



HUDSON BAY MINING AND SMELTING CO., LIMITED

June 24, 2010

Don Labossiere
Director, Environmental Operations
Manitoba Conservation
123 Main St.
Winnipeg MB R3C 1A5

Dear Mr. Labossiere:

Re: Wastewater Treatment System for the Lalor Advanced Exploration Project ("Lalor AEP")

Hudson Bay Mining and Smelting Co., Limited ("HBMS") writes to propose registration of an onsite wastewater management system, in accordance with subsection 8(1) of the Onsite Wastewater Management Systems Regulation, Manitoba Regulation 83/2003 (the "Regulation"), made under *The Environment Act*, and to seek your approval of the system in accordance with paragraph 8(2)(e) of the Regulation. Please find enclosed the report of our consultant, AECOM, in that regard.

As you may know, HBMS has received approval from the Director of Mines to proceed with the Lalor Advanced Exploration Project ("Lalor AEP") on a site located near the Town of Snow Lake. The Lalor AEP is expected to take 33 months to complete and have a maximum work force of 100 persons. There will be no living quarters, laundry or kitchen facility on the Lalor AEP site, as the Lalor workers will live in Snow Lake. The Lalor AEP site therefore will require only limited onsite waste water management.

The Regulation applies to the onsite wastewater management system proposed herein because, as noted in the enclosed report of our consultant AECOM, calculations made in accordance with Manitoba Conservation guidance verify that wastewater generated during the course of the Lalor AEP will comply with the combined sewage and greywater flow limit of less than 10,000 L (2,200 gallons) per day, which is set in section 2 of the Regulation.

HBMS would have preferred to comply with the Regulation by installing a wastewater holding system on the Lalor AEP site and pumping out the wastewater for treatment in the Snow Lake licensed Sewage Treatment Plant ("STP"). However, we are advised that, at present, the Snow Lake STP is not functioning at a level which would permit additional loading. HBMS therefore proposes to comply with the Regulation by an alternative, more costly means.

Rather than a simple wastewater holding system, the Lalor AEP site will have a sewage treatment plant which is fully capable of treating the wastewater to a standard that would make it appropriate for discharge directly to the environment. The proposed sewage treatment system will discharge from the Lalor AEP site by pipeline to the open pit on the Chisel Mine site. The Chisel Mine site has a mine water treatment plant operated in accordance with *Environment Act* Licenses No. 1501RR, 1919 S2RR and 2648, and a minor alteration (improvements to the Chisel mine water treatment plant) approved by your letter dated June 12, 2007.

Before the Lalor effluent enters the pipeline, it will be tested to ensure that it meets Manitoba Water Quality Standards, Objectives and Guidelines as described in section 2.2 of the enclosed AECOM report, or such other applicable criteria as Manitoba may require. Our consultant, AECOM, also assures us that the sewage treatment plant can meet Canadian Council of Ministers of the Environment recommended

Hudson Bay Mining and Smelting Co., Limited
P.O. Box 1500 Flin Flon Manitoba R8A 1N9 Canada



HUDSON BAY MINING AND SMELTING CO., LIMITED

criteria. Thus, discharge into and from the pipeline from the Lalor AEP site to the Chisel Pit will not result in any change in environmental effects at the Chisel site and there will be no potential need to further improve the Chisel water treatment plant.

At present, effluent quality testing data for the Chisel site is submitted monthly to Manitoba Conservation Environmental Operations, to the attention of the local office compliance officer, Audrey Romanchuk, in accordance with the Chisel licenses. HBMS proposes to include the Lalor effluent testing data in the regular monthly report submitted to Manitoba Conservation.

Please find enclosed our letter of even date to the Director of Environmental Assessment and Licensing for approval, pursuant to subsection 14(2) of *The Environment Act*, of discharge of the Lalor treated effluent into the Chisel Pit, as described above, and the addition of the effluent data to the HBMS regular monthly report submitted in accordance with the Chisel licenses. We also have requested that Director Braun specify the standard which HBMS should apply when testing the treated effluent.

In summary, the quantity of wastewater to be handled meets the requirements of the Regulation; there will be no discharge of effluent to the environment except in accordance with the requirements of existing *Environment Act* licenses; and there will be no discharge except to a licensed facility. Thus, the proposed wastewater management system meets or exceeds all requirements for your approval under subsection 8(2) of the Regulation.

As soon as your approval has been received, we intend to source and arrange for purchase of the sewage treatment equipment, to be installed under the supervision of appropriately qualified consultants. We will be pleased to provide you with a copy of the plans for your review before installation on the site.

A schedule of HBMS anticipated activities with respect to carrying out the plans for the Lalor AEP, including those with respect to the sewage treatment facilities, will be provided in the near future.

Thank you for your kind attention to this matter. Please do not hesitate to call if you have any questions. We look forward to hearing from you at your earliest convenience.

Yours truly,

Stephen West, P. Eng.
Superintendent, Environment Control

Cc: Kim Proctor
Barry Williamson/C. Samoiloff
Sheryl Rosenberg
Tracey Braun

Hudson Bay Mining and Smelting Co., Limited
P.O. Box 1500 Flin Flon Manitoba R8A 1N9 Canada

Memorandum

To	Stephen West	Page 1
CC	Cliff Samoiloff	
Subject	HBMS, Lalor Advanced Exploration Project Wastewater Treatment Proposal to Manitoba Conservation	
From	Barry Williamson	
Date	May 28, 2010	Project Number 60148609 4.2.1

1. Overview

Hudson Bay Mining and Smelting Co., Limited (HBMS) is planning the construction of an administration facility and dry complex as part of the Lalor Zone Advanced Exploration Project (AEP). The AEP complex is located near the east shore of Lalor Lake, approximately 8 km west of the Town of Snow Lake, Manitoba. Wastewater management at the Lalor site is proposed to occur by a Wastewater Treatment System (WWTS) to be constructed onsite. The complex is to accommodate a maximum work force of 100 persons. It is intended that the WWTS be used at the Lalor AEP site for the duration of the exploration project and then components of the WWTS will be re-located to another HBMS facility. It is estimated that the duration of the project will be 33 months.

The WWTS is to be designed and constructed to accommodate a combined sewage and greywater flow of less than 10,000 litres per day.

2. Design Criteria

The proposed WWTS will be used to handle the flow from the onsite toilet and shower facilities. There will be no kitchen or sleeping quarters located at the site serviced by the proposed WWTS.

The water usage patterns at the complex have been estimated using typical values based on facility type. Specifically, Manitoba Conservation has published standards on their website that reference the USEPA Onsite Wastewater Treatment Systems Manual. These standards suggest that the typical wastewater flow rate for:

- Industrial buildings (sanitary waste only) is 49 lpcd
- Schools, day-only with cafeteria, gym and showers is 95 lpcd
- Camps, pioneer type is 95 lpcd

Assuming that the typical flow rates at the proposed HBMS complex fall within one of the above categories and using the higher flow rate of 95 lpcd, an average daily flow rate for 100 persons is 9,500 L/day.

The workforce will have accommodations offsite at locations such as Snow Lake and will be commuting to the site daily. This has the effect of lower flow rates compared to a complex providing full service continuously. Also, it is proposed that water conserving plumbing fixtures such as waterless urinals, low-flow shower heads, and dual-flush or low-flow toilets be installed at the complex to reduce water consumption thereby keeping wastewater flow rates within the design values.

It should be noted that the proposed water supply is a 10,000 litre storage tank supplied by an offsite source delivered by truck. The daily consumption of water is not anticipated to exceed the tank volume. Limiting the daily water consumption will also benefit HBMS by reducing the size of the WWTS.

Treatment Equipment

Currently, HBMS is evaluating treatment options available to them for use at the AEP complex. The treatment system will include mechanical treatment and designed to achieve the effluent quality noted below. We propose that wastewater generated on-site will flow into a pre-packaged wastewater treatment plant that will consist of proven mechanical treatment (i.e. RBC, SBR, or Extended Aeration) and will be complete with disinfection.

Effluent Quality

The Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG) for *Tier 1 Water Quality Standards* provides the following guidance for the minimum quality of municipal wastewater effluents:

- Five Day Biochemical Oxygen Demand (BOD₅) ≤ 30 mg/L
- Total Suspended Solids (TSS) ≤ 30 mg/L
- ≤ 200 Fecal Coliform organisms / 100 mL

It is proposed that the effluent produced by the selected WWTS will meet the above-noted MWQSOG standards.

Treated Effluent Disposal

Part of the AEP project will involve the installation of a mine water discharge pipe from the Lalor AEP site to the existing Chisel North open pit. It is proposed that the treated sewage effluent be discharged to the mine water collection sump, which is then pumped to the Chisel open pit. Water in the open pit is treated in the existing Chisel North wastewater treatment plant prior to discharge to the environment in accordance with existing licenses. However, the treated sewage effluent which is added to the open pit by means of the mine water discharge pipe will not require further treatment as, upon entrance to the mine water collection sump, the effluent will meet or exceed the applicable standards for discharge from the Chisel site to the environment.

3. Solid Waste Handling

Solid waste produced by the WWTS will require disposal. The amount of sludge produced from the WWTS will depend on the selected treatment process. For example, if extended aeration is selected as the preferred method of treatment, AECOM estimates the dry solid mass of the sludge produced

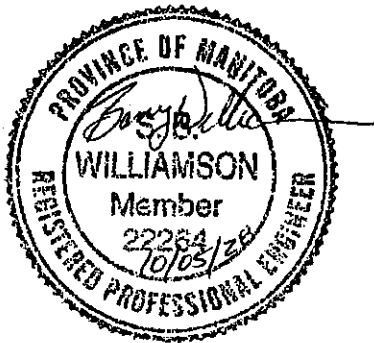
from the extended aeration treatment process is 80-120 mg/L. A WWTS serving 100 persons and flow rate of 95 lpcd has an estimated sludge production rate of 760 to 1140 grams/day.

Assuming that the selected WWTS produces a thickened sludge with 4 to 6% solids, the volume of settled sludge is approximately 0.018 m³/day based on a sludge production rate of 1140 grams/day. The design of the WWTS will include a form of sludge storage (either in tank or a stand alone tank). Depending on the size of the tank and increasing the sludge retention time; it is intended that the estimated sludge generated will be small enough to allow for semi-annual or annual desludging and disposal.

4. Summary

HBMS proposes to implement a WWTS at the Lalor Advanced Exploration Project site to treat wastewater generated by the AEP complex. It is expected that the flow rates will be less than 10,000 L/day. Using recommended flow rates provided by Manitoba Conservation and the design population of the project, AECOM has calculated the expected daily flow rates, which are less than 10,000 L/day. AECOM recommends that the design, construction, and operation of the WWTS be conducted in accordance with the 10,000 L/day limit and that discharge of the treated effluent be directed to the Chisel North pit.

AECOM's preliminary assessment of the mechanical processes available to HBMS for treating the wastewater indicates that any of the above-noted types of system (RBC, SBR, or Extended Aeration) would be capable of producing effluent that meets or exceeds the MWQSOG standards.



Marilyn Chubaty

From: Sheryl Rosenberg
Sent: November 10, 2010 12:08 PM
To: Donna Smiley (Donna.Smiley@gov.mb.ca)
Cc: Steph West; 'Shirley Neault'
Subject: FW: Onsite Wastewater Management Systems Application Re Sewage Treatment Plant for Lalor Advanced Exploration Project site - Part 1
Attachments: OWMS Application to Register.pdf; TDSLAW-#1160442-v1-L_Labossiere_from_HBMS_June_24_2010_Re_Wastewater_Treatment_System_for_the_Lalor_AEP.PDF; TDSLAW-#1211844-v1-0066334_owms_appl_2010-11-03_Pg_7.PDF; TDSLAW-#1211842-v1-0066334_owms_appl_2010-11-03_Pg_6.PDF

Donna,

Donna, I tried twice yesterday to send this to you and it bounced back both times. I'm dividing it up into two emails. If this doesn't work, I'll send the whole thing by courier.

The cheque is coming to you this afternoon by courier. The completed application form, which is attached above, is being mailed to you from Flin Flon. Let's hope this works. S.

From: Sheryl Rosenberg
Sent: Tuesday, November 09, 2010 4:19 PM
To: Smiley, Donna (CON)
Cc: Labossiere, Don (CON); Steph West; 'Shirley Neault'; Debbie Doverspike
Subject: FW: Onsite Wastewater Management Systems Application Re Sewage Treatment Plant for Lalor Advanced Exploration Project site

Donna,

Thanks for your guidance in preparing this application.

This package includes the application form, the 2 drawings (one of the site, showing the location of the sewage treatment plant, and one of the pipeline from the Lalor site to the Chisel pit), a copy of the cheque that was sent with the application letter to Don, dated June 24, 2010, and a copy of the Lalor Advanced Exploration Project plan, prepared by AECOM, which describes the water and wastewater facilities on the site (see pages 12-15).

HBMS also will mail the signed application form attached above. Please let us know if you need anything else.

My best,
Sheryl

Sheryl A. Rosenberg
Thompson Dorfman Sweatman LLP
Barristers and Solicitors
2200 - 201 Portage Avenue
Winnipeg MB R3B 3L3
Phone: (204) 934-2312
Fax: (204) 934-0562
Email: sar@tdslaw.com

This is a privileged and strictly confidential Solicitor/Client or Solicitor/Advisor communication and must not be disclosed to any person other

17/11/2010

**ONSITE WASTEWATER MANAGEMENT SYSTEMS
REGULATION**



Application to Register - Flow less than 10,000 litres per day

Conservation

APPLICANT'S NAME		Hudson Bay Mining and Smelting Co., Limited ("HBMS")	
Mailing Address		P.O. Box 1500	
City/Town		Flin Flon, MB	Postal Code R8A 1N9
Phone Home	Business	(204) 687-2229	Cell (204) 687-0708
Fax (204) 687-2173	Email	Steph.West@HudBayMinerals.com	
INSTALLER'S NAME		HBMS: Stephen West, Superintendent of Environment	
Mailing Address		P.O. Box 1500	
City/Town		Flin Flon, MB	Postal Code R8A 1N9
Phone Home	Business	(204) 687-2229	Cell (204) 687-0708
Fax (204) 687-2173	Email	Steph.West@HudBayMinerals.com	

Legal Description: (Section, Township, Range / Lot and Block No / Street Address)

Pt. 9 - 68 - 18 WPM East of Lalor Lake (General Permit 63483)

Municipality: N/A

Site Location Information

Is Lot Serviced by:	New Wastewater Collection System?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	Existing Wastewater Collection System?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is system located in Nutrient Management Zone N4:		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is system located in Red River Designated Area:		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is system located in:	Provincial Park <input type="checkbox"/>	Crown Land <input checked="" type="checkbox"/>	Sensitive Area <input type="checkbox"/>
Is a variance requested:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Letter requesting variance attached: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Sewage Disposal System:	New Construction <input checked="" type="checkbox"/>	Portable Sewage Treatment Plant <input type="checkbox"/>	Replacement <input type="checkbox"/>
	Modification <input type="checkbox"/>		Repair <input type="checkbox"/>

Pages 1, 2 and a site plan must be submitted with this application

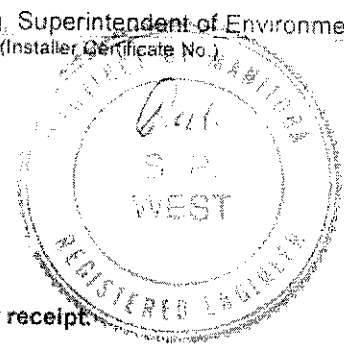
I certify the onsite wastewater management system will be constructed in accordance with the requirements of MR 83/2003 and as described in the site plan and specifications attached hereto. I acknowledge the installation cannot proceed until I have received a Manitoba Conservation official receipt and authorization to proceed.

Date: November 9, 2010

Signature:

Applicant

HBMS per Stephen West, P. Eng. Superintendent of Environment
(Installer or authorized signature) (Installer Certificate No.)



Registration Fee plus 5% GST: GST Registration No. R107863847
 Holding Tank (3-20-1) \$50.00 + \$2.50 = \$52.50
 Disposal Field (3-20-2) \$100.00 = \$5.00 = \$105.00
 Septic Tank Replacement (3-20-4) \$50.00 = \$2.50 = \$52.50
 Secondary Treatment System (3-20-5) \$250. + \$12.50 = \$262.50
 Holding Tank & Greywater Disposal Field (3-20-6) \$100.00 + \$5.00 = \$105.00
 Cheque payable to Minister of Finance

This application is valid for a period of 1 year from date of receipt.

Authorization to cover the disposal system or any part thereof must be obtained from an Environment Officer.

FOR DEPARTMENT USE ONLY	
Registration Number:	
Registration Reviewed and Authorized to Proceed by:	EO No.: _____ Date: _____
System Inspected by:	Date: _____
Authorized to Cover by:	Date: _____
Comments:	
Latitude	Longitude

Personal information is collected under the authority of The Environment Act, the Onsite Wastewater Management Systems Regulation and will be used for administration and enforcement purposes. Information collected is protected by the privacy provisions of The Freedom of Information and Protection of Privacy Act. If you have any questions, contact the Access & Privacy Coordinator, Box 85, 200 Saulteaux Crescent, Winnipeg MB, R3J 3W3 1-204-945-4170.

White, Manitoba Conservation

Canary Applicant

Pink

Installer

DWMS Application to Register

MG-5585 (Rev. 03/2010)

Page 1 of 3

Applicant's Name: Hudson Bay Mining and Smelting Co., Limited

Legal Description: _____

System to Serve:	Dwelling <input type="checkbox"/> Seasonal Cottage <input type="checkbox"/> No. of Bedrooms _____ Other <input type="checkbox"/> Administration & dry complex for Lalor Advanced Exploration Project (potential future mine)														
	Size of Lot (acres/hectares): _____ Dimensions of Lot: _____ Estimated Daily Flow (L/day): _____														
Type of System:	Disposal Field <input type="checkbox"/> Holding Tank <input type="checkbox"/> Secondary Treatment <input checked="" type="checkbox"/> Biodisk RBC Unit BJ-166 (rotating biological contactor unit) (portable STP), discharging into the mine water discharge pipeline, leading to the open pit on the Chisel Mine site (as shown in attached figure). The pipeline will be insulated and covered to prevent freezing. Other <input type="checkbox"/> (Specify): _____														
Tank Details:	CSA Certified <input type="checkbox"/> Type: Concrete <input type="checkbox"/> Fibreglass <input type="checkbox"/> Polyethylene <input type="checkbox"/> Holding Tank (Volume): N/A Septic Tank 1 st Compartment (Volume): _____ 2 nd Compartment (Volume): _____														
Soil Conditions:	Test Pit <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Depth to Restrictive Layer of Soil (cm) _____ Depth to Bedrock (cm) at surface _____ Depth to Normal High Water Table (cm) _____														
Soil Type:	Course Sand to Sandy Loam <input type="checkbox"/> Silty Loam <input type="checkbox"/> Clay Loam <input type="checkbox"/> Clay <input type="checkbox"/> Soil Analysis attached <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>														
Disposal Field Details:															
Total Area:	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;"></td> <td style="width:15%; text-align: center;">Field Area (m²)</td> <td style="width:15%; text-align: center;">Volume of Stone (m³)</td> <td style="width:15%;"></td> </tr> <tr> <td>Subsurface (conventional) <input type="checkbox"/></td> <td style="text-align: center;">N/A</td> <td></td> <td rowspan="3" style="vertical-align: top;"> Total Length of Distribution Pipe (m) N/A Volume of Sand m³ </td> </tr> <tr> <td>Modified system <input type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td>At Grade system <input type="checkbox"/></td> <td></td> <td></td> </tr> </table>		Field Area (m ²)	Volume of Stone (m ³)		Subsurface (conventional) <input type="checkbox"/>	N/A		Total Length of Distribution Pipe (m) N/A Volume of Sand m ³	Modified system <input type="checkbox"/>			At Grade system <input type="checkbox"/>		
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Modified system <input type="checkbox"/>															
At Grade system <input type="checkbox"/>															
Trench:	Stone <input type="checkbox"/> Trench Width (cm) N/A Total Length of Distribution Pipe (m) N/A Stone Depth below Pipe (cm) _____ Wastewater Effluent Chambers <input type="checkbox"/> Type of Chamber N/A Total Length of Distribution Pipe (m) N/A Trench Width (cm) _____														
Sand Treatment Mound:	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A Mound worksheet attached: _____														
Distance From (m):	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;"></td> <td style="width:15%;"> Septic Tank/ Holding Tank <input type="checkbox"/> to: Portable STP </td> <td style="width:15%;"> Nearest Property Boundary Water Service Pipe </td> <td style="width:15%;"> Well(s) <input type="checkbox"/> Cistern <input type="checkbox"/> Greater than 30 meters Cut/Embankment </td> <td style="width:15%;"> Watercourse Greater than 50 feet Habitable Bldg </td> </tr> <tr> <td></td> <td> Disposal Field <input type="checkbox"/> to: </td> <td> Nearest Property Boundary Water Service Pipe </td> <td> Well(s) <input type="checkbox"/> Cistern <input type="checkbox"/> Cut/Embankment </td> <td> Watercourse Habitable Bldg </td> </tr> </table>		Septic Tank/ Holding Tank <input type="checkbox"/> to: Portable STP	Nearest Property Boundary Water Service Pipe	Well(s) <input type="checkbox"/> Cistern <input type="checkbox"/> Greater than 30 meters Cut/Embankment	Watercourse Greater than 50 feet Habitable Bldg		Disposal Field <input type="checkbox"/> to:	Nearest Property Boundary Water Service Pipe	Well(s) <input type="checkbox"/> Cistern <input type="checkbox"/> Cut/Embankment	Watercourse Habitable Bldg				
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If information submitted is incomplete, or if supporting documentation (plans, maps, etc.) is of poor quality, the application process may be delayed or the application may be rejected.

Applicant's Name: Hudson Bay Mining and Smelting Co., Limited

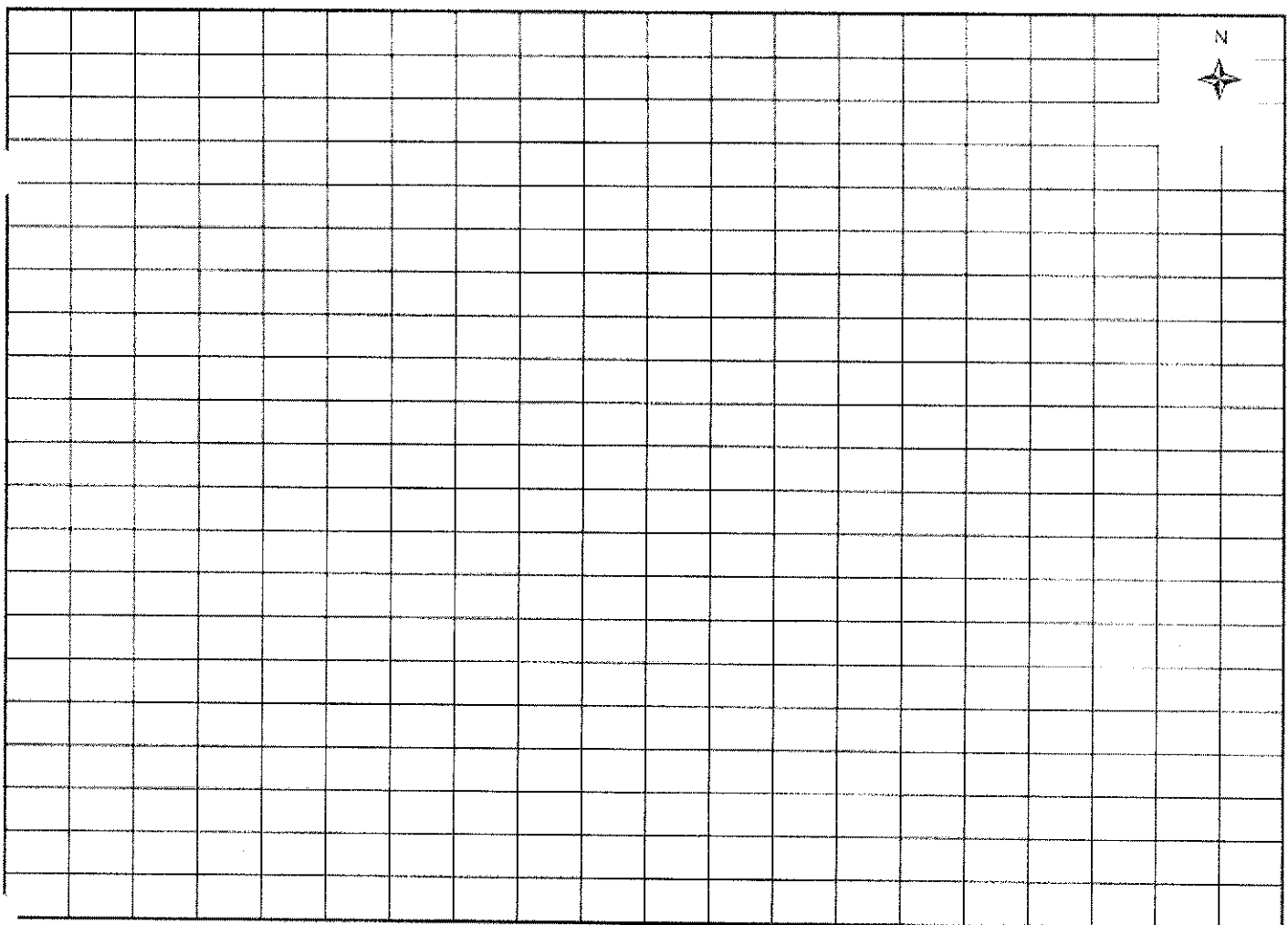
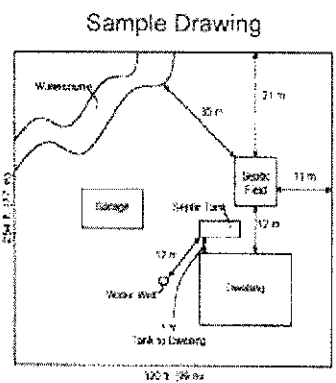
Legal Description: See attached:

1. Site General Arrangement Drawing
2. Figure showing mine water discharge line

SITE PLAN DIAGRAM

The site plan must include the following information:

1. Property size (hectares/acres); dimensions, boundaries
2. Location of OWMS (septic/holding tank, secondary treatment unit, disposal field) and distances to any of the following:
 - Wells
 - Inhabited buildings
 - Water service pipe
 - Watercourses
 - Cut/embankment
 - Property boundary





**HUDSON BAY MINING AND
SMELTING CO., LIMITED**

June 24, 2010

Don Labossiere
Director, Environmental Operations
Manitoba Conservation
123 Main St.
Winnipeg MB R3C 1A5

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Hudson Bay Mining and Smelting Co., Limited
P.O. Box 1500 Flin Flon Manitoba R8A 1N9 Canada

**HUDBAY
MINERALS**

HBMS is a wholly-owned subsidiary of HudBay Minerals Inc.



HUDSON BAY MINING AND SMELTING CO., LIMITED

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Yours truly,

Stephen West, P. Eng.
Superintendent, Environment Control

Cc: Kim Proctor
Barry Williamson/C. Samoiloff
Sheryl Rosenberg
Tracey Braun

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P.O. Box 1500 Flin Flon Manitoba R8A 1N9 Canada

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Memorandum

To	Stephen West	Page	1
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From	Barry Williamson		
Date	May 28, 2010	Project Number	60148609 4.2.1

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The WWTS is to be designed and constructed to accommodate a combined sewage and greywater flow of less than 10,000 litres per day.

2. Design Criteria

The proposed WWTS will be used to handle the flow from the onsite toilet and shower facilities. There will be no kitchen or sleeping quarters located at the site serviced by the proposed WWTS.

The water usage patterns at the complex have been estimated using typical values based on facility type. Specifically, Manitoba Conservation has published standards on their website that reference the USEPA Onsite Wastewater Treatment Systems Manual. These standards suggest that the typical wastewater flow rate for:

- Industrial buildings (sanitary waste only) is 49 lpcd
- Schools, day-only with cafeteria, gym and showers is 95 lpcd
- Camps, pioneer type is 95 lpcd

Assuming that the typical flow rates at the proposed HBMS complex fall within one of the above categories and using the higher flow rate of 95 lpcd, an average daily flow rate for 100 persons is 9,500 L/day.

The workforce will have accommodations offsite at locations such as Snow Lake and will be commuting to the site daily. This has the effect of lower flow rates compared to a complex providing full service continuously. Also, it is proposed that water conserving plumbing fixtures such as waterless urinals, low-flow shower heads, and dual-flush or low-flow toilets be installed at the complex to reduce water consumption thereby keeping wastewater flow rates within the design values.

It should be noted that the proposed water supply is a 10,000 litre storage tank supplied by an offsite source delivered by truck. The daily consumption of water is not anticipated to exceed the tank volume. Limiting the daily water consumption will also benefit HBMS by reducing the size of the WWTS.

Treatment Equipment

Currently, HBMS is evaluating treatment options available to them for use at the AEP complex. The treatment system will include mechanical treatment and designed to achieve the effluent quality noted below. We propose that wastewater generated on-site will flow into a pre-packaged wastewater treatment plant that will consist of proven mechanical treatment (i.e. RBC, SBR, or Extended Aeration) and will be complete with disinfection.

Effluent Quality

The Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG) for *Tier 1 Water Quality Standards* provides the following guidance for the minimum quality of municipal wastewater effluents:

- Five Day Biochemical Oxygen Demand (BOD₅) ≤ 30 mg/L
- Total Suspended Solids (TSS) ≤ 30 mg/L
- ≤ 200 Fecal Coliform organisms / 100 mL

It is proposed that the effluent produced by the selected WWTS will meet the above-noted MWQSOG standards.

Treated Effluent Disposal

Part of the AEP project will involve the installation of a mine water discharge pipe from the Lalor AEP site to the existing Chisel North open pit. It is proposed that the treated sewage effluent be discharged to the mine water collection sump, which is then pumped to the Chisel open pit. Water in the open pit is treated in the existing Chisel North wastewater treatment plant prior to discharge to the environment in accordance with existing licenses. However, the treated sewage effluent which is added to the open pit by means of the mine water discharge pipe will not require further treatment as, upon entrance to the mine water collection sump, the effluent will meet or exceed the applicable standards for discharge from the Chisel site to the environment.

3. Solid Waste Handling

Solid waste produced by the WWTS will require disposal. The amount of sludge produced from the WWTS will depend on the selected treatment process. For example, if extended aeration is selected as the preferred method of treatment, AECOM estimates the dry solid mass of the sludge produced

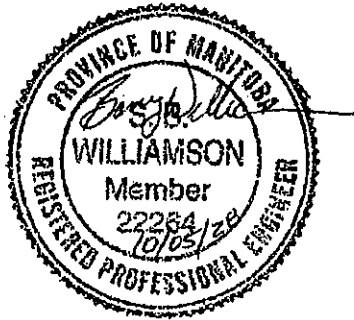
from the extended aeration treatment process is 80-120 mg/L. A WWTS serving 100 persons and flow rate of 95 lpcd has an estimated sludge production rate of 760 to 1140 grams/day.

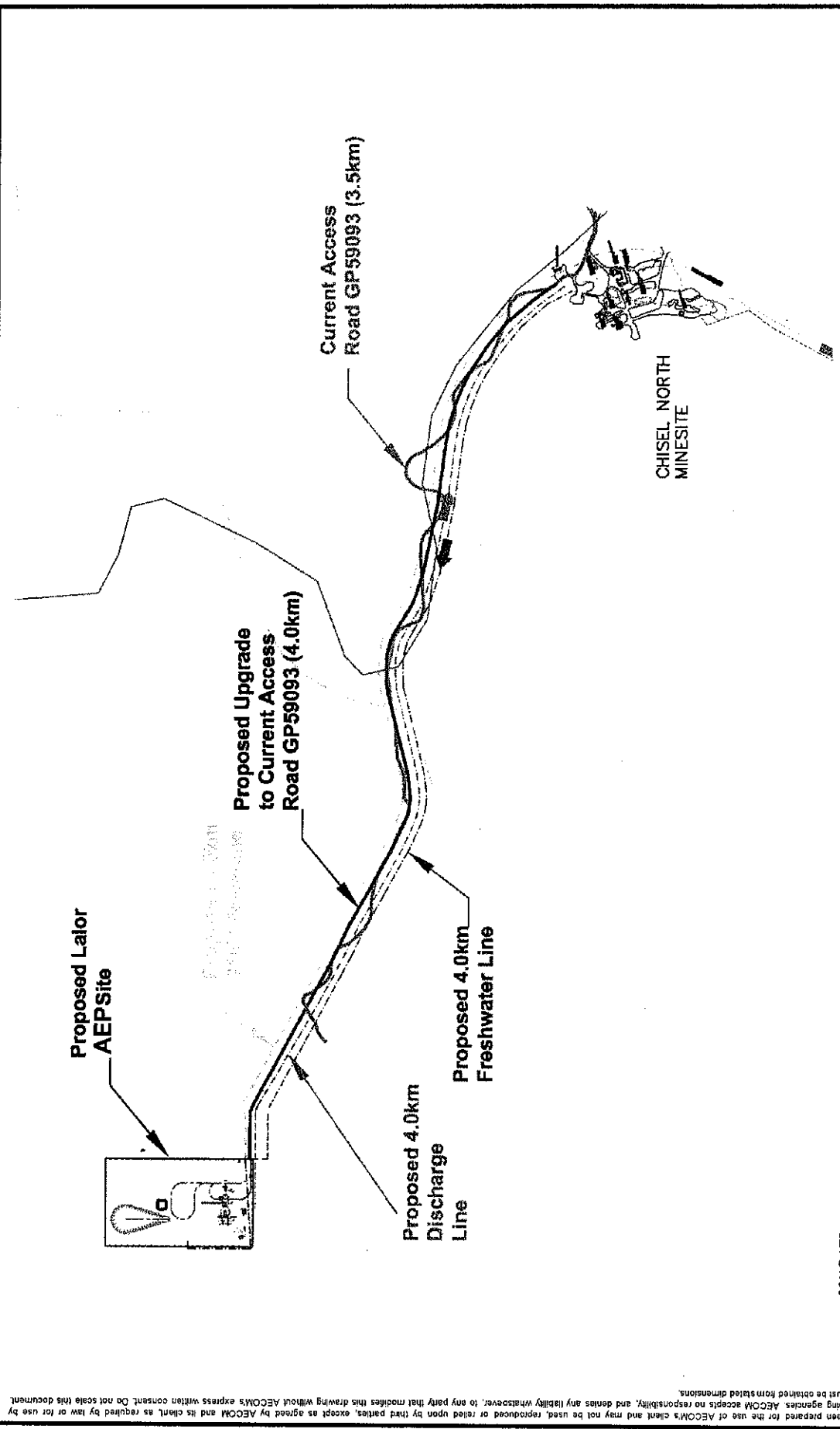
Assuming that the selected WWTS produces a thickened sludge with 4 to 6% solids, the volume of settled sludge is approximately 0.018 m³/day based on a sludge production rate of 1140 grams/day. The design of the WWTS will include a form of sludge storage (either in tank or a stand alone tank). Depending on the size of the tank and increasing the sludge retention time; it is intended that the estimated sludge generated will be small enough to allow for semi-annual or annual desludging and disposal.

4. Summary

HBMS proposes to implement a WWTS at the Lalor Advanced Exploration Project site to treat wastewater generated by the AEP complex. It is expected that the flow rates will be less than 10,000 L/day. Using recommended flow rates provided by Manitoba Conservation and the design population of the project, AECOM has calculated the expected daily flow rates, which are less than 10,000 L/day. AECOM recommends that the design, construction, and operation of the WWTS be conducted in accordance with the 10,000 L/day limit and that discharge of the treated effluent be directed to the Chisel North pit.

AECOM's preliminary assessment of the mechanical processes available to HBMS for treating the wastewater indicates that any of the above-noted types of system (RBC, SBR, or Extended Aeration) would be capable of producing effluent that meets or exceeds the MWQSOG standards.



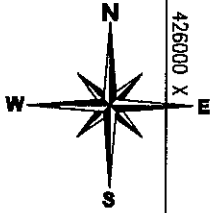


This drawing has been prepared for the use of AECOM's client and may not be used, reproduced or relied upon by third parties, except as agreed by AECOM and its client, as required by law or for use by governmental reviewing agencies. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that modifies this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from scaled dimensions.

Hudson Bay Mining & Smelting Co. Limited
 Lalor Zone
 Advanced Exploration Project
Lalor AEP
Proposed Upgrade to Road
Figure - 04

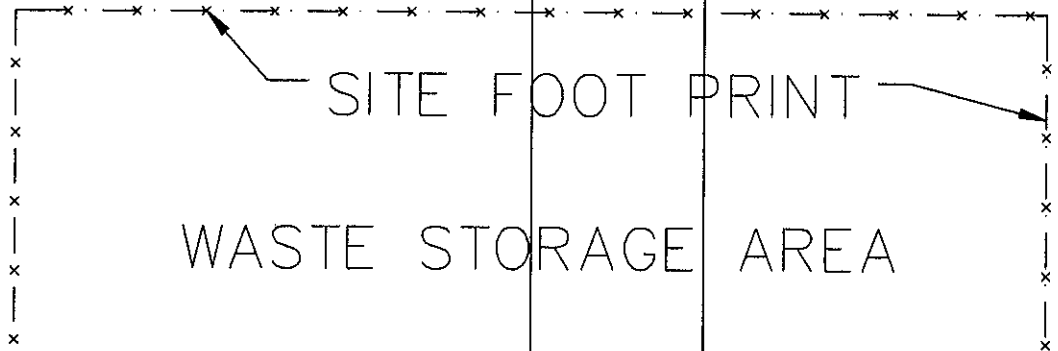


6081750 Y



426000 X

426250 X



SITE LEVELLING EXTENT

6081500 Y

LAYDOWN AREA

STANDBY POWER PLANT

SWITCH GEAR
HOIST &
COMPRESSOR
HOUSE

POLISHING
POND

STANDBY POWER
PLANT

FIRE PUMPS
PROCESS PUMPS

PUMPSTATION AND
RAW WATER
RESERVOIR/WATER
TREATMENT PLANT

6081250 Y

VENT
PLANT

PROPANE
STORAGE

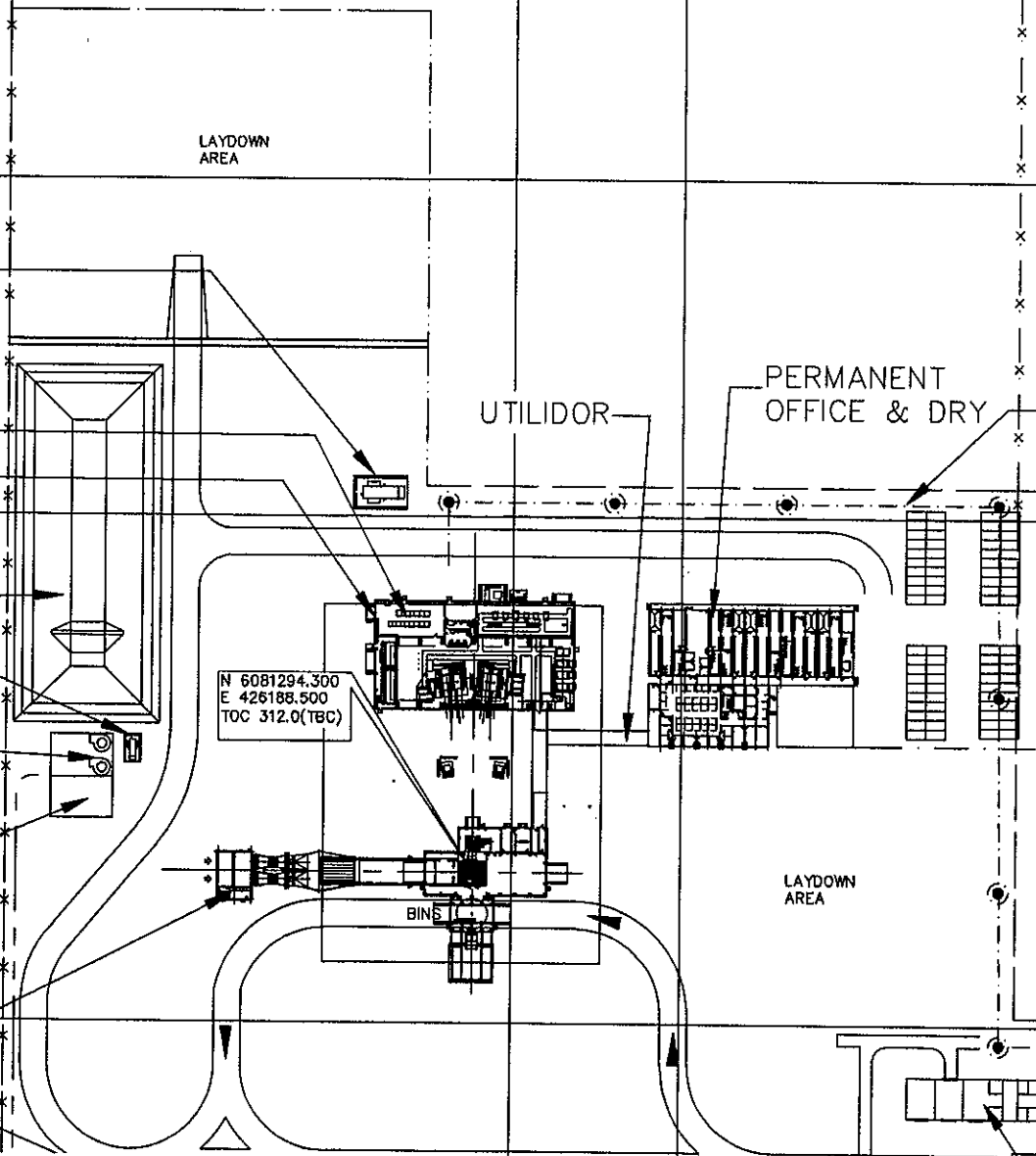
UTILIDOR

PERMANENT
OFFICE & DRY

N 6081294.300
E 426188.500
TOC 312.0(TBC)

BINS

LAYDOWN
AREA



Hudson Bay Mining and Smelting Co., Limited

**The Lalor Zone
Advanced Exploration Project Plan**

Prepared by:

AECOM
99 Commerce Drive
Winnipeg, MB, Canada R3P 0Y7
www.aecom.com

204 477 5381 tel
204 284 2040 fax

Project Number:

7223 018 00 (4.6.1)

Date:

March 2010

Doc 1002616

Writer's Name Sheryl A. Rosenberg
Internet E-mail Address sar@tdslaw.com
Writer's Direct Telephone (204) 934-2313
Writer's Direct Fax (204) 934-0576

November 10, 2010

DELIVERED

Donna Smiley
Onsite Wastewater Management
Systems Program
Manitoba Conservation
1007 Century Street
Winnipeg MB R3H 0W4

Dear Ms Smiley:

Re: Onsite Wastewater Management Systems Application
Re Sewage Treatment Plant for
Lalor Advanced Exploration Project site
Our Matter No. 0066334 SAR

Attached please find our firm's cheque in the amount of \$262.50 respecting the attached application.

We trust this is satisfactory.

Yours truly,

THOMPSON DORFMAN SWEATMAN LLP

Per:

Sheryl A. Rosenberg

SAR:mrc
Encs.

THOMPSON DORFMAN SWEATMAN LLP

Please Detach Before Cashing

G 154045

Request Number: 113136

Cheque Date: Nov 04/10

Requested by: Rosenberg, Sheryl A.

Cheque Amount

\$262.50

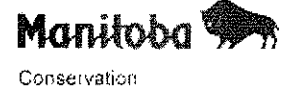
Payee: Minister of Finance (Manitoba)

R: Application for Regulatory Approval for Management Systems

<u>Client</u>	<u>Matter</u>	<u>Narrative</u>	<u>Amount</u>
00057	0066334	PAYEE: Minister of Finance (Manitoba); REQUEST#: 113136; DATE: 11/4/2010. - Application for Regulatory Approval for Management Systems	250.00

<u>G/L Acct</u>	<u>Account Description</u>	<u>Narrative</u>	<u>Amount</u>
1085000	INPUT TAX CREDITS	PAYEE: Minister of Finance (Manitoba); REQUEST#: 113136; DATE: 11/4/2010. - Application for Regulatory Approval for Management Systems	12.50

**ONSITE WASTEWATER MANAGEMENT SYSTEMS
REGULATION**



Application to Register - Flow less than 10,000 litres per day

APPLICANT'S NAME		Hudson Bay Mining and Smelting Co., Limited ("HBMS")			
Mailing Address		P.O. Box 1500			
City/Town		Flin Flon, MB	Postal Code	R8A 1N9	
Phone	Home	Business	(204) 687-2229	Cell	(204) 687-0708
	Fax	(204) 687-2173	Email	Steph.West@HudBayMinerals.com	
INSTALLER'S NAME		HBMS. Stephen West. Superintendent of Environment			
Mailing Address		P.O. Box 1500			
City/Town		Flin Flon, MB	Postal Code	R8A 1N9	
Phone	Home	Business	(204) 687-2229	Cell	(204) 687-0708
	Fax	(204) 687-2173	Email	Steph. West@HudBayMinerals.com	

Legal Description: (Section, Township, Range / Lot and Block No / Street Address)

Pt. 9 - 68 - 18 WPM East of Lalor Lake (General Permit 63483)

Municipality: N/A

Site Location Information

Is Lot Serviced by:	New Wastewater Collection System?	Yes	<input checked="" type="checkbox"/>	No
	Existing Wastewater Collection System?	Yes	<input checked="" type="checkbox"/>	No
Is system located in Nutrient Management Zone N4:	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Is system located in Red River Designated Area:	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Is system located in:	Provincial Park	<input type="checkbox"/>	Crown Land	<input checked="" type="checkbox"/>
				Sensitive Area
				<input type="checkbox"/>
Is a variance requested:	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Letter requesting variance attached:	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No

Sewage Disposal System:	New Construction	<input checked="" type="checkbox"/>	Portable Sewage Treatment Plant	Replacement	<input type="checkbox"/>
	Modification	<input type="checkbox"/>		Repair	<input type="checkbox"/>

Pages 1, 2 and a site plan must be submitted with this application

I certify the onsite wastewater management system will be constructed in accordance with the requirements of MR 83/2003 and as described in the site plan and specifications attached hereto. I acknowledge the installation cannot proceed until I have received a Manitoba Conservation official receipt and authorization to proceed.

Date: November 9, 2010

Signature:

Applicant

HBMS per Stephen West, P. Eng. Superintendent of Environment
(Installer or authorized signature) (Installer Certificate No.)

Registration Fee plus 5% GST: GST Registration No. R107863847
 Holding Tank (3-20-1) \$50.00 + \$2.50 = \$52.50
 Disposal Field (3-20-2) \$100.00 = \$5.00 = \$105.00
 Septic Tank Replacement (3-20-4) \$50.00 = \$2.50 = \$52.50
 Secondary Treatment System (3-20-5) \$250. + \$12.50 = \$262.50
 Holding Tank & Greywater Disposal Field (3-20-6) \$100.00 + \$5.00 = \$105.00
 Cheque payable to Minister of Finance



This application is valid for a period of 1 year from date of receipt.

Authorization to cover the disposal system or any part thereof must be obtained from an Environment Officer.

FOR DEPARTMENT USE ONLY		
Registration Number:		
Registration Reviewed and Authorized to Proceed by:	EO No.:	Date:
System Inspected by:	Date:	
Authorized to Cover by:	Date:	
Comments:		
Latitude	Longitude	

Personal information is collected under the authority of The Environment Act, the Onsite Wastewater Management Systems Regulation and will be used for administration and enforcement purposes. Information collected is protected by the privacy provisions of The Freedom of Information and Protection of Privacy Act. If you have any questions, contact the Access & Privacy Coordinator, Box 85, 200 Saulteaux Crescent, Winnipeg MB R3J 3W3 1-204-945-4170.

White: Manitoba Conservation

Canary: Applicant

Pink:

Installer

OWMS Application to Register

MG-5585 (Rev. 03/2010)

Applicant's Name: Hudson Bay Mining and Smelting Co., Limited

Legal Description:

System to Serve:	Dwelling <input type="checkbox"/> Seasonal Cottage <input type="checkbox"/> No. of Bedrooms _____ Other <input type="checkbox"/> Administration & dry complex for Lalor Advanced Exploration Project (potential future mine) _____ Size of Lot (acres/hectares): _____ Dimensions of Lot: _____ Estimated Daily Flow (L/day): _____														
Type of System:	Disposal Field <input type="checkbox"/> Holding Tank <input type="checkbox"/> Secondary Treatment <input checked="" type="checkbox"/> Biodisk RBC Unit BJ-166 (rotating biological contactor unit) (portable STP), discharging into the mine water discharge pipeline, leading to the open pit on the Chisel Mine site (as shown in attached figure). The pipeline will be insulated and covered to prevent freezing. Other <input type="checkbox"/> (Specify): _____														
Tank Details:	CSA Certified <input type="checkbox"/> Type: Concrete <input type="checkbox"/> Fibreglass <input type="checkbox"/> Polyethylene <input type="checkbox"/> Holding Tank (Volume): N/A _____ Septic Tank 1 st Compartment (Volume): _____ 2 nd Compartment (Volume): _____														
Soil Conditions:	Test Pit <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Depth to Restrictive Layer of Soil (cm) _____ Depth to Bedrock (cm) at surface _____ Depth to Normal High Water Table (cm) _____														
Soil Type:	Course Sand to Sandy Loam <input type="checkbox"/> Silty Loam <input type="checkbox"/> Clay Loam <input type="checkbox"/> Clay <input type="checkbox"/> Soil Analysis attached <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>														
Disposal Field Details:															
Total Area:	<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;"></th> <th style="width:20%; text-align:center;">Field Area (m²)</th> <th style="width:20%; text-align:center;">Volume of Stone (m³)</th> <th style="width:30%;"></th> </tr> </thead> <tbody> <tr> <td>Subsurface (conventional) <input type="checkbox"/></td> <td style="text-align:center;">N/A</td> <td></td> <td rowspan="3" style="vertical-align: top;"> Total Length of Distribution Pipe (m) N/A Volume of Sand m³ </td> </tr> <tr> <td>Modified system <input type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td>At Grade system <input type="checkbox"/></td> <td></td> <td></td> </tr> </tbody> </table>		Field Area (m ²)	Volume of Stone (m ³)		Subsurface (conventional) <input type="checkbox"/>	N/A		Total Length of Distribution Pipe (m) N/A Volume of Sand m ³	Modified system <input type="checkbox"/>			At Grade system <input type="checkbox"/>		
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Modified system <input type="checkbox"/>															
At Grade system <input type="checkbox"/>															
Trench:	Stone <input type="checkbox"/> Trench Width (cm) N/A _____ Stone Depth below Pipe (cm) _____ Total Length of Distribution Pipe (m) N/A _____														
Wastewater Effluent Chambers	<input type="checkbox"/> Type of Chamber N/A _____ Trench Width (cm) _____ Total Length of Distribution Pipe (m) N/A _____														
Sand Treatment Mound:	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A Mound worksheet attached: <input type="checkbox"/>														
Distance From (m):	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%; vertical-align: top;"> Septic Tank/ Holding Tank/ Portable STP <input type="checkbox"/> to: </td> <td style="width:20%; vertical-align: top;"> Nearest Property Boundary Water Service Pipe </td> <td style="width:20%; vertical-align: top;"> Well(s) Greater than 30 meters Cistern <input type="checkbox"/> Cut/Embankment </td> <td style="width:30%; vertical-align: top;"> Watercourse Greater than 50 feet Habitable Bldg </td> </tr> <tr> <td style="vertical-align: top;"> Disposal Field <input type="checkbox"/> to: </td> <td style="vertical-align: top;"> Nearest Property Boundary Water Service Pipe </td> <td style="vertical-align: top;"> Well(s) Cistern <input type="checkbox"/> Cut/Embankment </td> <td style="vertical-align: top;"> Watercourse Habitable Bldg </td> </tr> </table>	Septic Tank/ Holding Tank/ Portable STP <input type="checkbox"/> to:	Nearest Property Boundary Water Service Pipe	Well(s) Greater than 30 meters Cistern <input type="checkbox"/> Cut/Embankment	Watercourse Greater than 50 feet Habitable Bldg	Disposal Field <input type="checkbox"/> to:	Nearest Property Boundary Water Service Pipe	Well(s) Cistern <input type="checkbox"/> Cut/Embankment	Watercourse Habitable Bldg						
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If information submitted is incomplete, or if supporting documentation (plans, maps, etc.) is of poor quality, the application process may be delayed or the application may be rejected.

**Conservation**

Environmental Operations
123 Main Street, Suite 180
Winnipeg, Manitoba R3C 1A6
T 204-948-7100 F 204-948-2338

November 29, 2010

Hudson Bay Mining and Smelting Co., Limited
Box 1500
Flin Flon MB R8A 1N9

Attention: Stephen West P. Eng., Superintendent of Environment

Dear Mr. West:

**RE: Portable Waste Treatment System – Lalor Advanced Exploration Project
Pt. Section 9 Township 68 Range 18 WPM, East of Lalor Lake, Manitoba**

Please find attached a letter approving the use of the Biolisk Portable Wastewater Treatment Plant during construction of the Lalor Advanced Exploration Project (Lalor AEP) located at Pt. Section 9, Township 68, Range 18, east of Lalor Lake, Manitoba.

Clause 4 of the approval letter requires monitoring data to be sent electronically to Environment Officer, Audrey Romanchuk in The Pas, Manitoba.

I wish to advise you that Ms. Romanchuk is currently on maternity leave and is not due back until November 2011. Interim until she returns please forward copies of the laboratory reports to District Supervisor, Tim Prawdzik in Dauphin at Tim.Prawdzik@gov.mb.ca. Should you have any questions regarding the attached letter please contact Mr. Prawdzik in Dauphin at (204) 622-2123.

Yours sincerely,

Don Labossiere
Director, Environmental Operations

c: Tim Prawdzik/Donna Smiley

Manitoba
spirited energy



Conservation
Environmental Operations
123 Main Street, Suite 160
Winnipeg, Manitoba R3C 1A5
T 204-945-7100 F 204-948-2338

November 29, 2010

Hudson Bay Mining and Smelting Co., Limited
Box 1500
Flin Flon MB R8A 1N9

Attention: Stephen West P. Eng., Superintendent of Environment.

Dear Mr. West:

**Re: Portable Waste Treatment System – Lalor Advanced Exploration Project
Pt. Section 9 Township 68 Range 18 WPM, East of Lalor Lake, Manitoba**

This will acknowledge receipt of your correspondence requesting approval to use the Biodisk Portable Wastewater Treatment Plant during construction of the Lalor Advanced Exploration Project (Lalor AEP) located at Pt. Section 9, Township 68, Range 18, east of Lalor Lake, Manitoba. Hudson Bay Mining and Smelting Co., Limited propose to utilize a portable sewage treatment plant with discharge of treated effluent by pipeline to the open pit at the Chisel Mine site. The Lalor AEP is expected to take approximately 33 months to complete and will produce a combined sewage flow of less than 10,000 L per day.

In accordance with the authority under Section 25 of the *Onsite Wastewater Management Systems Regulation* a variance is hereby granted for the use of the Biodisk Portable Wastewater Treatment Plant (the System) at the Lalor AEP.

This variance is issued in absence of an applicable Canadian Standard for mobile wastewater treatment systems.

This variance is issued for the use of the System by Hudson Bay Mining and Smelting Co., Limited and is granted subject to the following conditions:

1. This variance to the legislation is valid from the date of this letter to December 31, 2013. Renewal of the variance, if required, will be considered upon written request to the Regional Office.
2. Peak daily sewage flow from the facility to be served shall not exceed 10,000L per day.
3. Treated wastewater effluent shall be discharged from the System at the Lalor AEP site by pipeline to the open pit on the Chisel Mine site.

...../2

Manitoba
spirited energy

4. The applicant shall not discharge effluent from the System into the pipeline;
 - a) where the organic content of the effluent, as indicated by the five day biochemical oxygen demand is in excess of 30 milligrams per litre;
 - b) where the total suspended solids content of the effluent is in excess of 30 milligrams per litre;
 - c) where the fecal coliform content of the effluent, as indicated by the MPN index is in excess of 200 per 100 milliliters of sample;
 - d) where the total coliform content of the effluent, as indicated by the MPN index is in excess of 1500 per 100 milliliters of sample.
5. The applicant shall monitor the System and sample the effluent at the discharge at a minimum frequency of once per month. The original copies of the laboratory reports shall be submitted to Manitoba Conservation on a monthly basis via electronic mail to Environment Officer Audrey Romanchuk at Audrey.Romanchuk@gov.mb.ca.
6. A report shall be developed indicating, but not limited to:
 - name and location of campsite;
 - camp occupancy population;
 - the date the treatment plant was put into operation;
 - the date the treatment plant was taken out of service;
 - dates and results of all effluent quality testing;
 - estimated or actual flow data;
 - dates of shutdown if applicable, and the reason for shutdown;
 - occurrences, dates and description of non-compliance;
 - system decommissioning details, if applicable.

A copy of this report shall be submitted to Manitoba Conservation, Regional Office in The Pas, Manitoba within 30 days of System decommissioning.

7. Monitoring, maintenance and effluent testing must be carried out under the supervision of a person qualified and trained in the operation and maintenance of the System.
8. The System must be installed in accordance with all other aspects of the *Onsite Wastewater Management Systems Regulation*.

This approval is granted without prejudice to any future environmental or public health legislation that may come into force that would be applicable to portable waste treatment systems. Approval is also granted on the basis that the principles, objectives and functions of the department to both protect the quality of the environment and pursue the acquisition of knowledge through technology and research is maintained.

Yours sincerely,



Don Labossiere
Director, Environmental Operations

c: Audrey Romanchuk/Donna Smiley



N 152249

DATE Nov. 19 2010

RECEIVED FROM Thompson Dorfman Sweetman

THE SUM OF two hundred - sixty two ⁵⁰ DOLLARS \$ 262.50

ON ACCOUNT OF OSWMS 3-20-5

PLA-68-18 Wfm LALOR

CASH CHEQUE VISA MASTERCARD DEBITCARD

ISSUED AT VIA
MG-773A (REV. 11/07)

PER Wendy B.

MANITOBA CONSERVATION / WATER STEWARDSHIP

**ONSITE WASTEWATER MANAGEMENT SYSTEMS
REGULATION**



Application to Register - Flow less than 10,000 litres per day

APPLICANT'S NAME	Hudson Bay Mining and Smelting Co., Limited ("HBMS")			
Mailing Address	P.O. Box 1500			
City/Town	Flin Flon, MB	Postal Code	R8A 1N9	
Phone Home	Business	(204) 687-2228	Cell	(204) 687-0708
Fax	(204) 687-2173	Email	Steph.West@HudBayMinerals.com	
INSTALLER'S NAME	HBMS Stephen West Superintendent of Environment			
Mailing Address	P.O. Box 1500			
City/Town	Flin Flon, MB	Postal Code	R8A 1N9	
Phone Home	Business	(204) 687-2229	Cell	(204) 687-0708
Fax	(204) 687-2173	Email	Steph.West@HudBayMinerals.com	

Legal Description: (Section, Township, Range / Lot and Block No. / Street Address)

Pt. 9 - 68 - 18 WPM East of Lalor Lake (General Permit 63483)

Municipality: N/A

Site Location Information

Is Lot Serviced by:	New Wastewater Collection System?	Yes	<input checked="" type="checkbox"/>	No
	Existing Wastewater Collection System?	Yes	<input checked="" type="checkbox"/>	No
Is system located in Nutrient Management Zone N4:	Yes	<input checked="" type="checkbox"/>	No	
Is system located in Red River Designated Area:	Yes	<input checked="" type="checkbox"/>	No	
Is system located in:	Provincial Park	Crown Land	<input checked="" type="checkbox"/>	Sensitive Area
Is a variance requested:	<input checked="" type="checkbox"/> Yes	No	Letter requesting variance attached:	<input checked="" type="checkbox"/> Yes No

Sewage Disposal System:	New Construction	<input checked="" type="checkbox"/> Portable Sewage Treatment Plant	Replacement:
	Modification		Repair

Pages 1, 2 and a site plan must be submitted with this application

I certify the onsite wastewater management system will be constructed in accordance with the requirements of MR 83/2003 and as described in the site plan and specifications attached hereto. I acknowledge the installation cannot proceed until I have received a Manitoba Conservation official receipt and authorization to proceed.

Date: November 9, 2010

Signature: *[Signature]*

Applicant

HBMS per Stephen West, P. Eng. Superintendent of Environment
(Installer or authorized signature) (Installer Certificate No.)

Registration Fee plus 5% GST. GST Registration No. R107563847
 Holding Tank (3-20-1) \$50.00 + \$2.50 = \$52.50
 Disposal Field (3-20-2) \$100.00 = \$5.00 = \$105.00
 Septic Tank Replacement (3-20-4) \$50.00 = \$2.50 = \$52.50
 Secondary Treatment System (3-20-5) \$250.00 + \$12.50 = \$262.50
 Holding Tank & Greywater Disposal Field (3-20-6) \$100.00 + \$5.00 = \$105.00
 Cheque payable to Minister of Finance

Reg # 152249

PAID
DATE: Nov. 19/10.
AMT: 262.50
REC'D BY: WB
FROM: 29540

This application is valid for a period of 1 year from date of receipt.

Authorization to cover the disposal system or any part thereof must be obtained from an Environment Officer.

FOR DEPARTMENT USE ONLY

Registration Number:	
Registered, Reviewed and Authorized to Proceed by:	<i>Donna Smiley</i>
System Inspected by:	
Authorized to Cover by:	
Comments:	<i>Installation of portable stp. Letter of variance to be prepared.</i>
Latitude:	
Longitude:	

Personal information is collected under the authority of The Environment Act, The Onsite Wastewater Management Systems Regulation and will be used for administrative and enforcement purposes. Information collected is protected by the privacy provisions of The Freedom of Information and Protection of Privacy Act. If you have a question, contact the Access to Information & Privacy Coordinator, Box 95, 350 Saulteaux Crescent, Winnipeg, MB R3J 3W3. Tel: 204-945-4173.

While: Manitoba Conservation

Canary Applicant

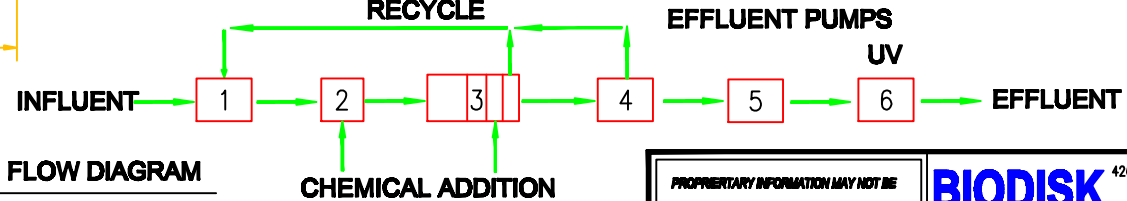
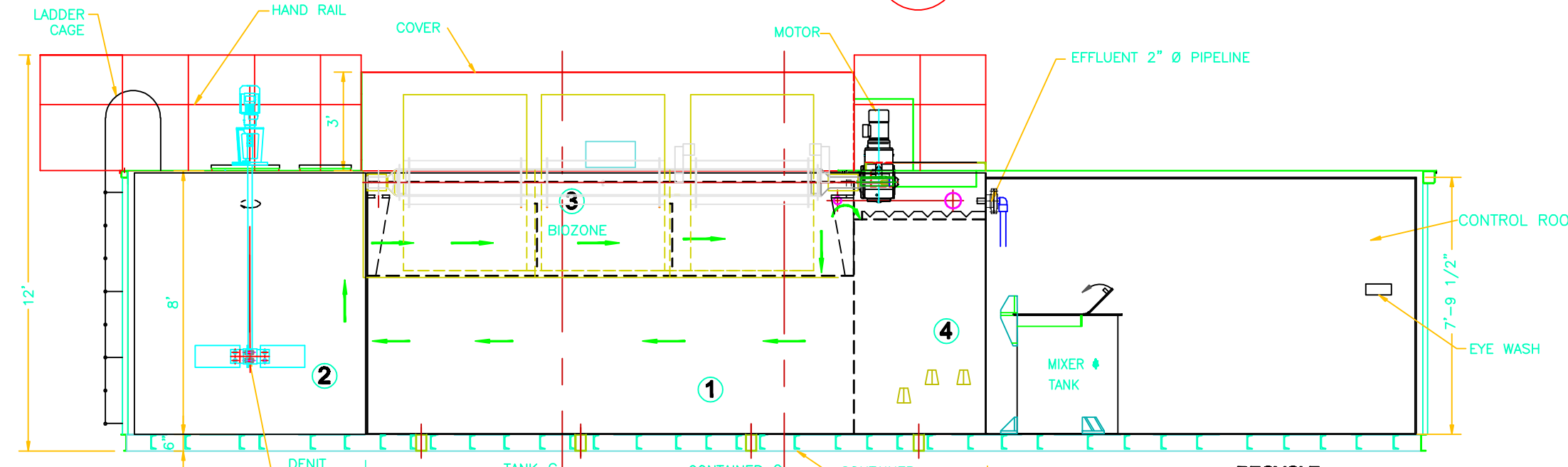
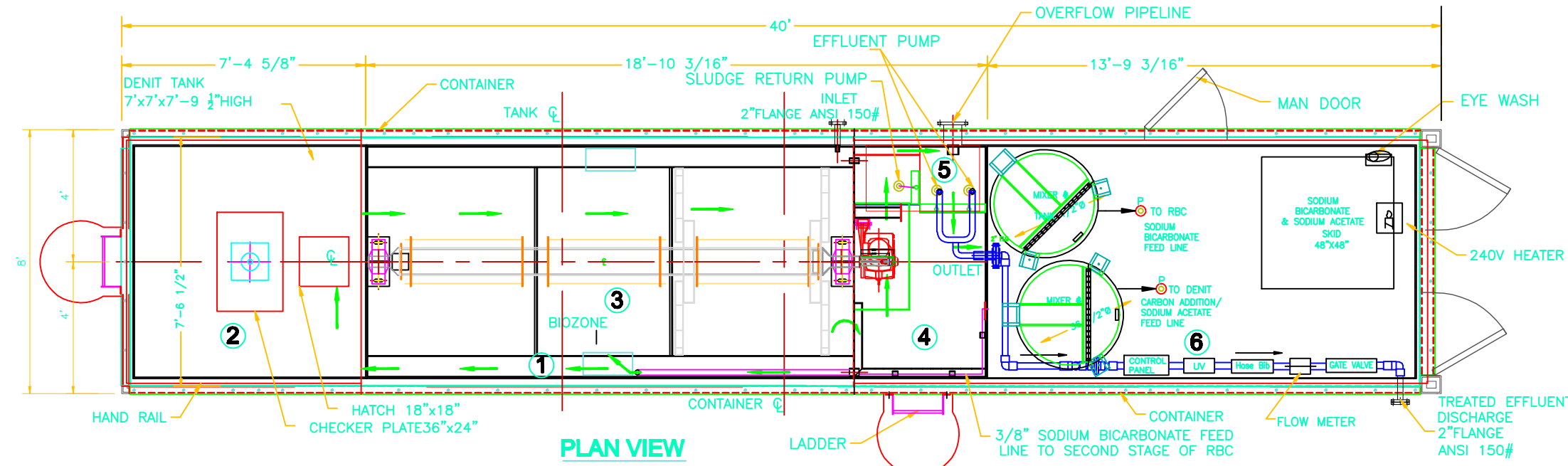
Phone

Installer

OWMS Application to Register

MO-0585, Rev. 01/2010

Page 1 of 3



PROCESS DETAILS		BIG JOHN
DENITRIFICATION TANK	(USG) (LITRES)	2,400 9,000
HYDRAULIC LOADING	(USGPD) (L/DAY)	12,500 47,100
BIO SUPPORT MEDIA AREA	(SQ.FT) (SQ.M)	7,000 650.65
BIO SUPPORT MEDIA DIAMETER	(FT) (M)	5'-4" 1.63
PRIMARY CLARIFIER CAPACITY	(CU.FT) (CU.M)	682 19.33
FINAL CLARIFIER CAPACITY	(CU.FT) (CU.M)	156 4.42
BIOZONE CAPACITY	(CU.FT) (CU.M)	68 1.93
SLUDGE STORAGE IN PRIMARY CLARIFIER	(CU.FT) (CU.M)	533 15.09
SLUDGE STORAGE IN FINAL CLARIFIER	(CU.FT) (CU.M)	21 0.59
T.W.L IN PRIMARY CLARIFIER	(FT) (M)	6'-9" 2.06
T.W.L IN FINAL CLARIFIER	(FT) (M)	6'-8" 2.03

SHIPPING DETAILS		BIG JOHN
OVERALL LENGTH		40'-0"
OVERALL WIDTH		8'-0"
OVERALL HEIGHT		12'
SHIPPING WEIGHT	(LBS)	45,000
OPERATING WEIGHT	(LBS)	125,000

PROCESS	
1	PRIMARY CLARIFIER
2	DENITRIFICATION TANK
3	THREE STAGES RBC
4	FINAL CLARIFIER
5	EFFLUENT PUMPS
6	UV

NOTES

1. THE TANK IS MANUFACTURED IN 1/4" EPOXY COATED STEEL.
2. THE SHAFT IS 1/2" WALL WITH CONTINUOUS WELDS AND COATED WITH EPOXY.
3. HEAT TRACING IS ON BOTTOM HALF OF THE TANK AT 12" SPACING.

NOTES

REV.	DESCRIPTION	DATE	BY
01	ADD CARBON ADDITION SYSTEM. THE CAPACITY OF THE DENITE TANK HAS BEEN CHANGED FROM 5000 LITERS TO 9000. ADD NOTES OF TANK MATERIALS.	2010-11-05	A. X.

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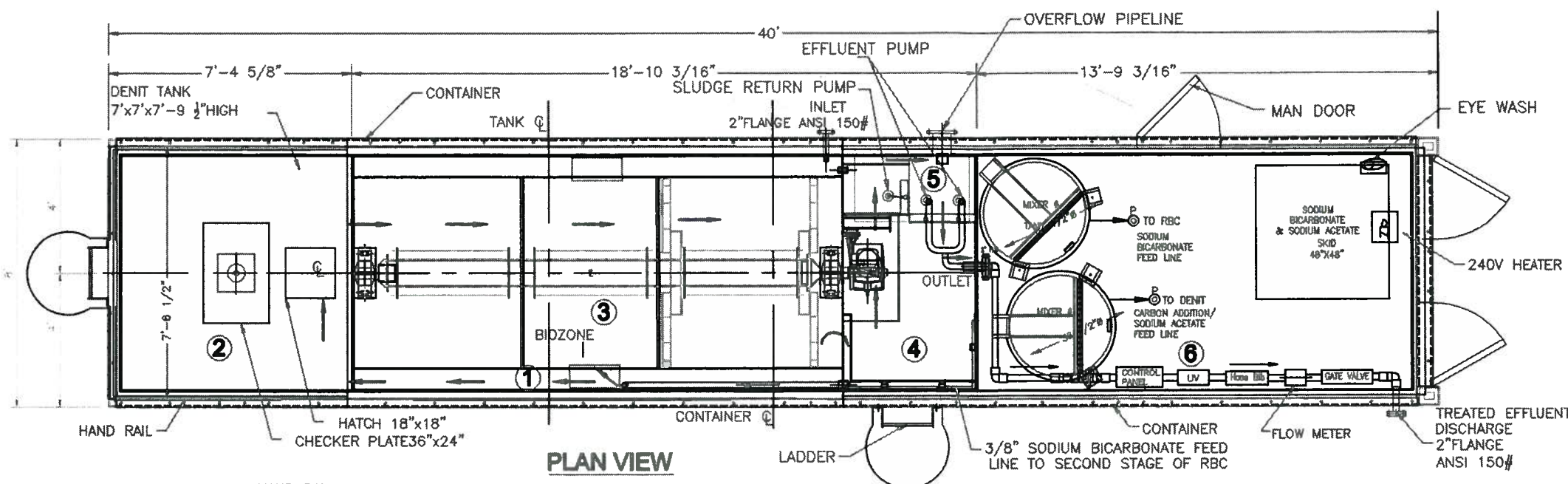
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DRAWING TITLE: GENERAL ARRANGEMENT

DRAWN: A. W.
CHECKED: T. S.
DATE: 2010-11-08
SCALE: N.T.S.

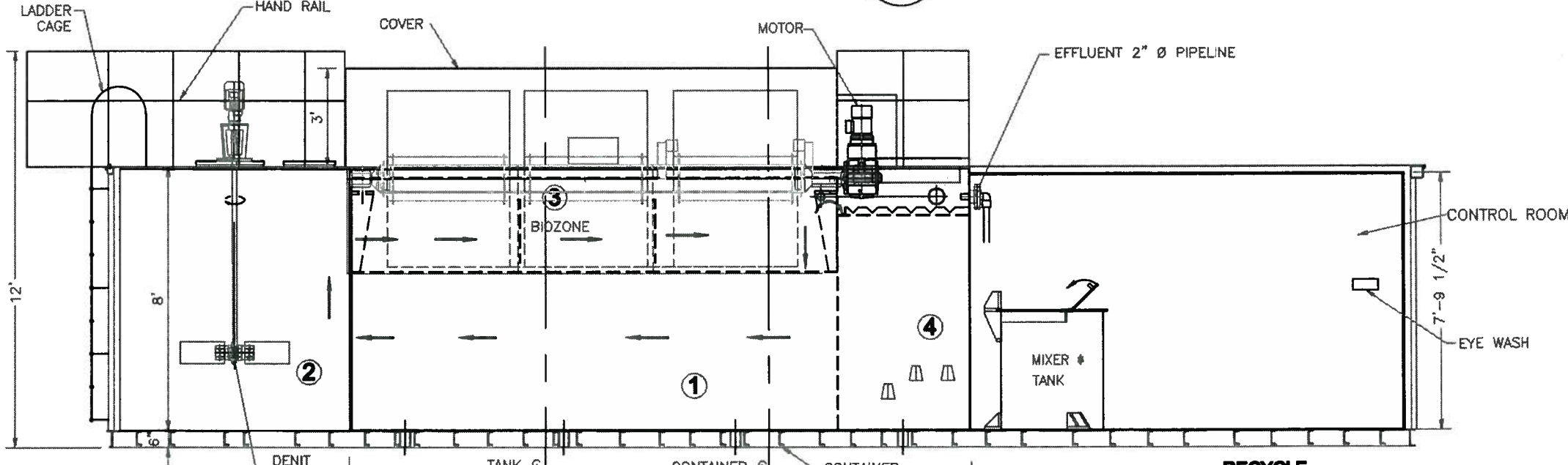
DWG NO. DBJ-166-312-02 REV. 01 SHEET 1 OF 1

PROJECT NAME: HBMS PO# P611118 Lalar Site Snow Lake Manitoba

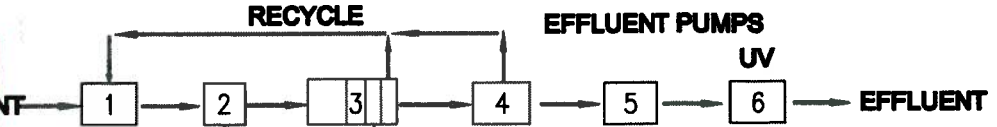


PROCESS DETAILS		BIG JOHN
DENITRIFICATION TANK	(USG) (LITRES)	2,400 9,000
HYDRAULIC LOADING	(USGPD) (L/DAY)	12,500 47,100
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PROCESS	
1	PRIMARY CLARIFIER
2	DENITRIFICATION TANK
3	THREE STAGES RBC
4	FINAL CLARIFIER
5	EFFLUENT PUMPS
6	UV



Submission No.:	SUBMITTAL REVIEW	AECOM
Project No.:	6014 B609	Discipline: Process Mechanical
<input checked="" type="checkbox"/> Reviewed - No Comment	<input checked="" type="checkbox"/> Reviewed - PROCESS FLOW DIAGRAM	
<input checked="" type="checkbox"/> Reviewed - As Noted	<input checked="" type="checkbox"/> Review by Consultant Not Required	

<small>PROPRIETARY INFORMATION MAY NOT BE REPRODUCED OR DISCLOSED WITHOUT PRIOR WRITTEN CONSENT OF BIODISK CORPORATION. DO NOT SCALE IF DIMENSIONS VARY.</small>		BIODISK <small>426 ROYAL YORK RD. TORONTO, ONTARIO, CANADA M8Y 2B9 OFFICE (416) 503-4100 FAX (416) 503-4101 www.BIODISK.ca</small>	
DRAWING TITLE		GENERAL ARRANGEMENT	
DRAWN	A. W.	DWG NO.	DBJ-166-312-02
CHECKED	T. S.	REV.	01
DATE	2010-11-08	SHEET	1 OF 1
SCALE	N.T.S.	PROJECT NAME HBMS PO# P611118 Lalor Site Snow Lake Manitoba	

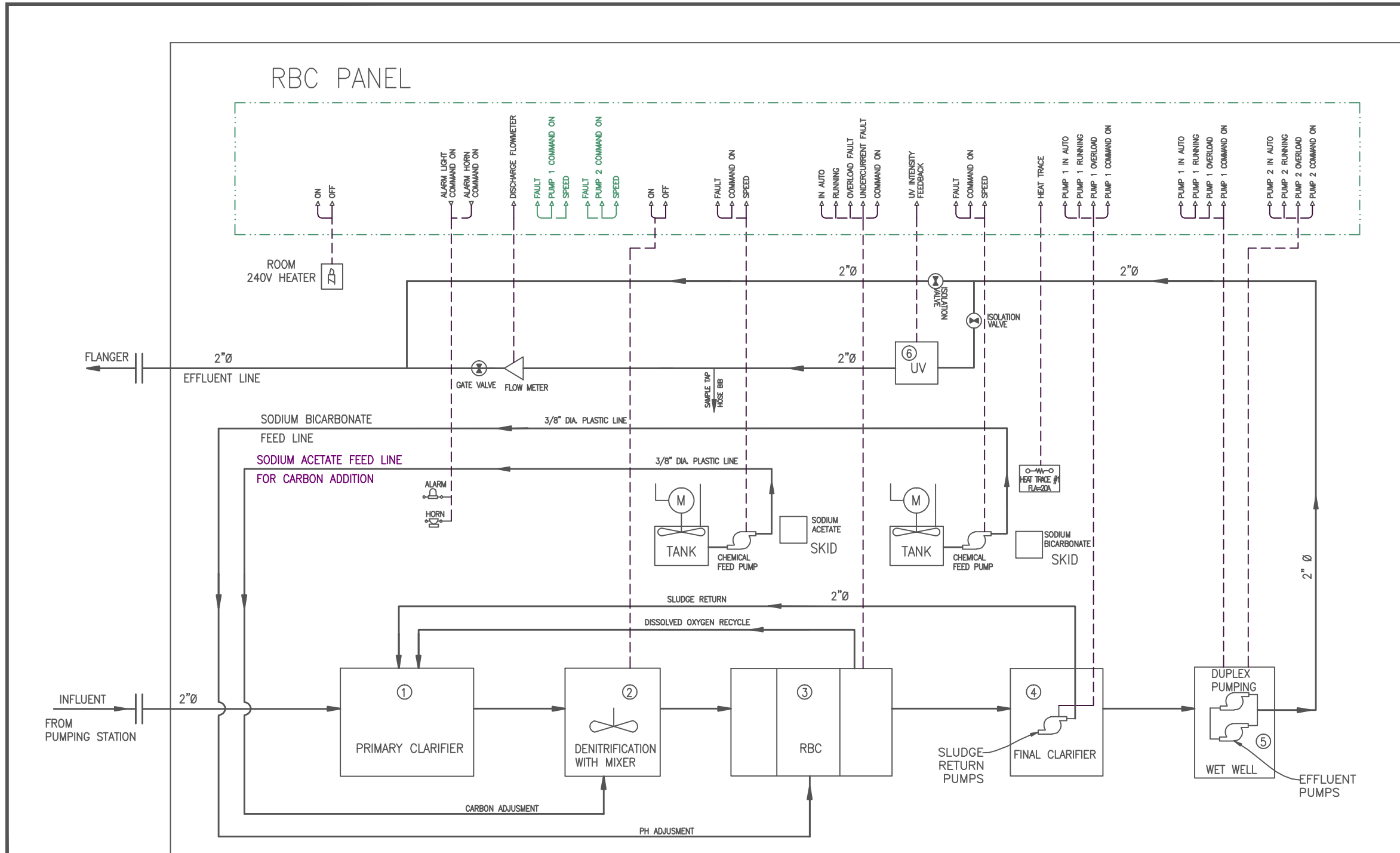
- NOTES**
1. THE TANK IS MANUFACTURED IN 1/4" EPOXY COATED STEEL.
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 3. HEAT TRACING IS ON BOTTOM HALF OF THE TANK AT 12" SPACING.

NOTES

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By: *John West* Date: **DEC 7, 2010**

REV.	DESCRIPTION	DATE	BY
01	ADD CARBON ADDITION SYSTEM. THE CAPACITY OF THE DENIT TANK HAS BEEN CHANGED FROM 5000 LITERS TO 9000. ADD NOTES OF TANK MATERIALS.	2010-11-05	A. X.



40' CONTAINER

PROCESS DETAILS		BIG JOHN
DENITRIFICATION TANK	(USG) (LITRES)	2,400 9,000
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OVERALL LENGTH		40'-0"
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PROCESS	
1	PRIMARY CLARIFIER
2	DENITRIFICATION TANK
3	THREE STAGES RBC
4	FINAL CLARIFIER & SLUDGE RETURN PUMPS
5	EFFLUENT PUMPS
6	UV

NOTES

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REV.	DESCRIPTION	DATE	BY
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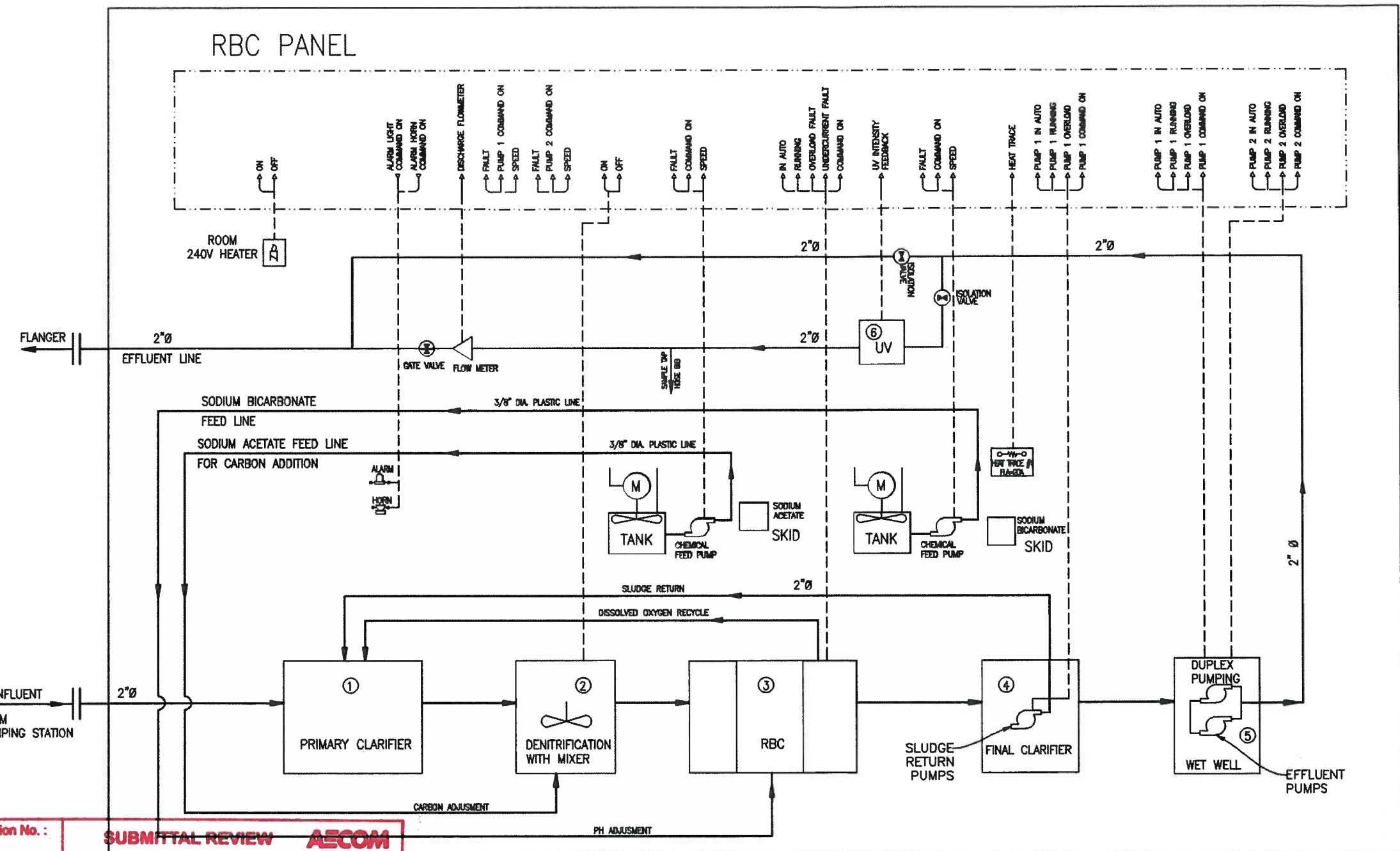
DRAWN A. W.
CHECKED T. S.
DATE 2010-11-05
SCALE N.T.S.

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DRAWING TITLE
P & ID DRAWING

DWG NO. DBJ-166-312-01 REV. 01 SHEET 1 OF 1

PROJECT NAME
HBMS PO# P611118 Lalor Site Snow Lake Manitoba



PROCESS DETAILS		BIG JOHN
DENITRIFICATION TANK	(USG) (LITRES)	2,400 (9,000)
HYDRAULIC LOADING	(USGPD) (L/DAY)	12,500 (47,100)
BIO SUPPORT MEDIA AREA	(SQ.FT) (SQ.M)	7,000 (650.65)
BIO SUPPORT MEDIA DIAMETER	(FT) (M)	5'-4" (1.63)
PRIMARY CLARIFIER CAPACITY	(CU.FT) (CU.M)	682 (19.33)
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SHIPPING DETAILS		BIG JOHN
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OPERATING WEIGHT	(LBS)	125,000

PROCESS	
1	PRIMARY CLARIFIER
2	DENITRIFICATION TANK
3	THREE STAGES RBC
4	FINAL CLARIFIER & SLUDGE RETURN PUMPS
5	EFFLUENT PUMPS
6	UV

Submission No. : **SUBMITTAL REVIEW AECOM**

Project No. : **60148609** Discipline : **Process Mechanical**

Reviewed - No Comment Reviewed - Revise and Resubmit

Reviewed - As Noted Review by Consultant Not Required

NOTES

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By: *John Wick* Date: **DEC 7, 2010**

40' CONTAINER

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CHECKED: T. S.
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DRAWING TITLE: **P & ID DRAWING**

DWG NO. **DBJ-166-312-01** REV. **01** SHEET **1 OF 1**

PROJECT NAME: **HBMS PO# P611118 Lalar Site Snow Lake Manitoba**