

Follow Up Report: #2022029

February 8th, 2022,

Engine Oil on Water Body B38 – Drill Rig#10



The following information refers to a spill reported by Agnico Eagle Mines Ltd. on February 9th, 2022, and is being provided in accordance with:

- the Nunavut Water Board License 2BB-MEL1424 Water License, part H, item 4c
- the Fisheries Act subsection 38(5)

Description of Incident:

On February 8th, at approximately 14:00, Environment Technicians were conducting an inspection of surface Drill# 10, operated by AEM's contractor Orbit Garant. During the inspection, areas with small amounts engine oil dripping from inside the rigs onto the lake ice were observed. The drill released approximately 15 L of engine oil. The coordinates of the spill are: 63° 0' 28.93" N, 92°12' 31.50"W, on the Water body B38, which is a shallow pond with a maximum depth of 1.5 m (therefore it is generally assumed to freeze completely to the bottom and would not support fish through the winter season).



Figure 1: Incident Location

Spill Response & Cleanup:

During the inspection, Environment technicians notified the drillers of the issues. Absorbent pads were placed beneath the drips immediately. The Orbit Garant supervisor was notified, and the drills were shut down immediately to perform a preliminary cleanup and ensure the spill was contained. The cleanup was then finalized following the movement of the drill. Regular inspections were performed by the Environment Department during this time to ensure environmental compliance.

The drill was completed to another borehole location on February 14th, and the site remediation was performed during the following night. A dozer was used to scrape the contaminated snow and ice and a composite sample was collected on the ice surface of Pond B38 on February 15th in the incident area. The ice sample was sent to the laboratory for analysis of the following parameters: BTEX, F1-F4 Hydrocarbons, Oil & Grease, total metals, Conductivity, pH, and Total Suspended Solids (TSS).

Results showed concentrations below detection limit for BTEX and F1-F4 Hydrocarbons, while total Oil & Grease concentration is of 0.8 mg/L. For reference, the maximum concentration of any grab sample applicable to Effluent discharge in Meliadine Lake at monitoring station MEL-7 is of 5 mg/L for Oil & Grease and no visible sheen, as per Water Licence 2BB-MEL1424 Part D Item 11. The certificate of analysis is attached and identified as Appendix A.



Figure 2: Area after remediation efforts



Figure 3: Ice surface after remediation efforts

The contaminated ice and snow were disposed at the Snow Cell where it will be stored until snowmelt, at which point the contaminated water will be transferred to the Landfarm for treatment at the oil-water separator, with the other existing material accumulated during Winter, as per the Water Management Plan.

Impact Assessment:

Although the spill occurred on the lake ice, it is expected that minimal impacts occurred to the water body itself because all the contaminated ice was removed, as demonstrated by the quality of the post clean-up surface sample, and because the lake was frozen to the bottom.

Indeed, prior to mobilizing the drill and beginning the drilling operations, Orbit Garant confirmed Pond B38 was frozen to bottom, and the most recent ice thickness survey of Pond B38 was conducted March 8th, 2022, showed the pond still frozen to the bottom, with 45.7 cm of ice at the location of the survey.

Corrective Measures:

The *Spill Retainment's at the Drills and Pump Shack* procedure applicable to drill rig investigation (attached as Appendix B) was thoroughly reviewed with both Orbit Garant shifts to remind crews of the importance of routine, regular inspections of their rigs (as per the section 5.2 of the attached procedure).

Furthermore, Orbit Garant is now using a more detailed Form for daily inspections (attached as Appendix C) and started to wrap high risk drill areas with absorbent rags to prevent a spill from occurring. As per Orbit Garant's Drill Environmental Inspection Guide (Appendix D), when absorbent rags show signs of saturation, the source of the leak is identified and fixed and the absorbent rags are replaced.

In addition, since this incident, the Environment Department increased its environmental inspections on drill located on water bodies, currently these inspections are being conducted every 2 days

Finally, to demonstrate the seriousness of the incident, AEM asked that the Orbit employees that were working at Drill 10 at the time of the spill be released of their duties. They left Meliadine on the next plane leaving site after the incident occurred.

Erratum:

In the initial spill report sent February 9th, 2022 (#2022029), hydraulic oil was listed as the product spilled under section "H" but after further investigation, it was determined that the material released was engine oil.

In the initial spill report sent February 9th, 2022 (#2022029), the water body on which the spill occurred was misidentified in section "K" as A8 but should have read B38 as the drill was located on Pond B38. Related to this misidentification, the following information communicated to Christine Wilson (CIRNAC) on February 11th, 2022 "*A8 is completely frozen, no oil entered the water body.*" should have read "*B38 is completely frozen, no oil entered the water body.*"



Your P.O. #: OL-1129375
 Site Location: MELIADINE
 Your C.O.C. #: N/a

Attention: Reporting

Agnico-Eagle
 Meliadine
 Meliadine Mine
 Rankin Inlet, NU
 CANADA X0C 0G0

Report Date: 2022/03/01
 Report #: R7023331
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C246785

Received: 2022/02/22, 09:30

Sample Matrix: Surface Water
 # Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Conductivity (1)	1	N/A	2022/02/24	CAM SOP-00414	SM 23 2510 m
Petroleum Hydro. CCME F1 & BTEX in Water (1)	1	N/A	2022/02/24	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1, 3)	1	2022/02/23	2022/02/24	CAM SOP-00316	CCME PHC-CWS m
Hardness Total (calculated as CaCO ₃) (2, 4)	1	N/A	2022/02/28	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (total) (2)	1	2022/02/23	2022/02/28	BBY7SOP-00002	EPA 6020B R2 m
Elements by CRC ICPMS (total) (2)	1	2022/02/28	2022/02/28	BBY7SOP-00003/BBY7SOEPA 6020B R2 m -00002	
Total Oil and Grease (1)	1	2022/02/23	2022/02/24	CAM SOP-00326	EPA1664B m, SM5520B m
pH (1)	1	2022/02/23	2022/02/24	CAM SOP-00413	SM 4500H+ B m
Low Level Total Suspended Solids (1)	1	2022/02/23	2022/02/24	CAM SOP-00428	SM 23 2540D m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd, Mississauga, ON, L5N 2L8



Your P.O. #: OL-1129375
Site Location: MELIADINE
Your C.O.C. #: N/a

Attention: Reporting

Agnico-Eagle
Meliadine
Meliadine Mine
Rankin Inlet, NU
CANADA X0C 0G0

Report Date: 2022/03/01
Report #: R7023331
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CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C246785

Received: 2022/02/22, 09:30

(2) This test was performed by Bureau Veritas Burnaby, 4606 Canada Way, Burnaby, BC, V5G 1K5

(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(4) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Katherine Szozda, Project Manager

Email: Katherine.Szozda@bureauveritas.com

Phone# (613)274-0573 Ext:7063633

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



BUREAU
VERITAS

Bureau Veritas Job #: C246785

Report Date: 2022/03/01

Agnico-Eagle

Site Location: MELIADINE

Your P.O. #: OL-1129375

Sampler Initials: SK

CCME PHCS, BTEX/F1-F4 (SURFACE WATER)

Bureau Veritas ID		RXL475			RXL475		
Sampling Date		2022/02/15 13:00			2022/02/15 13:00		
COC Number		N/a			N/a		
	UNITS	2022029	RDL	QC Batch	2022029 Lab-Dup	RDL	QC Batch
BTEX & F1 Hydrocarbons							
Benzene	ug/L	<0.20	0.20	7848279	<0.20	0.20	7848279
Toluene	ug/L	<0.20	0.20	7848279	<0.20	0.20	7848279
Ethylbenzene	ug/L	<0.20	0.20	7848279	<0.20	0.20	7848279
o-Xylene	ug/L	<0.20	0.20	7848279	<0.20	0.20	7848279
p+m-Xylene	ug/L	<0.40	0.40	7848279	<0.40	0.40	7848279
Total Xylenes	ug/L	<0.40	0.40	7848279	<0.40	0.40	7848279
F1 (C6-C10)	ug/L	<25	25	7848279	<25	25	7848279
F1 (C6-C10) - BTEX	ug/L	<25	25	7848279	<25	25	7848279
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	<100	100	7848807			
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	7848807			
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	7848807			
Reached Baseline at C50	ug/L	Yes		7848807			
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	109		7848279	110		7848279
4-Bromofluorobenzene	%	92		7848279	95		7848279
D10-o-Xylene	%	96		7848279	106		7848279
D4-1,2-Dichloroethane	%	116		7848279	121		7848279
o-Terphenyl	%	99		7848807			
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Lab-Dup = Laboratory Initiated Duplicate							



BUREAU
VERITAS

Bureau Veritas Job #: C246785
Report Date: 2022/03/01

Agnico-Eagle
Site Location: MELIADINE
Your P.O. #: OL-1129375
Sampler Initials: SK

TOTAL ICPMS METALS FOR CCME CEQG FOR SW (SURFACE WATER)

Bureau Veritas ID		RXL475		
Sampling Date		2022/02/15 13:00		
COC Number		N/a		
	UNITS	2022029	RDL	QC Batch
Metals				
Total Aluminum (Al)	mg/L	0.0241	0.0030	7856916
Total Antimony (Sb)	mg/L	<0.00050	0.00050	7856916
Total Arsenic (As)	mg/L	0.00325	0.00010	7856916
Total Barium (Ba)	mg/L	0.0030	0.0010	7856916
Total Beryllium (Be)	mg/L	<0.00010	0.00010	7856916
Total Bismuth (Bi)	mg/L	<0.0010	0.0010	7856916
Total Boron (B)	mg/L	<0.050	0.050	7856916
Total Cadmium (Cd)	mg/L	<0.000010	0.000010	7856916
Total Chromium (Cr)	mg/L	<0.0010	0.0010	7856916
Total Cobalt (Co)	mg/L	<0.00020	0.00020	7856916
Total Copper (Cu)	mg/L	<0.00050	0.00050	7856916
Total Iron (Fe)	mg/L	0.086	0.010	7856916
Total Lead (Pb)	mg/L	0.00752	0.00020	7856916
Total Lithium (Li)	mg/L	<0.0020	0.0020	7856916
Total Manganese (Mn)	mg/L	0.0030	0.0010	7856916
Total Molybdenum (Mo)	mg/L	<0.0010	0.0010	7856916
Total Nickel (Ni)	mg/L	<0.0010	0.0010	7856916
Total Selenium (Se)	mg/L	<0.00010	0.00010	7856916
Total Silicon (Si)	mg/L	<0.10	0.10	7856916
Total Silver (Ag)	mg/L	<0.000020	0.000020	7856916
Total Strontium (Sr)	mg/L	0.0041	0.0010	7856916
Total Thallium (Tl)	mg/L	<0.000010	0.000010	7856916
Total Tin (Sn)	mg/L	<0.0050	0.0050	7856916
Total Titanium (Ti)	mg/L	<0.0050	0.0050	7856916
Total Uranium (U)	mg/L	<0.00010	0.00010	7856916
Total Vanadium (V)	mg/L	<0.0050	0.0050	7856916
Total Zinc (Zn)	mg/L	<0.0050	0.0050	7856916
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	7856916
Total Calcium (Ca)	mg/L	1.41	0.050	7856915
Total Magnesium (Mg)	mg/L	0.068	0.050	7856915
Total Potassium (K)	mg/L	<0.050	0.050	7856915
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C246785
Report Date: 2022/03/01

Agnico-Eagle
Site Location: MELIADINE
Your P.O. #: OL-1129375
Sampler Initials: SK

TOTAL ICPMS METALS FOR CCME CEQG FOR SW (SURFACE WATER)

Bureau Veritas ID		RXL475		
Sampling Date		2022/02/15 13:00		
COC Number		N/a		
	UNITS	2022029	RDL	QC Batch
Total Sodium (Na)	mg/L	0.142	0.050	7856915
Total Sulphur (S)	mg/L	<3.0	3.0	7856915
Calculated Parameters				
Total Hardness (CaCO ₃)	mg/L	3.79	0.50	7856914
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C246785

Report Date: 2022/03/01

Agnico-Eagle

Site Location: MELIADINE

Your P.O. #: OL-1129375

Sampler Initials: SK

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		RXL475		
Sampling Date		2022/02/15 13:00		
COC Number		N/a		
	UNITS	2022029	RDL	QC Batch
Inorganics				
Conductivity	umho/cm	10	1.0	7848472
pH	pH	6.93		7848523
Total Suspended Solids	mg/L	6	1	7847727
Petroleum Hydrocarbons				
Total Oil & Grease	mg/L	0.80	0.50	7848162
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C246785

Report Date: 2022/03/01

Agnico-Eagle

Site Location: MELIADINE

Your P.O. #: OL-1129375

Sampler Initials: SK

TEST SUMMARY

Bureau Veritas ID: RXL475
Sample ID: 2022029
Matrix: Surface Water

Collected: 2022/02/15
Shipped:
Received: 2022/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	7848472	N/A	2022/02/24	Surinder Rai
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7848279	N/A	2022/02/24	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7848807	2022/02/23	2022/02/24	Agnieszka Brzuzy-Snopko
Hardness Total (calculated as CaCO ₃)	CALC	7856914	N/A	2022/02/28	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	7856915	2022/02/28	2022/02/28	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	7856916	2022/02/28	2022/02/28	Andrew An
Total Oil and Grease	BAL	7848162	2022/02/23	2022/02/24	Niravkumar Patel
pH	AT	7848523	2022/02/23	2022/02/24	Surinder Rai
Low Level Total Suspended Solids	BAL	7847727	2022/02/23	2022/02/24	Shaneil Hall

Bureau Veritas ID: RXL475 Dup
Sample ID: 2022029
Matrix: Surface Water

Collected: 2022/02/15
Shipped:
Received: 2022/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7848279	N/A	2022/02/24	Georgeta Rusu



BUREAU
VERITAS

Bureau Veritas Job #: C246785

Report Date: 2022/03/01

Agnico-Eagle

Site Location: MELIADINE

Your P.O. #: OL-1129375

Sampler Initials: SK

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	11.7°C
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Results relate only to the items tested.

BUREAU
VERITAS

Bureau Veritas Job #: C246785

Report Date: 2022/03/01

QUALITY ASSURANCE REPORT

Agnico-Eagle

Site Location: MELIADINE

Your P.O. #: OL-1129375

Sampler Initials: SK

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7848279	1,4-Difluorobenzene	2022/02/24	98	70 - 130	99	70 - 130	107	%				
7848279	4-Bromofluorobenzene	2022/02/24	99	70 - 130	105	70 - 130	88	%				
7848279	D10-o-Xylene	2022/02/24	102	70 - 130	99	70 - 130	99	%				
7848279	D4-1,2-Dichloroethane	2022/02/24	104	70 - 130	100	70 - 130	108	%				
7848807	o-Terphenyl	2022/02/23	98	60 - 130	101	60 - 130	99	%				
7847727	Total Suspended Solids	2022/02/24					<1	mg/L	0	25	100	85 - 115
7848162	Total Oil & Grease	2022/02/24			99	85 - 115	<0.50	mg/L	1.5	25		
7848279	Benzene	2022/02/24	116	50 - 140	98	50 - 140	<0.20	ug/L	NC	30		
7848279	Ethylbenzene	2022/02/24	127	50 - 140	107	50 - 140	<0.20	ug/L	NC	30		
7848279	F1 (C6-C10) - BTEX	2022/02/24					<25	ug/L	NC	30		
7848279	F1 (C6-C10)	2022/02/24	110	60 - 140	93	60 - 140	<25	ug/L	NC	30		
7848279	o-Xylene	2022/02/24	126	50 - 140	103	50 - 140	<0.20	ug/L	NC	30		
7848279	p+m-Xylene	2022/02/24	125	50 - 140	105	50 - 140	<0.40	ug/L	NC	30		
7848279	Toluene	2022/02/24	114	50 - 140	95	50 - 140	<0.20	ug/L	NC	30		
7848279	Total Xylenes	2022/02/24					<0.40	ug/L	NC	30		
7848472	Conductivity	2022/02/24			101	85 - 115	<1.0	umho/cm	0.25	25		
7848523	pH	2022/02/24			102	98 - 103			1.5	N/A		
7848807	F2 (C10-C16 Hydrocarbons)	2022/02/24	88	60 - 130	98	60 - 130	<100	ug/L	NC	30		
7848807	F3 (C16-C34 Hydrocarbons)	2022/02/24	92	60 - 130	105	60 - 130	<200	ug/L	NC	30		
7848807	F4 (C34-C50 Hydrocarbons)	2022/02/24	91	60 - 130	104	60 - 130	<200	ug/L	NC	30		
7856916	Total Aluminum (Al)	2022/02/28	106	80 - 120	102	80 - 120	<0.0030	mg/L				
7856916	Total Antimony (Sb)	2022/02/28	104	80 - 120	102	80 - 120	<0.00050	mg/L				
7856916	Total Arsenic (As)	2022/02/28	103	80 - 120	101	80 - 120	<0.00010	mg/L				
7856916	Total Barium (Ba)	2022/02/28	99	80 - 120	98	80 - 120	<0.0010	mg/L				
7856916	Total Beryllium (Be)	2022/02/28	90	80 - 120	93	80 - 120	<0.00010	mg/L				
7856916	Total Bismuth (Bi)	2022/02/28	98	80 - 120	98	80 - 120	<0.0010	mg/L				
7856916	Total Boron (B)	2022/02/28	90	80 - 120	93	80 - 120	<0.050	mg/L				
7856916	Total Cadmium (Cd)	2022/02/28	105	80 - 120	103	80 - 120	<0.000010	mg/L				
7856916	Total Chromium (Cr)	2022/02/28	104	80 - 120	101	80 - 120	<0.0010	mg/L				
7856916	Total Cobalt (Co)	2022/02/28	106	80 - 120	103	80 - 120	<0.00020	mg/L				
7856916	Total Copper (Cu)	2022/02/28	106	80 - 120	103	80 - 120	<0.00050	mg/L				

BUREAU
VERITAS

Bureau Veritas Job #: C246785

Report Date: 2022/03/01

QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle

Site Location: MELIADINE

Your P.O. #: OL-1129375

Sampler Initials: SK

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7856916	Total Iron (Fe)	2022/02/28	109	80 - 120	104	80 - 120	<0.010	mg/L				
7856916	Total Lead (Pb)	2022/02/28	102	80 - 120	101	80 - 120	<0.00020	mg/L				
7856916	Total Lithium (Li)	2022/02/28	103	80 - 120	99	80 - 120	<0.0020	mg/L				
7856916	Total Manganese (Mn)	2022/02/28	106	80 - 120	102	80 - 120	<0.0010	mg/L				
7856916	Total Molybdenum (Mo)	2022/02/28	106	80 - 120	103	80 - 120	<0.0010	mg/L				
7856916	Total Nickel (Ni)	2022/02/28	107	80 - 120	105	80 - 120	<0.0010	mg/L				
7856916	Total Selenium (Se)	2022/02/28	105	80 - 120	102	80 - 120	<0.00010	mg/L				
7856916	Total Silicon (Si)	2022/02/28	109	80 - 120	108	80 - 120	<0.10	mg/L				
7856916	Total Silver (Ag)	2022/02/28	102	80 - 120	100	80 - 120	<0.000020	mg/L				
7856916	Total Strontium (Sr)	2022/02/28	98	80 - 120	97	80 - 120	<0.0010	mg/L				
7856916	Total Thallium (Tl)	2022/02/28	99	80 - 120	98	80 - 120	<0.000010	mg/L				
7856916	Total Tin (Sn)	2022/02/28	103	80 - 120	102	80 - 120	<0.0050	mg/L				
7856916	Total Titanium (Ti)	2022/02/28	108	80 - 120	102	80 - 120	<0.0050	mg/L				
7856916	Total Uranium (U)	2022/02/28	100	80 - 120	100	80 - 120	<0.00010	mg/L				
7856916	Total Vanadium (V)	2022/02/28	107	80 - 120	103	80 - 120	<0.0050	mg/L				
7856916	Total Zinc (Zn)	2022/02/28	112	80 - 120	105	80 - 120	<0.0050	mg/L				
7856916	Total Zirconium (Zr)	2022/02/28	102	80 - 120	100	80 - 120	<0.00010	mg/L				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).



BUREAU
VERITAS

Bureau Veritas Job #: C246785

Report Date: 2022/03/01

Agnico-Eagle

Site Location: MELIADINE

Your P.O. #: OL-1129375

Sampler Initials: SK

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, BBY Scientific Specialist

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



BUREAU
VERITAS

Bureau Veritas Job #: C246785

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Agnico-Eagle

Site Location: MELIADINE

Your P.O. #: OL-1129375

Sampler Initials: SK

Exceedance Summary Table – Metal Mining Effluent Reg
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						

	Geology
	MEL-GEO-PRO-3xxx
	Spill Retainments at the Drills and Pump Shack

Electronic Approval	
Approver	Geology Superintendent
Approver	Health and Safety General Supervisor
Approver	OHSC Representative

1 – PURPOSE

The purpose of this procedure is to ensure that the spill retention pans and mattings at the drills and pump shacks are disposed in a well structured way. This will allow the employees at the drills to be guided about the numbers and dispositions of pans and matting they need to put place, and will orient geology and environment team during their inspections as this procedure would be used as a guidebook.

This procedure will mitigate the risks of environment spills, most importantly while the drilling on and near by frozen lakes, as any spills there are reportable to the government are hurting the company credibility in front of the communities and financial market.

2 – SCOPE

This procedure/document is intended for Orbit team members, exploration technicians, environment field crew or any other individuals intending be informed about how both the drilling company and Agnico-Eagle's Meliadine Division are mitigating the risks of reportable spills while diamond drilling operations.

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3 – DEFINITIONS

Term	Definitions
Drip pans and spill containment trays	<p>Many types of drip pans and spill containment trays exist: Platforms, spills tray, utility trays, Leak diverters, Spill Dikes, etc. (See Annex I).</p> <p>They may be in various size and material, permanently fixed or mobile, equipped with water filters or not.</p> <p>They are effective in catching spills and even drips before they cause environmental concerns and hazardous or unsafe conditions on the floor or on the ground.</p> <p>The spill containments need to be able to contain a minimum of 25% of the material put inside in case of leaks.</p>
Oil-Only Absorbent Mats and Pads	They absorb oil, diesel, gas and petroleum anywhere (even on water) while repelling water.
Fuel Mat	It's a fuel spill management mat that is designed to capture most minor spills, overfills, and splashes or drips that occur when fueling or the handling of fuels.
Universal Absorbent Pads	They are made of one layer of lint-free spunbond fabric that is ultrasonically bonded to one layer of meltblown polypropylene sorbent.
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	Spill Retainments at the Drills and Pump Shack

Term	Definitions
	This type of absorbent comes in pad and roll and absorbs all water based fluids, oil, diesel, gas, coolants, cutting fluids, hydraulic fluids, vegetable oil, acetone, turpentine, ether, methyl ethyl ketone, hexane, trichloroethylene, etc.

4 – PELIMINARY INFORMATION

4.1 PPE and equipment required

- 2-way handheld radio
- Safety glasses or goggles
- Steel-toe boots with metatarsal protection/guard
- Log book with spill pan quick guide sheet

The following protective gear is optional:

- Standard Winter PPE
- Cleats under boots
- Winter coat (high visibility)
- Winter pants (high visibility)
- Winter work gloves
- Neck cover
- Winter hat or balaclava

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4.3

For all work being done on ice, follow the guidelines of the following procedures:

- **MEL-GEO-PRO-3002 Working on Ice**
- **MEL-HSH-PRO-0021 Adverse Weather - Work Restriction**

5 – PROCESS

Spill pans disposition at the drill

5.1a Mobile drills

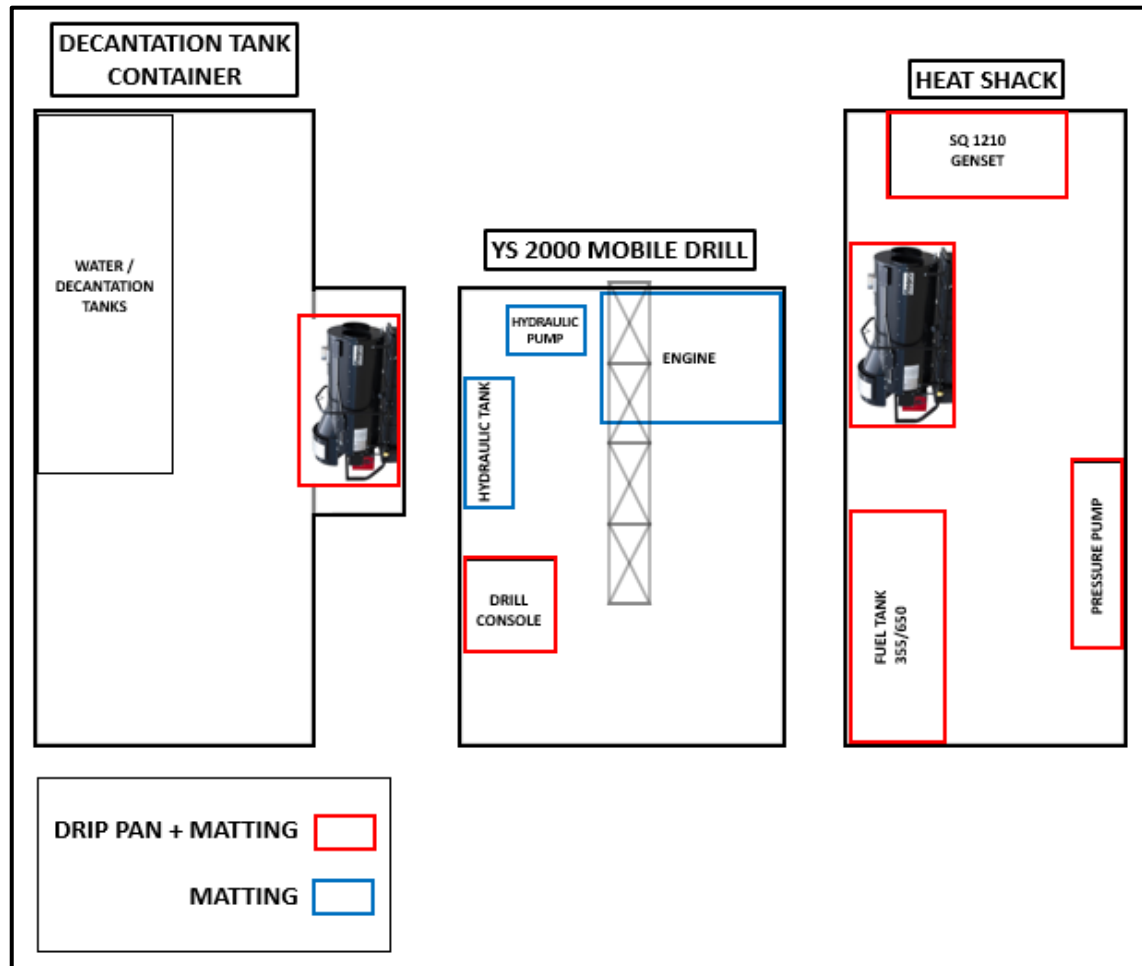
Mobile drills are the ones that are tracked behing a dozer. Normally used during the winter they can also be used without snow cover while tracked on existing civil invrastructures or on production leases.



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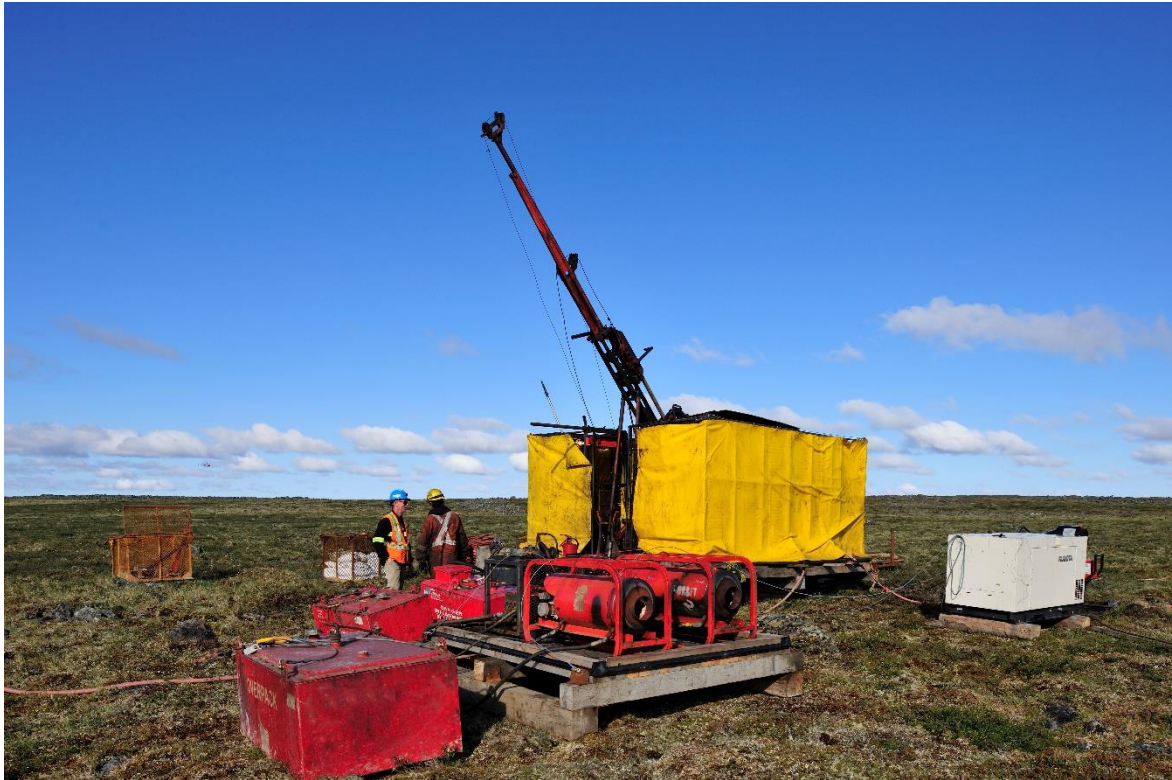
Orbit Garant Drilling made a sketch about where containment spill pans need to be installed inside and around the drills when setuped:



5.1b Fly drills

Fly drills are the ones that are moved from one site to the other by dismantelling in into slingable parts with the use of a helicopter.

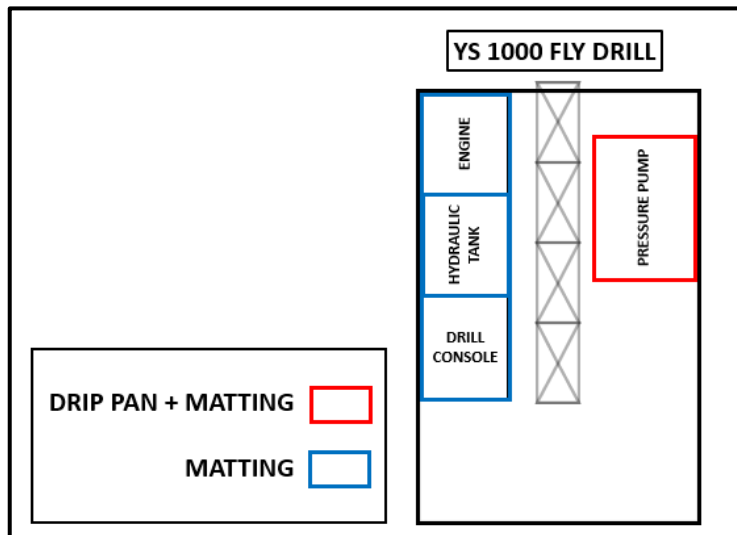
	Geology
	MEL-GEO-PRO-3xxx
	Spill Retainments at the Drills and Pump Shack



Extra care is necessary to empty containment pans and to remove all matings that may fly away during this operation. This following sketch is showing the location for containment pans and for the matting to be verified.

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5.1c Mobile & Fly pump shacks

Mobile pump shacks are small cabins on skids, closed by roof and walls to protect the equipment inside from the cold weather, that are hosting pumping system to furnish water to the drills.

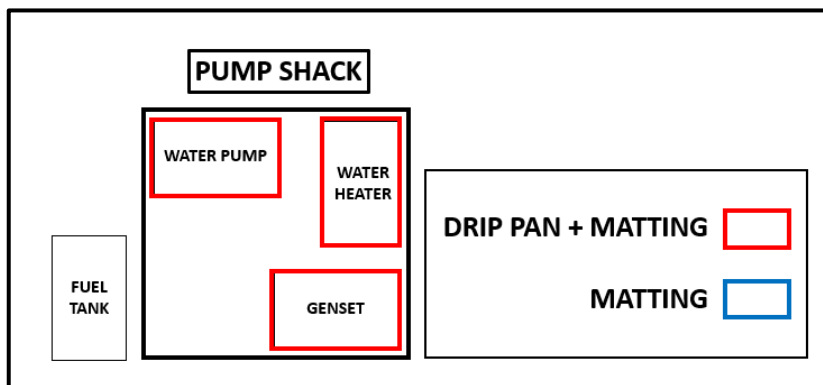


	Geology
	MEL-GEO-PRO-3xxx
	Spill Retainments at the Drills and Pump Shack

Fly Pump shack are the same but without the skidded cabin. Pumping equipment are disposed on small wood beam floor by the water body on which it's pumping the water to the drill.



Both are composed of a genset, a heater and an electric pump. These tree elements need to pocess an incorporated drip pan hosting matting absorbents that need to be verified frequently.



	Geology
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	Spill Retainments at the Drills and Pump Shack

5.1d Winter drilling on a water body

In addition to the above specified instructions, when using a portable water pump on a frozen water body, a drip pan must be installed at the base of the pump when refueling.

Inspection Frequency

- 5.2 A minimum of three inspection per twelve hour shift need to be completed by the drill helper. One inspection when starting the shift, one in the middle of the shift and at the end of the shift.

Inspection Procedure and Spill Response Procedure

- 5.3a Any spill observed need to be cleaned up. Following the spill, new matting needs to be installed. Any spill needs to be reported immediately to the Supervisor and the source of the spill needs to be fixed.

The *Drill Environment Inspection Guide* sheet in appendix of this procedure will be provided to worker alongside the helper work card. The foreman will ask the worker to verify if all the spill containment equipment and material on the sheet are there and installed properly. The worker will complete the check sheet for all areas of the drill, and will ensure that missing spill pads and drip trays are replaced when observed. Corrective actions taken will be included in The *Drill Environment Inspection Guide* sheet.

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- 5.3b During the inspection any sign of a spill in or outside containment points will be noted on the inspection sheet. This information will be passed to the next shift by the foreman and maintenance will be scheduled accordingly. To make sure any new spills are identified each points need to be kept clean.
- 5.3c If a spill occurs at the drill in a location that is not incorporated into this procedure, a temporary spill pan need to be put in place with the right amount and type of absorbent, the leak needs to be repaired and controlled and matting changed until it stays cleaned. A meeting with geology, environment and the drilling company representatives needs to take place and action plans developed . A risk assessment will be completed to determine if additional mitigation measures are required. This procedure and associated *Drill Environment Inspection Guide* will be updated to reflect the changes.
- 5.3d All spills are to be stopped immediately, contained, reported with photos and cleaned up. The environment department will be advised and can provide guidance with the clean up process.

	Geology
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6 – SPECIFIC RESPONSIBILITIES

Role	Responsibility
Geology Superintendent	Ensure that this document is reviewed annually and amendments made when necessary.
Exploration Coordinator	Annually review this procedure, hold refresher sessions for workers and make amendments when necessary.
Orbit Garant Foreman	Annually review this procedure, hold refresher sessions for workers and make amendments when necessary.
Workers (Technicians, Drillers,Helpers, etc.)	Assimilated all the notions related to the task, understand the possible risks and opportunities associated and be able to deal with all possible scenario that could happen.

7 – REFERENCES / RELATED DOCUMENTS

References
<ul style="list-style-type: none"> • MEL-GEO-PRO-3002 Working on Ice • MEL-HSH-PRO-0021 Adverse Weather - Work Restriction • Safe ice construction 2015, NWT

Related documents
<ul style="list-style-type: none"> • Guidelines for safe ice constructions 2015, NWT Department of Transportation • NWT Mine Act


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8 – CHANGE LOG

Version	Revision date	Modification	Initiator
001	11/11/2021	New template	J. Lavoie
002		Update document for the new template	
001	11/11/2021	Document creation	J. Lavoie
002	13/01/2022	Update document	E. Giroux
003		Update document and coordinator review	
004		OHSC Review	
005		Coordinator review	
006		Proofreading	

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ANNEX 1: SPILL CONTAINMENT EQUIPMENT

SPILL CONTAINMENT



Spill Containment Pallets



Spill Containment Workstations



IBC Spill Containment



Drum Platforms



Drum Overpacks



Steel Salvage Drum



Spill Containment Drum Shed



Spill Trays



Utility Trays



Flexible Spill Trays



Leak Diverters



Drain Seals



Spill Dikes



Modular Spill Berm

Figure 2.1.: Containment products sold by commercial companies

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SORBENTS AND SPILL KITS



Universal Sorbents



Oil Only Sorbents



Universal Spill Kits



Hazmat Sorbents



Hi-Vis Sorbents



Sorbent Disposal Bags



Sorbent Roll Dispenser



Battery Acid Spill Kit



Mercury Spill Kit



Oil-Dri®



Spill Containment

Figure 2.2.: Sorbent products sold by commercial companies

ANNEX 2: DRILL ENVIRONMENT INSPECTION GUIDE

Drill Environment Inspection Guide

DECANTATION TANK CONTAINER

WATER / DECANTATION TANKS

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

YS 2000 MOBILE DRILL

HYDRAULIC PUMP
ENGINE
HYDRAULIC TANK
DRILL CONSOLE

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

HEAT SHACK

SQ 1210 GENSET
FUEL TANK 355/650
PRESSURE PUMP

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

YS 1000 FLY DRILL

ENGINE
HYDRAULIC TANK
DRILL CONSOLE
PRESSURE PUMP

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

PUMP SHACK

WATER PUMP
WATER HEATER
GENSET
FUEL TANK

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

☐ CLEAN
☐ 10% WET
☐ 35% WET
☐ 50+% WET
☐ CHANGED
Time:

Inspection made by: _____

Date: _____

DRIP PAN + MATTING ☐

MATTING ☐

Préparé par / Prepared by : Dépt. Santé et Sécurité / Health & Safety Dept.

Révisé / Revised : Avril / April 2021

Page 1 de/of 1

Nom du projet/Project name :

Site/Location :

Numéro du dernier trou/Last hole number :

Site nettoyé par/Location cleaned by :

Date :

ITEMS À RAMASSER/ITEMS TO PICK-UP

	Non-conf.	Corr. date	Init.
1. Boîte de carottes/Core box	<input type="checkbox"/>		
2. Graisse autour du tubage (casing)/Grease around the casing	<input type="checkbox"/>		
3. Bois/Wood (2 x 4; 2 x 6; 2 x 8)	<input type="checkbox"/>		
4. Plastique/Plastic	<input type="checkbox"/>		
5. Papier/Paper	<input type="checkbox"/>		
6. Conteneur huiles et graisses/Oil and grease container	<input type="checkbox"/>		
7. Jute/Burlap	<input type="checkbox"/>		
8. Fer (ligne à eau, tiges de forage)/Steel (wireline, rods)	<input type="checkbox"/>		
9. Couches absorbantes/Absorbent sheets	<input type="checkbox"/>		
10. Taches d'huile et/ou de graisse par terre/ Oil and/or grease spills on the ground	<input type="checkbox"/>		
11. Bouchons pour oreilles/Ear plugs	<input type="checkbox"/>		
12. Déchets domestiques cannettes de liqueur, nourriture) / Domestic garbage (pop cans, food)	<input type="checkbox"/>		
13. Remettre le bouchon étanche sur le trou et la baguette d'identification à côté du trou/Place waterproof cap on hole and the identification stick beside hole	<input type="checkbox"/>		

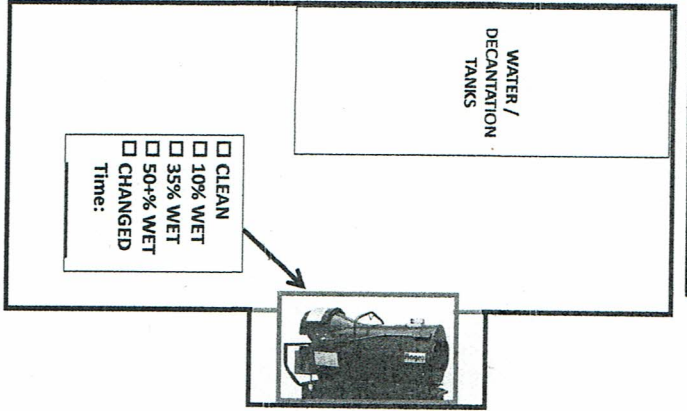
Signature :

Titre/Position :

Signature :

Titre/Position :

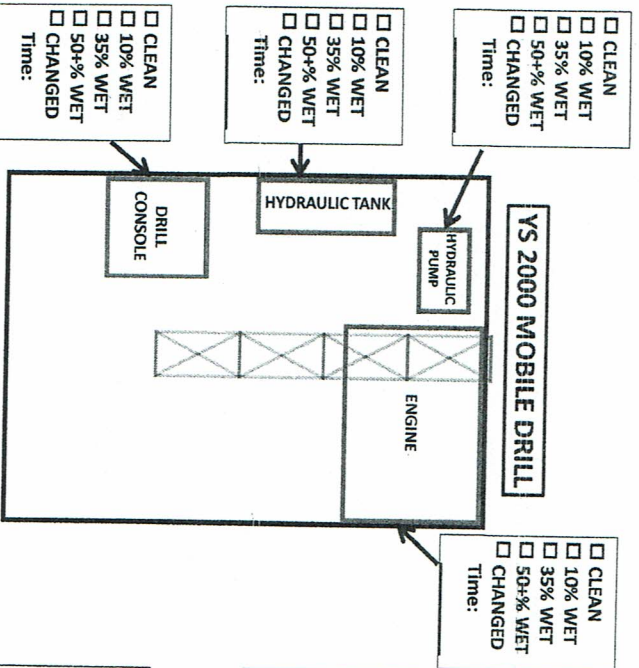
DECANTATION TANK CONTAINER



- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

Drill Environment Inspection Guide

YS 2000 MOBILE DRILL



- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

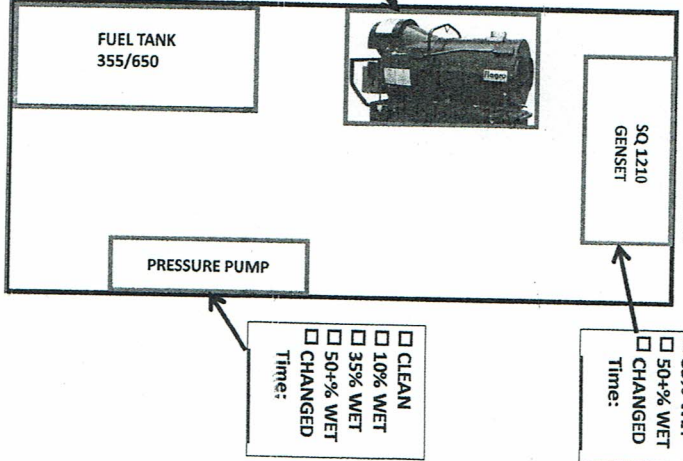
- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

HEAT SHACK



- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

Inspection made by:

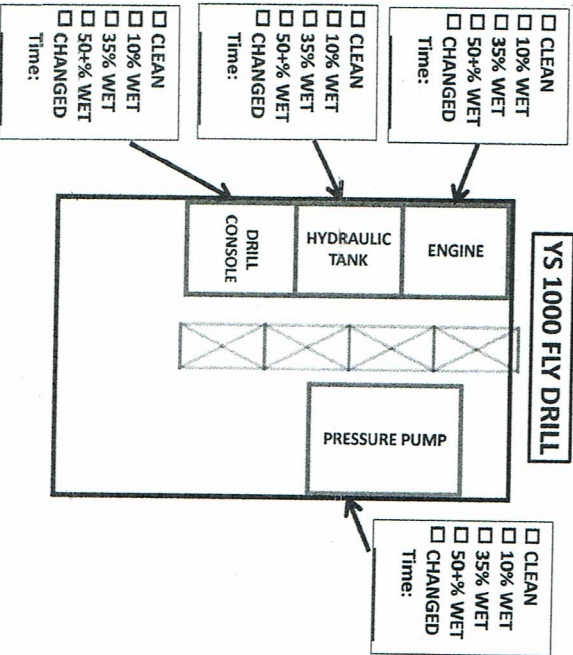
Date:

DRIP PAN + MATTING

MATTING

☐

YS 1000 FLY DRILL



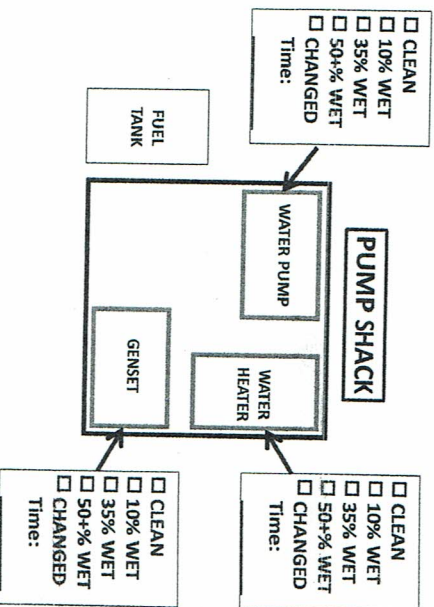
- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

PUMP SHACK



- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time:

- ☐ CLEAN
- ☐ 10% WET
- ☐ 35% WET
- ☐ 50+% WET
- ☐ CHANGED
- Time: