



January 22, 2019

Sahtu Land and Board File Numbers: S18X-003 & S17X-004

Ms. Bonnie Bergsma
Sahtu Land and Water Board
P.O. Box 1
Fort Good Hope, NT
X0E 0H0
(867) 598-2413

CC:

Michael Brownlee –Public Services and Procurement and Canada
Melissa Fraser – Transport Canada
Reid Campbell – Transport Canada
Trevor Bremner – Department of Lands, GNWT;
Erin Goose – Department of Environment and Natural Resources, GNWT

**Memorandum RE: Change of Drilling Subcontractor for LUPs S18X-003 & S17X-004
Norman Wells Airside Land Treatment Unit & Taxiway C
Norman Wells, Northwest Territories X0E 0V0**

Dear Ms. Bergsma:

The following memo documents the applicable revisions to Transport Canadas (TC) Sahtu Land and Water Board Type A Land Use Permits (LUP) S18X-003 & S17X-004 resulting from the change in drilling sub contractor. The drilling and installation of 3 new monitoring wells is schedule to take place at the Norman Wells airport at the end of January. The original subcontractor (Midnight Sun Drilling Inc.) has been replaced by Clean Harbours Inc. This memo has been prepared by BluMetric Environmental Inc. (BluMetric) on behalf of TC.

APPLICABLE CHANGES TO S18X-003 & S17X-004

The following section documents any applicable changes to the aforementioned LUPs in response to the drilling subcontractor replacement.

Section 3 – Other personnel

Tel. 867-873-3500
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BluMetric Environmental Inc.

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Sahtu Midnight Sun Drilling Inc. replaced with Clean Harbours Inc.

Section 12 – Containment fuel spill contingency plans

A spill contingency plan was submitted by BluMetric Environmental Inc. on November 6, 2017. This plan was submitted in support of S17X-003 and later adopted for S18X-003. Outlined below are the applicable revisions to this document as a result of the change in drilling subcontractors.

Section 1 – Introduction

Contact information replaced with;

Clean Harbours Inc.

Physical address (courier packages):

1102 - 6th street

Nisku, Alberta T9E-7N7

Tel: 780-220-0824

Field Operations Manager: Alvin Lawless

Clean Harbours – After Hours 24hr Emergency Phone Number

Tel: 1-800-661-6689

Section 5.1 – List of Hazardous Materials On-Site

Table 1: Storage Container information replaced with;
800L fuel tank on back of pick up

Table 1: Maximum On-Site information replaced with;
800L

Other equipment onsite

Multi Power Locust Tracked Geotechnical Air Rotary Drill Rig replaced with;

Canycom S25A mounted MARL M 4CT Augur Drill Rig

Appendix D – Drill Specifications

Replace the PDF currently in the Spill Response Plan with the PDF attached to the end of this document.

WORK PLAN & SCHEDULE

S18X-003

Drilling under this Land Use Permit is scheduled to begin on January 28th 2019. The drilling program includes the drilling and installation of two new monitoring wells on the Norman Wells Airport property (See Attachment B-1 for locations). The first well is to be installed to approximately 6 meters below ground surface (mbgs) and the second well is to be installed to approximately 4 mbgs. Drilling is anticipated to finish the afternoon of January 28th 2019.

S17X-004

Drilling under this Land Use Permit is scheduled to begin on January 29th 2019. The drilling program includes the drilling and installation of one new monitoring well. The monitoring well will be installed on the Norman Wells Airport property adjacent to the former Land Treatment Unit (See Attachment B-2 for location). Installation of this well is to be to a depth of approximately 6 mbgs. Drilling is anticipated to finish the afternoon of January 29th 2019.

CLOSURE

The information presented within this memo has been prepared for the Sahtu Land and Water Board, Public Services and Procurement Canada and Transport Canada. Any use a third party makes of this report, any reliance on the report, or decisions based upon the report, are the responsibility of those third parties unless authorization is received from BluMetric Environmental Inc. in writing. BluMetric Environmental Inc. accepts no responsibility for any loss or damages suffered by any unauthorized third party as a result of decisions made or actions taken based on this report.

If you have any questions please do not hesitate to contact the undersigned.

Respectfully submitted,

BluMetric Environmental Inc.



Aaron Barker, B.Sc.
Environmental Scientist



Andrea Jenney, P.Eng.
Senior Engineer

List of Attachments

Attachment A – Drill Rig Specifications

Attachment B-1 – S18X-003 Proposed Monitoring Well Locations

Attachment B-2 – S17X-004 Proposed Monitoring Well Location

Attachment A:
Drill Rig Specifications



MARL M 4CT

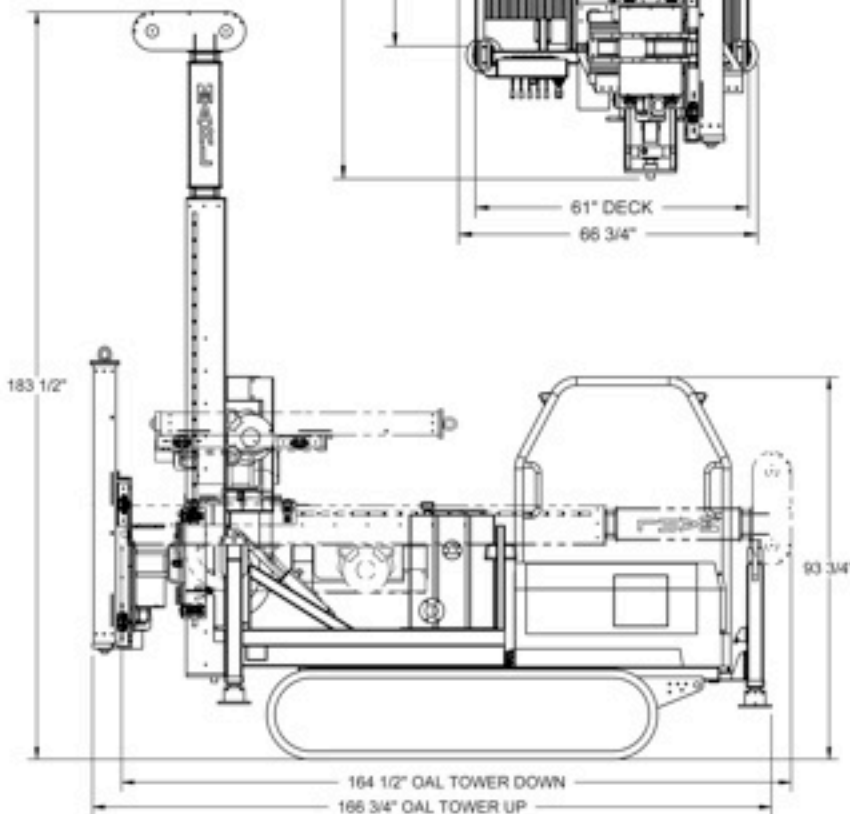
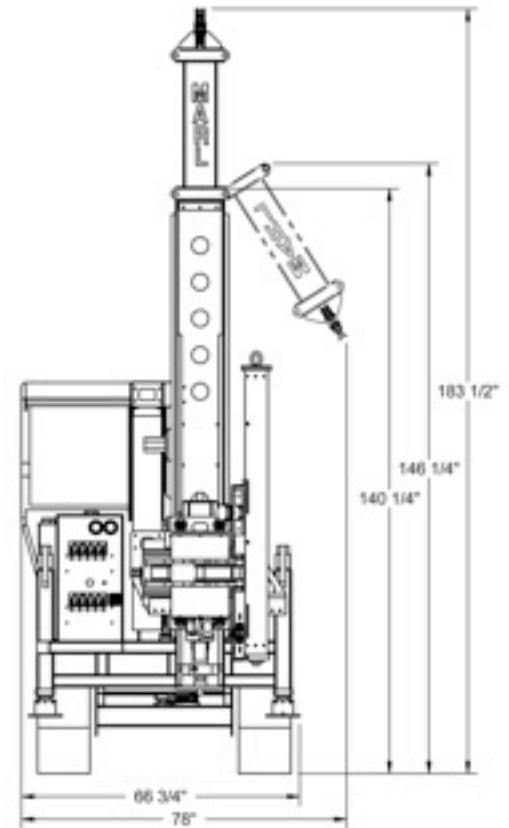
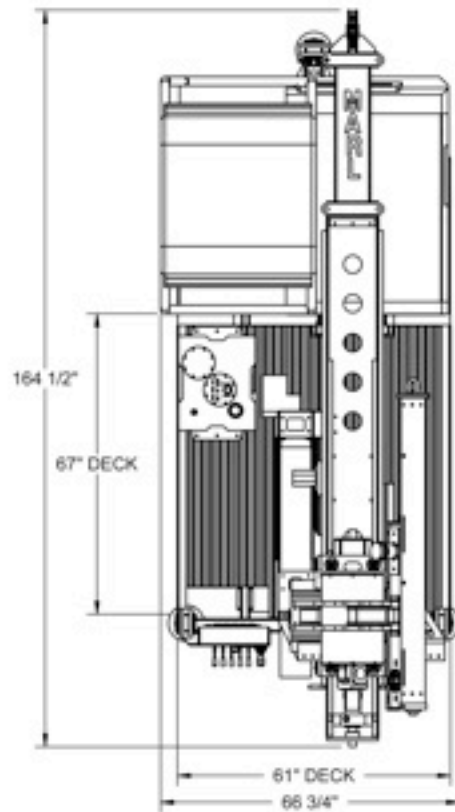
Powerful Limited Access Drill

The M 4CT auger drill is mounted on the ***Canycor S25A***, and is excellent for shallow to intermediate holes for geotechnical and environmental drilling.

Its compact size, powerful drill and tracked carrier make it highly maneuverable, easy to operate, and efficient. Perfect for a variety of applications such as construction and engineering. A favorite of both operators and clients!

Featuring driver ROPS protection, the M 4CT provides unique capabilities for accessing difficult locations.





Sample Specifications

- Gross vehicle weight 10,700 lbs
- Basic weight 8,870 lbs
- Tracked carrier: Canycom S25A
- Width 67 in
- Length 165 in
- Height 94 in
- Torque 4,500 ft. lbs.
- Ground pressure 5.54 psi
- Winch pull 4,400 lbs
- Rotary head side slide 13.75 in
- Stroke 68 in
- Grade ability 47 %
- All-hydrostatic track and rotary drives

Options

- Automatic SPT hammer
- Mud pumps
- 180° pivoting deck

Attachment B-1:
S18X-003 Proposed Monitoring Well Locations



Transport
Canada

Transports
Canada

Location of Monitoring Wells to be Installed at Norman Wells Airport

November 15th, 2018

Legend

- New Monitoring Well Location



Attachment B-2:
S17X-004 Proposed Monitoring Well Location



LEGEND

Proposed well locations

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK
<div>REFERENCES</div> <div><div>PROPRIETARY INFORMATION MAY NOT BE REPRODUCED OR DIVULGED WITHOUT PRIOR WRITTEN CONSENT OF BLUMETRIC ENVIRONMENTAL INC. DO NOT SCALE DRAWING. THIS DRAWING MAY HAVE BEEN REDUCED. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS. Service Layer Credits: ESRI World Imagery</div><div><div><div>0100200400Meters</div><div><div>N</div><div>E</div><div>S</div><div>W</div></div></div></div></div>				
<div>Coordinate System: UTM NAD83 Zone 9</div>				
<div>CLIENT</div> <div>Public Services and Procurement Canada</div>				
<div>PROJECT</div> <div>Norman Wells Airport Airside Land Treatment Unit Closure & Reclamation Plan</div>				
<div>TITLE</div> <div>Proposed Well Locations</div>				
<div><div><div><div><div></div><div>BluMetric™</div><div>Environmental</div></div><div><div>4916 49th Street, PO Box 11086 Yellowknife, NT, X1A 1P3 TEL: (867) 873-3500 FAX: (867) 873-3499 Email: info@blumetric.ca Web: http://www.blumetric.ca</div></div></div></div></div>				
PROJECT # 180501		DATE January 14, 2019		
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