

Notice of Alteration Form

Dangerous Goods Handling and
Transportation Act Licence



Client File No. : 3440.20		DGH&TA Licence No. : 58 HW S2 RRRR	
Legal name of the Licencee: Miller Environmental Corporation			
Name of the FACILITY: MANITOBA ENVIRONMENTAL CENTRE			
Type of Activity: Hazardous waste management			
Licencee Contact Person: Dave Howes			
Mailing address of the Licencee: 1803 Hekla Ave.			
City: Winnipeg		Province: MB	Postal Code: R3N 0T1
Phone Number: (204) 925-9600 Fax: (204) 925-9601 Email: daveh@millerenvironmental.mb.ca			
Name of proponent contact person for purposes of the environmental assessment (e.g. consultant): Dave Howes			
Phone: (204) 925-9604		Mailing address:	
Fax: (204) 925-9601		Same as above.	
Email address: daveh@millerenvironmental.mb.ca			
Description of Alteration (max 150 characters): Miller proposes to use the southern portion of the repository cell to treat and stage waste solids prior to placement into the active area.			
Date: 2019-01-16		Signature: 	
		Printed name: Dave Howes	
<p>A complete Notice of Alteration (NoA) consists of the following components:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Cover letter <input type="checkbox"/> Notice of Alteration Form <input type="checkbox"/> 2 hard copies and 1 electronic copy of the reports/plans supporting the alteration to the facility 		<p>Submit the complete NoA to:</p> <p>Director Environmental Approvals Branch Manitoba Sustainable Development 1007 Century Street Winnipeg, Manitoba R3H 0W4</p> <p>For more information:</p> <p>Phone: (204) 945-8321 Fax: (204) 945-5229 http://www.gov.mb.ca/sd/eal</p>	



Miller Environmental Corporation

1803 Hekla Avenue
Winnipeg, Manitoba R2R 0K3
Tel. (204) 925-9600 Fax (204) 925-9601

Committed to Leadership in Our Industry

December 7, 2018

Manitoba Sustainable Development
Environmental Approvals
1007 Century Street
Winnipeg, MB R3H 0W4

Attn: Siobhan Burland Ross, M .Eng., P. Eng. – A/Director Environmental Approvals Branch

Dear Ms. Burland Ross:

RE: Repository Extension Staging Area - License DGHTA No. 58 HW S2 RRRR

Please accept this as Miller Environmental Corporation's (Miller) proposal to receive a variance to the issued Dangerous Goods Handling & Transportation Act License No. 58 HW S2 RRRR and the requirements specifically associated to the repository extension.

Currently, Miller has fully commissioned only the northern portion (active area) of the repository extension recently completed for the purpose of receiving waste for placement. Miller proposes to use the southern portion of the repository to treat and stage waste solids prior to placement into the active area. The southern treatment zone would be within the clay lined, engineered repository expansion footprint, with a cutoff berm separating the treatment zone from the active area. All water generated within the treatment zone will be collected, analyzed and treated and/or disposed of in accordance with our operating license. The waste solids are packaged into 205L steel, open top drums and consist of rags, filters or other material contaminated with solvents, paint or other hydrocarbon compounds. Containers are emptied and sorted in processing cells based on the type of material. Once sorted, the processing procedure begins, which includes application of a bio-spray to the material. After the pre-processing steps, the material requires time to react with the bio-spray and to reduce the levels of volatile organics to acceptable levels for placement into the active area. After processing is completed and confirmatory analytical is received to confirm material is below regulated CEPA landfill disposal criteria, the treated material is transferred to the active area of the repository cell.

Miller engaged Dillon Consulting to support the extension of the repository cell to provide the construction details and engineered drawings to Manitoba Sustainable Development (MSD). The compaction of the staging area was completed with the repository extension project as per the requirements of Miller's facility operating licence No. 58 HW S2 RRRR (section titled "Respecting the Construction of the Repository Cell", clauses 40 to 48). The details of the compaction work have been approved by MSD (refer to Appendix A – Manitoba Sustainable Development Approval, Appendix B - RC1-1 Shelby Tube Results).

The proposed staging area in the repository extension is 30m x 40m and is isolated by a berm from all areas in the repository cell (refer to Appendix C – Repository Cell Staging Area). After the initial pre-processing of the material in processing cells described above, Miller would utilize the proposed repository cell staging area to transfer the pre-processed material. Once processing of the material in the staging area is completed and external analytical is received to confirm material is below regulated CCME landfill disposal criteria, the treated material will be transferred to the repository cell. At the time of the next proposed repository cell expansion, the material from the staging area berm and floor would be processed (if necessary) and samples would be sent for analysis by an external laboratory. Once external analytical confirmed the compacted material was below regulated CCME landfill disposal criteria, the material would be transferred to the repository cell with all other treated material.

If you have any questions, please feel free to contact me at 204-925-9604 or by email at daveh@millerenvironmental.mb.ca.

Sincerely yours,

Miller Environmental Corporation

A handwritten signature in black ink, appearing to read 'Dave Howes', with a stylized flourish at the end.

Dave Howes

Director of Regulatory Affairs

CC: Cory Graham – Manitoba Sustainable Development
Paul Bauer – Vice President/General Manager, Miller Environmental Corporation
Yolo Ortiz – Operations Manager, Miller Environmental Corporation

Appendix A

Manitoba Sustainable Development Approval

Dave Howes

From: Graham, Cory (SD) <Cory.Graham@gov.mb.ca>
Sent: October 2, 2018 7:41 AM
To: Dave Howes
Cc: Ige, Dupe (SD); Kneeshaw, Tyler (SD)
Subject: FW: Repository Cell Expansion - file 3440.20, Miller (Montcalm)
Attachments: RC1-1 Shelby Tube Results.pdf

Good Morning,

The attached results of permeability testing look great, please be advised that the repository cell RC1-1 and the eastern end of RC1-2 may be utilized for its designed purpose.

As noted during the site inspection & testing, the western section of RC1-2 (the southern cell) will require additional testing prior to being put into use, due to not testing that area due to silt inclusions.

Please submit the as-built drawing (with the identified incomplete area) to the undersigned as soon as they have been finalized.

Regards,

Cory Graham, P.Eng.

Phone: (204) 250-7645

Fax: (204) 945-5229

In the event of an Environmental Emergency please call the 24hr Environmental Emergency Response Line at 204-944-4888

From: Dave Howes <daveh@millerenvironmental.mb.ca>
Sent: October-01-18 4:52 PM
To: Graham, Cory (SD) <Cory.Graham@gov.mb.ca>
Subject: Repository Cell Expansion

Hi Cory,

Please accept the attached document identifying the Shelby tube results from the repository expansion as per clause 45 of Miller's operating licence 58 HW S2 RRRR. Upon receiving approval from MSD, Miller will commence operations in the repository expansion. If there are any questions, please feel free to contact me at your convenience. Thanks.

Dave Howes

Director of Regulatory Affairs

[Miller Environmental Corporation](#)

ISO 9001:2015 & 14001:2015 & OHSAS 18001:2007

1803 Hekla Avenue, Winnipeg, MB R2R 0K3

Direct: 204-925-9604 Mobile: 204-771-2004

24 Hour Spill Response: 204-957-6327



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Appendix B

RC1-1 Shelby Tube Results



420 Turenne Street, Winnipeg, Manitoba, R2J 3W8
Phone: (204) 233-1694 Fax: (204) 235-1579
E-mail: engtech@mymts.net
www.eng-tech.ca

August 28, 2018

File No. 18-119-01

Secure Energy Services
47 Terracon Place
Winnipeg, Manitoba
R2J 4B3

ATTENTION: Jared Andrews

RE: Hydraulic Conductivity Test Results, Miller Environmental Corporation, St. Jean Baptiste, MB

ENG-TECH Consulting Limited (ENG-TECH) collected on August 3, 2018 seven (7) Shelby tube samples from the above project and completed the requested hydraulic conductivity testing on three (3) samples selected by MB Sustainable Development. The seven (7) Shelby Tube samples were extracted on August 13, 2018 at ENG-TECH laboratory.

The samples labelled as #S2, #S5 and #S7 were prepared for testing in accordance with ASTM D5084-16a, *Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials using a Flexible Wall Permeameter*. The final hydraulic conductivity values (k_{20}) of 3.3×10^{-8} cm/sec, 1.8×10^{-8} cm/sec and 5.8×10^{-9} cm/sec were obtained for the samples identified as #S2, #S5 and #S7, respectively. The hydraulic conductivity test data is outlined in Table 1, while the graphical representations of the hydraulic conductivity versus elapsed time are shown in Figures 1 to 3. Photographs of the samples are attached

ENG-TECH trusts the above is all the information you require. If you have any questions, please contact the undersigned.

A handwritten signature in black ink, appearing to read "Clark Hryhoruk".

Sincerely,
ENG-TECH Consulting Limited

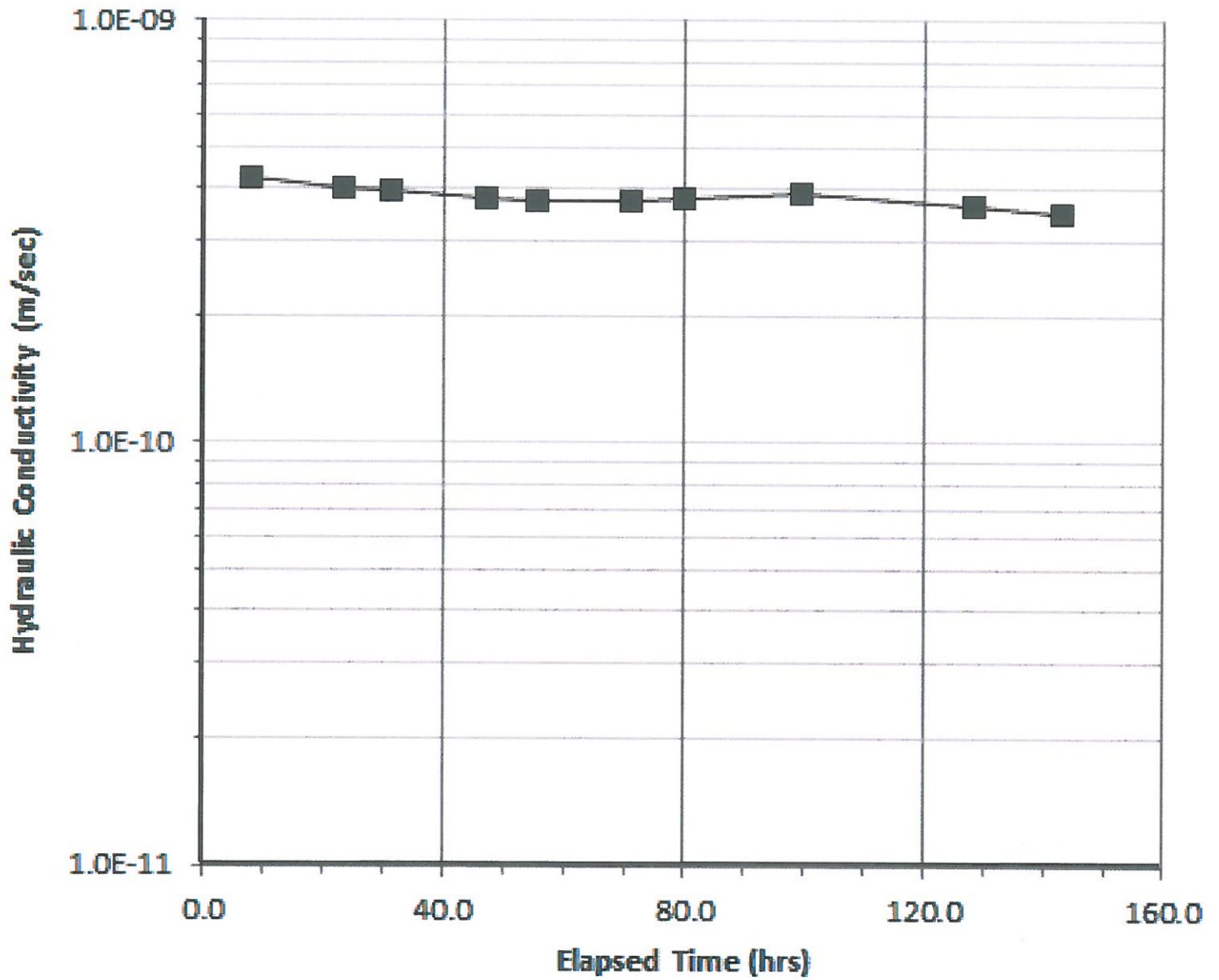
Clark Hryhoruk, M.Sc., P.Eng.
President, Geotechnical Engineer

CDH/pfpc

Attachments: Table 1 – Hydraulic Conductivity Test Data (Miller Environmental Corporation, St. Jean Baptiste, MB)
Figure 1 – Hydraulic Conductivity Versus Elapsed Time (#S2)
Figure 2 – Hydraulic Conductivity Versus Elapsed Time (#S5)
Figure 3 – Hydraulic Conductivity Versus Elapsed Time (#S7)
Photographs (1 to 6)

TABLE 1
HYDRAULIC CONDUCTIVITY TEST DATA
MILLER ENVIRONMENTAL CORPORATION, ST. JEAN BAPTISTE, MB

SAMPLE IDENTIFICATION	#S2	#S5	#S7
INITIAL VALUES			
ENG-TECH Reference No.	18-119-1-3	18-119-1-4	18-119-1-5
Length of Sample in Tube (cm)	52.0	63.5	63.5
Length (cm)	7.10	7.03	7.26
Diameter (cm)	7.19	7.18	7.19
Area (cm ²)	40.6	40.5	40.6
Volume (cm ³)	288.1	284.5	294.6
Water Content (%)	49.8	50.6	42.9
Bulk Dry Density (kg/m ³)	1143	1147	1288
Specific Gravity (G _s) (assumed)	2.70	2.70	2.70
Void Ratio	1.362	1.354	1.096
Degree of Saturation (%)	98.6	100	100
FINAL VALUES			
Length (cm)	7.18	7.09	7.38
Diameter (cm)	7.26	7.20	7.25
Area (cm ²)	41.4	40.7	41.3
Volume (cm ³)	297.1	288.5	304.5
Water Content (%)	54.2	51.7	41.0
Bulk Dry Density (kg/m ³)	1105	1141	1294
Specific Gravity (G _s) (assumed)	2.70	2.70	2.70
Void Ratio	1.443	1.366	1.087
Degree of Saturation (%)	100	100	100
CONSOLIDATION PHASE			
Confining Pressure (kPa)	103.4	103.4	103.4
Pore Water Pressure (kPa)	82.7	82.7	82.7
Effective Stress (kPa)	20.7	20.7	20.7
PERMEATION PHASE			
Confining Pressure (kPa)	103.4	103.4	103.4
Pore Water Pressure (kPa)	82.7	82.7	82.7
Effective Stress (kPa)	20.7	20.7	20.7
Hydraulic Gradient	15.7	15.9	15.2
Permeant Fluid	Potable Tap Water	Potable Tap Water	Potable Tap Water
HYDRAULIC CONDUCTIVITY AT TEST TEMPERATURE OF 25 °C (cm/sec)	3.7 x 10 ⁻⁸	2.0 x 10 ⁻⁸	6.5 x 10 ⁻⁹
HYDRAULIC CONDUCTIVITY AT TEMPERATURE OF 20 °C (K₂₀) (cm/sec)	3.3 x 10 ⁻⁸	1.8 x 10 ⁻⁸	5.8 x 10 ⁻⁹



420 Turenne Street
 Winnipeg, MB R2J 3W8
 Phone: (204) 233-1694
 Fax: (204) 235-1579

ENG. STAMP:



CLIENT:

SECURE ENERGY SERVICES

DATE:

AUGUST 2018

DRAWN BY:
PFPC

FIGURE No.:
1

REV.:

PROJECT:

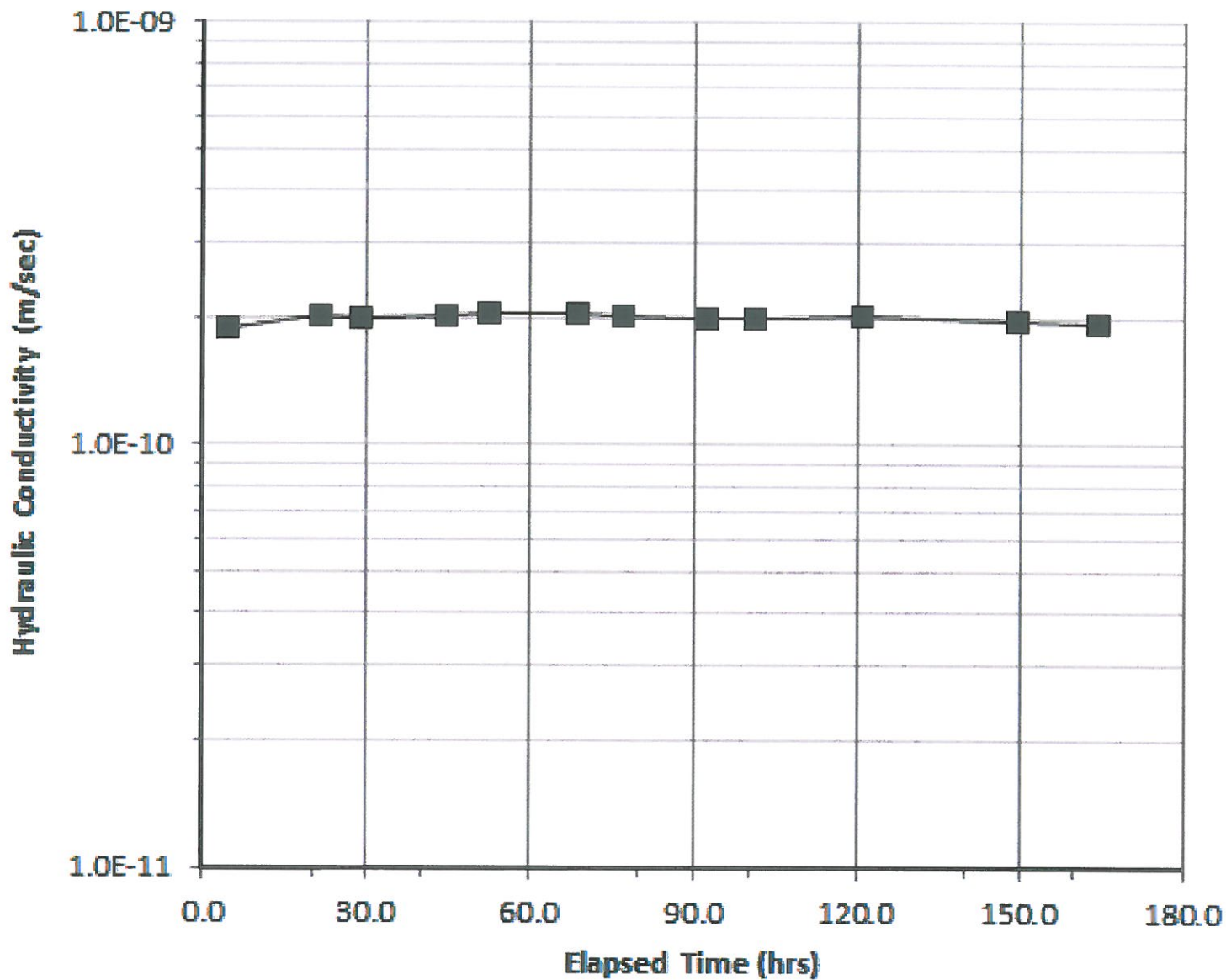
MILLER ENVIRONMENTAL CORPORATION,
 ST. JEAN BAPTISTE, MB.

FILE No.:

18-119-01

SCALE:
N/A

HYDRAULIC CONDUCTIVITY
 VERSUS ELAPSED TIME
 (#S2)



420 Turenne Street
 Winnipeg, MB R2J 3W8
 Phone: (204) 233-1694
 Fax: (204) 235-1579

ENG. STAMP:



CLIENT:
 SECURE ENERGY SERVICES

DATE:
 AUGUST 2018

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FIGURE No.:
 2

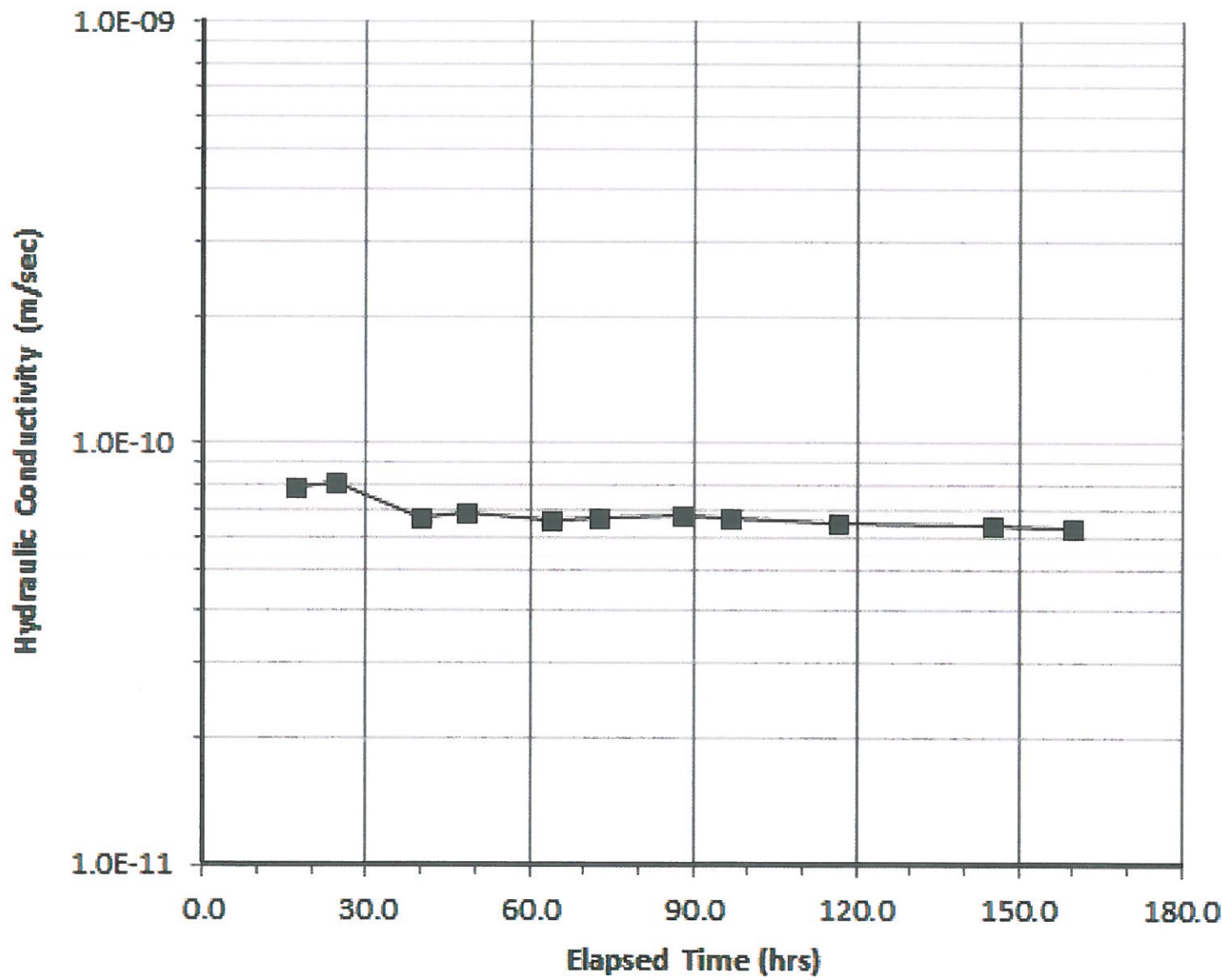
REV.:

PROJECT:
 MILLER ENVIRONMENTAL CORPORATION,
 ST. JEAN BAPTISTE, MB.

FILE No.:
 18-119-01

SCALE:
 N/A

HYDRAULIC CONDUCTIVITY
 VERSUS ELAPSED TIME
 (#S5)



ENG. STAMP:



CLIENT:
SECURE ENERGY SERVICES

DATE:
AUGUST 2018

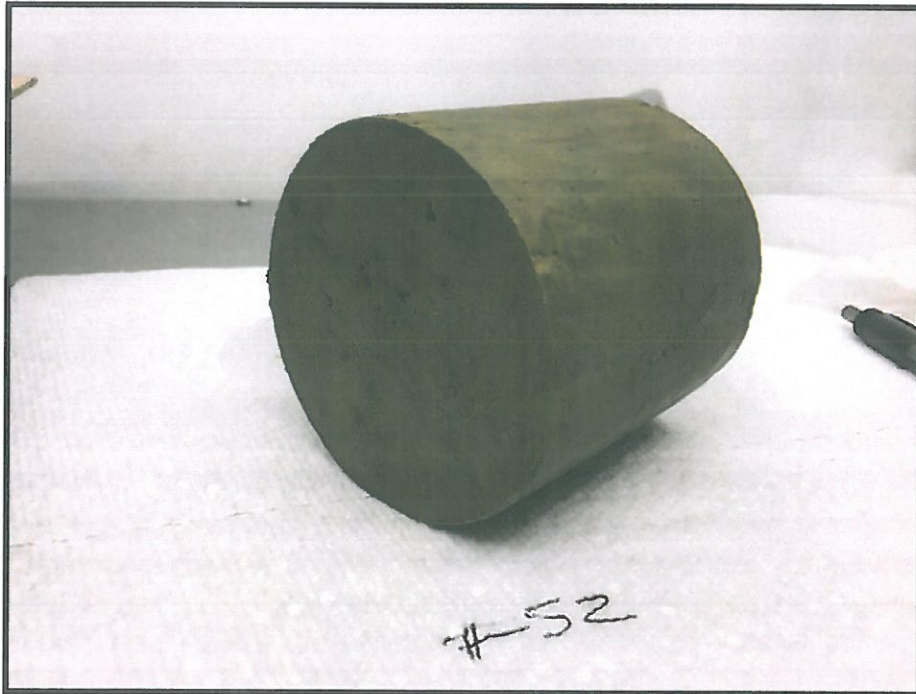
DRAWN BY:
PFPC

PROJECT:
MILLER ENVIRONMENTAL CORPORATION,
ST. JEAN BAPTISTE, MB.

FILE No.:
18-119-01

SCALE:
N/A

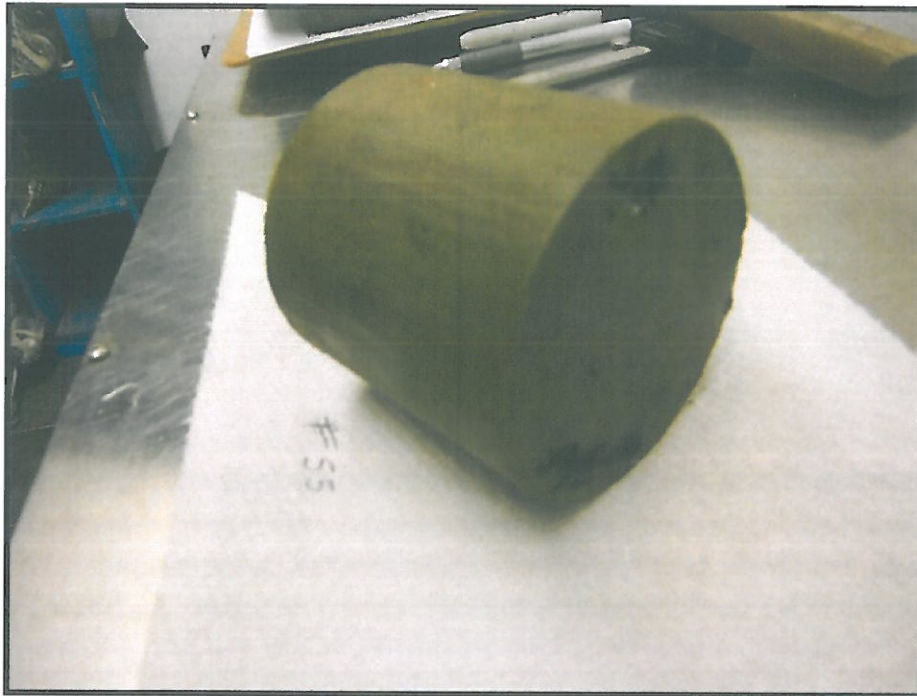
HYDRAULIC CONDUCTIVITY
VERSUS ELAPSED TIME
(#S7)



PHOTOGRAPH #1: Sample #S2 upon completion of test.



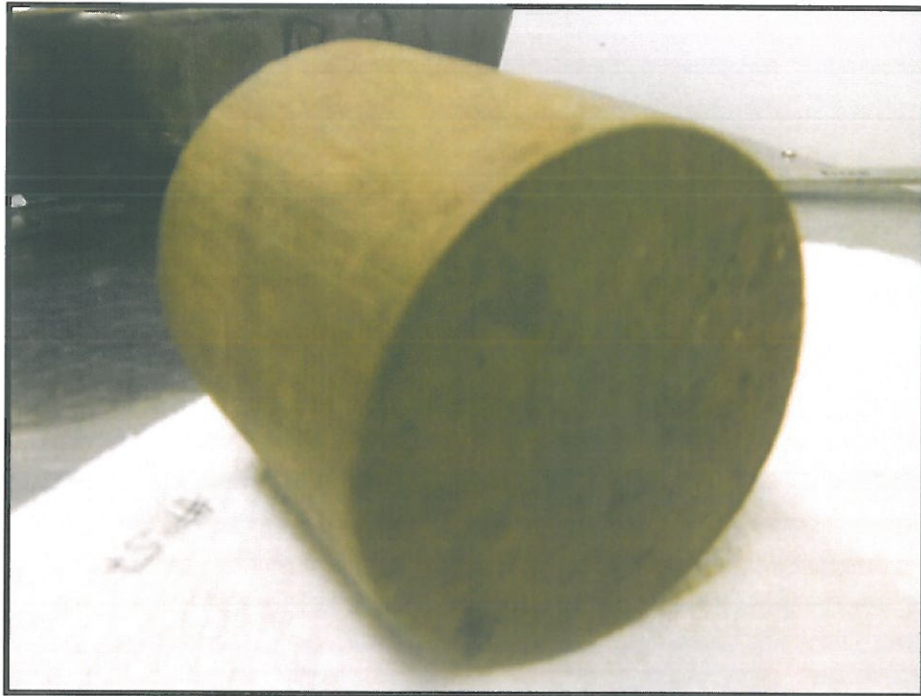
PHOTOGRAPH #2: Sample #S2 after breaking apart.



PHOTOGRAPH #3: Sample #S5 upon completion of test.



PHOTOGRAPH #4: Sample #S5 after breaking apart.



PHOTOGRAPH #5: Sample #S7 upon completion of test.



PHOTOGRAPH #6: Sample #S7 after breaking apart.

Appendix C
Repository Cell Staging Area

