

October 17th, 2011

Mr. Robert Holmes
Director, Mineral Resources
Department of Energy, Mines and Resources
Box 2703, Whitehorse, Yukon
Y1A 2C6

Dear Mr. Holmes,

Re: Addendum to General Site Plan V20011-05 For Operations Phase Waste Rock Stockpile

Pursuant to Section 6.2 of Quartz Mining License QML-0006, information is provided herein regarding the construction of an operations phase waste rock stockpile. Yukon Zinc Corporation requests that this information be reviewed as an addendum to approved *General Site Plan V20011-05* (GSP).

As described in the GSP, following the revision of the mine plane, YZC has determined that waste rock will be transported to surface as development progresses, and the waste rock will not be incorporated in mine backfill during the initial three years of operations to ensure continued safe underground mine operations.

The existing waste rock pad is at capacity and it is necessary to store additional development rock on surface until sill stopes are mined and paste backfilled, and subsequent levels are mined and ready for placement of waste rock fill during backfilling activities. YZC estimates that over this period, storage for approximately 325,000 t or 171,000 m³ is required¹. The previously designated area for waste surface storage in the operations phase (referred to as the DMS stockpile area during project permitting) up gradient of the tailings facility will be used for this purpose.

While the GSP provided a general layout of the waste rock stockpile, the detailed design of the operations phase waste rock stockpile has been subsequently prepared, and is provided in Appendix A, for inclusion in the GSP as an addendum.

As per QML-0006 Section 7.8, as-built drawings and a summary of construction activities, including any quality assurance or quality control monitoring, will be submitted within 60 days of construction completion.

If you have any questions please do not hesitate to contact the undersigned at Mary.Mioska@yukonzinc.com or 604-682-5474 ext. 287.

¹ Based on *in situ* density of 1.9 t/m³

Sincerely,

Mary
Mioska

Digitally signed by Mary Mioska
DN: cn=Mary Mioska, o=Yukon
Zinc Corporation, ou,
email=mary.mioska@yukonzinc.c
om, c=CA
Date: 2011.10.17 11:42:18 -07'00'

Mary Mioska, B.A.Sc., E.I.T.
Acting Environmental Manager
Yukon Zinc Corporation

cc. Arlene Kyle – Mine Licensing Officer, Yukon Energy, Mines and Resources
Matt Kawei – Environmental Superintendent, Wolverine Mine
Don Strickland – Mine General Manager, Wolverine Mine
Ross River Dena Council – Mary Maje
Liard First Nation – Jimmy Wolftail & Sheila Caesar

Appendix A: Klohn Crippen Berger Rock Pad Storage Facility Design and Construction Report

October 13, 2011

Yukon Zinc Corporation
701-475 Howe Street
Vancouver, British Columbia
V6C 2B3

Mr. Don Strickland
Mine General Manager
Wolverine Mine

Dear Mr. Strickland:

Wolverine Mine
Waste Rock Storage Pad

This report presents the design of the Rock Pad Storage Facility for the above project. The rock pad will be used to temporarily store mine rock prior to use as backfill for the underground workings. The rock pad will be lined with an impervious geomembrane and will store up to 170,000 tonnes of potentially acid generating mine waste rock. Runoff from the rock pad will be collected in a sump and directed to the tailings storage facility where it will be reclaimed for use in the mill, or treated and discharged to the environment.

If you require further details please contact the undersigned.

Yours truly,

KLOHN CRIPPEN BERGER LTD.



Harvey McLeod, P.Eng. (YT)
Senior Geotechnical Engineer

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1. INTRODUCTION

This report provides the design for the temporary waste rock storage pad (“the pad”) for the Wolverine Mine in Southeastern Yukon. The purpose of the pad is to temporarily store potentially acid generating waste rock excavated from the underground mine in a secure containment area to mitigate the potential for water quality effects on the environment. Waste rock will be stored on the pad and later reclaimed during the mine life for backfill of the underground openings. The pad will contain up to 170,000 tonnes of mine rock.

This report has been prepared to satisfy requirements contained within the Quartz Mining License QML-0006 (Section 7.0) and Type “A” Water Use License Approval QZ04-065 (condition 31). In preparing the report the following items were considered and are presented within this report:

- Location and dimensions.
- Volumetric and tonnage capacity.
- Characterization of the foundation soils for permeability, permafrost and thaw stability of permafrost.
- Characterization of the section through the rock storage facility showing materials and grade lines.
- Details for site preparation and placement of sub-base, geomembrane liner and liner cover.
- Details of surface water diversion and contact water collection and management.

2. SITE DESCRIPTION AND SITE CONDITIONS

2.1 General

The site is located just upstream of the Tailings Storage Facility (TSF) as shown on Drawing D-WR001. The site crosses a small sub-drainage, which currently is directed into Diversion Ditch A and routed around the TSF. Photo 2.1 and Photo 2.2 show the general conditions of the area. The pad will straddle the existing drainage channel and a main diversion ditch will divert water around the pad and towards Go Creek, which is located approximately 500 m west of the pad. Subsurface flow under the pad will continue to flow to Ditch A.

The topography of the area slopes gently towards the drainage channel and the area is partially covered with shrubs and some forest.

2.2 Soil Conditions

Two test pits were excavated to a depth of approximately 3 m within the pad area. The foundation consists of a thin organic layer overlying medium dense silty, sandy gravelly soils, with large rock fragments suggesting that bedrock may be near surface. The organic soils are typically 300 mm thick and of low to moderate strength. The sandy soils are of moderate strength and no soft or very loose materials were observed:

- Permafrost was not observed in the area.
- The water table is typically approximately 1 m below ground surface.

2.3 Photos

Typical site conditions in the pad area are shown in the following photos.



Photo 2.1 Waste Rock Pad Area looking north



Photo 2.2 Waste Rock Pad Area looking east

2.4 Hydrology

The precipitation of the area for various return periods is summarized in Table 2.1 and is based on Starter Dam Design and Construction Plan (2009). The precipitation rates for the 50 year return period have been interpolated from the 100 year event.

Table 2.1 Precipitation for Various Return Periods

EVENT	50 YEAR	100 YEAR
Maximum (25 min.)	8 mm	12 mm
Average 24 hrs	42 mm	53 mm

The average runoff coefficient for the area is approximately 20%.

3. ROCK PAD DESIGN

3.1 Surface Water Diversion

Runoff from the catchment area upstream of the rock pad will be diverted to the west, for eventual discharge into Go Creek. A culvert will be placed under the main access road.

Based on a catchment area of approximately 50 ha, the maximum 50-year flow (over 25 minutes) is estimated to be 530 L/s. This value is based on a runoff coefficient of 0.2 and a 50 yr return period precipitation of 8 mm. The average flow over 24 hours (assuming 42 mm of precipitation) is estimated to be 50 L/s. The diversion ditch will transition to a culvert under the main access road. The culvert should be a minimum of 800 mm diameter, or equivalent.

3.2 Foundation Preparation and Liner Base Design

Site preparation and placement of materials will be carried out with the following sequence:

- **Foundation Preparation:** The pad area will be cleared and grubbed and soft or loose soils will be removed. Organic soils will be stockpiled for future reclamation purposes.
- **Site Grading:** The site will be graded with a cut and fill operation with surplus material borrowed from the west side of the pad area dozed into the basin to form a smooth regular base pad to form the main foundation. Graded material should be compacted with a large smooth drum vibratory roller.
- **The liner base will be graded to allow positive drainage of infiltration water towards the downstream water collection sump. If positive drainage is not possible, a berm, up to 1 m high, will be placed around the perimeter to contain infiltration water and direct flows towards the downstream sump.**

3.3 Liner Underdrain

A French drain will be installed under the entire pad, near the alignment of the existing drainage channel. The purpose of the drain is to direct any water that bypasses the Diversion Ditch under the pad area. The drain will consist of approximately 1 m² area of drain gravel enclosed in a geotextile fabric.

3.4 Liner Design

The main components of the liner system will include the following:

- **Liner Base Preparation:** The site grading surface is anticipated to include areas with both smooth surfaces and rough surfaces. Rough surfaces will require placement of a minimum 8oz geotextile fabric or placement of a fine sand to form a smooth base for placement of the geomembrane.
- **Geomembrane Liner Placement:** The liner will be a 30 mil. LLDPE geomembrane, such as the Layfield Enviro Liner 4030. The liner will be placed over the entire pad, perimeter berms, and collection sump areas.
- **Overliner Protection:** The overliner protection will consist of a 12oz. geotextile filter fabric.
- **Fill Protection:** A 500 mm thick protection layer of silty glacial till will be placed over the geotextile. The layer will be carefully spread in one lift with a small dozer.

3.5 Water Collection Sump

A water collection sump will be formed at the downhill side of the pad to temporarily store water prior to either pumping or piping to the tailings storage facility (TSF). The sump will be capable of storing the equivalent water volume of 40 mm of precipitation over the entire rock pad and sump areas (4 ha), which is equivalent to approximately 1600 m³ of required storage capacity. A valved pipe outlet will be installed, leading to a pipeline to the TSF, which would allow gravity flow of collected water.

4. **CONSTRUCTION**

The construction of the facility will be carried out in September/October 2011. Diversion ditch construction and site grading is planned to be carried out by Arctic Construction Ltd. and liner placement is planned to be carried out by Layfield Environmental System Inc. The work will be inspected by a qualified engineer and an “As-Constructed” report will be prepared to document the actual site conditions and construction details.

5. OPERATING PLANS

Waste rock will be hauled along the main access road and end dumped onto the rock pad and spread with a dozer. The use of haul trucks on the main access road will be mitigated with the following:

- Stop signs will be posted at the entry point of the haulage route to the stockpile. A second sign will warn that the access road will be shared with haul trucks that must be yielded to.

6. CLOSURE PLAN

The current mine plan assumes that the mine rock placed on the rock pad will eventually be reclaimed and used as mine backfill for the underground openings. In the event that the mine rock is not reclaimed, the rock will be transported to the TSF and stored in a saturated state. The liner will be landfilled and the site graded and contoured to reflect the surrounding environment. The stockpiled organics will be replaced, and seeded with native grasses and woody species.

7. FURTHER REQUIREMENTS

The rock pad will be constructed by approximately October 31, 2011. An “As Constructed” report will be prepared and submitted by December 30, 2011.

8. SUMMARY

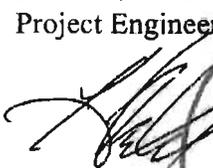
This letter report presents the design for the rock storage pad for the Wolverine Project. This report is an instrument of service of Klohn Crippen Berger. The report has been prepared for the exclusive use of Yukon Zinc Corp. for the specific application to the Wolverine Project. In this report, Klohn Crippen Berger has endeavoured to comply with generally accepted geotechnical practice common to the local area. Klohn Crippen Berger makes no warranty, express or implied.

Yours truly,

KLOHN CRIPPEN BERGER LTD.



Lowell Constable, EIT
Project Engineer

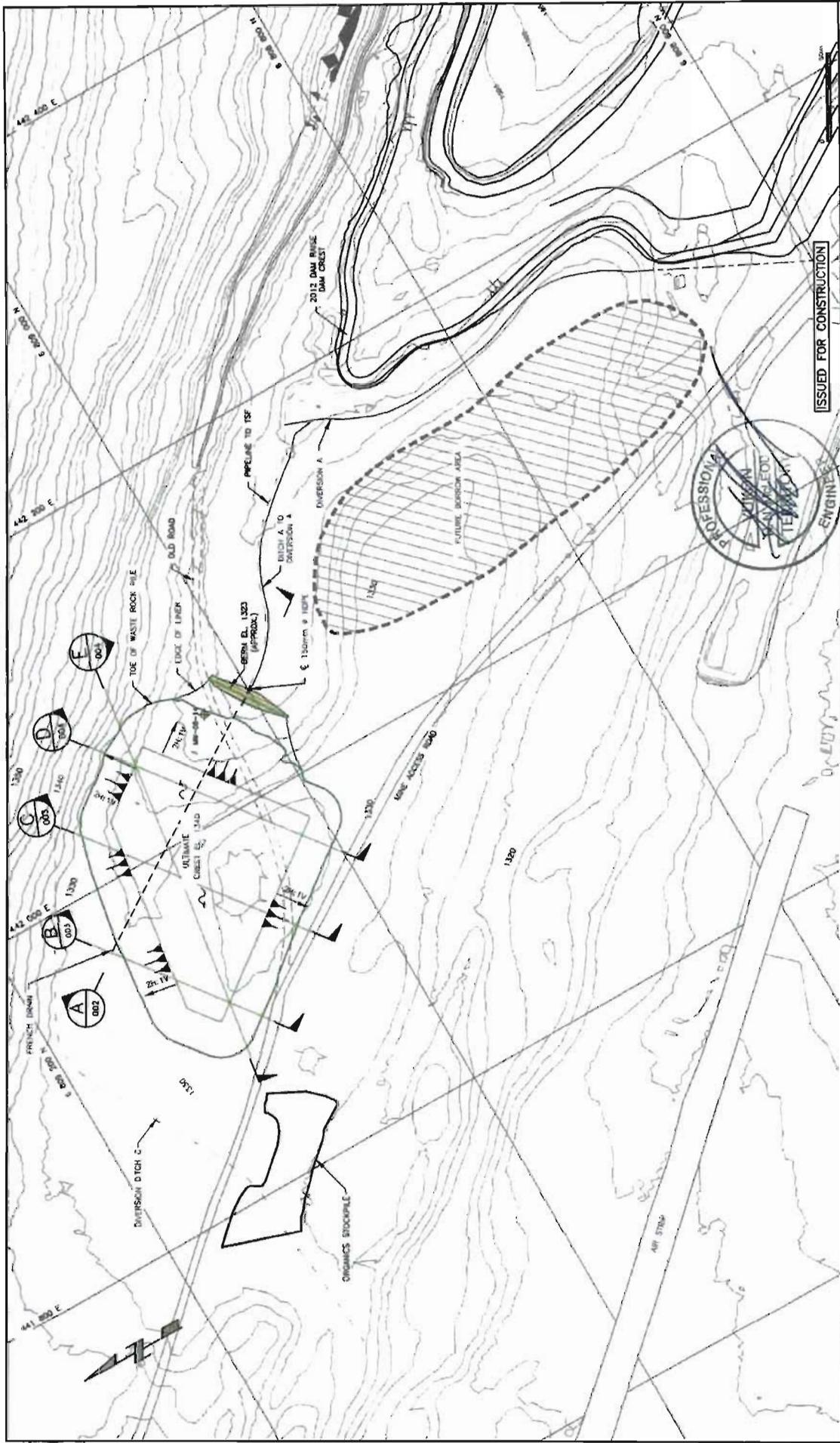


Harvey McLeod, P. Eng. (Y.T.)
Senior Geotechnical Engineer

HM:jc

DRAWINGS

- D-WR-001 Waste Rock Storage Area, General Arrangement
- Plan**
- D-WR-002 Waste Rock Storage Area, Details**
- D-WR-003 Waste Rock Storage Area, Sections B and C**
- D-WR-004 Waste Rock Storage Area, Sections D and E**



ISSUED FOR CONSTRUCTION

Yukon Engineering Inc.
WASTE ROCK STORAGE AREA
GENERAL ARRANGEMENT - PLAN



NO.	DATE	BY	CHKD.	DESCRIPTION
1	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION (REVISED)
2	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION

NO.	DATE	BY	CHKD.	DESCRIPTION
1	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION (REVISED)
2	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION

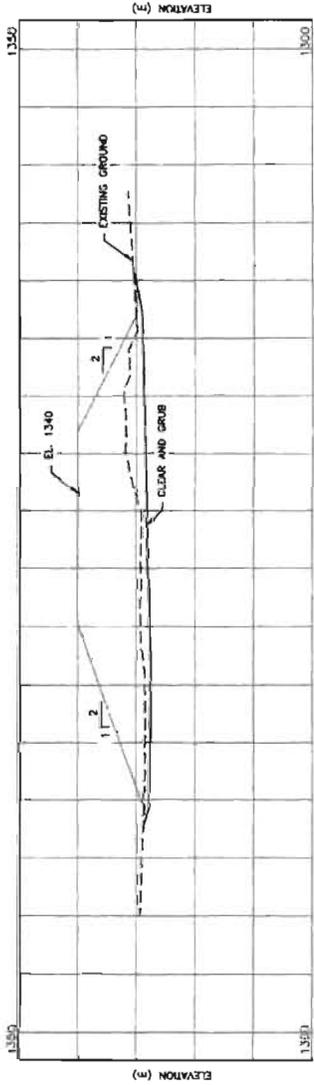
NO.	DATE	BY	CHKD.	DESCRIPTION
1	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION (REVISED)
2	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION

NO.	DATE	BY	CHKD.	DESCRIPTION
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2	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION

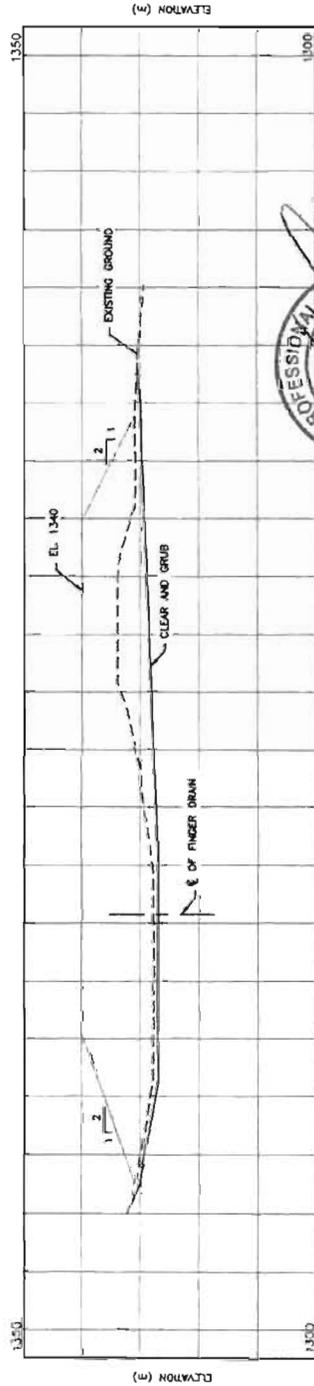
NO.	DATE	BY	CHKD.	DESCRIPTION
1	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION (REVISED)
2	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION

NO.	DATE	BY	CHKD.	DESCRIPTION
1	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION (REVISED)
2	08/11/11	JL	JL	ISSUED FOR CONSTRUCTION

DATE: 08/11/11
PROJECT: WASTE ROCK STORAGE AREA
DRAWING: GENERAL ARRANGEMENT - PLAN



SECTION B
OF



SECTION C
OF



ISSUED FOR CONSTRUCTION



NO.	DATE	ISSUE/REVISIONS	BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION
1	02/11/11	ISSUED FOR CONSTRUCTION (REVISION 1)	UC	02/11/11	ISSUED FOR CONSTRUCTION (REVISION 1)	UC	02/11/11	ISSUED FOR CONSTRUCTION (REVISION 1)	UC	02/11/11	ISSUED FOR CONSTRUCTION (REVISION 1)
2	02/11/11	ISSUED FOR CONSTRUCTION	UC	02/11/11	ISSUED FOR CONSTRUCTION	UC	02/11/11	ISSUED FOR CONSTRUCTION	UC	02/11/11	ISSUED FOR CONSTRUCTION

PROJECT NUMBER	WORKPACKAGE	DRAWING NUMBER	REV.
		D-WR-03	1

Kohn Crippen Berger

WASTE ROCK STORAGE AREA
SECTIONS B AND C



