STATE OF COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

FW: Grand Island Resources LLC - Nederland Mine -- Phase I & Phase II Temporary Water Treatment Systems

Rmittasch@nedmining.com <Rmittasch@nedmining.com> Thu, Apr 28, 2022 at 9:00 AM
To: "Eschberger - DNR, Amy" <amy.eschberger@state.co.us>

From: jpbrewer@nedmining.com <jpbrewer@nedmining.com>
Sent: Wednesday, April 27, 2022 10:43 AM
To: Rmittasch@nedmining.com
Subject: FW: Grand Island Resources LLC - Nederland Mine -- Phase I & Phase II Temporary Water Treatment Systems
Importance: High

From: mike.tallering@envirositesolutions.com <mike.tallering@envirositesolutions.com>
Sent: Tuesday, April 26, 2022 5:46 PM
To: 'Je'an-Paul Brewer' <jpbrewer@nedmining.com>; pdelaney@blackfoxmining.com
Cc: 'Bennett Buchsieb' <bbuchsieb@gravertech.com>
Subject: Grand Island Resources LLC - Nederland Mine -- Phase I & Phase II Temporary Water Treatment Systems
Importance: High

Hi guys,

Just checking in to see how you've decided to proceed. I also wanted to give you pricing.

Pricing for Rental Vessels	***$950/Vessel/Month***
Pricing for Purchase Vessels	***$12,830/vessel***
Pricing for Metsorb HMRG Media (Non-Rinsed)	***$21,000/vessel***
Pricing for Metsorb HMRG Media (Rinsed)	***$22,120/vessel***

Please let me know if you want to get on a call to discuss.

Thanks,

Mike

Mike Tallering

Environmental Site Solutions

360-503-7299

STATE OF COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

Adequacy Review #3 / TR-10 / Cross Gold Mine / M1977-410

Rmittasch@nedmining.com <Rmittasch@nedmining.com> Thu, Apr 28, 2022 at 10:42 AM
To: "Eschberger - DNR, Amy" <amy.eschberger@state.co.us>
Cc: Daniel Takami <danieltakami@gmail.com>, Sergio Rivera <sergio.rivera@novametallix.com>, Sean Muller <smuller@nedmining.com>, Patrick Lennberg - DNR <patrick.lennberg@state.co.us>, Jared Ebert - DNR <jared.ebert@state.co.us>, "Cunningham - DNR, Michael" <michaela.cunningham@state.co.us>

AMY

This email will act as our response to adequacy review number three / TR-10, item number three. It is also based on the phone conversation that we spoke about earlier today. The items that I'm looking to correct in your bond calculations are Task 001, 010, and 011.

Task 001

In an email I forwarded to you that we received from Environmental Site Solutions it put the cost of the vessels at $21,000 for non-rinsed vessels.

In January 2022, we developed the procedure for handling the non-rinsed vessels and have implemented them into our system. Based on the fact that we will be using two vessels a year, the cost per year for task one will be $42,000 instead of the previously proposed $50,000.

Task 010

The task involved around the sampling and inspection of the media is to determine the quality and the lifespan of the media in the vessels. We have installed through our automation upgrades “pressure sensors between the media vessels” which is a method of determining with the help of the manufacturers the lifespan of the media.

These new pressure sensors will allow us to determine the pressure gradient change across the vessels eliminating the opening and sampling of the media. This also allows us the ability to decrease the necessary inspection time from 8 hours a week to 4 hours a week, bringing the total inspection hours needed per year down to 208 hours. At the cost of $45 an hour this brings the total yearly cost down to $9,360.

Task 011

The newly installed PLC unit gives us the ability to access its information and controls via the Internet. We will be able to access information from all locations for these items:

The pump at the bottom of the Cross Mine

The pump and VFD controllers in pond one

The pH data

The inflow data

The temperature data from the Cross and Caribou

The flow rate from the Cross and Caribou

Connectivity, pH, temperature, and flow data from the discharge

This data collected via the automated systems minimizes the amount of work necessary for data reporting. It has been our experience the system only requires two hours of data reporting per month totaling 24 hours per year at $75 an hour which would put the total cost at $1800 per year.

With this new automation and our ability to handle non rinse vessels, we request a review of the bond calculations in Adequacy Review #3.

Kind Regards,

Richard Mittasch, Vice President

Nederland Mining Consultants, Inc.

Phone: 720-893-3749

Mobile: 516 582-0833

Email: Rmittasch@nedmining.com

4415 Caribou Rd, PO Box 3395, Nederland, CO 80466

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STATE OF COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

Adequacy Review #3 / TR-10 / Cross Gold Mine / M1977-410

Rmittasch@nedmining.com <Rmittasch@nedmining.com> Thu, Apr 28, 2022 at 11:26 AM
To: "Eschberger - DNR, Amy" <amy.eschberger@state.co.us>, Patrick Lennberg - DNR <patrick.lennberg@state.co.us>
Cc: Daniel Takami <danieltakami@gmail.com>, Sergio Rivera <sergio.rivera@novametallix.com>, Sean Muller <smuller@nedmining.com>, Jared Ebert - DNR <jared.ebert@state.co.us>, "Cunningham - DNR, Michael" <michaela.cunningham@state.co.us>

Amy / Patrick

Here is your response to adequacy review #3 for technical revision number 10 as stated in the response number three was answered via email earlier today. if you have any other questions or clarifications, please do not hesitate to call or write, as we all know time is short. I'll make myself immediately available so that we can complete this today.

Kind Regards,

Richard Mittasch, Vice President

Nederland Mining Consultants, Inc.

Phone: 720-893-3749

Mobile: 516 582-0833

Email: Rmittasch@nedmining.com

4415 Caribou Rd, PO Box 3395, Nederland, CO 80466

From: Eschberger - DNR, Amy <amy.eschberger@state.co.us>
Sent: Thursday, April 28, 2022 8:18 AM
To: RIchard Mittasch <rmittasch@nedmining.com>
Cc: Daniel Takami <danieltakami@gmail.com>; Sergio Rivera <sergio.rivera@novametallix.com>; Sean Muller <smuller@nedmining.com>; Patrick Lennberg - DNR <patrick.lennberg@state.co.us>; Jared Ebert - DNR <jared.ebert@state.co.us>; Cunningham - DNR, Michael <michaela.cunningham@state.co.us>
Subject: Adequacy Review #3 / TR-10 / Cross Gold Mine / M1977-410

Good Morning Richard,

[Quoted text hidden]

Response to Technical Revision No. 10 (TR-10) Adequacy Review No. 3.pdf
300K

Response to: Cross Gold Mine, Permit No. M-1977-410, Technical Revision No. 10 (TR-10), Adequacy Review No. 3

1) The revised Figure 1 – Water Management System includes a "Temporary Backwash Tank" located just southeast of the water treatment conex. This tank was not included on the previous version of this figure, and no additional details on this tank were provided in the revised materials. The tank is only referenced in the caption of Figure 16 provided in Appendix A which states "Current Backwash and Settling Tank". The photograph presented in this figure shows the exterior of a large steel tank. Please provide a description of this temporary backwash tank, including its main components, its capacity, how it will be connected to the main treatment conex, and its use in the water treatment/management regime. Additionally, please describe what will be done with the residual sediments deposited inside the tank during the backwash process.

1. **GIR Comment 1 Response:** GIR recently installed a temporary backwash tank adjacent to the current water treatment plant conex. This horizonal weir tank has approximately 6,000 gallons of storage compacity. The dimensions are similar to the specification sheet shown below. Overtime, the MetSorb pressure vessels occasionally have a backwash procedure performed on them to reduce the pressure drop across the vessel. The backwash process removes the buildup of fines on the media by reversing flow through the vessel and discharging into the temporary weir/settling tank. 2" suction hose is connected from the backwash discharge of the vessel via camlocks to the influent side of the temporary weir/settling tank. A series of an underflow weir and overflow weir drop of the fines and separate the water. This is only temporary as the supplier of the MetSorb vessels and prefiltration system are improving the treatment process without an increase to the operation budget or infrastructure costing to reduce or eliminate the need for backwashes in the future. GIR will perform waste characterization analysis on the fines to determine the means of disposal.

Box

Roll-Off 25 Yard Weir

Overview:

The Roll off Weir Box contains and separates heavy solids with a low flow rate to settle out large solids.

Features:

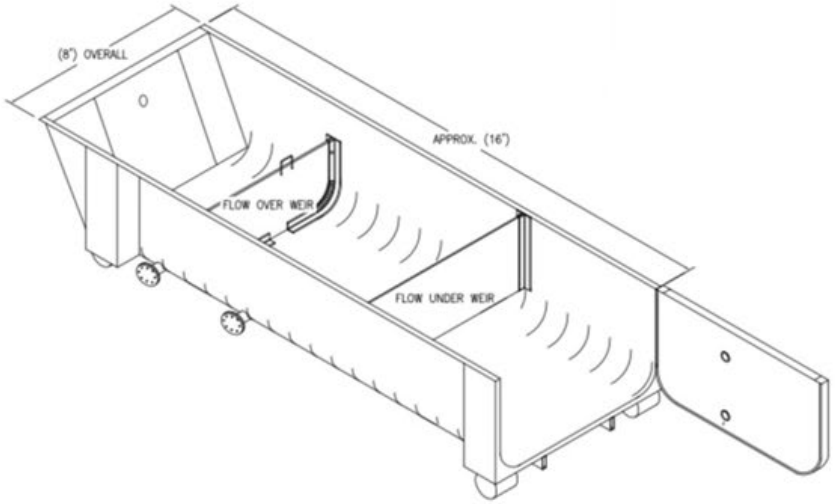
The 25 yard weir box filters debris by trapping solids on each side of the two weirs.

Specs:

Material	Steel
Capacity	25 Yards
Dry weight	7,300 lbs.
Footprint:	276" x 96" x 84"

Accessories:

- Spillguard
- Hoses
- Pipe
- Filtration
- Oil/Water separation



RAIN FOR RENT

Liquid Ingenuity

2) DRMS has the following comments pertaining to the revised groundwater monitoring plan provided in Appendix F:

a. Please provide a revised Table 4 groundwater sampling parameter list that includes the following parameters and associated standards:

Nitrate, dissolved	10.0 mg/L as N
Nitrite, dissolved	1.0 mg/L as N
Total Nitrate + Nitrite, dissolved	10.0 mg/L as N
Sulfate, dissolved	250 mg/L
Silver, dissolved	0.05 mg/L

GIR Comment 2 a. Response: DRMS has the following comments pertaining to the revised groundwater monitoring plan provided in Appendix F:

Table 4 has been updated as shown below

Table 4. Cross Gold Mine Semi-Annual Groundwater Sampling Parameter List

Parameter	Standard	Unit	Method	Preservation	Reg. 41 Table
Unfiltered Samples					
pH	6.5 - 8.5	pH units	SM[a] 4500-H-B	≤ 4°C	Table 2
TDS	400	mg/l	SM 2540-C	≤ 4°C	Table 4
Corrosivity	Non Corrosive	Langlier Units	SM 2330-B	≤ 4°C	Table 2
Alkalinity	Non Scaling	mg/l as $CaCO_3$	SM 2320-B	≤ 4°C	Table 2
Cyanide [Free]	0.2	mg/l	EPA 335.4	NaOHpH≥12,≤6°C	Table 1
Chlorophenol	0.0002	mg/l	EPA 420.1	H_2SO_4 pH<2,≤ 4°C	Table 2
Phenol	0.3	mg/l	EPA 420.1	H_2SO_4 pH<2,≤ 4°C	Table 2
Odor	3	odor units	SM 2150 B	≤ 4°C	Table 2
Color	15	color units	SM 2120 A	≤ 4°C	Table 2
Foaming Agents	0.5	mg/l	SM 5540 C	≤ 4°C	Table 2
Asbestos	7,000,000	fibers/liter	EPA 100.1	≤ 4°C	Table 1
30-day Total Coliforms	2.2	org/100 ml	SM 9221-9223	≤ 4°C	Table 1

Max Total Coliforms	23	org/100 ml	SM 9221-9223	≤ 4°C	Table 1

Samples Field-Filtered To 0.45 Micron (re: dissolved)

Gross Alpha	15	pCi/l	EPA 900.0	≤ 4°C	Table 1
Beta and Photon	4	mrem/year	EPA 900.0	≤ 4°C	Table 1
Aluminum	5	mg/l		HNO_3 pH <2, ≤ 4°C	Table 3
Antimony	0.006	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Arsenic	0.01	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Barium	2	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Beryllium	0.004	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Boron	0.75	mg/l		HNO_3 pH <2, ≤ 4°C	Table 3
Cadmium	0.005	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Calcium	NA	mg/l as $CaCO_3$	EPA 200.7	HNO_3 pH <2, ≤ 4°C	Corrosivity [B]
Chloride	250	mg/l		HNO_3 pH <2, ≤ 4°C	Table 2
Chromium	0.1	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Parameter	**Standard**	**Unit**	**Method**	**Preservation**	**Reg. 41 Table**
Cobalt	0.05	mg/l		HNO_3 pH <2, ≤ 4°C	
Copper	0.2	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 2
Fluoride	2	mg/l		HNO_3 pH <2, ≤ 4°C	Table 3
Iron	0.3	mg/l	EPA 200.7	HNO_3 pH <2, ≤ 4°C	Table 2
Lead	0.05	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Lithium	2.5	mg/l		HNO_3 pH <2, ≤ 4°C	Table 3
Manganese	0.05	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 2
Mercury	0.002	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Molybdenum	0.21	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Nitrate, dissolved	10.0	mg/l as N	EPA 353.2	H_2SO_4 pH<2,≤ 4°C	Table 1
Nitrate + Nitrate (Total), dissolved	10.0	mg/l as N	EPA 353.2	H_2SO_4 pH<2,≤ 4°C	Table 1
Nitrite, dissolved	1.0	mg/l as N	EPA 353.2	H_2SO_4 pH<2,≤ 4°C	Table 1
Nickel	0.1	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Selenium	0.02	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Silver	0.02	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Silver, dissolved	0.05	mg/l	EPA 200.8	H_2SO_4 pH<2,≤ 4°C	Table 1
Sulfate, dissolved	250	mg/l	EPA 375.2	Cool to 4°C	Table 2

Thallium	0.002	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Uranium	0.0168 - 0.03	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1
Vanadium	0.1	mg/l		HNO_3 pH <2, ≤ 4°C	Table 3
Zinc	2	mg/l	EPA 200.8	HNO_3 pH <2, ≤ 4°C	Table 1

Notes:
[a] SM methods are from Standard Methods for the Examination of Water and Wastewater (APHA et al. 1998).
[b] Calcium data needed for corrosivity/scaling calculations .

b. Please commit to sampling all three groundwater monitoring wells and the two mine effluent locations for all analytical parameters listed in Table 4 (as revised per item 2a above).

GIR Comment 2 b. Response: GIR will sample all location with the same parameters listed in Table 4

3) DRMS has calculated the required financial warranty for the water management and treatment program proposed in this revision to be in the amount of $225,199.00 (see enclosed estimate). Because the operator has already posted an interim financial warranty of $162,841.00 for water treatment, the additional required financial warranty for TR-10 approval will be in the amount of $62,358.00. Please be aware, the costs associated with removal and disposal of the secondary pipelines (differentiated in purple on Figure 1 – Water Management System) are based on DRMS's measurements on Figure 1 (approximate 725 feet total), as the operator did not provide this information as requested.

GIR Comment 3. Response: answered by email at 10:42AM 4/28/22