

September 9, 2013

Director, Environmental Assessment and Licensing Branch  
Manitoba Conservation  
123 Main Street  
Winnipeg, MB R3C 1A5

**Reference: Application for a Certificate of Approval for a Wastewater Collection System  
Collection and Transport to the Pierson Lagoon and Reston Lagoon Facilities  
Town of Melita, MB**

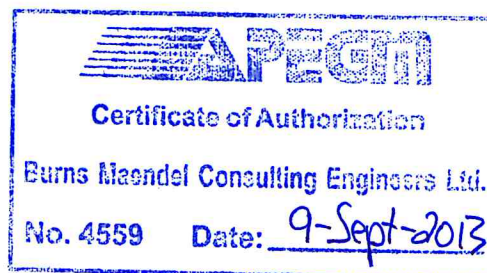
Dear Director,

Burns Maendel Consulting Engineers Ltd. is pleased to submit an Application for a Certificate of Approval for a Wastewater Collection System Project in the Town of Melita, Manitoba on behalf of PTI Group Inc. PTI Group Inc. is constructing a temporary construction camp, and will be hauling sewage from holding tanks on-site to the Pierson Lagoon and Reston Lagoon facilities.

All of the information relating to the Application for a Certificate of Approval has been compiled in the attached document. Two (2) copies of our application have been included. If you have any questions or comments, please feel free to contact the undersigned.

Regards,

BURNS MAENDEL CONSULTING ENGINEERS LTD.



Daniel Burns, P. Eng.  
Senior Engineer

enclosed



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Manitoba Conservation  
123 Main Street  
Winnipeg, MB R3C 1A5

**Application for a Certificate of Approval for a Wastewater Collection System**  
Collection and Transport to the Pierson Lagoon and Reston Lagoon Facilities  
Town of Melita, MB

Submitted by:

Burns Maendel Consulting Engineers Ltd.  
1331 Princess Ave.  
Brandon, MB R7A 0R4  
Tel: 204.728.7364  
Fax: 204.728.4418

On behalf of:

Gary Hauser, General Manager  
PTI Group Inc.  
Camp Installations  
101 Stony Plain Road  
Edmonton, AB T5S 1K6  
Tel: 780.440.7837  
Fax: 780-231-0544

September 9, 2013



## **Standard Limitations**

This Application for a Certificate of Approval was prepared by Burns Maendel Consulting Engineers Ltd. (BMCE) for the account of PTI Group Inc. (the Client). The disclosure of any information contained in this report is the sole responsibility of the Client. The material in this report reflects BMCE's best judgment in light of the information available to it at the time of preparation. Should this report be used by a third party, any reliance or decisions made based on this report are the responsibility of such third party. BMCE accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report. BMCE makes no representation concerning the legal significance of the findings or the information contained within this report.

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## 1. Project Description

PTI Group Ltd. is a major supplier of temporary and permanent work camps across North America. Their sites are fully inclusive, providing all necessities including food, water, sanitation facilities, entertainment, and year round lodging. PTI is currently in the design stages of a temporary work camp in Melita, MB, with a lifetime of approximately 10 years. The camp will be located at W ½ SEC 6, TWP 4, RGE 26 WPM, LOT 2, BLOCK 1, PLAN 728. It would largely be used to cater to workers in the oilfield industry.

The camp has been designed for a population of 254 people, although there will be room to expand the camp to include an additional 72 people. The camp itself will be composed of a series of modular units connected by attached hallways. These modular units will be made of one 20-person dorm unit, three 36-person dorm units, three 42-person dorm units, a 3-unit lobby, a 7 unit recreation area, a 14 unit kitchen, and a laundry area (for the Site Layout, refer to Drawing C1.1). The planned future expansion would see an additional two 36-person dorm units being brought in. The site services will be potable water, sanitary sewer, site electrical and liquid propane tank farm and distribution. There will also be a large back-up diesel generator designed to accommodate the entire site, with a large storage tank to supply fuel.

## 2. Design Population

The camp has a current design capacity of 254 workers, with additional local people being hired to clean and perform other maintenance related tasks. The camp has also been designed with the ability to add two future 36-person dorms. This would increase the population to 326 people plus local staff. For the purposes of design, it will be estimated that the water usage per day is 55 US gal/c/d for the site residents. This number is based upon values found during literature review and historical data from other PTI camps. The local workers will be expected to use much less water, given that they won't be using the showers or clothes washers. Toilet and sink use would also be less. Water use for the local workers is estimated at 16 gallons/c/d. It is estimated that there will be approximately 20 local workers, based on the number and size of the rooms, along with the camp needs.

Therefore, with a design population of 254 residents and 20 local workers, the wastewater produced can be estimated at;

$$254 \text{ people} * 55 \text{ US gal/c/d} + 20 \text{ people} * 16 \text{ US gal/c/d}$$

$$= 14\,290 \text{ US gal/d}$$

$$= 11\,900 \text{ imperial gal/d}$$

With the addition of the two 36-person units, it can be expected that the number of local workers will need to increase by about 5. Therefore, the increased wastewater flow can be estimated at;

$$326 \text{ people} * 55 \text{ US gal/c/d} + 25 \text{ people} * 16 \text{ US gal/c/d}$$

$$= 18\,330 \text{ US gal/d}$$

$$= 15\,263 \text{ imperial gal/d}$$

Given that the additional two 36-person units will be added in the future, the purpose of this application is to obtain approval for the current design sewage loading of 11 900 gal/d. Separate approval for the increased load will be applied for once plans are made to expand the camp.

### **3. Components**

#### **3.1. Gravity Sewer System & Lift Station**

Wastewater would be collected from each of the different units throughout the site by a gravity sewer network. The wastewater would enter the gravity flow sanitary sewer system via 4-inch risers at each connection point. From there, it will flow down a series of sewer pipes (refer to Drawing C2.1). The sewer pipes have been designed at 1% grade to ensure sufficient flow rates. To make certain that the pipes don't freeze, they will be wrapped in insulation. The wastewater will be directed by the sanitary sewer system to a lift station, where it will be pumped into a 31 500 US gallon holding tank.

#### **3.2. Holding Tank & Vac Trucks**

After the lift station pumps the wastewater into the holding tank, it remains there until vac trucks come to empty the wastewater. The holding tank has a capacity of 31 500 US gallons, which is well above the daily capacity needed to handle the future design sewage loading of 18 330 US gallons/d. Specifically, the tank would be filled to 58.2% of its capacity daily. PTI has contracted Souris Pumping, a local sewage hauler, to complete the daily hauling of sewage from the camp. To indicate if the amount of sewage is nearing capacity, a level sensor and alarm will be installed. The alarm will sound in the office area to ensure staff are alerted to the problem. The alarm will sound when it reaches the 80% level. Secondary containment will also be installed around the storage tank, as described in the Environmental Protection section, to prevent contamination in the event of a spill.

Vac trucks will be used to empty sewage from the holding tank. From there, they will haul the sewage to several different lagoons. Approval has been obtained from the Reston Lagoon in the RM of Pipestone for 8000 imperial

gal/day, and from the Pierson Lagoon in the RM of Edward for 6600 imperial gal/d, for a total of **14 600 imperial gal/d**. This is well over the design loading of 11 900 imperial gal/d; only 81.5% of the approved volume will be used. Further approval is also being pursued for use of the lagoon in Deloraine in the RM of Winchester for an additional 6000 gal/d. If there are any additional concerns over the volume for which approval has been obtained, there is capacity in the Hartney lagoon in the RM of Cameron, and at the Souris Wastewater Treatment Plant.

#### **4. Design Alternatives**

In the planning stages of the PTI construction camp wastewater management and treatment, one potential solution was for the PTI construction camp to tie into the Town of Melita sanitary sewer system to dispose of its wastewater. The wastewater would then flow into the Town of Melita lagoon treatment system. However, this idea was rejected for the near future due to several major factors;

One such factor is that the Town of Melita is preparing to model their water and wastewater systems later this year in order to determine capacity. The Town of Melita is not prepared to accept wastewater flow of this size while the current capacity is not known. They would also require upgrades to the existing system and lift station. This alternative will be pursued in the future once the modeling is completed.

Another factor is that the route to the available City of Melita tie-in would be complicated for three major reasons. The first is the route; the wastewater would need to be conveyed down Front Street, and would require installation of a sanitary sewer main. The wastewater would then need to cross underneath Highway 83, which would require an opening to be made for the pipe. The second reason is that once the new sanitary sewer main ties into the Town of Melita infrastructure, it would need to be pumped through a lift station. It is unknown at this time what the capacity of the lift station is. The third major reason is that a subdivision is being proposed to the east of construction camp which would make use of the same sanitary sewer main. Given that the subdivision has not been designed yet, it is not possible to determine the size of sewer main that would be needed to accommodate both the construction camp and the subdivision.

Finally, the City of Melita Lagoon itself is experiencing problems, and is in need of repair. The City of Melita is currently looking at different options for upgrading their lagoon.

Once more information becomes available and the subdivision design and sanitary sewer modeling are completed, this alternative will be pursued further.

## 5. General Conformance with Ten State Standards

The wastewater distribution system for the camp is constructed according to current design standards, and there is no significant deviation from the ten state standards. This type of design is common for similar projects.

## 6. Environmental Protection

Secondary containment will be installed to ensure that if a spill occurs, it does not contaminate the surrounding area. The secondary containment system specified is a Westeel Zero Ground Disturbance C-Ring. It makes use of a wall made of 44-inch tall steel panels supported by incrementally placed braces. A liner is then laid inside the containment area to prevent any leakage into the ground surface. The storage volume that the secondary containment is designed for is 31 500 US gallons. The secondary containment has been sized so that it will hold over 110% of the storage volume, as per regulatory requirements, at 34 650 US gallons.

## 7. Proposed Construction Schedule

Schedule Milestone	Date
Commencement of Installation of Underground Services	As soon as permit received (Sept 30, 2013)
Completion of Installation of Underground Services	November 15, 2013
Camp Set-Up	October 21, 2013 to November 30, 2013
Opening Day	December 1, 2013

## 8. Location Map

Refer to Drawing Package – PTI Melita Lodge Phase 1 Site Services





Appendix A – Town of Melita Approval Letter for the PTI Construction  
Camp

From:TOWN OF MELITA

To:Wayne Poole

03/15/2012 07:17

#810 P.001/005



Box 364  
Melita, Manitoba R0M 1L0  
P: (204) 522-3413  
F: (204) 522-3587  
tofmel@mymts.net  
www.melitamb.ca

R.F. (Bob) Walker MAYOR

Julie Chase ADMINISTRATOR

Carolyn Porter  
COUNCILLOR

William (Bill) Warren  
COUNCILLOR

William (Bill) Holden  
COUNCILLOR

Jocelyn Skelton  
COUNCILLOR

DATE: March 15, 2012

NUMBER OF PAGES: 5 (Including cover sheet)

RECEIVING FAX NUMBER: 748-3469

TO: Wayne Poole

FROM: Town of Melita

REMARKS: This PERMIT for Development only. Council  
will need to sign off for ZONING, etc.  
Building PERMIT from MB DEPT of LABOUR  
OFC - Rick GRIMSHAW 726-7171

cc Rick Grimshaw



Box 364  
Melita, Manitoba R0M 1L0  
P: (204) 522-3413  
F: (204) 522-3587  
tofmel@mymts.net  
[www.melitamb.ca](http://www.melitamb.ca)

R.F. (Bob) Walker MAYOR

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William (Bill) Holden  
COUNCILLOR

Jocelyn Skelton  
COUNCILLOR

PTI Premium Comp Services Ltd.  
3790 – 98 St. NW  
Edmonton, Alberta  
T6E 6B4

March 20, 2012

Attention: Danny Happy

RE: BUILDING PERMIT

Your development permit was received by the Town of Melita and faxed to the Building Inspector, Wayne Poole on March 15, 2012. Mr. Poole has advised via fax that this permit has been forwarded on to Manitoba Department of Labour, Office of the Fire Commissioner for approval due to the size. Mr. Rick Grimshaw is the contact. His contact number is 1-204-726-7171.

The Town of Melita has already taken the necessary steps of setting up an extension of conditional approval that was submitted January 2011 to allow for the camp to be developed on Lot 2, Block 2, Plan 728.

At this time Council asks that you deal with Mr. Grimshaw and abide by all rules and regulations laid out by the Fire Commissioner's Office to proceed with development of the camp.

Enclosed is an invoice for fees payable for the Town of Melita as well as a copy of fax from Mr. Poole

Yours truly,

Julie Chase  
CAO Town of Melita

Encl.  
/jac



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Melita, Manitoba R0M 1L0  
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COUNCILLOR

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COUNCILLOR

William (Bill) Holden  
COUNCILLOR

Jocelyn Skelton  
COUNCILLOR

Mr. Greaves  
1422, 510-5<sup>th</sup> Street SW  
Calgary, Alberta  
T2P 3S2

February 14, 2012

Dear Bob,

RE: CONDITIONAL USE ORDER NO. CO-2011-01 EXTENSION

On February 13, 2012, the Council of the Town of Melita was presented with your request to extend the Conditional Use Order No. CO-2011-01 that was approved February 2011. Council has approved the extension with the same condition as was placed on the original resolution.

I enclose a certified copy of resolution #2012-029 which confirms council decision, a copy of the conditional use order with one condition.

Yours truly,

Julie Chase CMMA  
C.A.O.  
Town of Melita

Encl.  
/jac

RESOLUTION #2012-029

Moved by Councillor Porter

Seconded by Councillor Skelton


BE IT RESOLVED THAT the Council of The Town of Melita does approve the extension of Conditional Order No. C0-2011-01 as submitted by James Benton on behalf of PTI under the Town of Melita Zoning By-Law #1703 as amended;

AND FURTHER BE IT RESOLVED THAT the approved conditional order is subject on one condition outlined in the original order;

AND FURTHER BE IT RESOLVED THAT the original conditional use order was for a one hundred man camp and has been increased to a two hundred forty man camp with council approval.

CARRIED.

I, Julie A. Chase, Chief Administrative Officer for the Town of Melita, do hereby certify that the above is true copy of the original resolution.  
Dated at Melita, Manitoba this 14<sup>th</sup> day of February 2012.

  
\_\_\_\_\_  
Julie A. Chase      CMMA  
C.A.O.              Town of Melita



**Appendix B – Confirmation Letters for Use of the Reston Lagoon and  
Pierson Lagoon Facilities**

# RURAL MUNICIPALITY OF EDWARD

Incorporated 1905

**Box 100  
Pierson, Manitoba  
R0M 1S0**

**Ralph J Wang, Reeve  
204-634-2465**

**Lisa Pierce, CAO**

August 21, 2013

Souris Pumping  
Souris, MB R0K 2C0

Via email: [sourispumping@hotmail.ca](mailto:sourispumping@hotmail.ca)

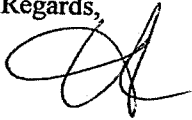
ATTN: Mark Thompson

This letter will serve as duly given permission for Souris Pumping to dump septic water at the Pierson Lagoon facility.

The maximum amount of septic water we will accept is thirty (30) cubes in one 24-hour period. The charge for dumping is \$.05 per gallon, or \$11.00 per cube.

Please contact the undersigned should you have any questions.

Regards,



Lisa Pierce, CAO  
Rural Municipality of Edward

Carey Murray  
Ward 1  
204-649-2345  
Cell: 204-264-0342

Debbie McMechan  
Ward 2  
204-634-2437  
Cell: 204-522-0938

Fred Raynor  
Ward 3  
204-686-2234

Bill Kennedy  
Ward 4  
204-634-2454

# PIPESTONE



# MUNICIPALITY

401 3<sup>RD</sup> AVENUE  
BOX 99, RESTON, MB R0M 1X0

www.rmofpipestone.com  
PH (204)877-3327 FAX 877-3999

September 5, 2013

Souris Pumping  
C/O Mark Thompson  
Box 1141  
Souris, MB R0K 2C0

Dear Mr. Thompson:

The Rural Municipality of Pipestone is prepared to enter into an agreement with you to haul 8,000 gallons of sewage per day to the Reston Lagoon. Should the Reston Lagoon be unable to accommodate this volume, the Pipestone Lagoon would be available to you.

Sincerely,

A handwritten signature in cursive script, appearing to read "June Greggor".

June Greggor, CMMA  
Chief Administrative Officer