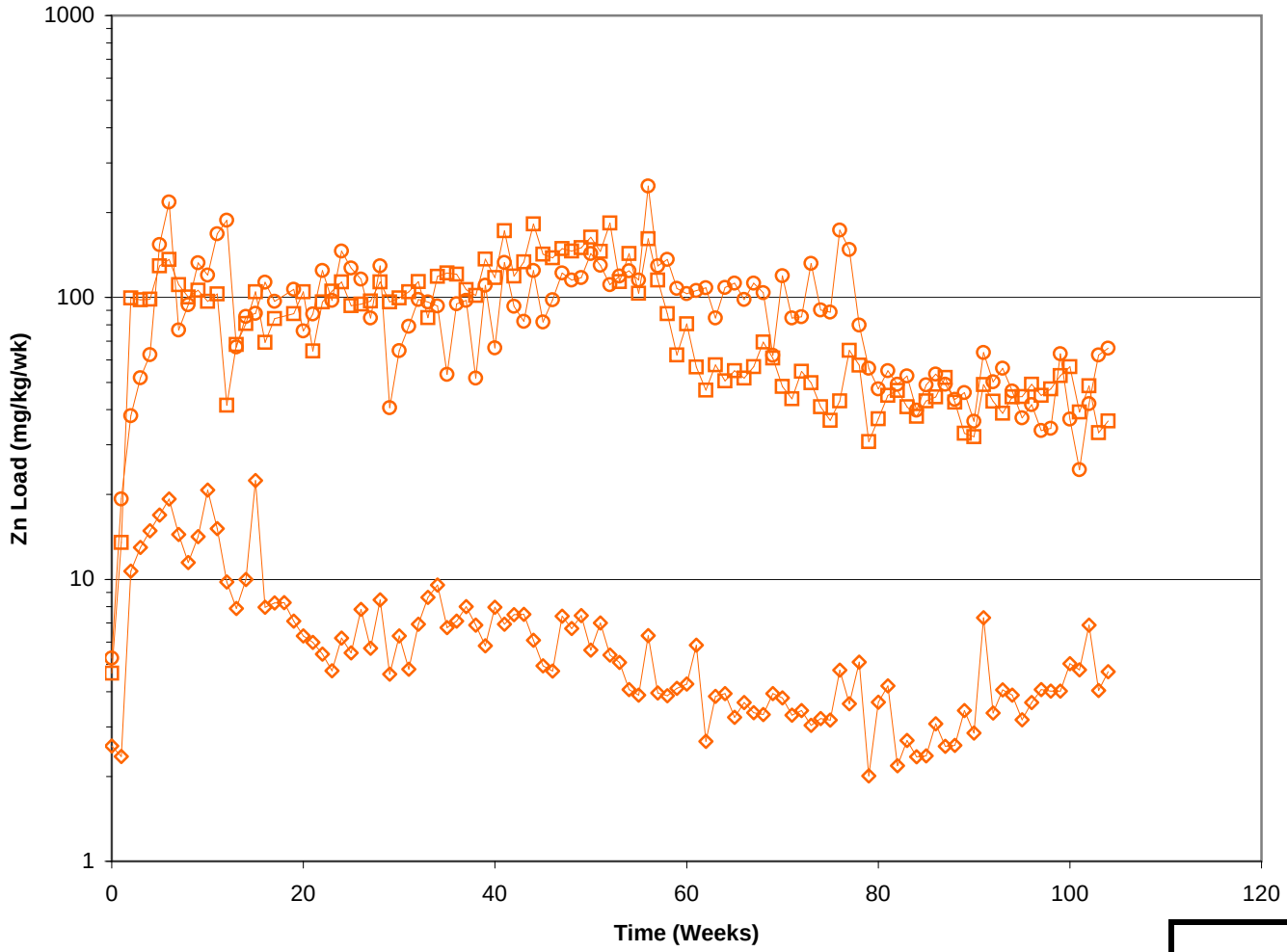
Selenium Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 46

TC 53920



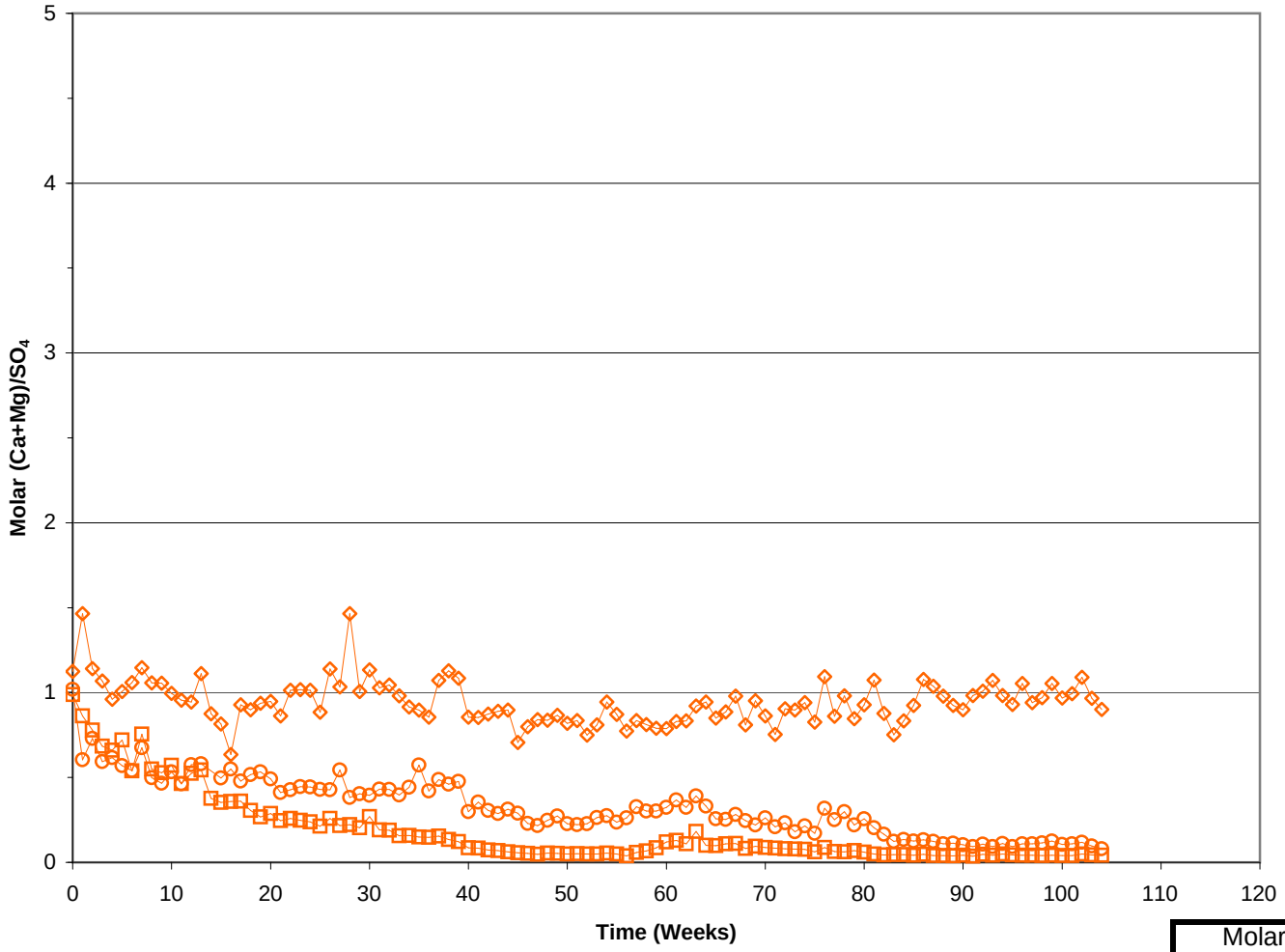
Zinc Load

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 47

TC 53920

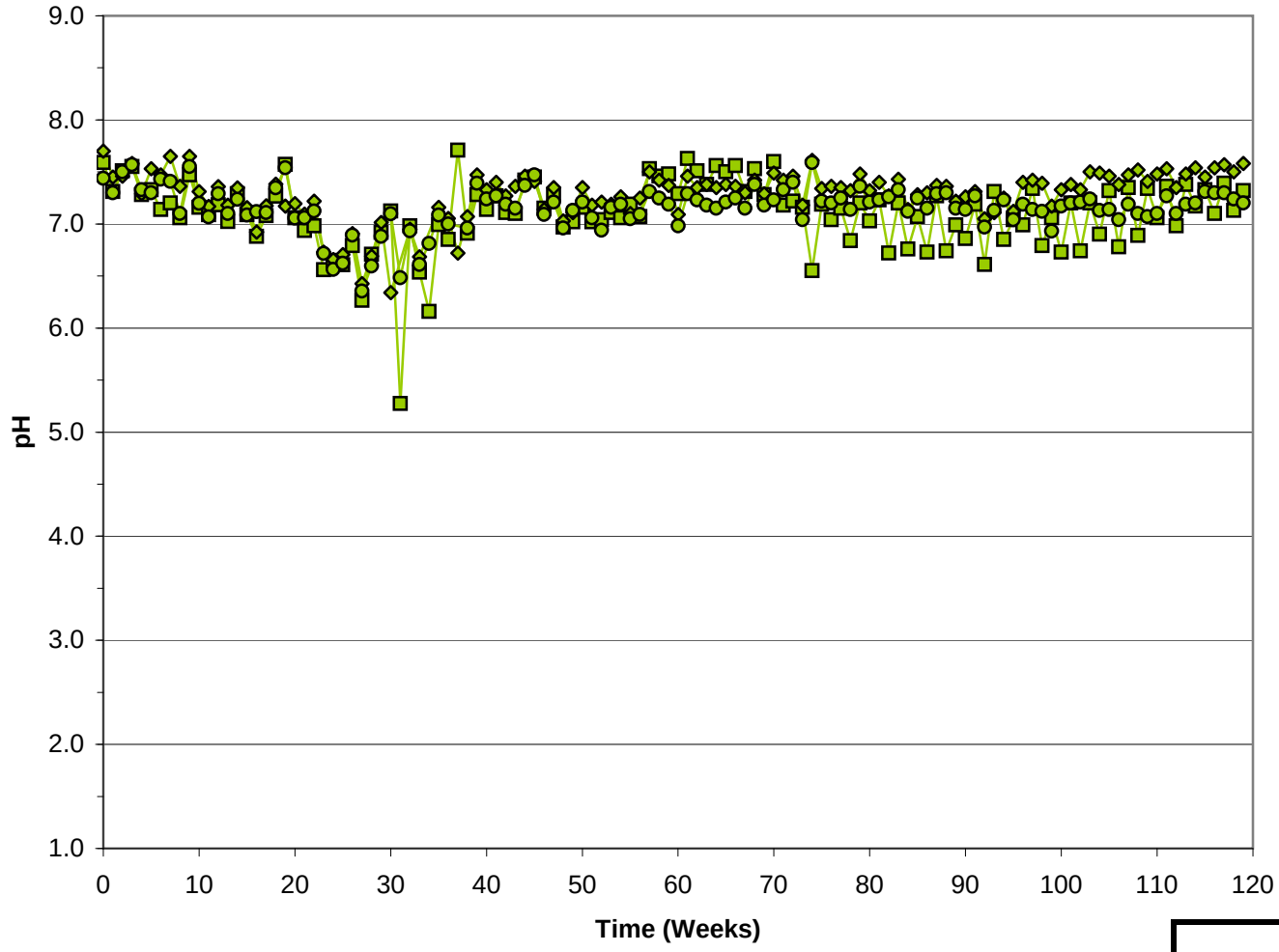


Molar (Ca+Mg)/SO4 Ratio

Wolverine Mine, YK

NP-Depleted Ore

June 2008 | FIGURE 48

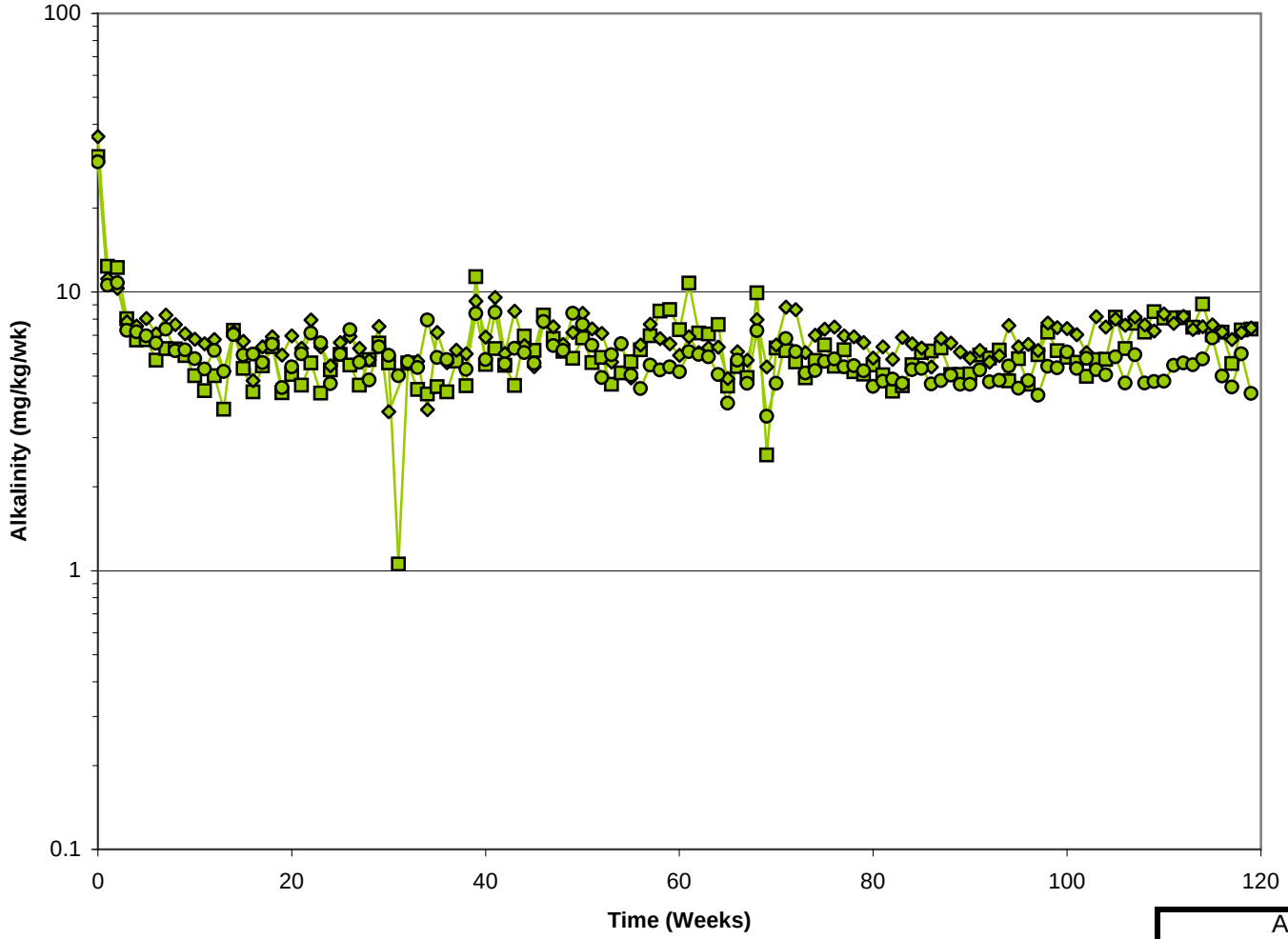


pH

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 49



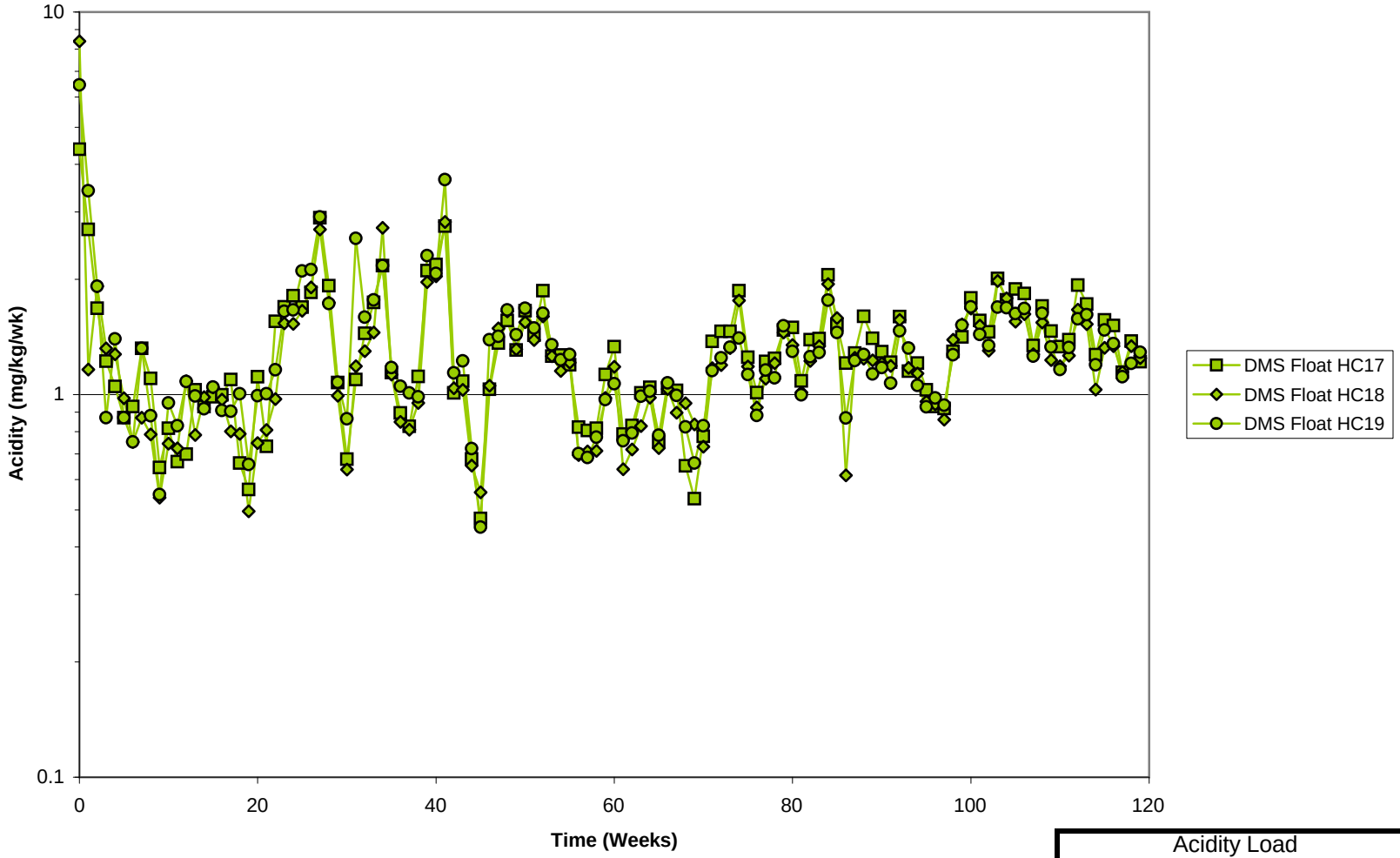
Alkalinity Load

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 50

TC 53920



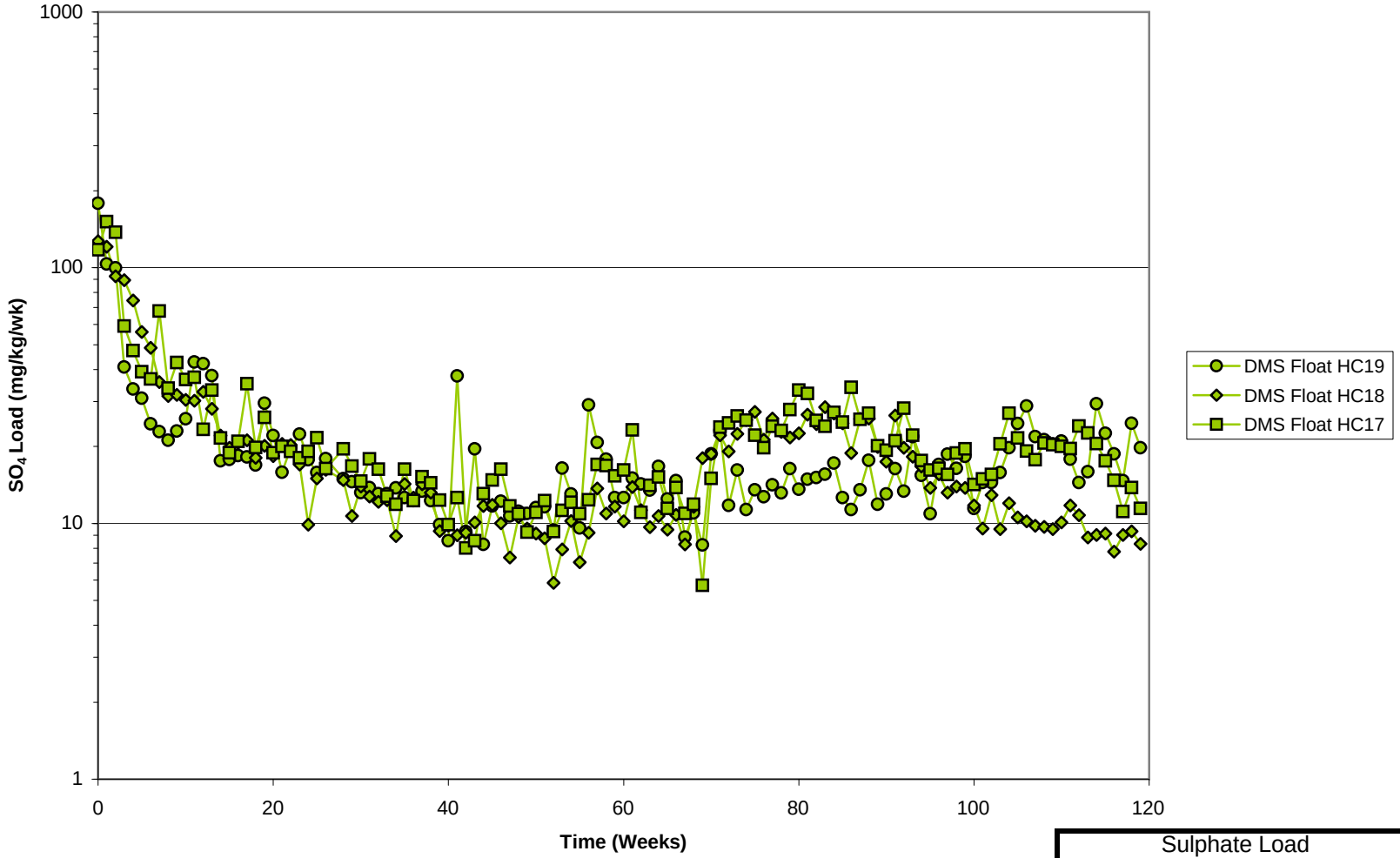
Acidity Load

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 51

TC 53920



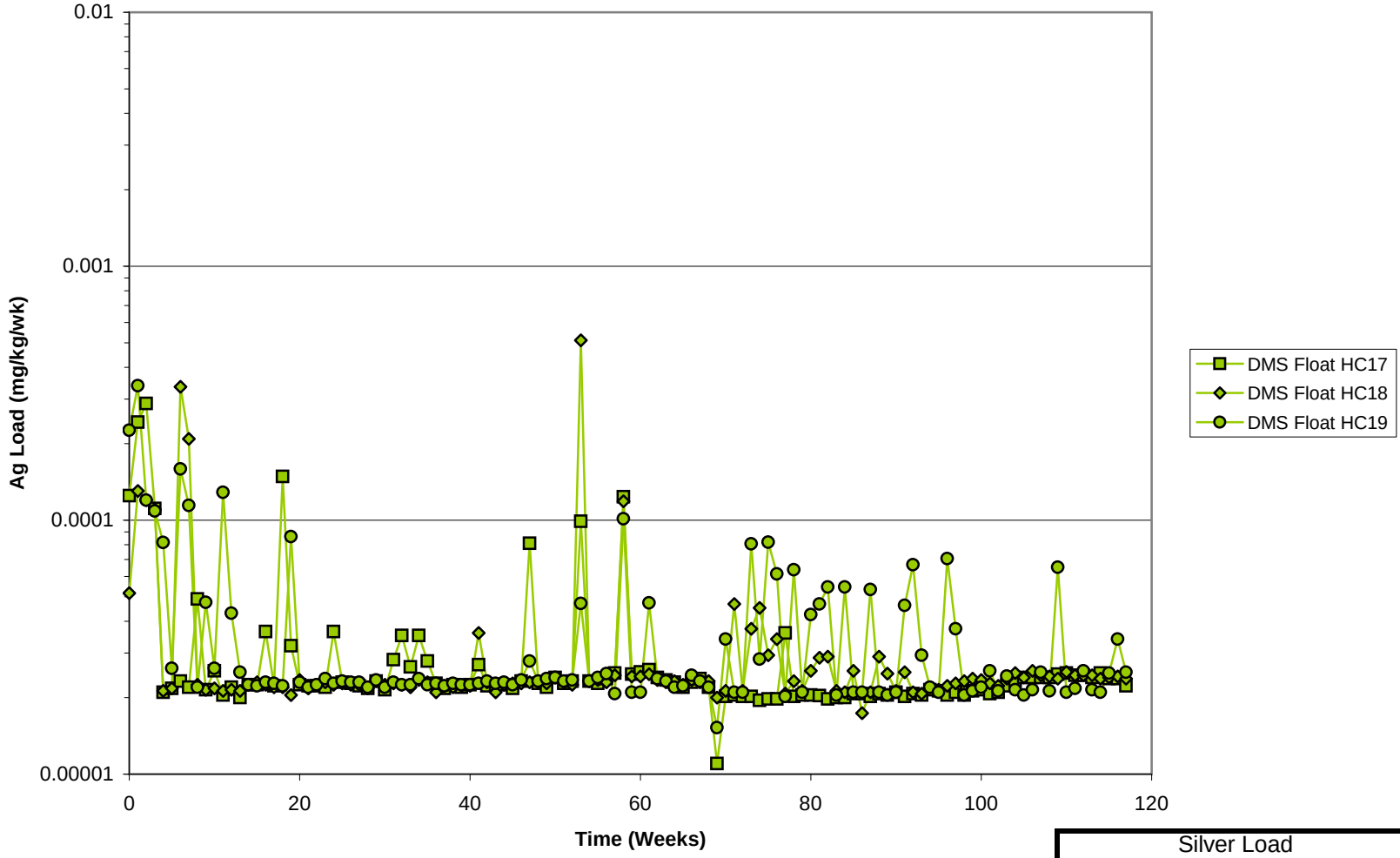
Sulphate Load

Wolverine Mine, YK

DMS Float

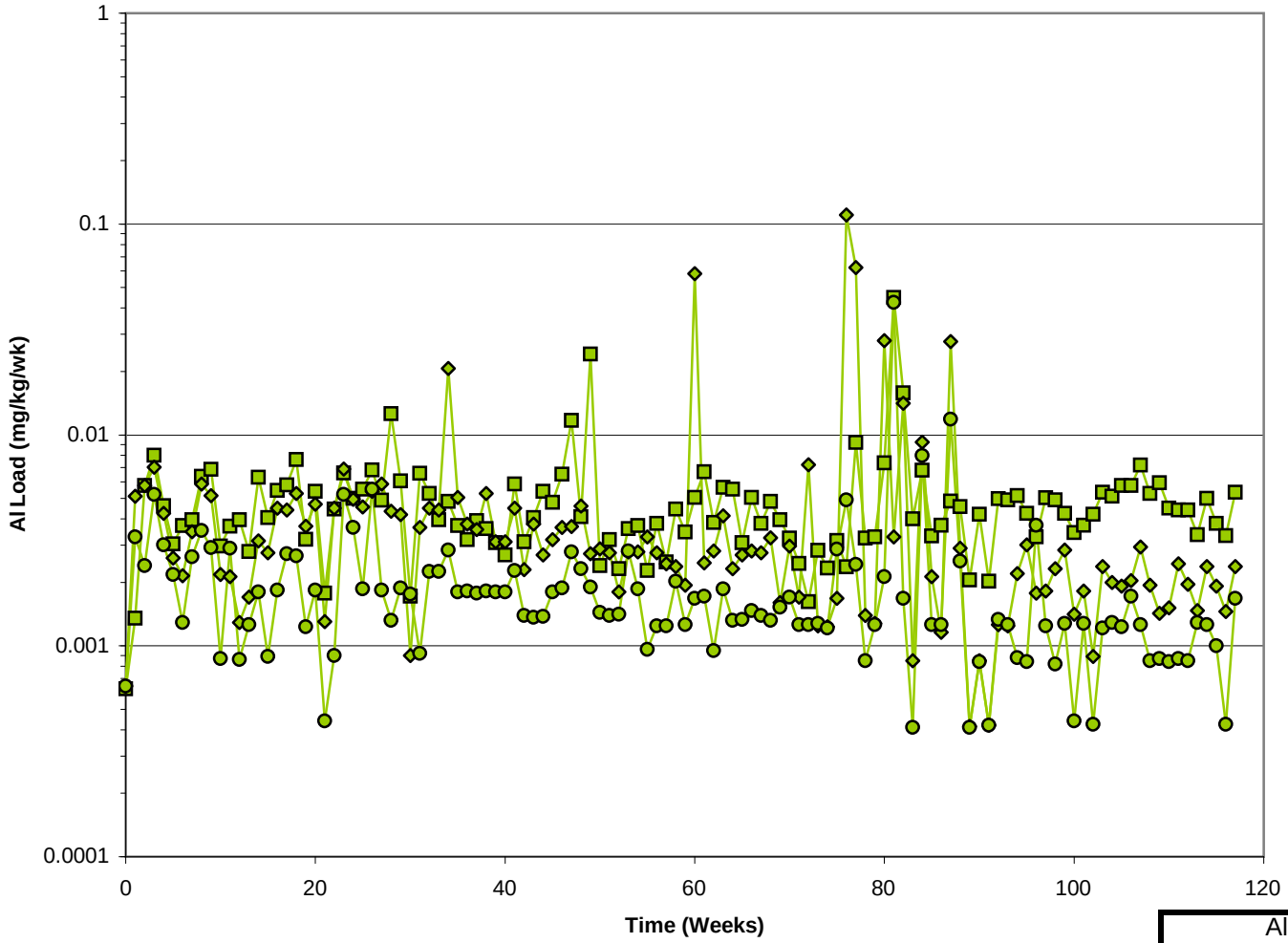
June 2008 | FIGURE 52

TC 53920

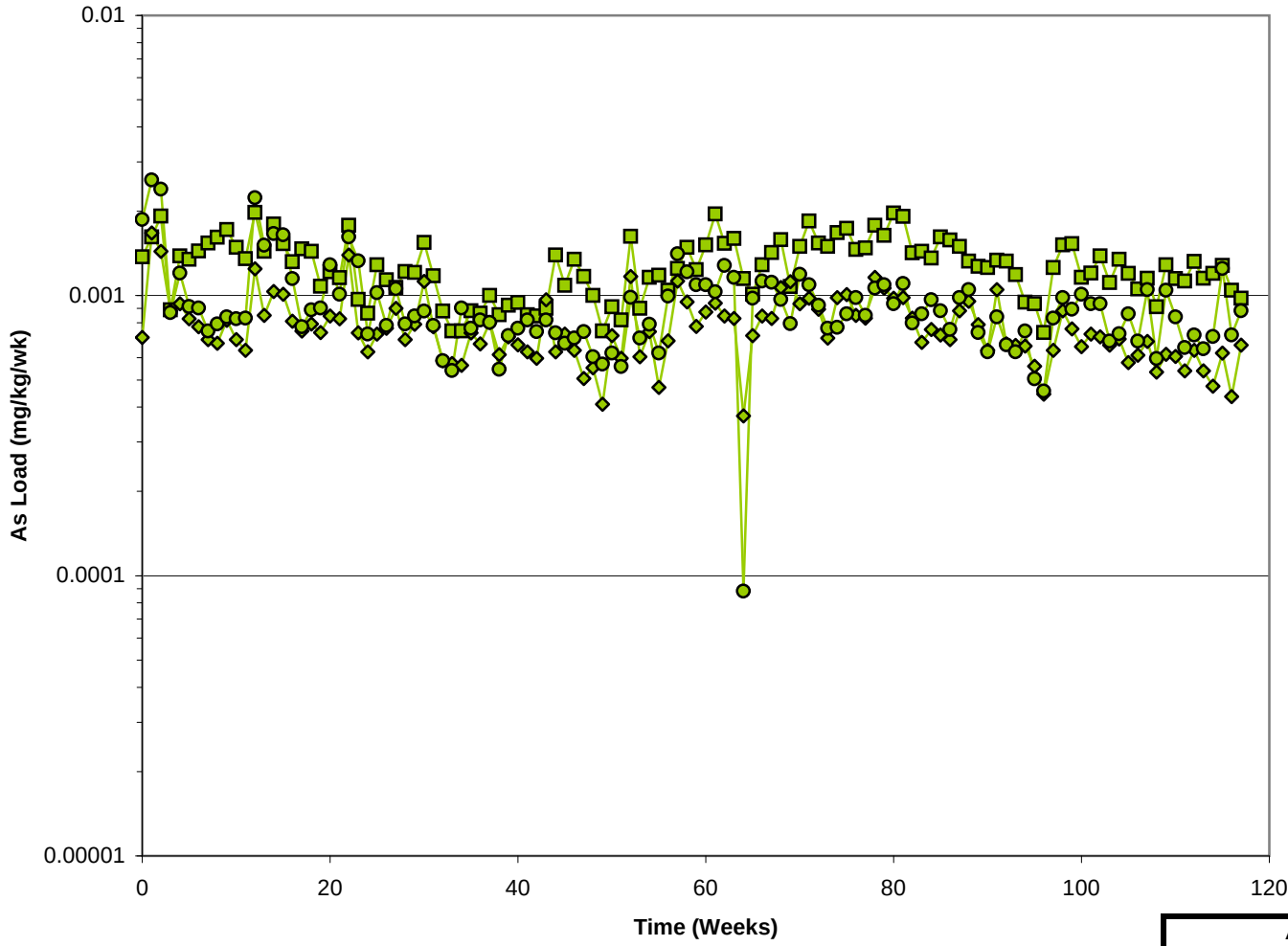


Silver Load	
Wolverine Mine, YK	
DMS Float	
June 2008	FIGURE 53

TC 53920



Aluminium Load	
Wolverine Mine, YK	
DMS Float	
June 2008	FIGURE 54



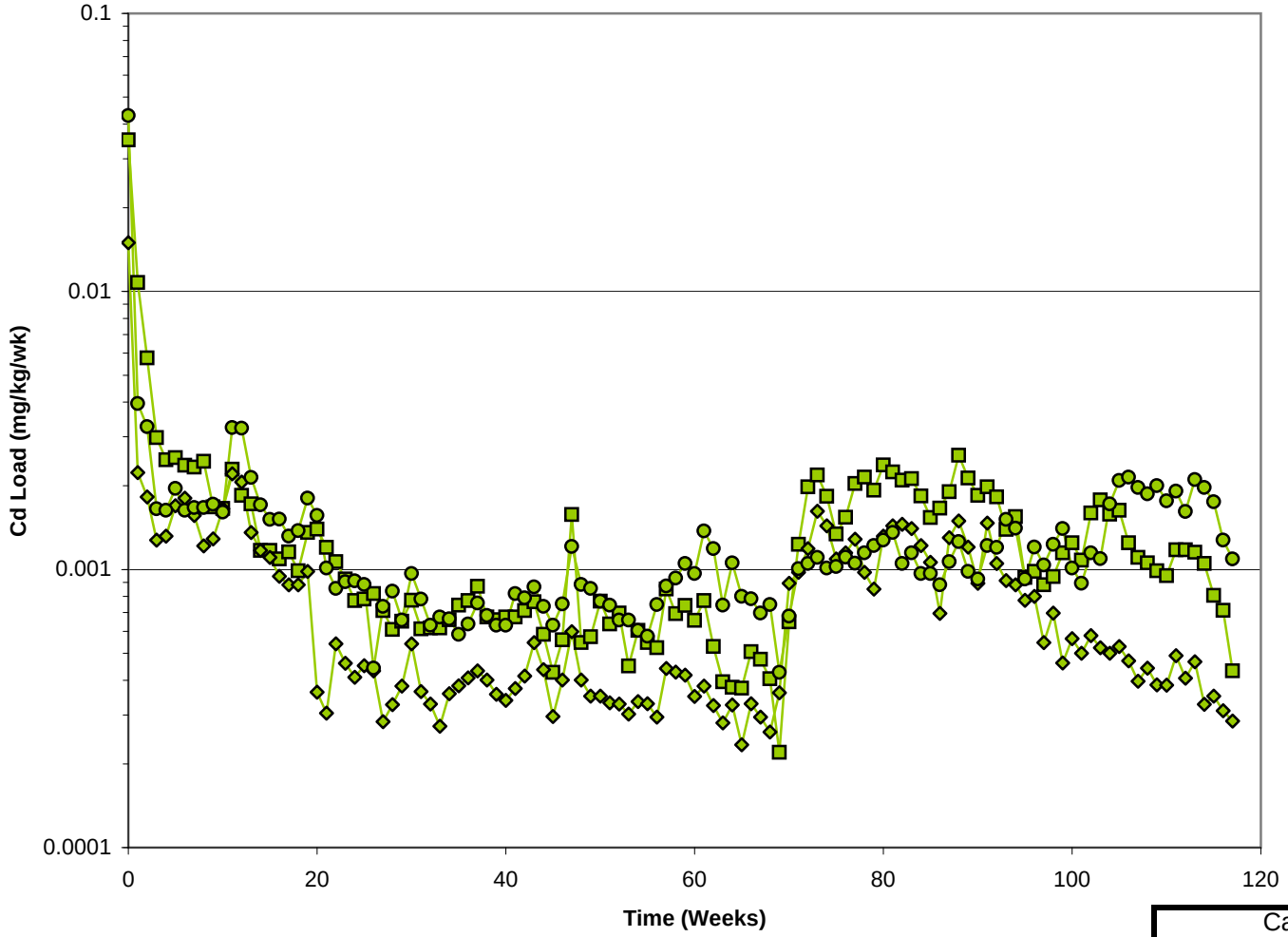
Arsenic Load

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 55

TC 53920



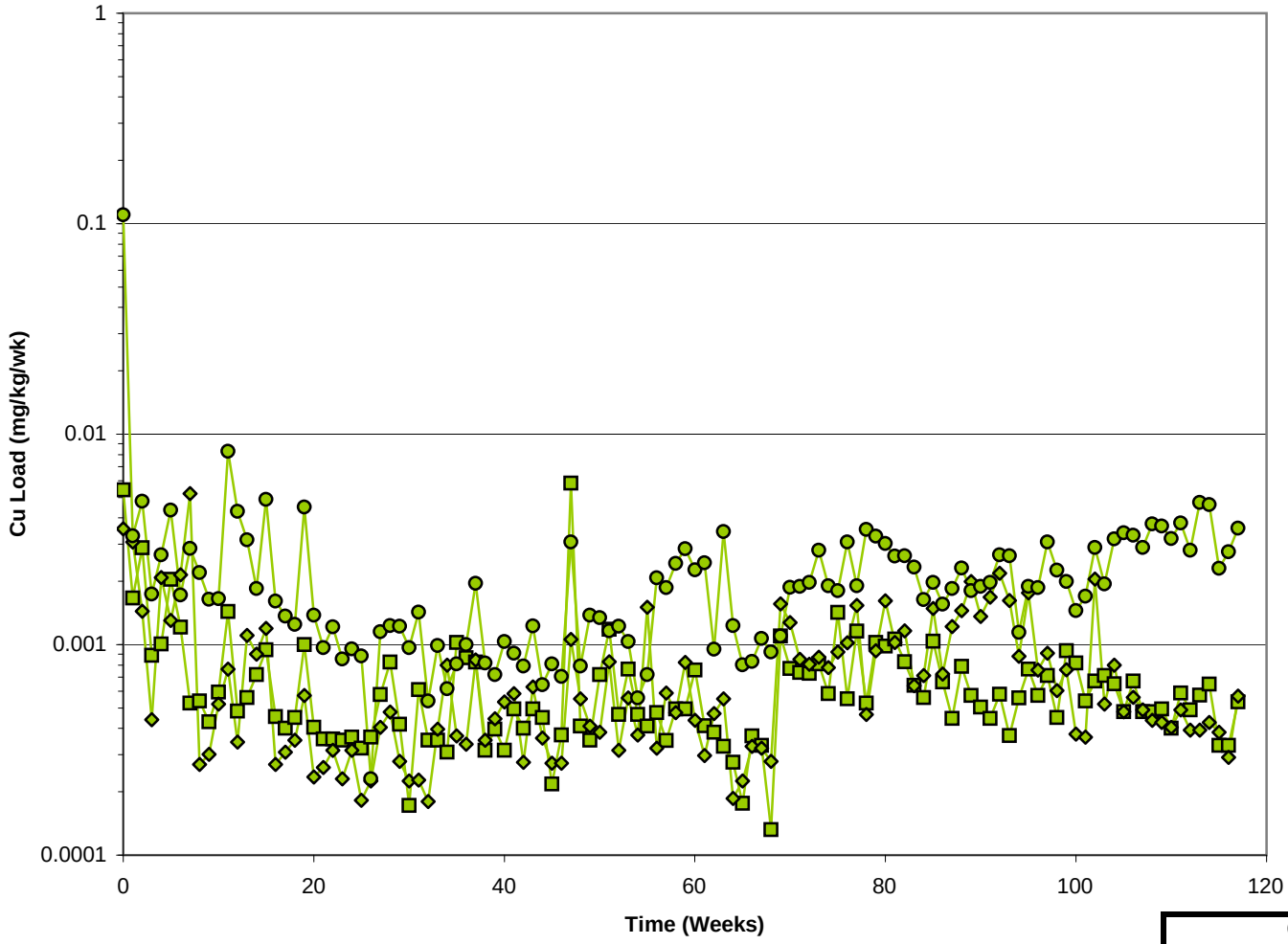
Cadmium Load

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 56

TC 53920

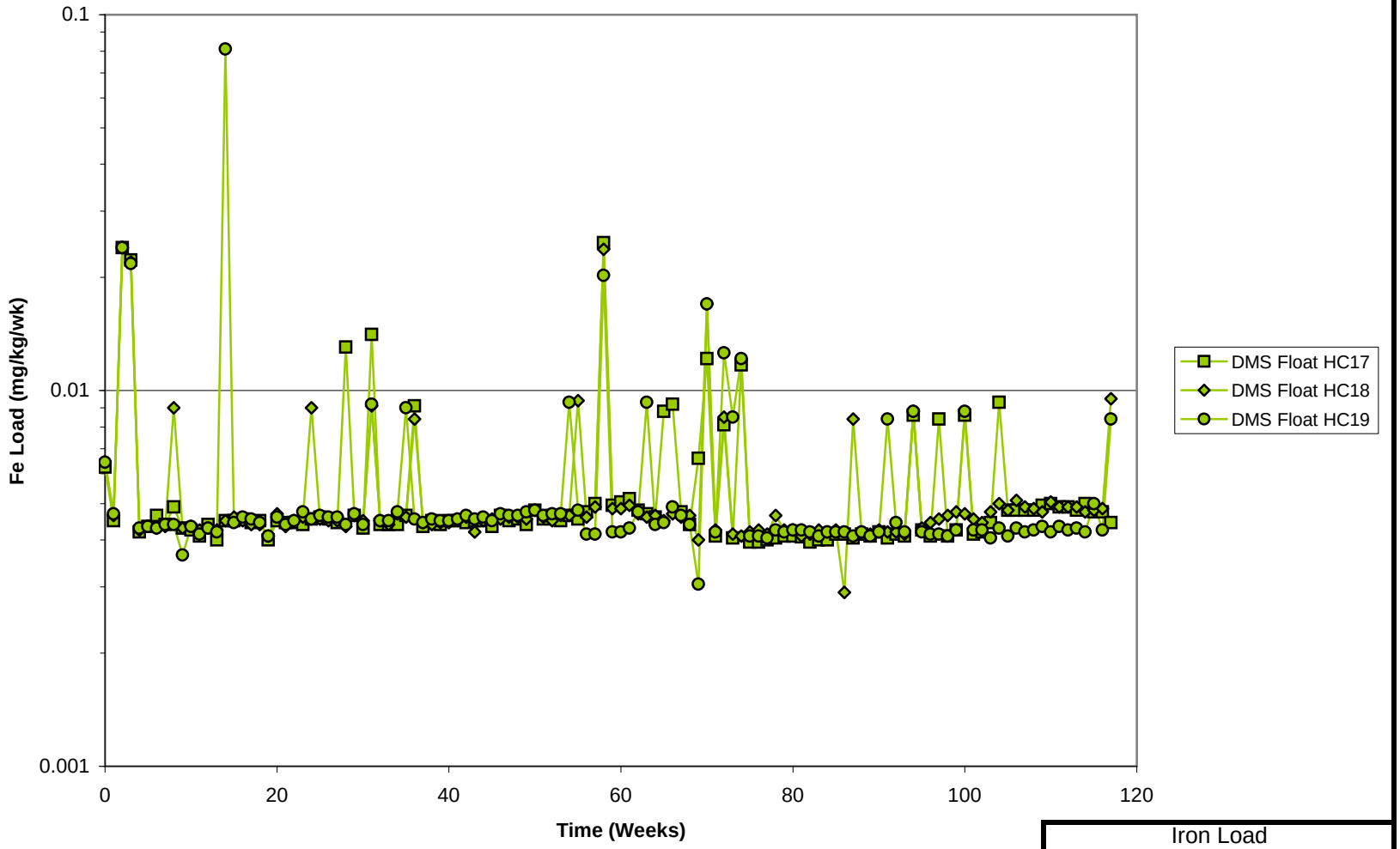


Copper Load

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 57

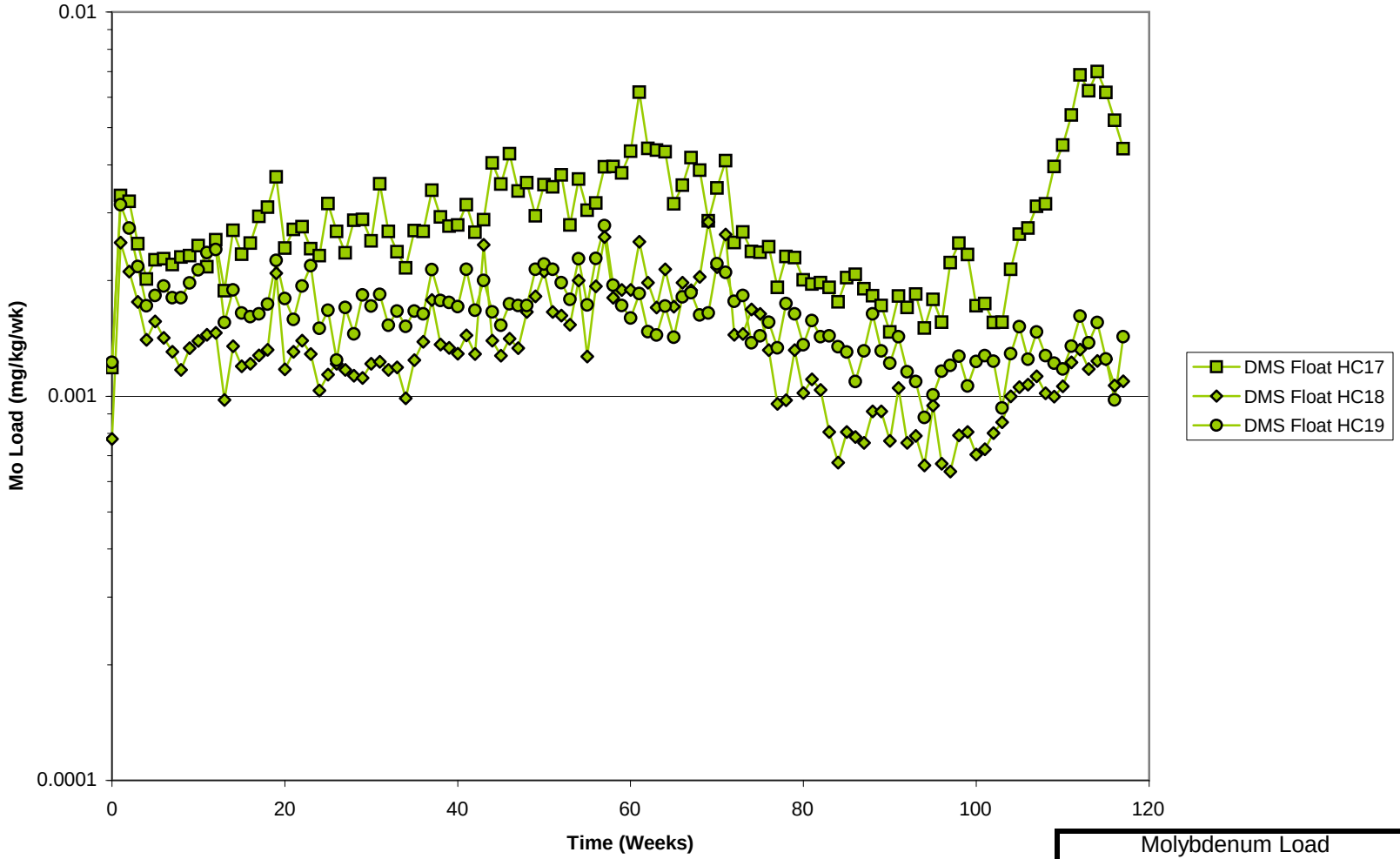


Iron Load

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 58

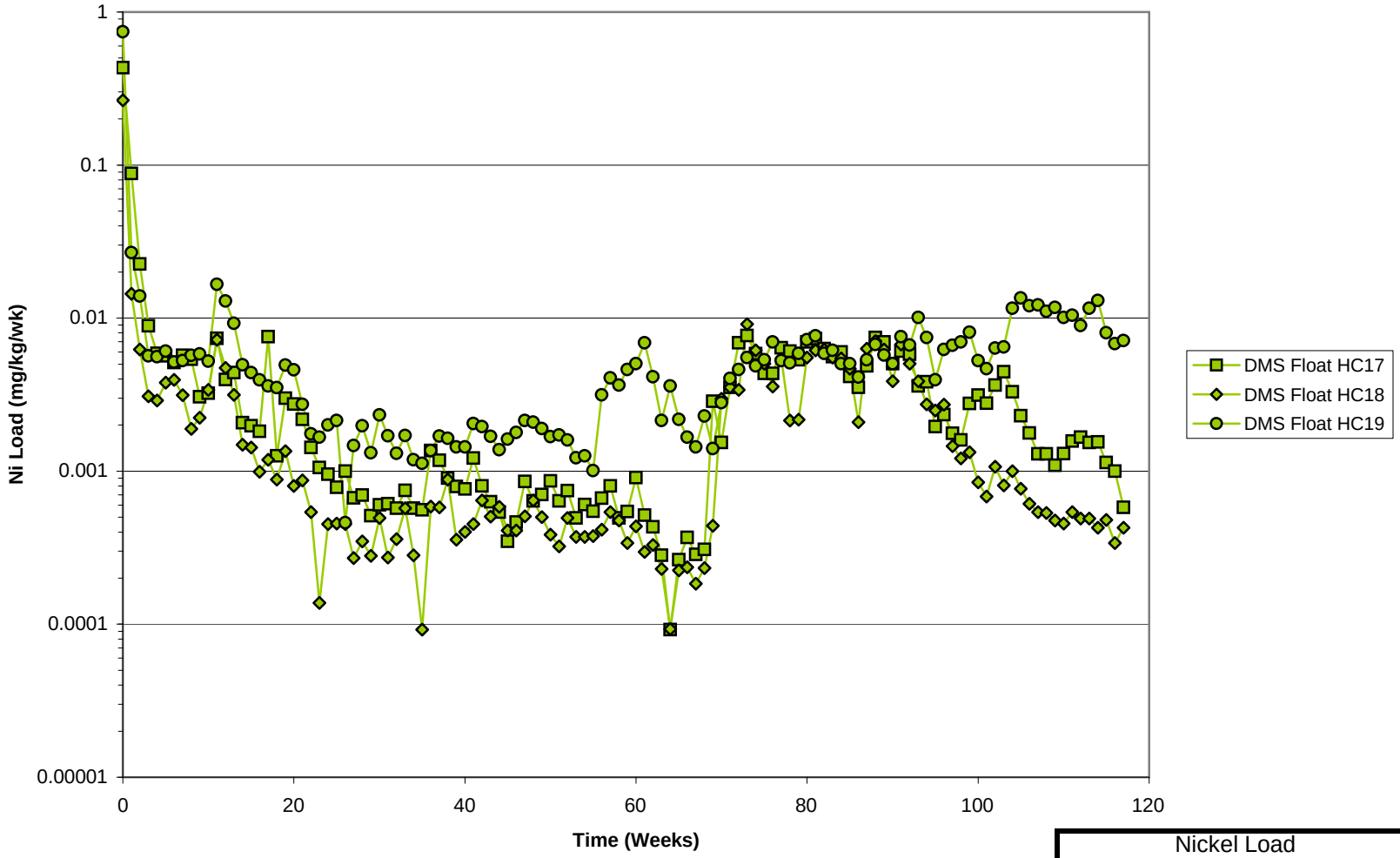


Molybdenum Load

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 59

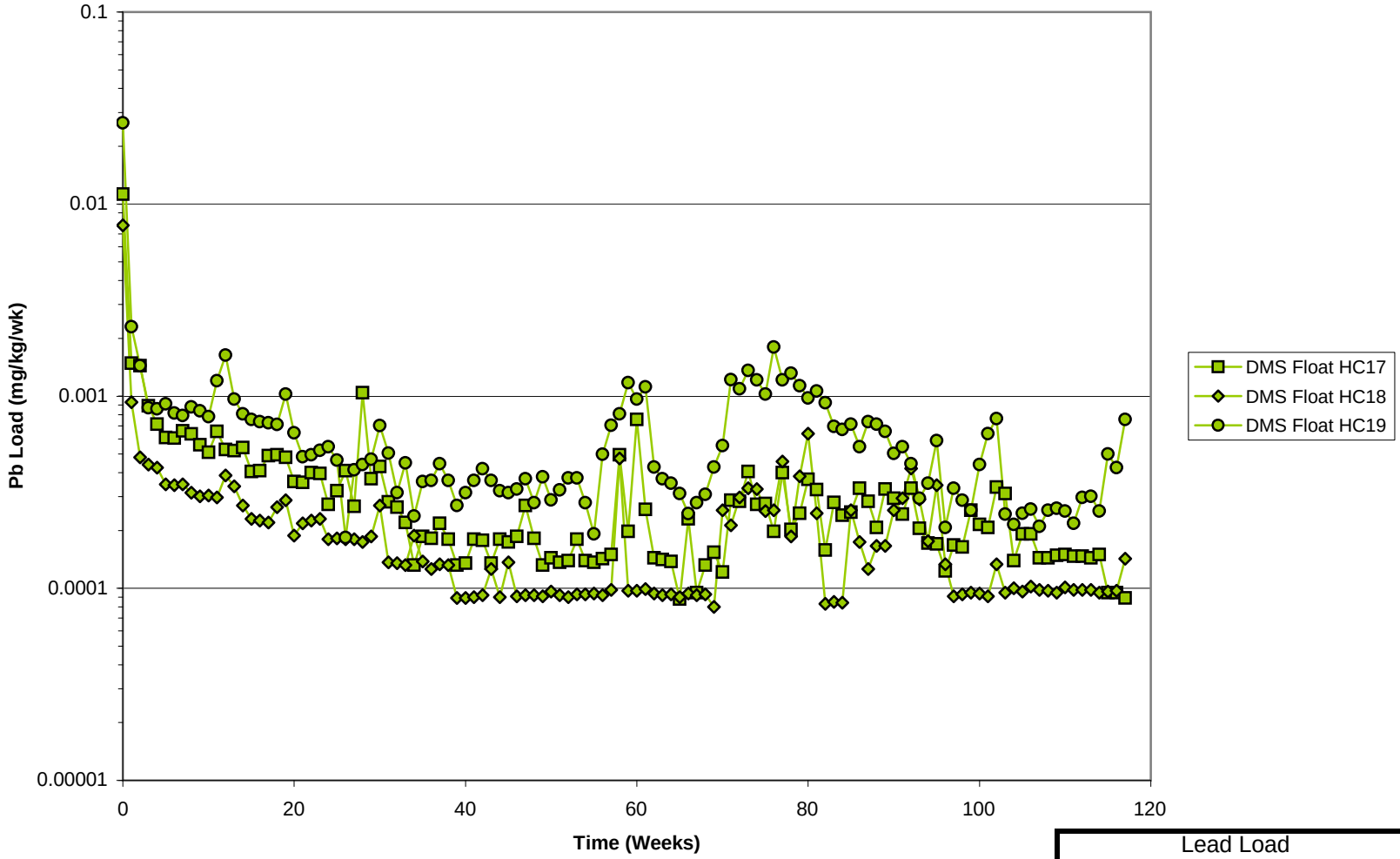


Nickel Load

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 60

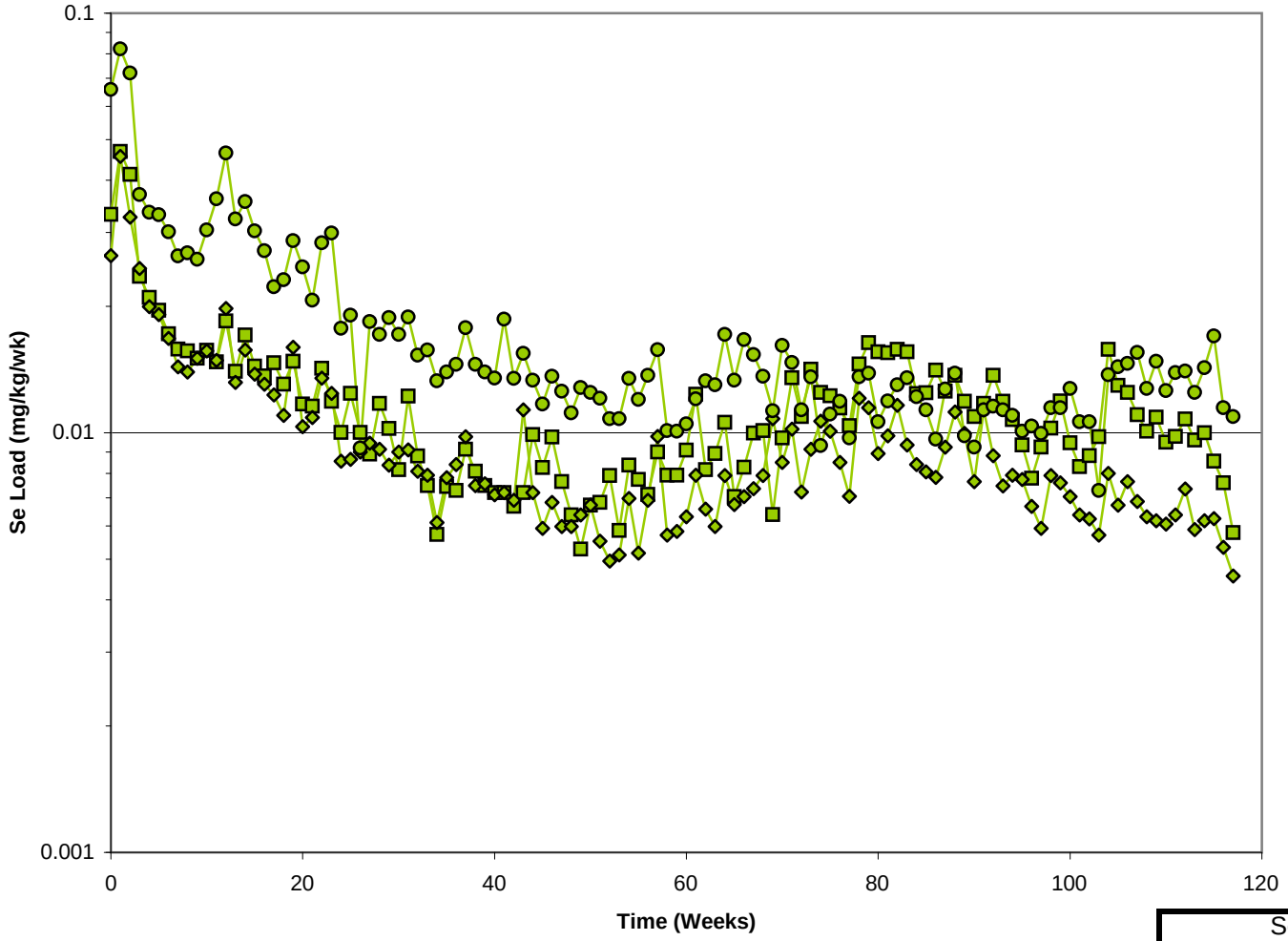


Lead Load

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 61



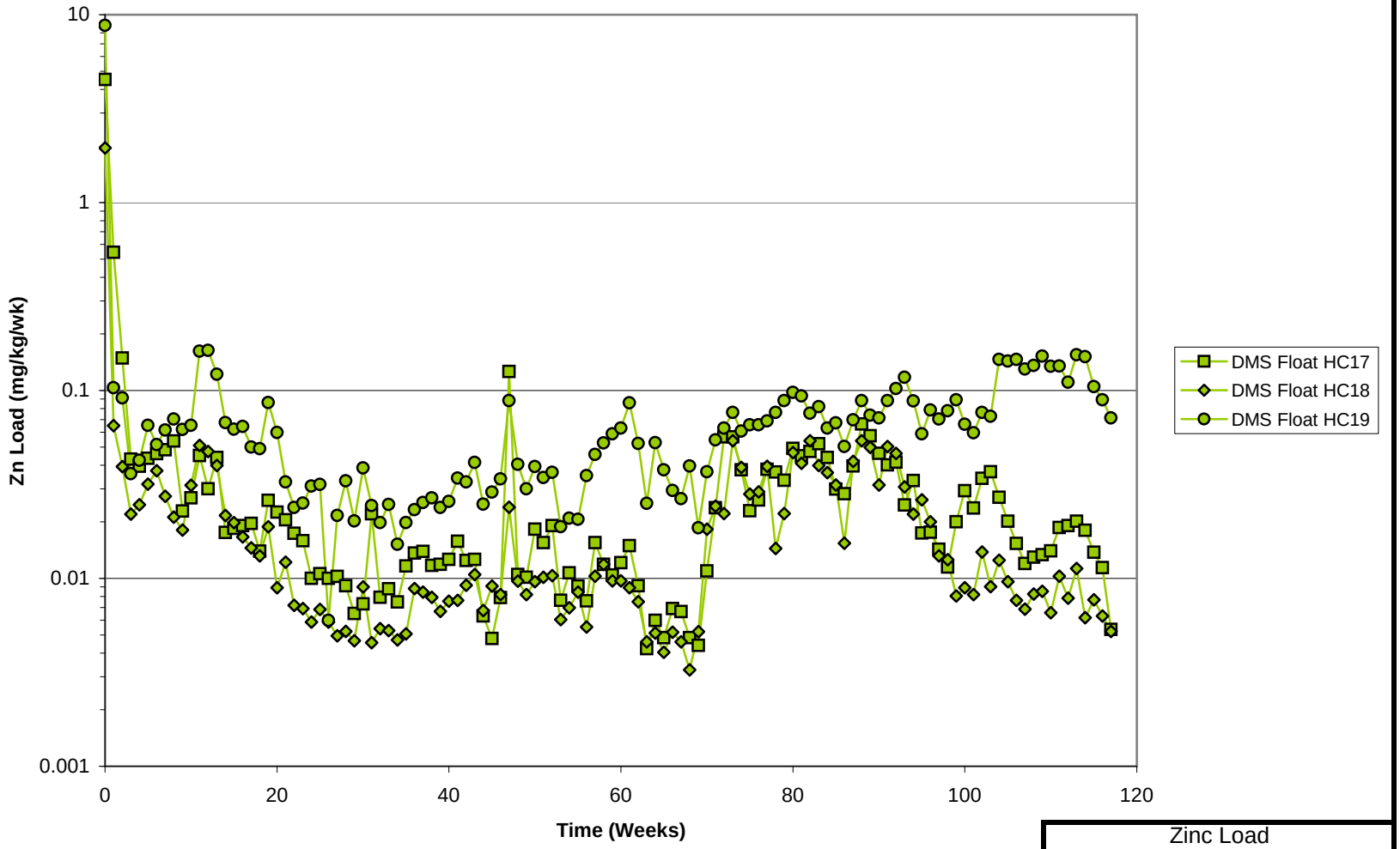
Selenium Load

Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 62

TC 53920

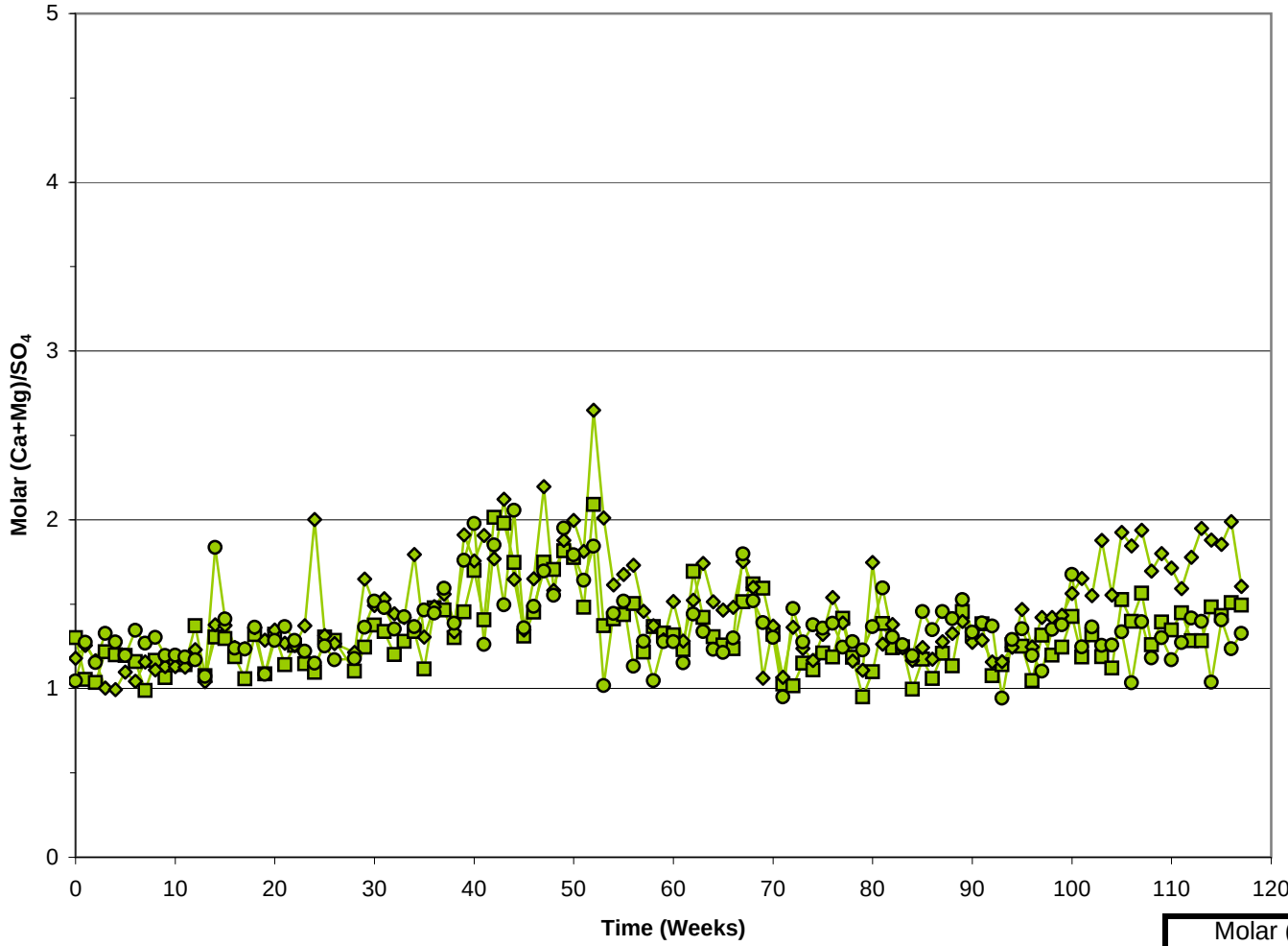


Zinc Load

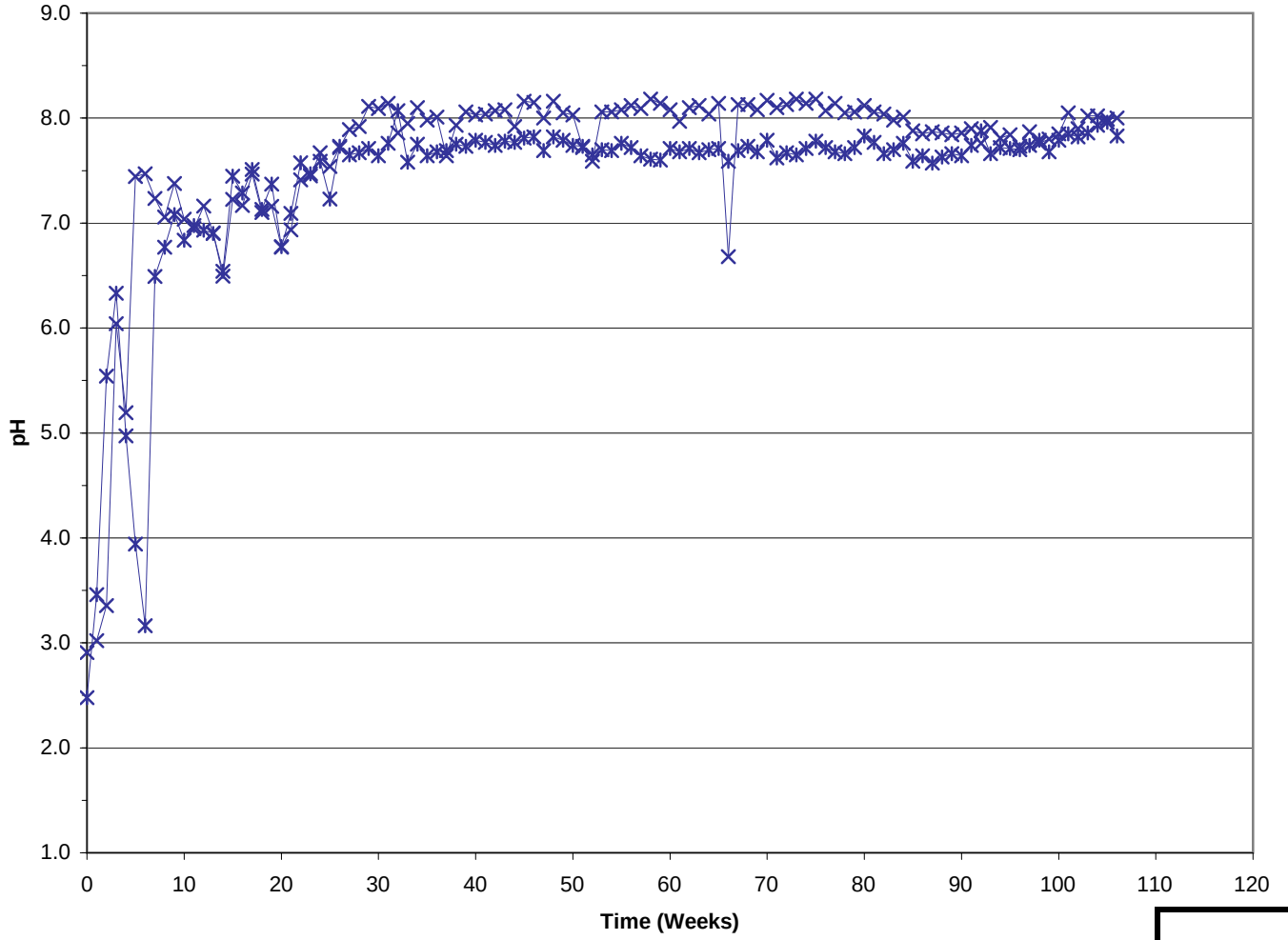
Wolverine Mine, YK

DMS Float

June 2008 | FIGURE 63



Molar (Ca+Mg)/SO4 Ratio	
Wolverine Mine, YK	
DMS Float	
June 2008	FIGURE 64

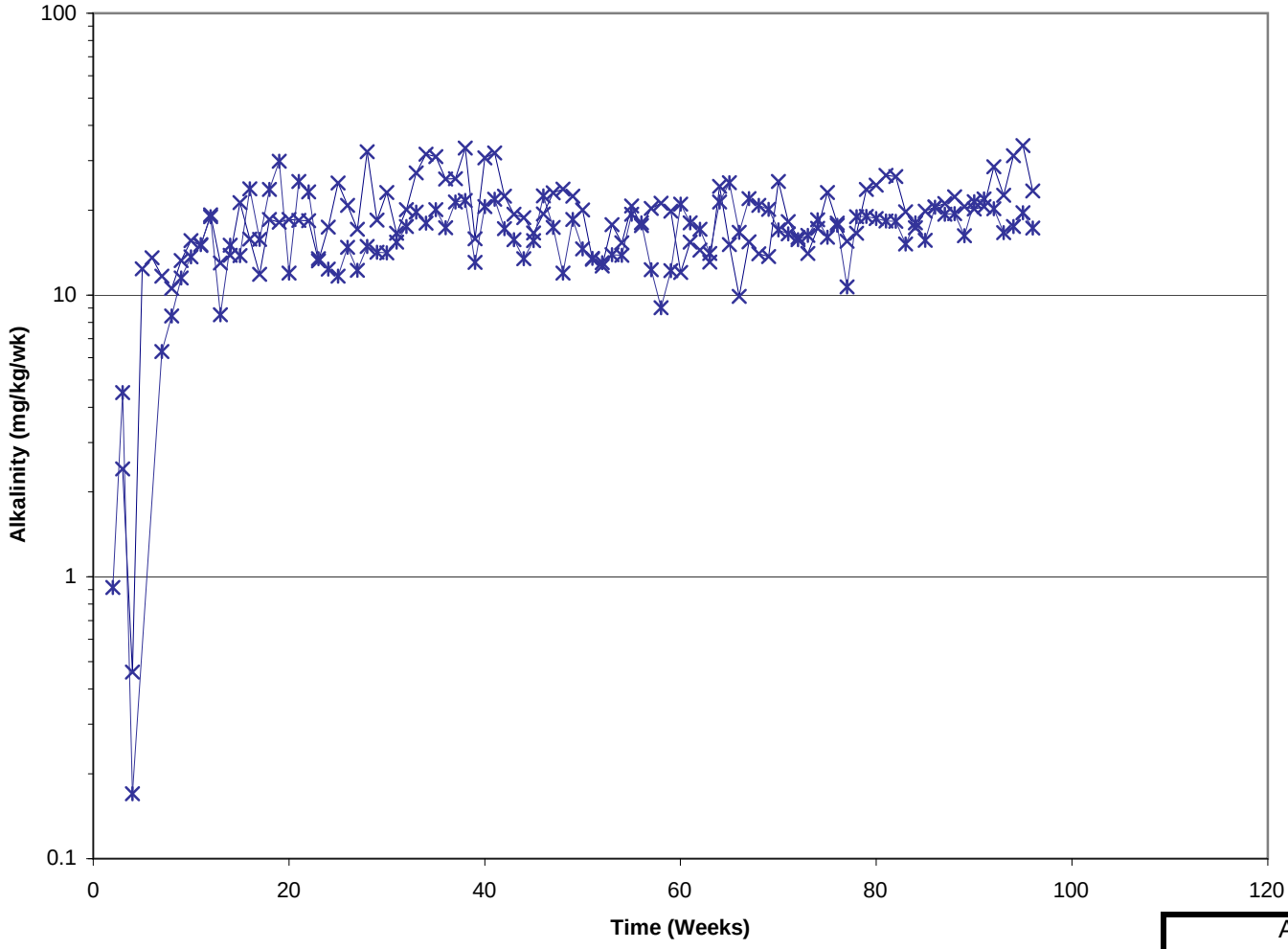


pH Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 65



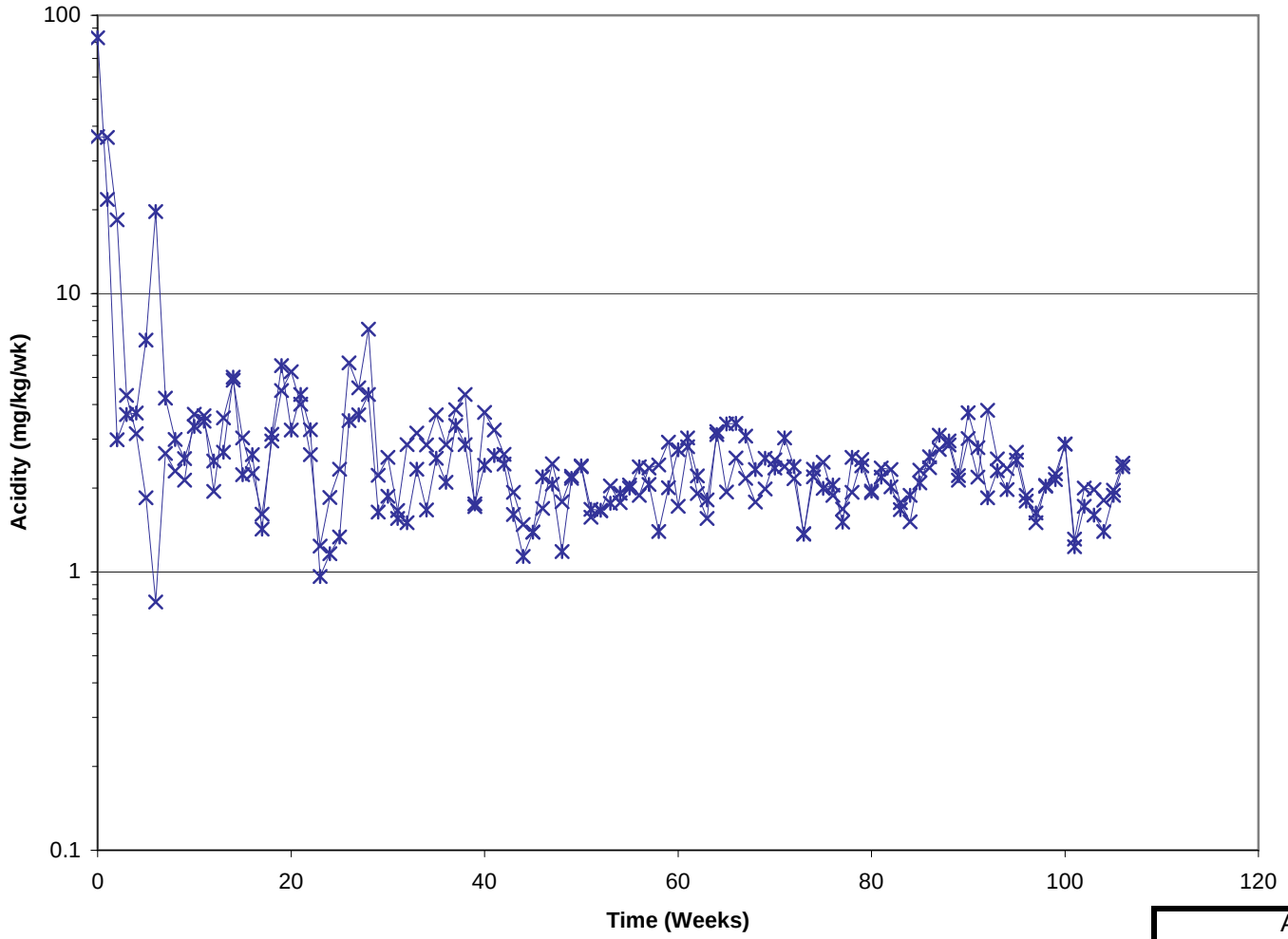
Alkalinity Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 66

TC 53920

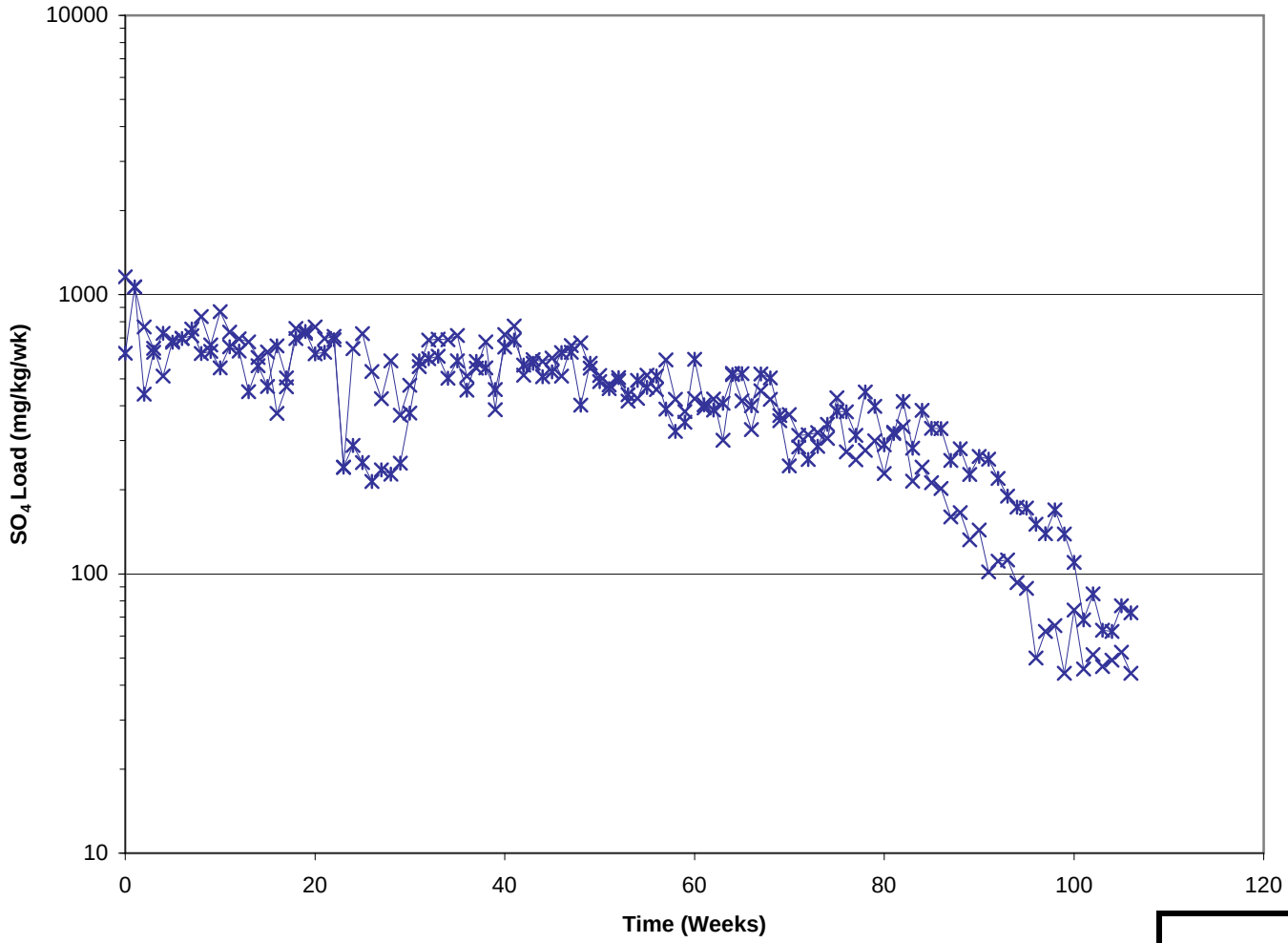


Acidity Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 67



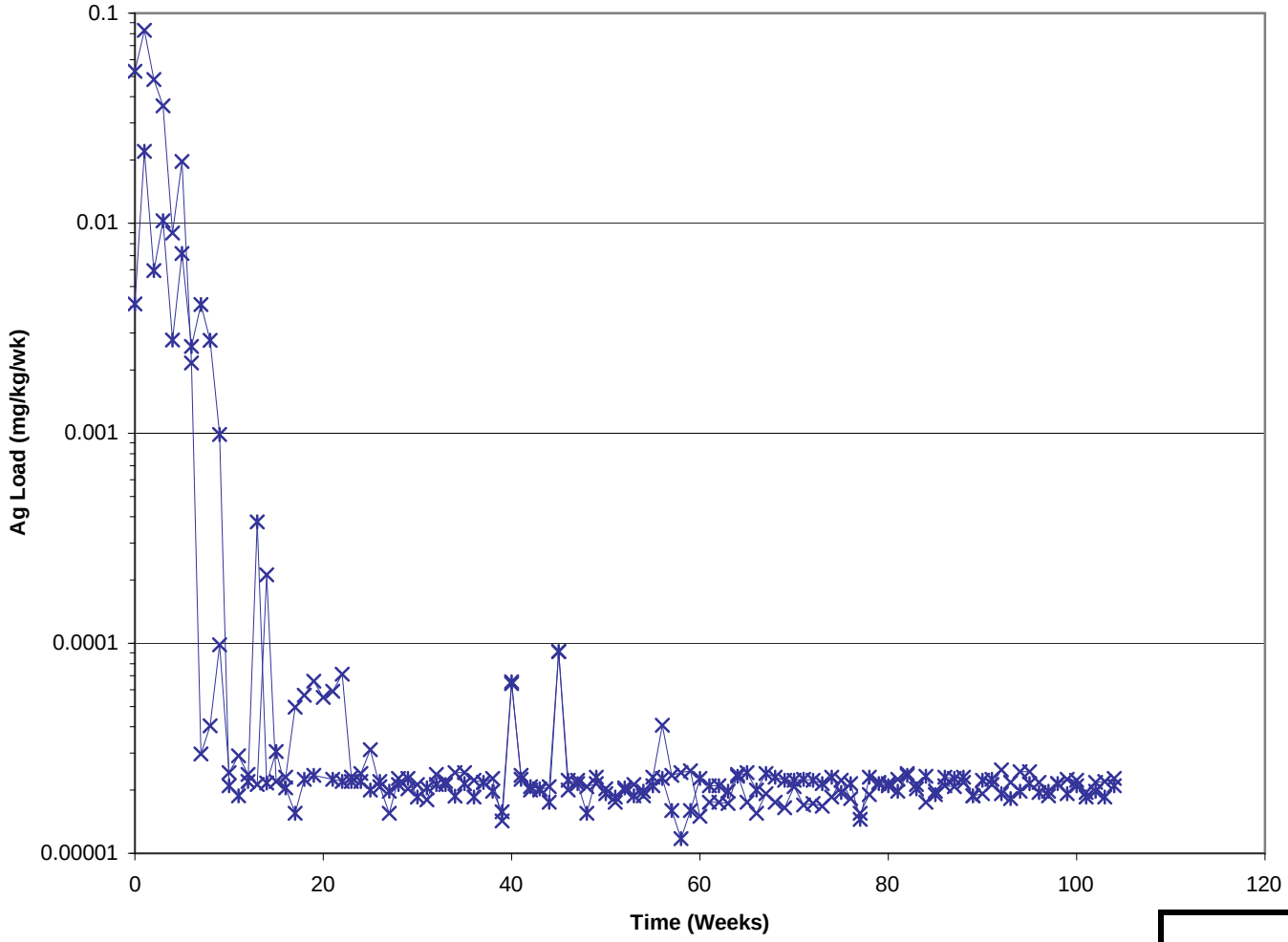
Sulphate

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 68

TC 53920

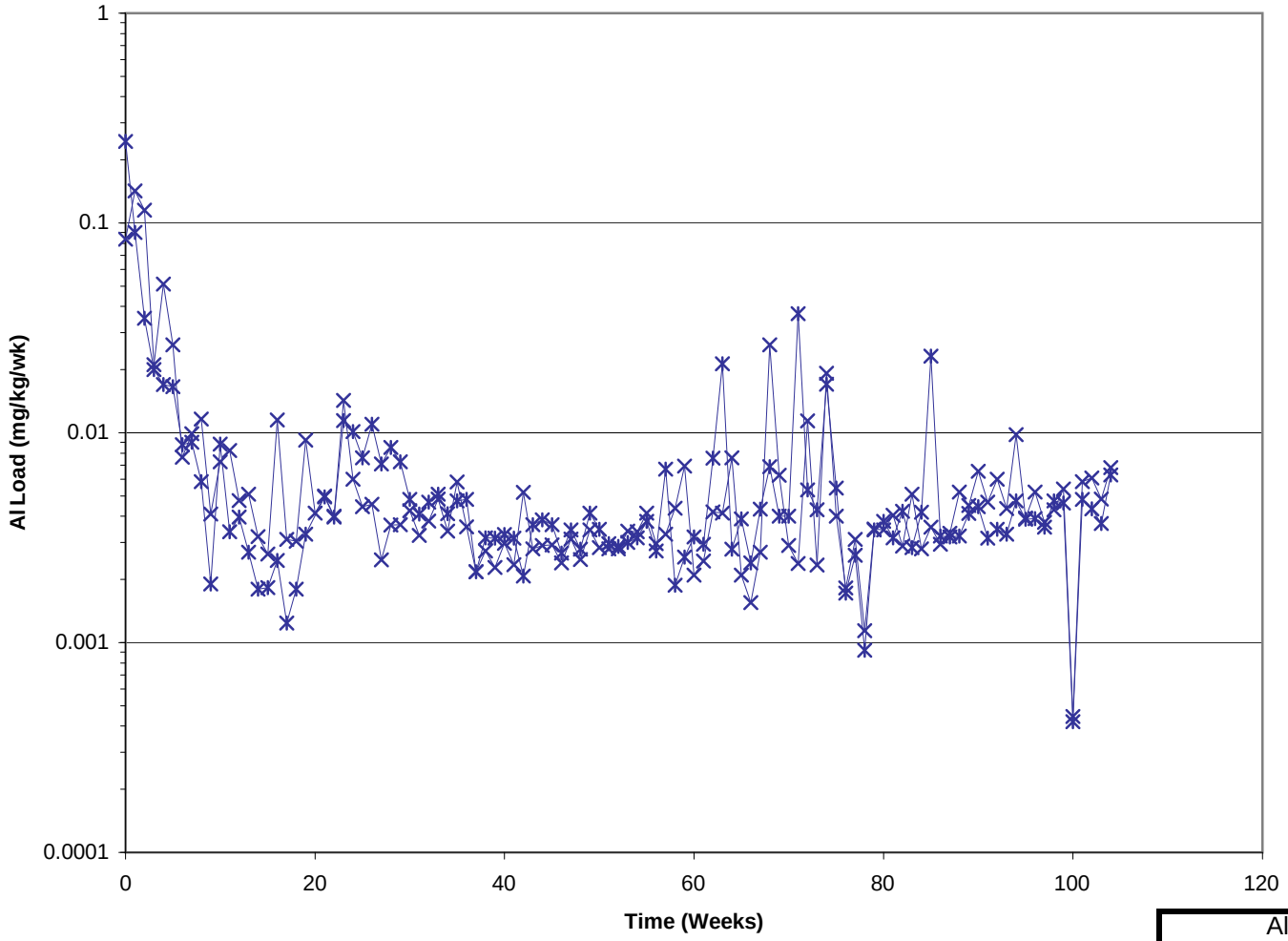


Silver Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 69

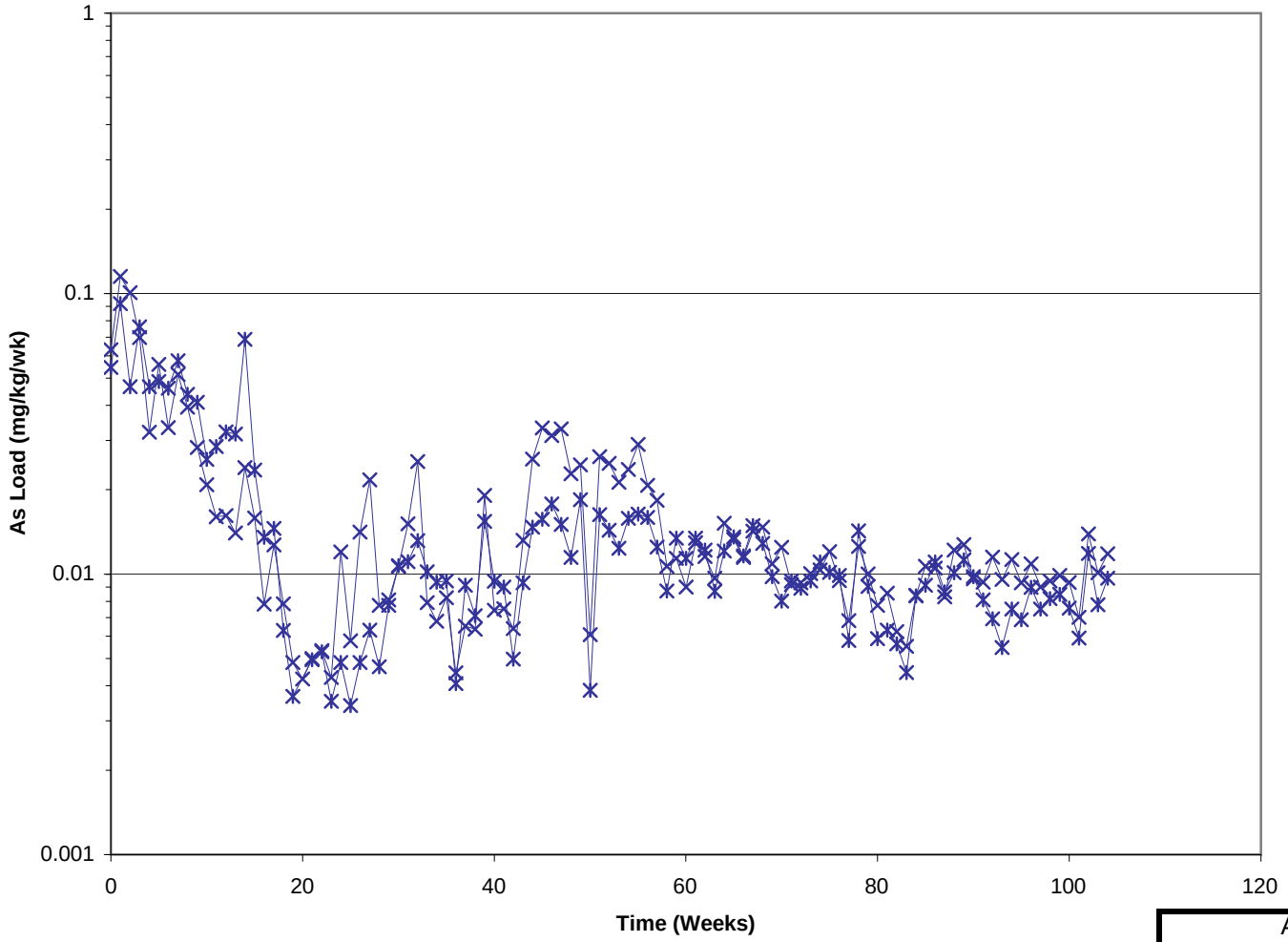


Aluminum Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 70

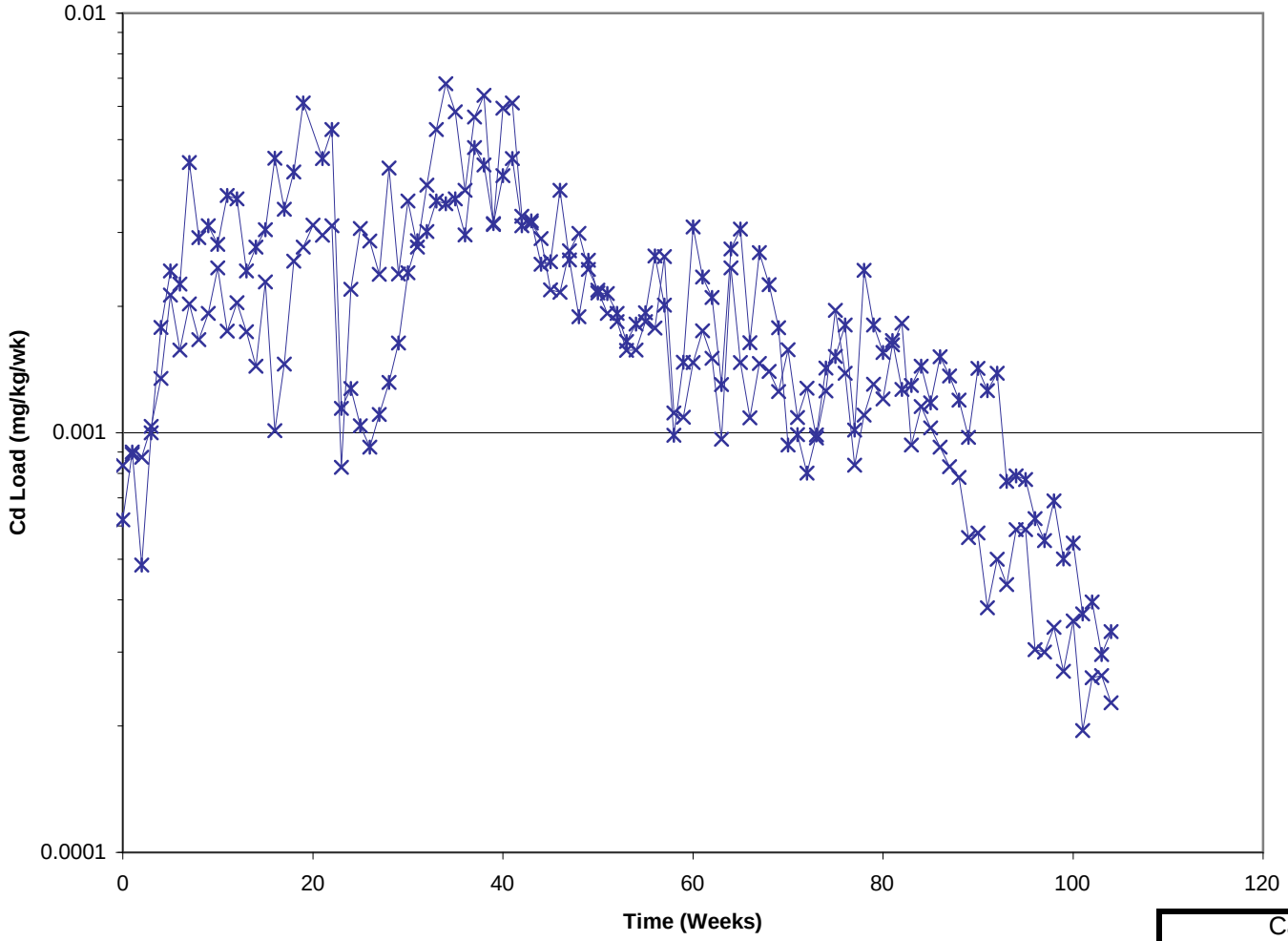


Arsenic Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 71



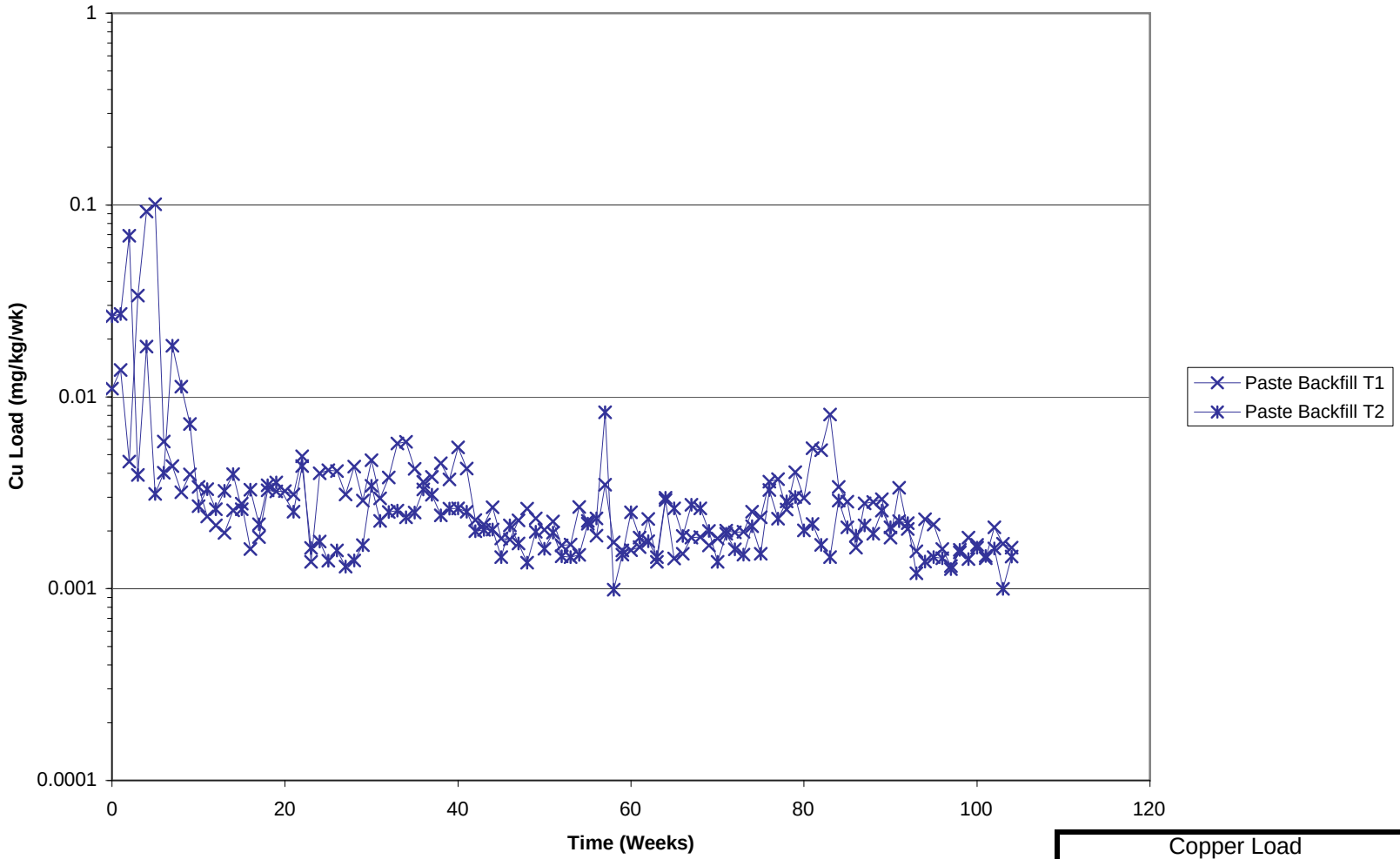
Cadmium Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 72

TC 53920



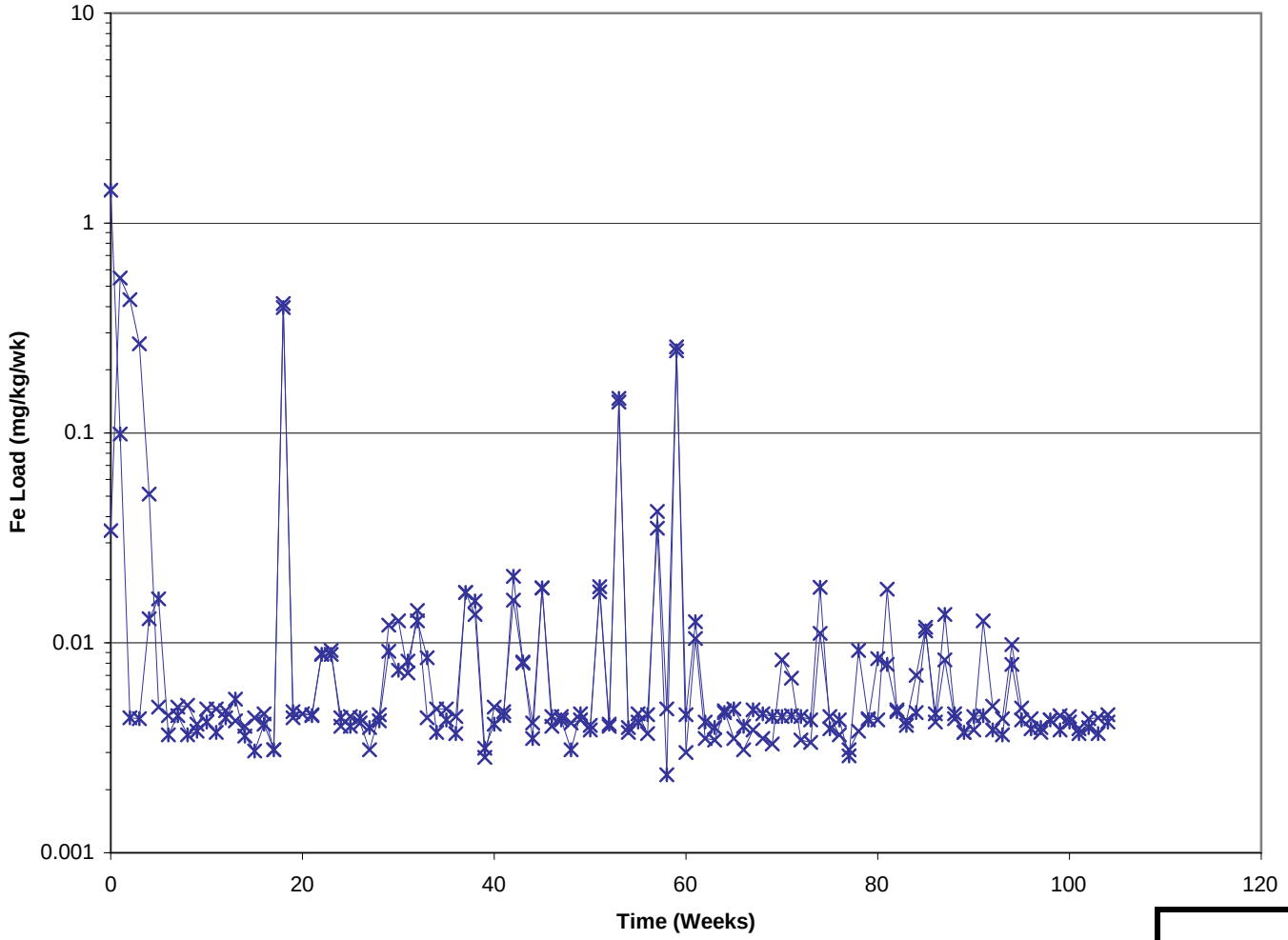
Copper Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 73

TC 53920

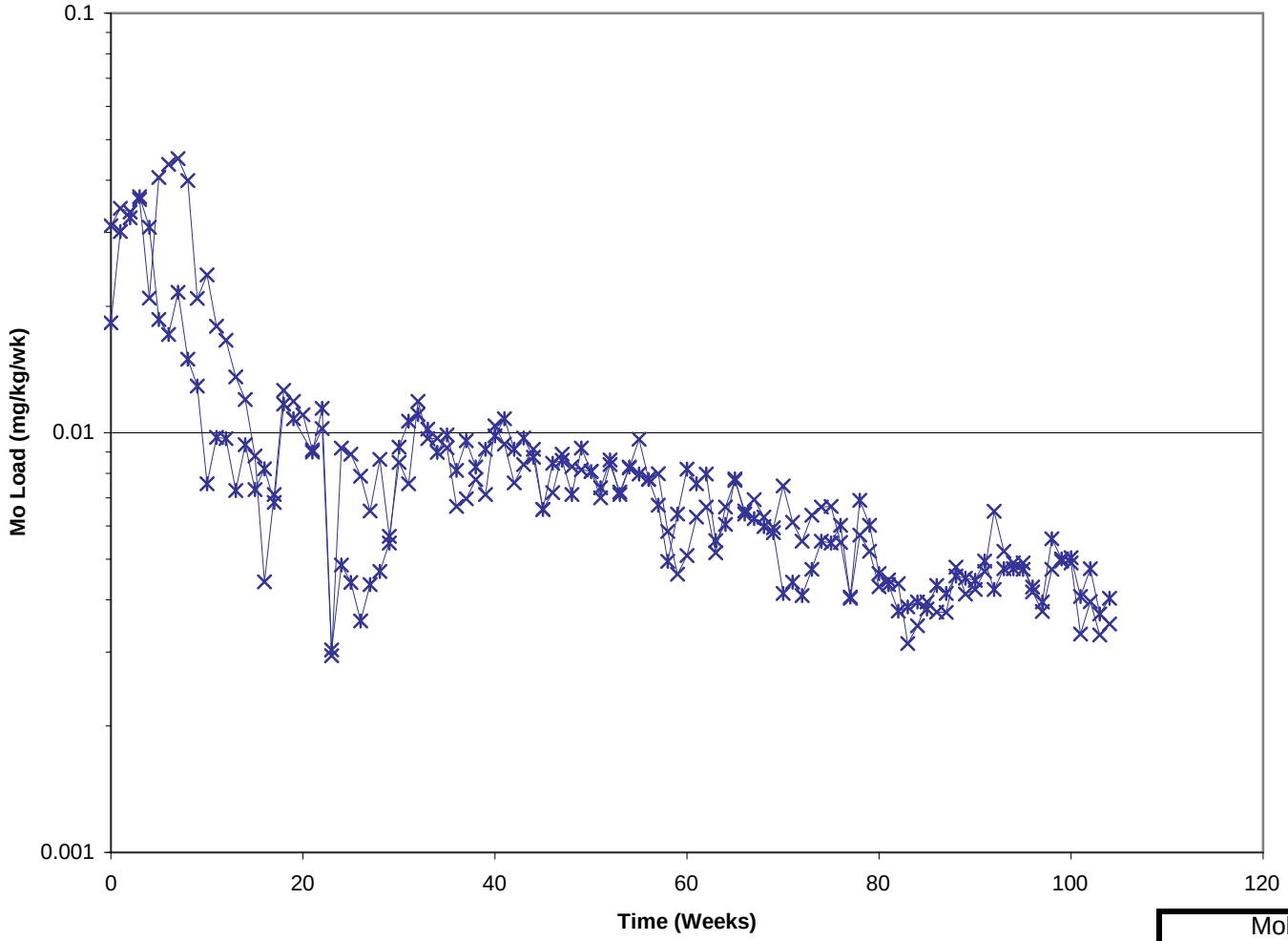


Iron Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 74

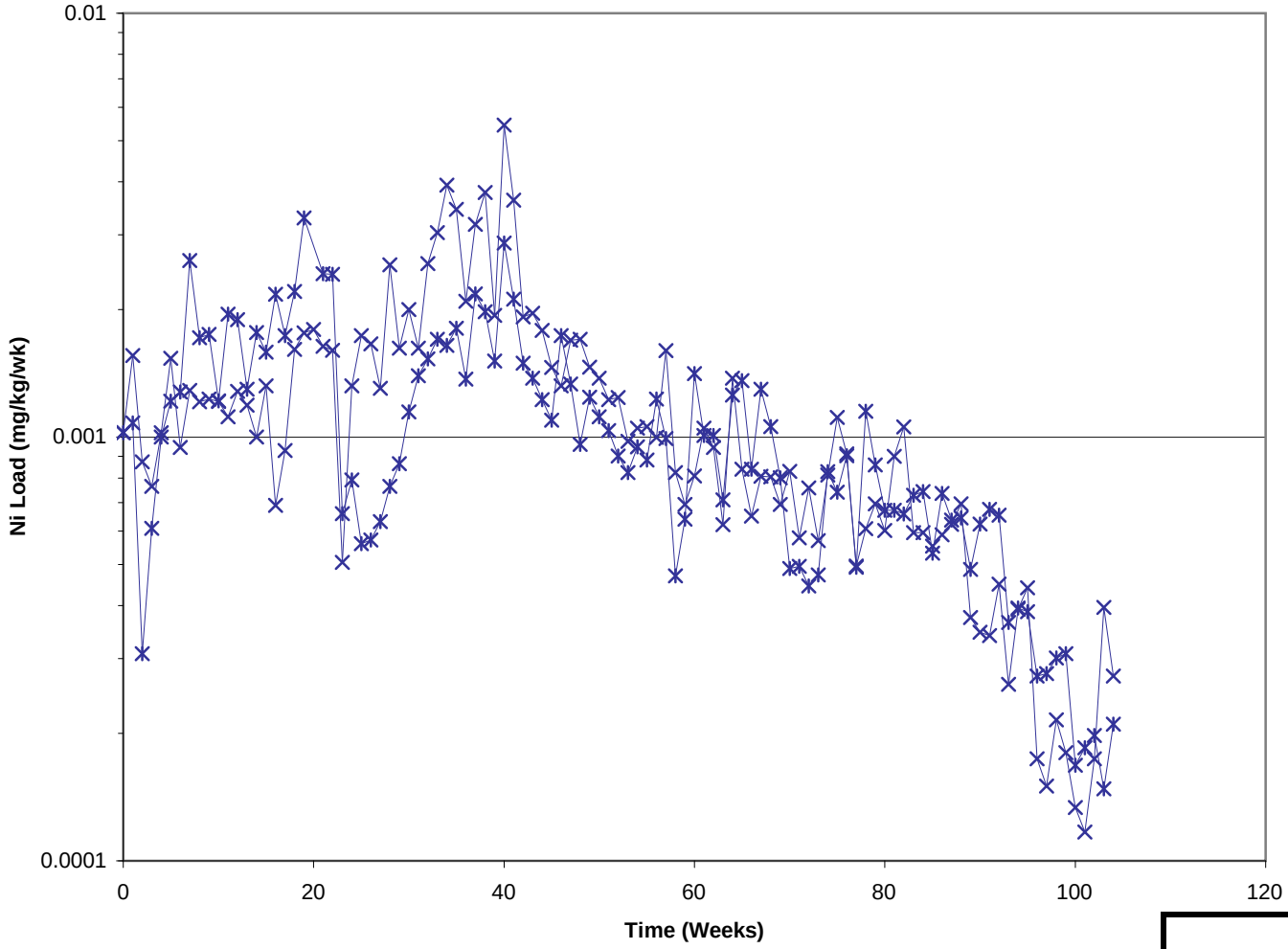


Molybdenum Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 75

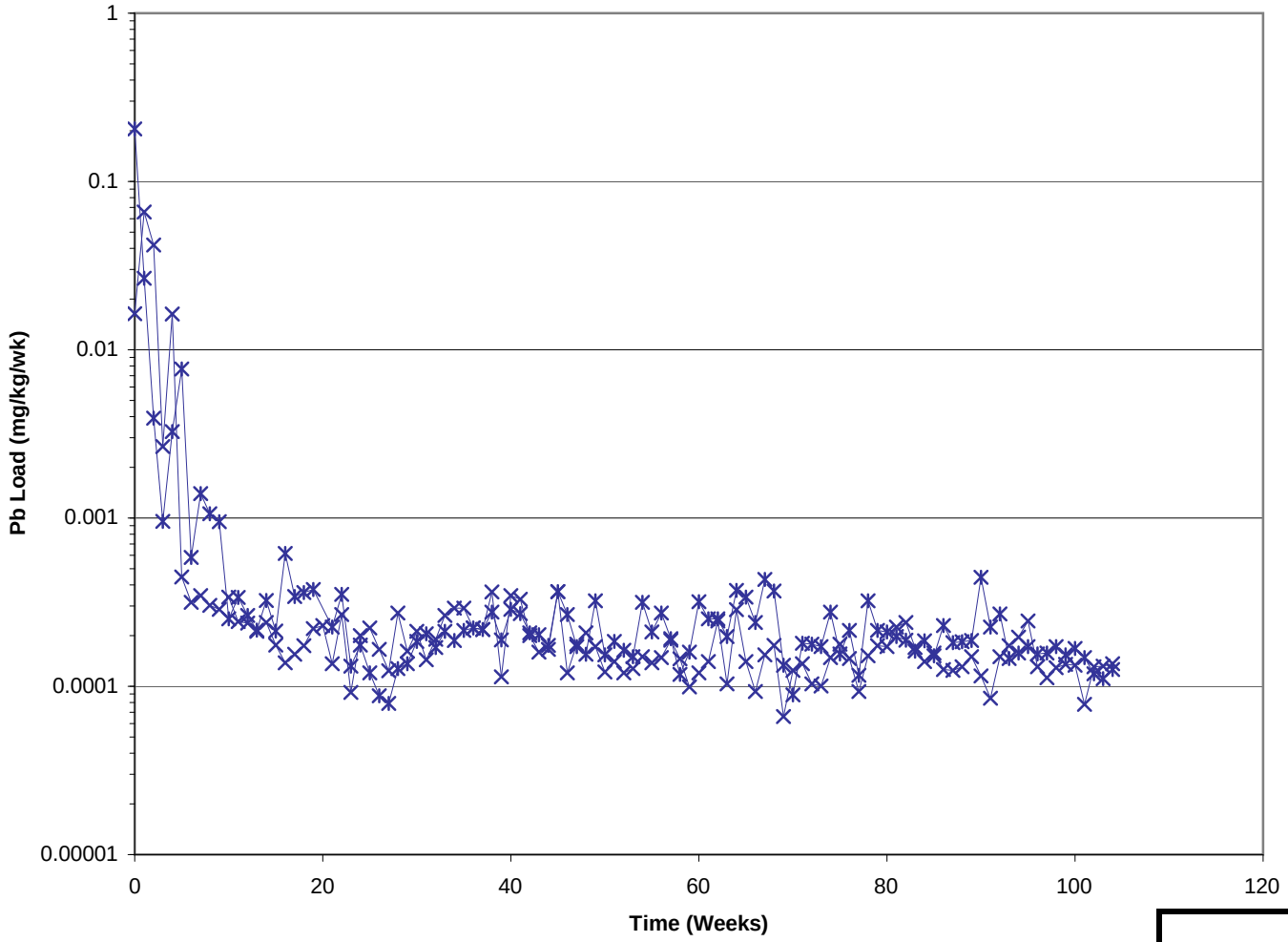


Nickel Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 76

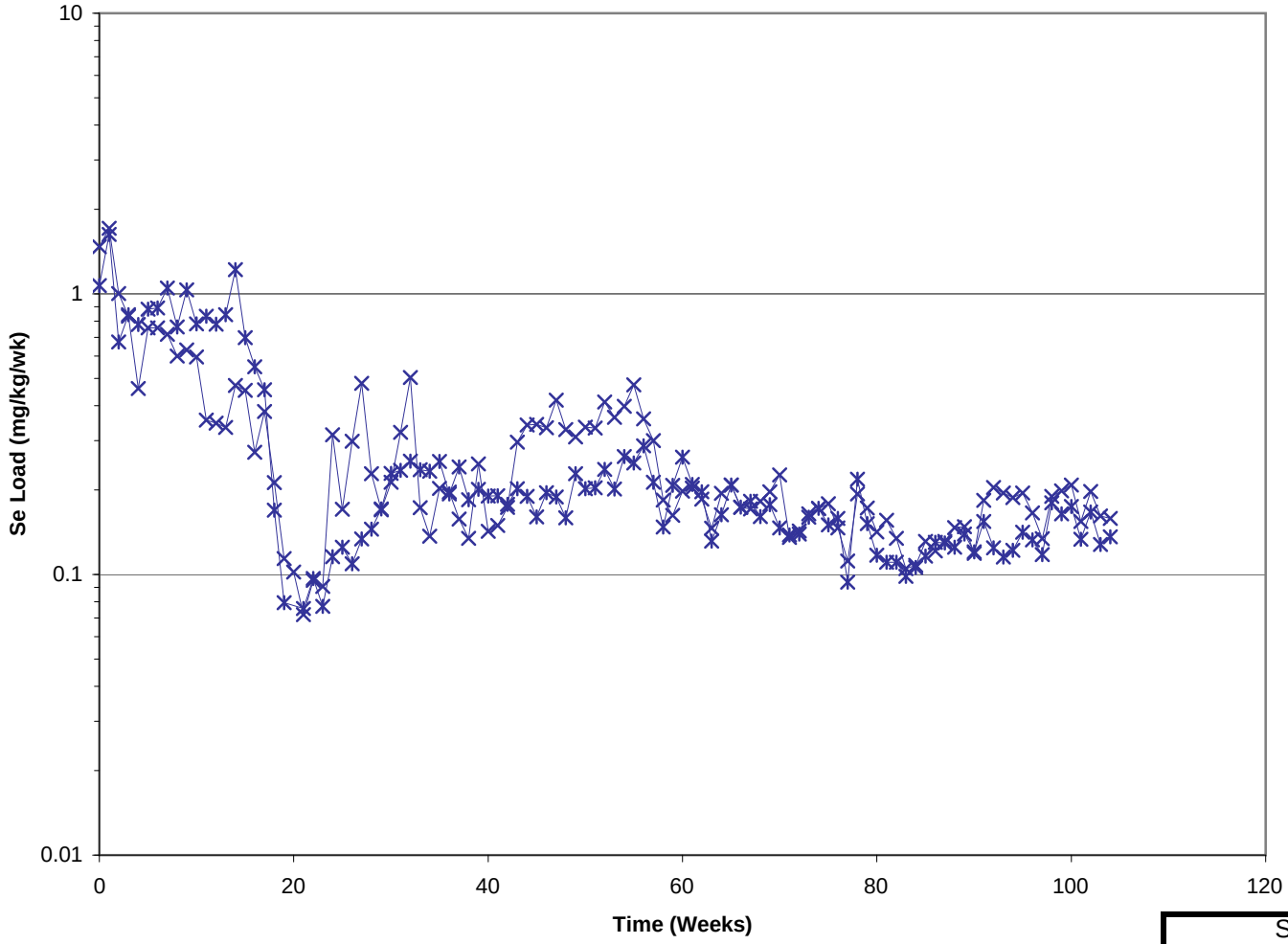


Lead Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 77

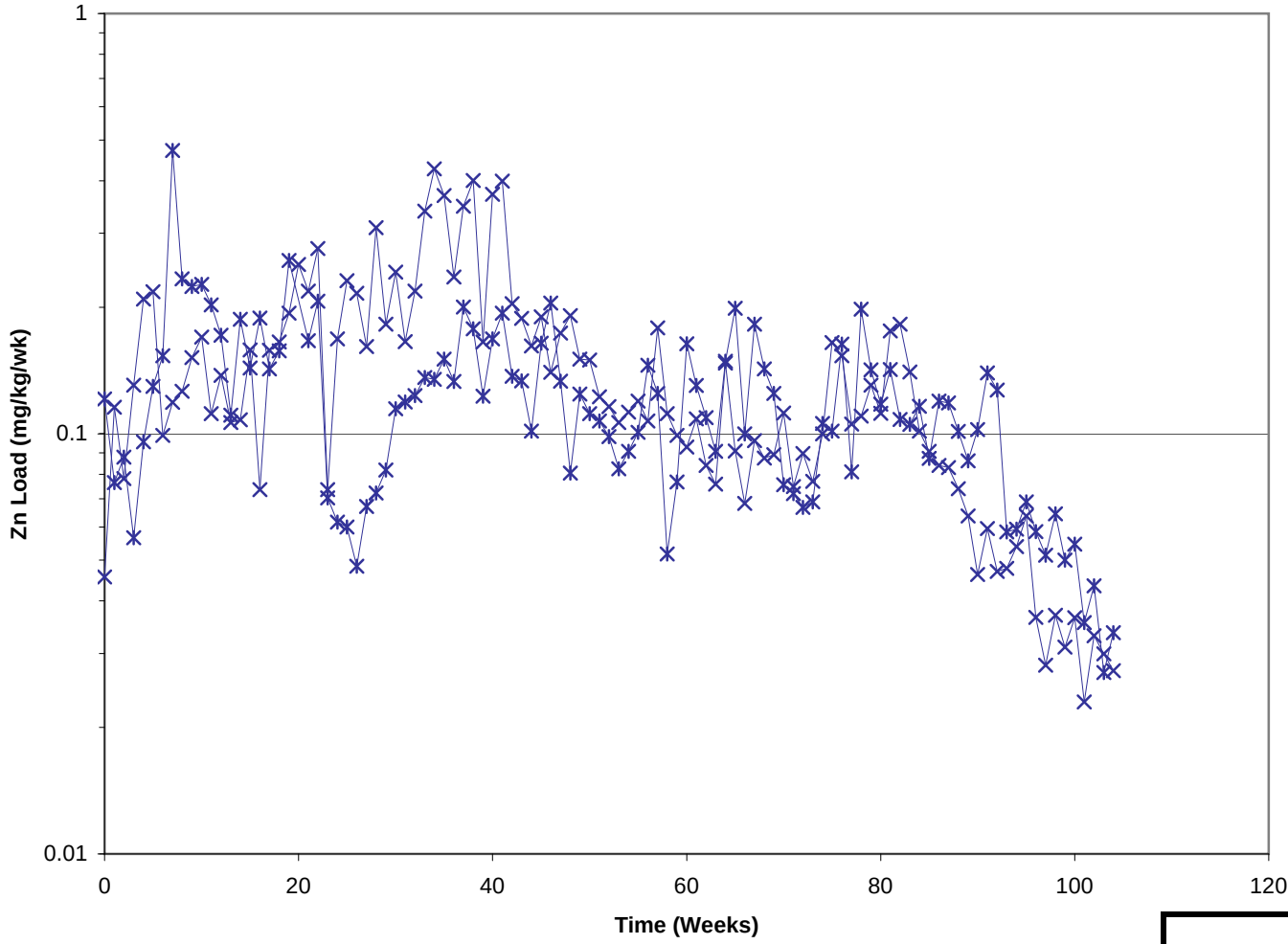


Selenium Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 78



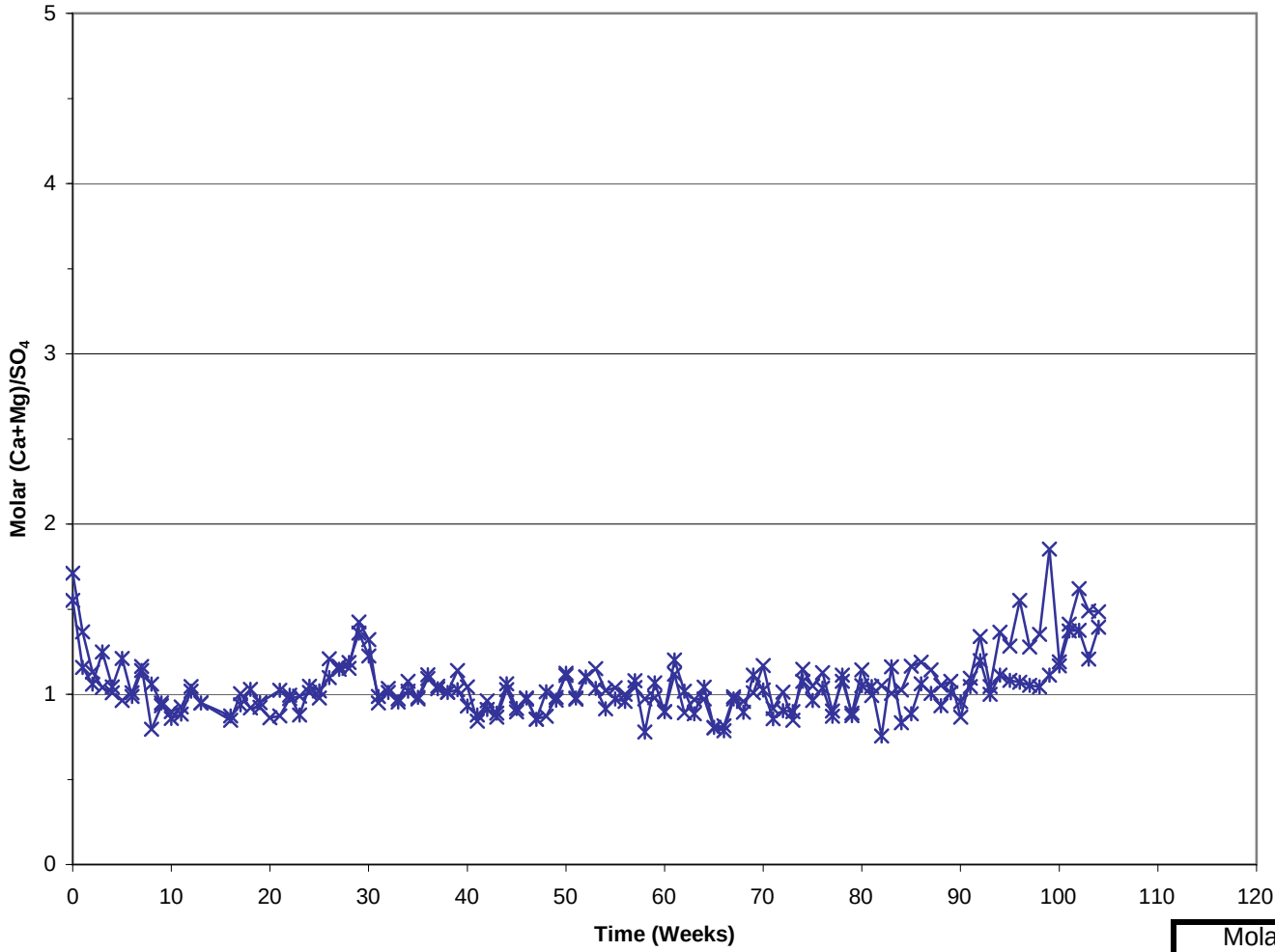
Zinc Load

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 79

TC 53920



Molar (Ca+Mg)/SO4 Ratio

Wolverine Mine, YK

Paste Backfill

June 2008 | FIGURE 80

TC 53920

MEA

September 10, 2008

Yukon Zinc Corp.
#701, 475 Howe St.,
Vancouver, BC, V6C 2B3

Ms. Pamela Ladyman, R.P. Bio.
Manager. Environment and Community Affairs

Dear Ms. Ladyman:

Wolverine Tailings Humidity Cells Update

The following provides a summary of the Wolverine tailings humidity cells to August 26, 2008. The Overall Ore Composite (OC) and Overall Diluted ore composite (OD) tailings humidity cells have run an additional 40 weeks since the last update in November 2007 and have reached weeks 168 and 162, respectively.

1. SUMMARY OF HUMIDITY CELL RESULTS

The pH of all cells has remained relatively constant generally between pH 6.4 and pH 7.0 (see Figure 1.1). All the Diluted Ore tailings cells experienced a temporary pH depression within the first 20 weeks, before rebounding. The Overall Ore Composite tailings did not experience this. It is surmised that the amount of thiosalt in solution (400 mg/L) did not exceed the rapid neutralization capacity of the tailings for the OC sample, whereas higher amounts of thiosalt (600-1200 mg/L) in the other cells clearly did. Once the initial flush of thiosalts was over (i.e., thiosalts dropped below 400 mg/L), the pH has been unaffected by these comparatively low concentrations.

There have been a few other instances when the pH dropped below pH 6.0 with the lowest pH in Cell OC at pH 4.7 at week 124. It should be noted that coincident with the low pH value at week 124, the sulphate production was measured at 28 mg/kg/wk well below the 5-week average. The low sulphate value is reflected in the lower conductivity. The lower pH is also reflected in the lower alkalinity and higher acidity values than previous and following cycles. In general, there appears to be some additional variability in the data fluctuations since week 109. These fluctuations do not appear to be occurring simultaneously in both Cell OD and OC, which suggests that the fluctuations are related to variability in reaction rates within the humidity cell and not artifacts of the laboratory testing. However, no trend in median pH is notable.

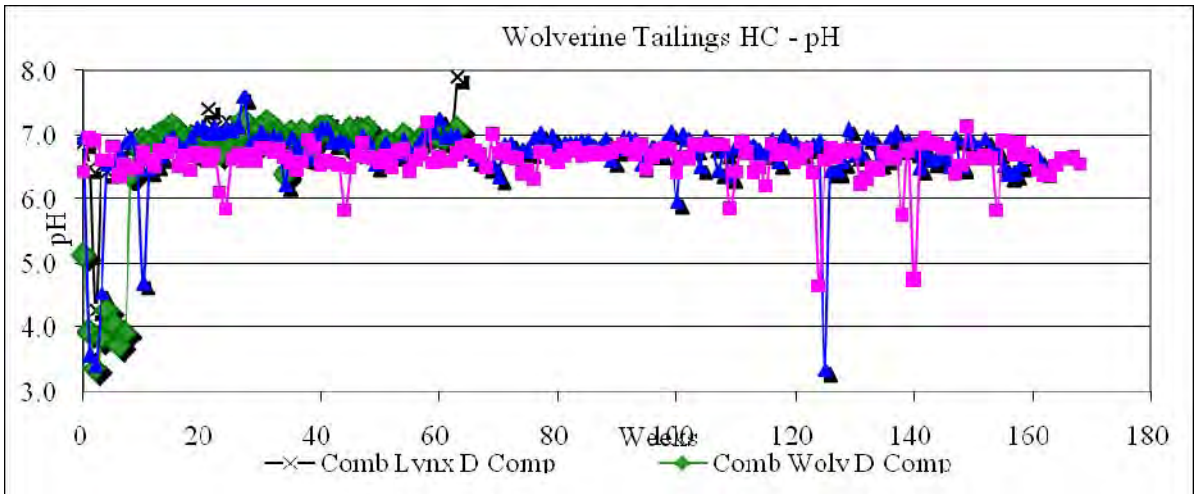


Figure 1.1 Wolverine Tailings Humidity Cells - pH

Acidity and alkalinity production rates remain low in both cells, consistent with the near-neutral pH and limited by calcite solubility.

The Sulphate production rate for Cell OD has shown a slight decline over the entire testing period. However, this decline has become more evident since week 113 dropping from 232 mg/kg/wk to 116 mg/kg/wk at week 162. Cell OC shows sulphate production remaining relatively constant (fluctuating around 100 mg/kg/wk) from week 70 through week 141. Since week 142 and through to the final measurement taken for this reporting period at week 168, the sulphate production rate has remained consistently above 100 mg/kg/wk and reaching as high as 142 mg/kg/wk at week 150. Both cells now have virtually identical sulphate production rates.

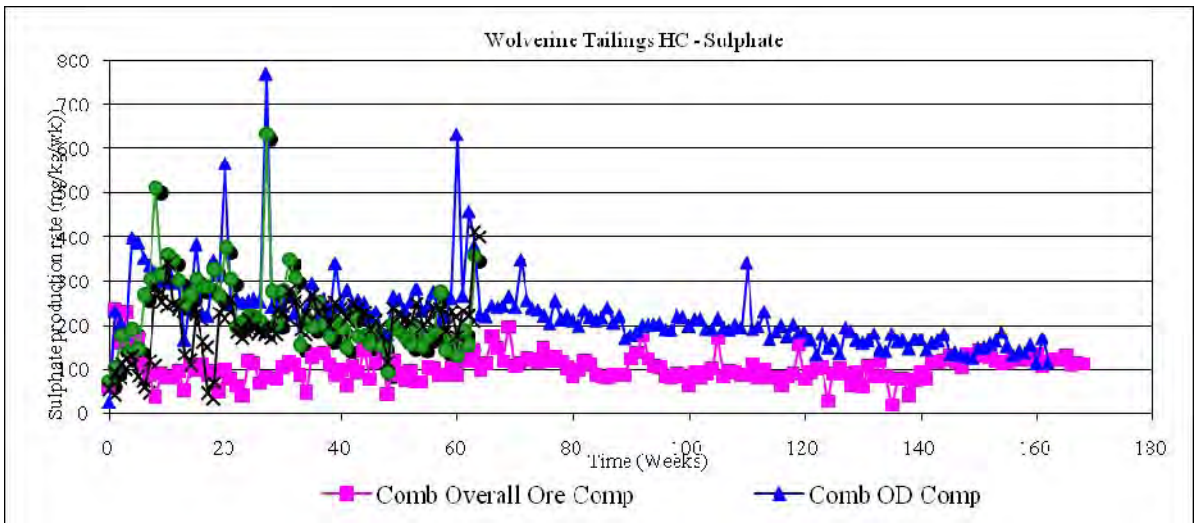


Figure 1.2 Wolverine Tailings Humidity Cells - Sulphate

Both cells show an abundance of total sulphur (mostly as sulphide) remaining (98.0% and 95.4% for cells OC and OD, respectively) with sulphate sulphur contents of 76.7% and 39.8% for cells OC and OD, respectively.

Table 1.1 summarizes the range in loading rates for Se and Zn from recent weeks until the current sampling on August 26, 2008.

Table 1.1 Range in Leachate Elemental Loading Rate over past 20 weeks

ELEMENT	CELL OC LOADING RATE (mg/kg/wk)	CELL OD LOADING RATE (mg/kg/wk)
Se	0.052 – 0.059	0.047 – 0.081
Zn	3.1 – 4.1[1]	0.91 – 1.3

[1] Zinc loading rates in the 20 weeks prior to the previous reporting period ranged from 1.4 to 1.9 mg/kg/wk

Current Zn loadings in both Cell OC and OD are well below the initial flush values. However, since the last reporting period (week 129 for the OC cell), the range in zinc loadings has approximately doubled and appears from **Figure 1.3** to be rising. The increase in Zn loading rates occurred after week 135 and is approximately coincident with the increase in the sulphate production rate noted above.

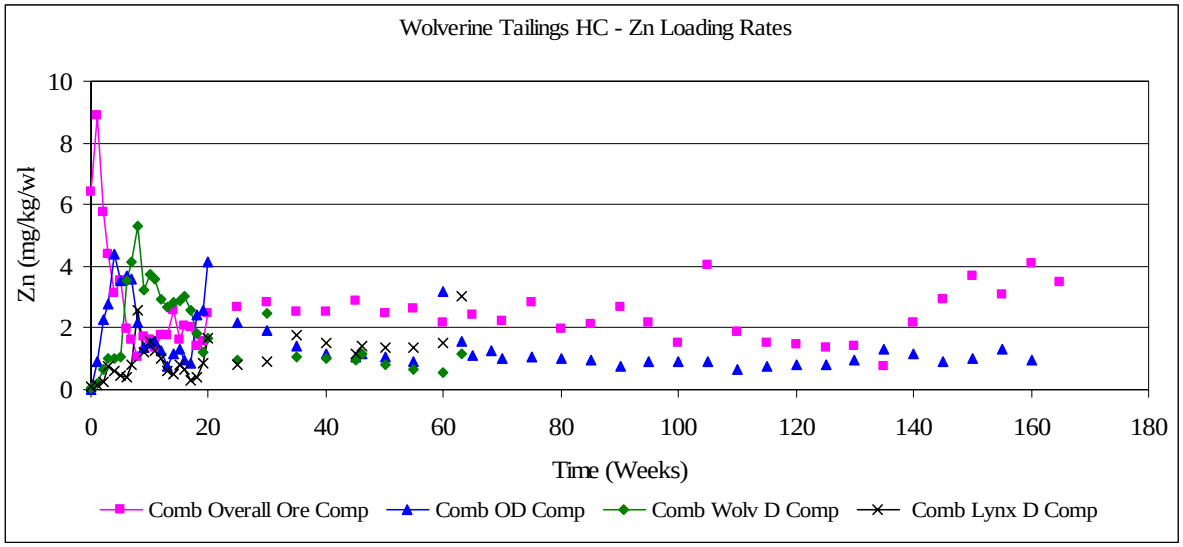


Figure 1.3 Wolverine Tailings Humidity Cells - Zn Loading Rates

Se loadings have remained relatively constant over the testing period for both cells since the initial flush (see
Figure 1.4). This is likely due to the relatively constant and neutral pH, but shows that soluble minerals still remain even after 3 years of leaching.

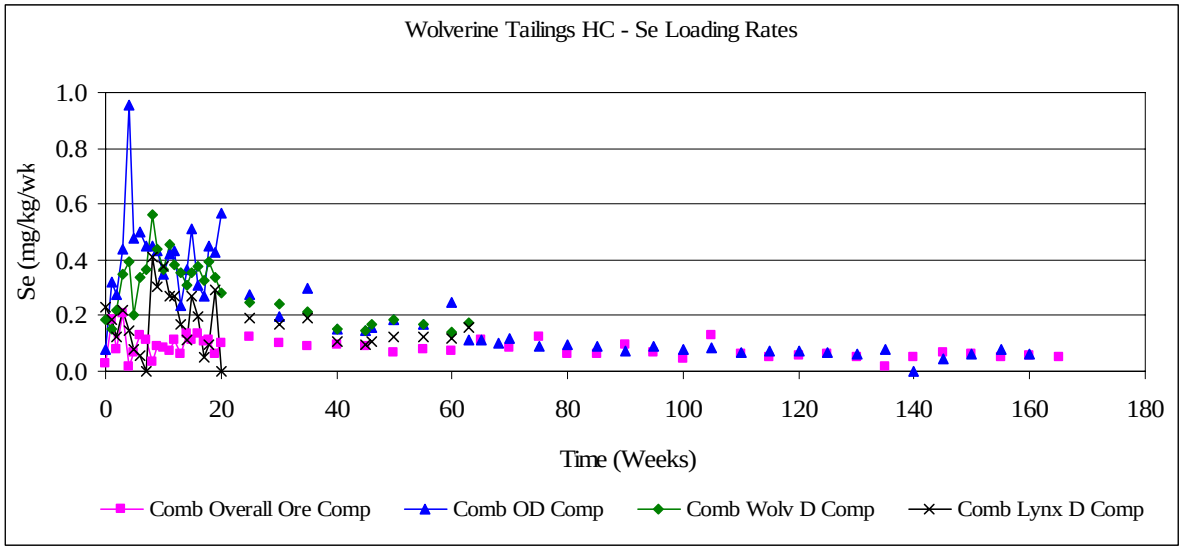


Figure 1.4 Wolverine Tailings Humidity Cells - Se Loading Rates

Table 1.2 shows that in the OC cell, of the original Se and Zn contained within the sample used to charge the humidity cell, 5% and 3%, respectively have been flushed out. While, for the OD cell, 14% and 4% of the Se and Zn, respectively have been removed through weekly cell flushing. These low percentages at this stage in the program suggest that Se and Zn leaching will continue for an extended period.

Table 1.2 Percent Removal of Original Se and Zn

CELL	HEAD ICP Se (mg/kg)	TOTAL Se RELEASED OVER HUMIDITY CELL PERIOD (mg/kg)	% Se REMOVED	HEAD ICP Zn (mg/kg)	TOTAL Zn RELEASED OVER HUMIDITY CELL PERIOD (mg/kg)	% Zn REMOVED
OC	364	17	5	19,000	547	3
OD	261	36	14	5,500	212	4

2. TIME TO ONSET OF ARD

In humidity cell testing, it is commonly assumed that sulphide oxidation is not taking place at a substantial rate until flushing of all of the original sulphate measured during the pre-test ABA characterization is complete. Cells OC and OD are showing measurable sulphate in the leachate collected weekly. It is likely that a majority of the sulphate measured is due to flushing of the original sulphate within the sample with some sulphate produced due to sulphide oxidation, particularly in the past few cycles for the OC cell. It is difficult to assess, however, what portion of the sulphate produced is due to sulphide oxidation. Therefore the assumption is made that all sulphate is from flushing as explained above.

The time to sulphate sulphur depletion has been estimated to be 12 and 3 years for Cells OC and OD, respectively. Approximately 60% of the initial sulphate has been removed from the OD cell, however, only 23% has been removed from the OC cell. As mentioned, this assumes that all the sulphate measured in the solution is due to flushing of the original sulphate. It is expected that eventually the sulphide oxidation rate would begin to increase with NP depletion and the onset of acidic conditions.

The time to Neutralization Potential (NP) depletion is required to estimate the time to onset of ARD within a laboratory humidity cell. However, the initial sulphate is still flushing from the cells, so it is not possible to ascertain what portion of the sulphate released is from sulphide oxidation. This renders the Carbonate Molar Ratio calculations invalid and precludes an accurate calculation of the time for NP depletion. Once the initial sulphate is believed to have flushed, NP depletion rates can be defined more explicitly. Even if all the current sulphate production from the past 26 weeks in cell OC (the beginning of the rise in sulphate flushing) were to be from sulphide oxidation, it would still take another 11 years in the laboratory humidity cell for all the Sobek-NP to become depleted.

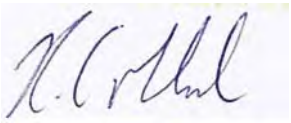
Based on these estimates, acid generation would not occur in the Wolverine tailings for many years. Nevertheless, elevated concentrations of selenium and zinc can be expected in any water contacting the tailings solids.

3. RECOMMENDATIONS FOR DECOMMISSIONING

It is not expected that acidic drainage will occur within these cells for a considerable period (>3 years) after which time the magnitude of associated elemental leaching rates could be used in further modeling and mitigation planning at the Wolverine site. The OD cell appears more likely to flush the initial sulphate sooner and thus more likely to achieve NP depletion sooner. Based on the recent activity in the OC cell and the increased rate of both sulphate and zinc production, decommissioning of the OC cell is not recommended at this time. The cell is recommended to continue at least an additional 6 months to monitor the current trends in sulphate and zinc production.

Cost savings could be achieved throughout future cycles by eliminating the measurement of thiosalts from the analytical suite for both cells. Thiosalts have shown values less than the method detection level since cycles 90 and 100 for the OC and OD cells, respectively. Physical parameters (including pH, alkalinity, acidity, conductivity and SO_4 are currently measured weekly and this frequency could be reduced to bi-weekly without significant data loss. Leachate volumes will still need to be measured weekly. A slight reduction in the frequency at which elemental analysis takes place is recommended so that elemental analysis occurs every sixth cycle, to coincide with every third measurement of sulphate and alkalinity/acidity.

Yours truly,
Marsland Environmental Associates Ltd.



Rob Marsland, P.Eng.
Senior Environmental Engineer

RCM/bh

/attach – digital version only of data compilation spreadsheet

19 November 2008

Yukon Zinc Corporation
701-475 Howe St.
Vancouver BC V6C 2B3

Attn: Pamela Ladyman, VP Environment

Dear Pamela

Re: Wolverine Project: Recommendations for Continued Humidity Cell Testing

On 28 August 2008, AMEC provided recommendations regarding the operation of 24 humidity cells for the Wolverine Project. Twenty-four humidity cells are currently in operation; eight were initiated in December 2005, five in January 2006, six in February 2006, and five in May 2006. Samples of Wolverine mine rock, ore, NP-depleted ore, Dense Media Separation (DMS) float, and backfill have been tested as part of the program.

Based on these results, AMEC recommended the termination of 21 of the 24 cells and the continued operation of three cells. A subsequent review by SRK Consulting (in a letter dated 4 November 2008), on behalf of the Yukon Government, recommended that a few of the tests slated for termination be continued at a low monitoring frequency.

Given this review, and Yukon Zinc Corporations support of continued study, we have modified our recommendations to the following:

1. Operation of the nine of the thirteen mine rock cells (HC1, HC2, HC3, HC5, HC8, HC9, HC11, HC12 and HC13) should be terminated.
2. Four of the mine rock cells (HC4, HC6, HC7 and HC10) should be continued at a reduced monitoring frequency. These cells represent the main mine rock types and have either elevated loads of sulphate, and/or zinc. As well, current indications are that three of the cells (HC4, HC7 and HC10) will exhaust their NP well in advance of sulphide exhaustion. The cells should continue to be flushed on a weekly cycle as per current procedures. The leachate should be analysed every fourth cycle for the same water quality parameters as per the current procedure. The results of these tests should be reviewed after six months.
3. The three ore cells (HC14 to HC16) should be terminated.
4. DMS float cells HC17, HC18 and HC19 should be shut down.
5. Two of the three NP-depleted ore cells (HC20 and HC22) should be shut down. However, Cell HC21 should continue operation for another 20 weeks and the results reviewed at that time.

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6. Paste backfill cells (T1 and T2) should be continued for another 20 weeks to observe the notable decreases in sulphate and metals loads. The results should be reviewed at that time.

The terminated cells should be shut down using the standard MEND shut down procedure and the results from that shut down reported as a final report on those cells.

AMEC's recommended actions are summarized in the following table.

Summary of Recommended Actions

Cell	Description	Recommended Action
HC1	Siliceous Siltstone-2	Terminate
HC2	EXMT	Terminate
HC3	Footwall Rhyolite-2	Terminate
HC4	Footwall Rhyolite-3	Continue at reduced frequency
HC5	EXCP-2	Terminate
HC6	EXCP-3	Continue at reduced frequency
HC7	Argillite-2	Continue at reduced frequency
HC8	Argillite-4	Terminate
HC9	A083503	Terminate
HC10	A083529	Continue at reduced frequency
HC11	A083504	Terminate
HC12	A083505	Terminate
HC13	A083511	Terminate
HC14	Wolverine Feed Ore	Terminate
HC15	Hump Feed Ore	Terminate
HC16	Lynx Feed Ore	Terminate
HC17	Wolverine Float	Terminate
HC18	Hump Float	Terminate
HC19	Lynx Float	Terminate
HC20	Wolverine Ore	Terminate
HC21	Hump Ore	Continue Operation for 20 weeks
HC22	Lynx Ore	Terminate
T1	Backfill Tailings	Continue Operation for 20 weeks
T2	Backfill Tailings	Continue Operation for 20 weeks

Closure

The findings and recommendations presented in this letter are based on laboratory analyses and information provided by the Client. If conditions are encountered that appear to be different from those shown and described in this report, or if the assumptions stated herein are not in keeping with the proposed project, this office should be notified in order that the recommendations can be reviewed and adjusted, if necessary. Field conditions, by their nature, can be highly variable across a site. A contingency should always be included in any project to allow for the possibility of condition variations, which may result in modification of the design and construction procedures. This report was prepared exclusively for Yukon Zinc Corporation and their agents, for the proposed project as described in the report. The data and recommendations provided herein should not be used for any other purpose, or by any other parties, without review and advice from qualified personnel. The findings and recommendations of this report were prepared in accordance with generally accepted professional scientific principles and practice. No other warranty, expressed or implied, is given.

We trust this meets your needs at this time. Should you have any questions, please do not hesitate to contact the undersigned.

Steve Sibbick, M.Sc., P.Geo.
Senior Associate Geochemist

C. James Warren, PhD., P.Geo. P.Ag.
Senior Review