

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
 TEL: (867) 920-8130
 FAX: (867) 873-6924
 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 04-30-2018	REPORT TIME 19:00	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 145
B	OCCURRENCE DATE: MONTH - DAY - YEAR 04-29-2018	OCCURRENCE TIME Unknown		
C	LAND USE (PLANT NUMBER IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENSE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Mine Site, Baffin Island, NU	REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES: 71 MINUTES: 18 SECONDS: 55		LONGITUDE DEGREES: 79 MINUTES: 17 SECONDS: 04	
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT(S) SPILLED Diesel Fuel	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Approx. 0.5 m3	OIL NUMBER N/A	
I	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	OIL NUMBER N/A	
J	SPILL SOURCE AD Wing Fuel Transfer Tank	SPILL CAUSE Float Failure	AREA OF CONTAMINATION IN SQUARE METRES 23m2	
K	FACTORS AFFECTING SPILL OR RECOVERY N/A	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
L	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILL OR PRODUCT AND CONTAMINATED MATERIALS At 19:00 HRS on April 29th, security informed Site Services supervisor of a leak at the AD wing fuel tank. Upon arrival, the supervisor discovered a flow of fuel coming from the venting cap at the top of the tank. The supervisor shut off the valves immediately, which stopped the release, and initiated spill response. Upon initial investigation, it was discovered that the float for the fuel tank had failed and approximately 0.5m3 of diesel fuel was released onto the camp pad, impacting an area approximately 23m2. Snow berms and spill sorbents confined the spill to an area directly beside the fuel tank. The fuel was collected into a tote and contaminated material placed in quatrex bags. This spill is >100 meters from the nearest water course (which is currently frozen). The investigation is ongoing and further details of the incident will be provided in the follow-up report. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9 (b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act.			
M	REPORTED TO SPILL LINE BY William Bowden	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM 647-253-0596
N	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE CONTACT LOCATION ext. 6016
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
LEAD AGENCY <input type="checkbox"/> EET <input type="checkbox"/> OGS <input type="checkbox"/> GRWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> IMC <input type="checkbox"/> NEB <input type="checkbox"/> OTC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN	FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME		CONTACT TIME	REMARKS
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2 – NT-NU Spill report



May 30, 2018

Resource Management Officer
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Manager, Major Projects
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-148
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On April 30 at 11:00 Hrs, a vac truck operator discovered water around the outside of the wasting door at the new Waste Water Treatment Plant (WWTP). Upon investigation, it was discovered that the wasting pump had overfilled the tank, overflowing through the door onto the surrounding camp pad. Approximately 1.3 m³ of raw sewage was released and confined to the adjacent pad. Due to a communication breakdown, one WWTP operator had manually overridden the system and failed to communicate the change to his colleague operator. This caused the wasting pumps to operate permanently, not on a timed cycle, resulting in the overflow.

Immediate and Follow-Up Action:

The power to the plant was shut off and the WWTP operators were called. A vacuum truck was utilised to recover and remove the raw sewage in the plant. The contaminated snow around the plant was excavated and placed in the PWSP for storage and potential future treatment during the open water season.

Recommendations:

All operators at sewage plants need to be in communication throughout the day with systematic checks. It is not common practice to have two operators in the WWTP; any changes in the system must be verified by both operators through a Standard Operating Procedure (SOP). All contractors operating both the WWTP and WTP must follow and implement.

Current Status:

A Standard Operating Procedure for the WWTP and WTP is in progress. This procedure includes a walk down prior to any shutdown, additional training of any new operator that comes on site, and cross signage of operators if more than one operator is on shift.

Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253- 0596 x6016.

Prepared by:

Handwritten signature of Benjamin Widdowson in black ink.

Ben Widdowson
Environmental Coordinator

Reviewed by:

Handwritten signature of William Bowden in black ink.

William Bowden
Environmental Superintendent

Attach: Photos, Map, Baffinland NT-NU Spill Report
cc. Grant Goddard, Sylvain Proulx, Tim Sewell, Connor Devereaux, Gerald Rogers, Francois Gaudreau (Baffinland), Stephen Bathory (QIA), Ian Parsons, Jeremy Fraser (INAC).



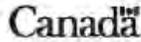
Photo 1. Overflow spill on ground surrounding the WWTP



Photo 2. Surrounding the WWTP pad after site clean up.



Figure 1. Map of spill location



NT-NU SPILL REPORT

OIL, GAS OILS, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 820-8150

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 05-01-2018	REPORT TIME 18:00	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 148
B	OCCURRENCE DATE: MONTH - DAY - YEAR 04-30-2018	OCCURRENCE TIME 10:45		
C	LAND USE PERMIT NUMBER (IF APPLICABLE): IOL - Commercial Lease: Q13C301	WATER LICENSE NUMBER (IF APPLICABLE): 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE: NAME, OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Milne Inlet Site, Baffin Island, NU	REGION: <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES: 71 MINUTES: 18 SECONDS: 85		LONGITUDE DEGREES: 79 MINUTES: 17 SECONDS: 98	
F	RESPONSIBLE PARTY ON VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED: Horizon, Newterra	CONTRACTOR ADDRESS OR OFFICE LOCATION: N/A		
H	PRODUCT SPILLED: Sewage	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES: Approximately 1.3 m3	UN NUMBER: N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE): N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES: N/A	UN NUMBER: N/A	
I	SPILL SOURCE: Wastewater treatment plant	SPILL CAUSE: Wasting Tank Overflow	AREA OF CONTAMINATION IN SQUARE METRES: 25m2	
J	FACTORS AFFECTING SPILL OR RECOVERY: Frozen, cold conditions	DESCRIBE ANY ASSISTANCE REQUIRED: N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT: N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CORRECT, CLEANUP OR DISPOSAL OF SPILLED PRODUCT AND CONTAMINATED MATERIALS: <p>On April 30, 2018 at 10:45 Hrs a vac truck operator was approaching the new wastewater treatment plant (WWTP) at the Mine Site and observed a release of liquid from the wasting room door. The operator notified Supervision and the WWTP operator. The pumps were immediately shut off. Upon initial investigation, it was determined that an automatic shutoff for the waste tank pump failed to engage resulting in an overflow of the wasting tank. Approximately 1.3m3 of sewage was released and confined to the WWTP pad, impacting an area of approximately 25m2. Contaminated material was disposed of in a lined engineered containment facility. The spill location is >100m to the nearest water course, which is currently frozen. An investigation is underway to determine the cause and details of the cleanup will be provided in the follow-up report. This spill is being reported as required by the conditions of NWB Water License no. 2AM-MRY1325, Part H, item 9 (b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act.</p>			
L	REPORTED TO SPILL LINE BY: William Bowden	POSITION: Env. Superintendent	EMPLOYER: Baffinland	LOCATION CALLING FROM: Mary River
M	ALTERNATE CONTACT: Tim Sewell	POSITION: Head of HSE	EMPLOYER: Baffinland	ALTERNATE TELEPHONE: 6016
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY: STATION DISPATCH	POSITION	EMPLOYER	LOCATION CALLED: YELLOW/WHITE, RT
LEAD AGENCY: <input type="checkbox"/> EC <input type="checkbox"/> CGG <input type="checkbox"/> GWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> IAC <input type="checkbox"/> NEB <input type="checkbox"/> TC		SIGNIFICANCE: <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS: <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2. Baffinland NT NU spill report



June 3, 2018

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Manager, Major Projects
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-153
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On May 4th, 2018, 20:00 Hrs, an Environment Department employee observed discoloured water near Lift Station 5 at AE Wing North. It was determined to be sewage upon inspection. Housing Maintenance and Surface Works Supervision was notified immediately. The source of the spill was an overflow of lift station 5. The lift station was being discharged through a regular vacuum truck schedule however due to an error in the implementation of this schedule the overflow occurred. Communications and associated vacuum truck scheduling procedures are being revised to prevent an overflow reoccurrence. Approximately 250 Litres impacted the adjacent MSC pad to the lift station migrating over an area of approx. 15m². The spill is >100 m from the nearest water body which is currently frozen.

Immediate and Follow-Up Action:

The Environment Department contacted Fixed Plant Housing Maintainers and the lift station was emptied with the Vacuum truck. Contaminated material was removed and disposed of. Implementation of a regular prescribed lift station vacuum truck schedule continues.

Recommendations:

To mitigate re-occurrence due to similar circumstances additional check and balances have been implemented to the vacuum truck scheduling protocols. Additional supervision for contractor and BIM vacuum truck operators and the prescribed schedule was implemented to support business needs.

Current Status:

The lift station is currently operational. Robust discharge vacuum truck scheduling protocols with revised checks and balances have been implemented to prevent a reoccurrence. Regular daily inspections of lift stations are ongoing.

Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253- 0596 x6016.

Prepared by:

Ben Widdowson
Environmental Coordinator

Reviewed by:

William Bowden and Gordon Mudryk
Environmental Superintendent and Site Services Manager

Attach: Photos, Map, Baffinland NT-NU Spill Report
cc. Grant Goddard, Sylvain Proulx, Tim Sewell, Connor Devereaux, Gerald Rogers, Francois Gaudreau (Baffinland), Stephen Bathory (QIA), Ian Parsons, Jeremy Fraser (INAC).



Photo 1. AE Lift Station after clean up



Figure 1. Map of spill location



Canada

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OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
 TEL: (867) 920-8150
 FAX: (867) 873-6924
 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE (MONTH - DAY - YEAR) 05-04-2018	REPORT TIME 21:00	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT OR <input type="checkbox"/> UPDATE # TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 153
B	OCCURRENCE DATE (MONTH - DAY - YEAR) 05-03-2018	OCCURRENCE TIME 20:00		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENSE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME, COORDINATE, AND DIRECTION FROM NAMED LOCATION Mary River Mine Site, Baffin Island, NU	REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 71 MINUTES 18 SECONDS 53		LONGITUDE DEGREES 79 MINUTES 17 SECONDS 03	
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR ON ICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Raw Sewage	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Approx. 250L	U.N. NUMBER N/A	
H	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A	
I	SPILL SOURCE Lift Station	SPILL CAUSE Discharge line failure	AREA OF CONTAMINATION IN SQUARE METRES Approx. 15m2	
J	FACTORS AFFECTING SPILL OR RECOVERY Congested area, snow and ice	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS <p>At 20:00 Hrs on May 3, 2018, an Environment Department employee observed water near the Lift station 5 at AE Wing North. The cause of the spill is unknown it was observed that the discharge line was cracked and the pumps were disengaged. The vac truck was called and the lift station was pumped down to prevent any further release. Approximately 250 Litres impacted the adjacent MSC pad to the lift station migrating over an area of approx. 15m2. The spill is >100 m from the nearest water body which is currently frozen.</p> <p>The investigation and cleanup are ongoing, further details will be provided in the follow-up report. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9 (b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act.</p>			
L	REPORTED TO SPILL LINE BY William Bowden	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM Mary River
M	ALTERNATE CONTACT Tim Sewell	POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE TELEPHONE ext. 6016
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
				REPORT LINE NUMBER (867) 920-8150
LEAD AGENCY: <input type="checkbox"/> EC <input type="checkbox"/> CG <input type="checkbox"/> NWT <input type="checkbox"/> GN <input type="checkbox"/> IA <input type="checkbox"/> MAC <input type="checkbox"/> NB <input type="checkbox"/> TC			SIGNIFICANCE: <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN	FILE STATUS: <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME		CONTACT TIME	REMARKS
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2. Baffinland NT NU spill report



June 5, 2018

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Manager, Major Projects
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-154
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On May 5, 2018 at 11:00 Hrs a vac truck operator was approaching the new wastewater treatment plant (WWTP) at the Mine Site and observed liquid leaking from the effluent tank door. Upon investigation, it was determined that the effluent tank had overflowed and approximately 0.5m³ of treated effluent was released to the WWTP pad, impacting an area of approximately 10m². Communications and associated vacuum truck scheduling procedures are being revised to prevent an overflow reoccurrence. The location is >100m to the nearest water course which was frozen.

Immediate and Follow-Up Action:

The WWTP operator instructed the vacuum truck to bring down the levels of the effluent tank to prevent over flow immediately. Contaminated material was removed with an excavator and disposed of.

Recommendations:

It was recommended that a Standard Operating Procedure (SOP) be implemented to define operational check and balances of the plant while ensuring all communication and responsibility requirements of an operating WWTP and discharge system are clearly outlined. An audio alarm system was recommended for installation to warn of high tank levels

Current Status:

An SOP was developed and implemented that verifies tank levels and operational checks. An audio alarm has been ordered to mitigate potential overflow occurrences. Communication strategies have been defined and primary responsibilities assigned to ensure that all WWTP parties are coordinated through Project site services. A permit to work system was implemented for the WWTP which defines the above.

Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253- 0596 x6016.

Prepared by:

Ben Widdowson
Environmental Coordinator

Reviewed by:

William Bowden
Environmental Superintendent

Attach: Photos, Map, Baffinland NT-NU Spill Report

cc. Grant Goddard, Sylvain Proulx, Tim Sewell, Connor Devereaux, Gerald Rogers, Francois Gaudreau (Baffinland), Stephen Bathory (QIA), Ian Parsons, Jeremy Fraser (INAC).



Photo 1. WWTP Before clean up



Photo 2. AE Lift Station after clean up



Figure 1. Map of spill location



NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
 TEL: (867) 920-8130
 FAX: (867) 873-6924
 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A REPORT DATE: MONTH - DAY - YEAR 05-06-2018		REPORT TIME 13:00		<input type="checkbox"/> ORIGINAL SPILL REPORT OR <input checked="" type="checkbox"/> UPDATE # 18-154 TO THE ORIGINAL SPILL REPORT		REPORT NUMBER 18-154	
B OCCURRENCE DATE: MONTH - DAY - YEAR 05-05-2018		OCCURRENCE TIME 11:00					
C LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301				WATER LICENSE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"			
D GEOGRAPHIC PLACE, NAME, OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Milne Inlet Site, Baffin Island, NU				REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN			
E LATITUDE DEGREES 71 MINUTES 18 SECONDS 84		LONGITUDE DEGREES 79 MINUTES 17 SECONDS 93					
F RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.		RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3					
G ANY CONTRACTOR INVOLVED Horizon		CONTRACTOR ADDRESS OR OFFICE LOCATION N/A					
H PRODUCT SPILLED Treated Effluent		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Approximately 0.5m3		U/N NUMBER N/A			
SECOND PRODUCT SPILLED (IF APPLICABLE) N/A		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A		U/N NUMBER N/A			
I SPILL SOURCE Wastewater treatment plant		SPILL CAUSE Effluent Tank Overflow		AREA OF CONTAMINATION IN SQUARE METRES 10m2			
J FACTORS AFFECTING SPILL OR RECOVERY Frozen, cold conditions		DESCRIBE ANY ASSISTANCE REQUIRED N/A		HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A			
K ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS <p>On May 5, 2018 at 11:00 Hrs a vac truck operator was approaching the new wastewater treatment plant (WWTP) at the Mine Site and observed liquid leaking from the effluent tank door. The operator then called his supervisor and the WWTP operator. The operator was instructed to vacuum down the tank to prevent further spillage. Upon investigation, it was determined that the effluent tank had overflowed and approximately 0.5m3 of treated effluent was released to the WWTP pad, impacting an area of approximately 10m2. Contaminated material was removed and disposed of. The location is >100m to the nearest water course which is currently frozen. An investigation is underway to determine the cause and details of the cleanup will be provided in the follow-up report. This spill is being reported as required by the conditions of NWB Water License no. 2AM-MRY1325, Part H, item 9 (b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act.</p>							
L REPORTED TO SPILL LINE BY William Bowden		POSITION Env. Superintendent		EMPLOYER Baffinland		LOCATION CALLING FROM Mary River	
TELEPHONE 416 364 8820							
M ANY ALTERNATE CONTACT Tim Sewell		POSITION Head of HSE		EMPLOYER Baffinland		ALTERNATE TELEPHONE 6016	
LOCATION 							
REPORT LINE USE ONLY							
N RECEIVED AT SPILL LINE BY 		POSITION STATION OPERATOR		EMPLOYER 		LOCATION CALLED YELLOWKNIFE, NT	
REPORT LINE NUMBER (867) 920-8130							
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CGG <input type="checkbox"/> CRWT <input type="checkbox"/> GN <input type="checkbox"/> IIA <input type="checkbox"/> IAC <input type="checkbox"/> NEB <input type="checkbox"/> TC				SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED	
AGENCY 		CONTACT NAME 		CONTACT TIME 		REMARKS 	
LEAD AGENCY 							
FIRST SUPPORT AGENCY 							
SECOND SUPPORT AGENCY 							
THIRD SUPPORT AGENCY 							

Figure 2. Baffinland NT NU spill report

APPENDIX E.8.4
INITIAL AND FOLLOW-UP SPILL REPORTS
(PART 3 OF 4)



June 15, 2018

Resource Management Officer
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Manager, Major Projects
Qikiqtani Inuit Association
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Re: Follow-up to Spill #18-180, Reported on May 18, 2018, Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

At approximately 13:00 HRS on May 16th, 2018, during the execution of the daily freshet monitoring program at the Mary River Mine Site, environmental technicians observed sediment-laden water to be breaching the series of sediment ponds/check dams that have been constructed along the Camp Lake Jetty access road. Elevated levels of suspended solids were observed from sediment impacted snow melt which mobilized due to the overland flow. In addition to the implementation of erosion and sediment control measures, water quality sampling was conducted of water entering Camp Lake.

Immediate and Follow-Up Action:

Personnel worked to re-direct flow so that it travelled through the series of check dams, as well as installed silt fencing and spring berms at strategic locations to minimize flow, increase retention time in sediment ponds, and reduce further mobilization of sediment prior to water entering Camp Lake. Once short-term erosion and sediment control mitigation measures were implemented, controls for longer-term solutions to minimize similar occurrences at this location were constructed. The existing series of check dams down the Camp Lake Jetty access road drainage channel were excavated and reinforced, as well as reinforcing and increasing the capacity of the existing settling pond structures.

Recommendations:

Continued monitoring during freshet conditions and routine maintenance of check dams and settling ponds (i.e. excavation of material) on an as-needed basis.

Current Status:

Conditions at Camp Lake Jetty, as well as other freshet monitoring locations, are currently being sampled and assessed on a daily basis. A more comprehensive Freshet Report will be submitted to document the water quality of water bodies and surface water drainages near Project infrastructure and summarize the corrective actions implemented to address sediment releases and other areas of concern identified during freshet 2018.

Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253-0596 x6016.

Prepared by:

Handwritten signature of Bryan Lukeman in black ink.

Bryan Lukeman
Environmental Coordinator

Reviewed by:

Handwritten signature of Connor Devereaux in black ink.

Connor Devereaux
Environmental Superintendent

Attach: Photos, Map, NT-NU Spill Report

cc. Grant Goddard, Sylvain Proulx, Gerald Rogers, Francois Gaudreau, Tim Sewell, William Bowden (Baffinland), Stephen Bathory (QIA), Ian Parsons, Jeremy Fraser (INAC)



Photo 1. May 15, 2018: Sediment-laden water flowing into spring berm before entering Camp Lake



Photo 2. May 22, 2018: Camp Lake Jetty access road drainage channel check dam



Photo 3. May 22, 2018: Camp Lake Jetty access road drainage channel check dams and berm



Photo 4. May 22, 2018: Typical check dam/berm cross section



Photo 5: May 21, 2018: Reinforcement of berms/check dams at Camp Lake Jetty, during frozen conditions



Figure 1 – Overview map of sediment release location



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spillis@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 05-18-2018	REPORT TIME 21:20	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 180
	B	OCCURRENCE DATE: MONTH - DAY - YEAR 05-16-2018		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease No.: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Project Mine Site, Baffin Island, NU	REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES MINUTES SECONDS	LONGITUDE DEGREES MINUTES SECONDS		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Sediment-laden water	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Unquantified at present time	U.N. NUMBER N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A	
I	SPILL SOURCE Melting snow, overland flow	SPILL CAUSE Rapid melt	AREA OF CONTAMINATION IN SQUARE METRES N/A	
J	FACTORS AFFECTING SPILL OR RECOVERY Snow covered area, high flow	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On May 16, 2018, warming temperatures resulting in snowmelt runoff containing sediment-laden water observed to be flowing down the Camp Lake ditching/check dams at 13:00; water samples were subsequently taken. The source of the drainage was snow melt from the Weatherhaven parking area and Camp Lake access road. The event resulted in sediment-laden water flowing onto and under the ice of Camp Lake. In accordance with the Surface Water Management Plan, sedimentation mitigation measures were implemented including silt fences and spring berms in an attempt to settle sediments prior to discharge. With freshet conditions present, daily monitoring of the water quality is ongoing; initial water quality sample results were submitted to ALS lab for analysis. This spill is being reported as required by the conditions of Water License no. 2AM-MRY1325, Part H, item 9 (b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act and as required by subsection 38(4) of the Fisheries Act.			
L	REPORTED TO SPILL LINE BY Connor Devereaux	POSITION Env Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM 647.253.0596
M	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE CONTACT LOCATION 647.253.0596
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN	FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME		CONTACT TIME	REMARKS
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2 – NT-NU Spill report

June 16, 2018

Resource Management Officer
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Indigenous and Northern Affairs Canada
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Iqaluit, NU X0A 0H0
Jonathan.mesher@aandc-aadnc.gc.ca

Manager, Major Projects
Qikiqtani Inuit Association
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Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-182, Reported on May 19, 2018, Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

At approximately 15:00 HRS on May 17th, 2018, during the execution of the daily freshet monitoring program at the Mary River Mine Site, environmental technicians observed sediment-laden water to be flowing at multiple locations at the Mary River Mine Site (SDLT and CLT). Elevated levels of suspended solids were observed from sediment impacted snow melt which mobilized as a result of increased overland flow. In addition to the implementation of erosion and sediment control measures in accordance with the Surface Water Management Plan, water quality sampling was conducted of water entering the receiving water bodies. SDLT reports to Sheardown Lake, while CLT reports to Camp Lake.

Immediate and Follow-Up Action:

Upon discovery of the elevated instream TSS conditions at these drainages, personnel worked to install sedimentation mitigation measures, including silt fences and spring berms, in accordance with the Surface Water Management Plan, in an attempt to slow flow and settle sediments prior to entering the streams.

In the days leading up to freshet, snow pack around the inlets and outlets of select culvert locations was excavated, including the SDLT and CLT crossings, to reduce the volume of snow melt and thus, the amount of overland flow present to mobilize sediment. The excess snow was removed and transported to the approved snow dump areas. By reducing the excess snow at these locations, the severity and frequency of elevated instream TSS events has been reduced.

Recommendations:

Continued monitoring during freshet conditions and routine maintenance of sediment fences and spring berms, where applicable.

Current Status:

Conditions at SDLT and CLT, as well as other freshet monitoring locations, are currently being sampled and assessed on a daily basis. A more comprehensive Freshet Report will be submitted to document the water quality of water bodies and surface water drainages near Project infrastructure and summarize the corrective actions implemented to address sediment releases and other areas of concern identified during freshet 2018.

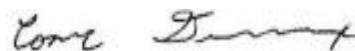
Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253-0596 x6016.

Prepared by:



Bryan Lukeman
Environmental Coordinator

Reviewed by:



Connor Devereaux
Environmental Superintendent

Attach: Photos, Map, NT-NU Spill Report

cc. Grant Goddard, Sylvain Proulx, Gerald Rogers, Francois Gaudreau, Tim Sewell, William Bowden (Baffinland), Stephen Bathory (QIA), Ian Parsons, Jeremy Fraser (INAC)



Photo 1. May 17, 2018: Viewing downstream of sediment-laden water at CLT entering Camp Lake



Photo 2. May 17, 2018: Viewing downstream of SDLT of sediment-laden water entering Sheardown Lake



Photo 3. May 9, 2018: Removal of excess snowpack from road crossing above SDLT



Photo 4. May 9, 2018: Removal of excess snowpack from road crossing above SDLT



Photo 5. May 9, 2018: Removal of excess snowpack from road crossing above SDLT



Photo 6. May 13, 2018: Removal of excess snowpack from road crossing above CLT



Figure 1 – Overview map of sediment release location



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spillis@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 05-19-2018	REPORT TIME 21:00	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 182
	OCURRENCE DATE: MONTH - DAY - YEAR 05-17-2018	OCURRENCE TIME 15:00		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease No.: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Project Mine Site, Baffin Island, NU		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN	
E	LATITUDE	LONGITUDE		
	DEGREES MINUTES SECONDS	DEGREES MINUTES SECONDS		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Sediment-laden water	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Unquantified	I.U. NUMBER N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	I.U. NUMBER N/A	
I	SPIII. SOURCE Melting snow, overland flow	SPIII. CAUSE Rapid melt	AREA OF CONTAMINATION IN SQUARE METRES N/A	
	FACTORS AFFECTING SPILL OR RECOVERY Snow covered area, high flow	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS			
	<p>On May 17, 2018, warming temperatures resulting in snowmelt runoff containing sediment-laden water observed to be flowing at multiple locations at the Mary River Mine Site (SDLT and CLT). The source of the sedimentation was snow melt from surrounding mine site infrastructure. The event resulted in sediment-laden water flowing onto and under the ice of Camp Lake and Sheardown Lake which are currently frozen. In accordance with the Surface Water Management Plan, sedimentation mitigation measures were implemented including silt fences and spring berms in an attempt to settle sediments prior to discharge. With freshet conditions present, daily monitoring of the water quality is ongoing; initial water quality sample results were submitted to ALS lab for analysis. This spill is being reported as required by the conditions of Water License no. 2AM-MRY1325, Part H, item 9 (b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act and as required by subsection 38(4) of the Fisheries Act.</p>			
L	REPORTED TO SPILL LINE BY Connor Devereaux	POSITION Env Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM 647.253.0596
	TELEPHONE Ext. 6016			
M	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE CONTACT 647.253.0596
	ALTERNATE TELEPHONE Ext. 6054			
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
				REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> LA <input type="checkbox"/> NAC <input type="checkbox"/> NEB <input type="checkbox"/> TC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2 – NT-NU Spill report



July 05, 2018

Resource Management Officer
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Jonathan.mesher@aandc-aadnc.gc.ca

Manager, Major Projects
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-209, Reported on June 05, 2018, Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

As part of Baffinland's 2018 Tote Road monitoring program, on May 30th, a crossing located at Km 86 (BG27) was identified from received sample results to be flowing above applicable water licence criteria for total suspended solids (TSS). The sediment was generated by the melting snow pack adjacent to the road and other sample results indicate natural sedimentation upstream is also contributing to the elevated TSS in the stream.

Immediate and Follow-Up Action:

Upon discovery of the elevated TSS conditions downstream of the culvert crossing, personnel installed sedimentation mitigation measures. Mitigation measures included riprap armoring of the ditches and silt fences to slow flow velocities and settle sediments prior to entering the culvert and stream, as outlined in the Surface Water Management Plan.

Recommendations:

Continued monitoring during summer rain events and routine maintenance of sediment control measures will be completed on an as-needed basis.

Current Status:

Conditions at BG27 improved following the installation of sediment control measures, with TSS levels returning to below applicable water licence criteria. A more comprehensive Freshet Report will be submitted to document the water quality of surface water crossings along the Tote Road and summarize the areas of concern identified during freshet 2018.

Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253-0596 x6016.

Prepared by:

Dominic Ritgen
Environmental Coordinator

Reviewed by:

Connor Devereaux
Environmental Superintendent

Attach: Photos, Map, NT-NU Spill Report
cc. Grant Goddard, Sylvain Proulx, Gerald Rogers, Francois Gaudreau, Tim Sewell, William Bowden (Baffinland), Stephen Bathory (QIA), Ian Parsons, Jeremy Fraser (INAC)



Photo 1. May 30, 2018: Viewing downstream BG27 entering waterbody



Photo 2. May 30, 2018: Viewing Upstream of BG27



Photo 3. June 6, 2018: Bank armoring with riprap



Photo 4. June 6, 2018: Bank armoring with riprap



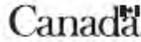
Photo 5. June 6, 2018: Silt fence being installed upstream of crossing



Photo 6. June 7, 2018: Water flowing clear following mitigation measures in place



Figure 1 – Overview map of sediment release location



NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 06-05-2018	REPORT TIME 19:00 HRS	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 209
B	OCCURRENCE DATE: MONTH - DAY - YEAR Unknown	OCCURRENCE TIME Unknown		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease No.: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Project Tote Road, Baffin Island, NU	REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES - MINUTES - SECONDS -	LONGITUDE DEGREES - MINUTES - SECONDS -		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Sediment / discoloured water	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Unquantified	U.N. NUMBER N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A	
I	SPILL SOURCE Freshet melting snowpack	SPILL CAUSE Sediment impacted water	AREA OF CONTAMINATION IN SQUARE METRES N/A	
J	FACTORS AFFECTING SPILL OR RECOVERY Poor access	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS As part of Baffinland's 2018 Tote Road monitoring program, crossings are being monitored for turbid water and sediment impacted drainage upon the start of flows. On May 30, 2018, one crossing- BG27 (Km 86) was identified from received sample results to be flowing above applicable water licence criteria for total suspended solids (TSS) downstream of the crossing . The sediment appears to be generated by the melting snow pack adjacent to the road, however sample results indicate natural sedimentation upstream is also contributing to the elevated TSS in the stream. Sedimentation mitigation measure such as silt fences, jute, spring berms and rip rap are planned and will be installed where possible based on safe access, snow, ice cover and frozen ground. The Tote Road monitoring program is ongoing. This spill is being reported as required by the conditions of Water License no. 2AM-MRY1325, Part H, item 9 (b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act and as required by subsection 38(4) of the Fisheries Act.			
L	REPORTED TO SPILL LINE BY William Bowden	POSITION Env Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM 647.253.0596
M	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE CONTACT LOCATION 647.253.0596
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2 – NT-NU Spill report



July 09, 2018

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Manager, Major Projects
Qikiqtani Inuit Association
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Re: Follow-up to Spill #18-214, Reported on June 09, 2018, Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On June 8th, 2018, runoff from the tundra was observed to be flowing into the adjacent ditches between kilometer 107 and 108 along the Mine Haul Road. Upon investigation, surface water runoff from the surrounding tundra entered two culverts resulted in sediment impacted water entering Mary River tributary (non fish bearing). Surface water was immediately diverted away from the Mary River tributary preventing any potential sedimentation impact.

Immediate and Follow-Up Action:

Culvert inlets along the Mine Haul Road drainage ditch were blocked off to divert water away from the Mary River catchment area preventing any further sediment laden water. The check dam at the end of the magazine road was also excavated to capture suspended solids.

Recommendations:

Additional monitoring during summer rain events and routine maintenance of sediment control measures will be initiated and completed as required. A water management engineering review associated with the Mine Haul Road will be undertaken and remedial action implemented.

Current Status:

Culvert inlets remain blocked and are functioning to prevent water flow towards the Mary River tributary.

Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253-0596 x6016.

Prepared by:

Dominic Ritgen
Environmental Coordinator

Reviewed by:

Connor Devereaux
Environmental Superintendent

Attach: Photos, Map, NT-NU Spill Report
cc. Tim Sewell, Grant Goddard, Sylvain Proulx, Gerald Rogers, Francois Gaudreau, William Bowden (Baffinland), Stephen Bathory (QIA), Ian Parsons, Jeremy Fraser (INAC)



Photo 1. June 9, 2018: Mine Haul Road and Mary River Tributary



Photo 2. June 13, 2018: Mary River downstream of Mary River Tributary



Photo 3. June 10, 2018: Minimal flow from culvert outlet after inlet was blocked off to divert runoff from the Mine Haul Road



Photo 4. July 9, 2018: Reinforcement of Check Dams as part of ongoing maintenance

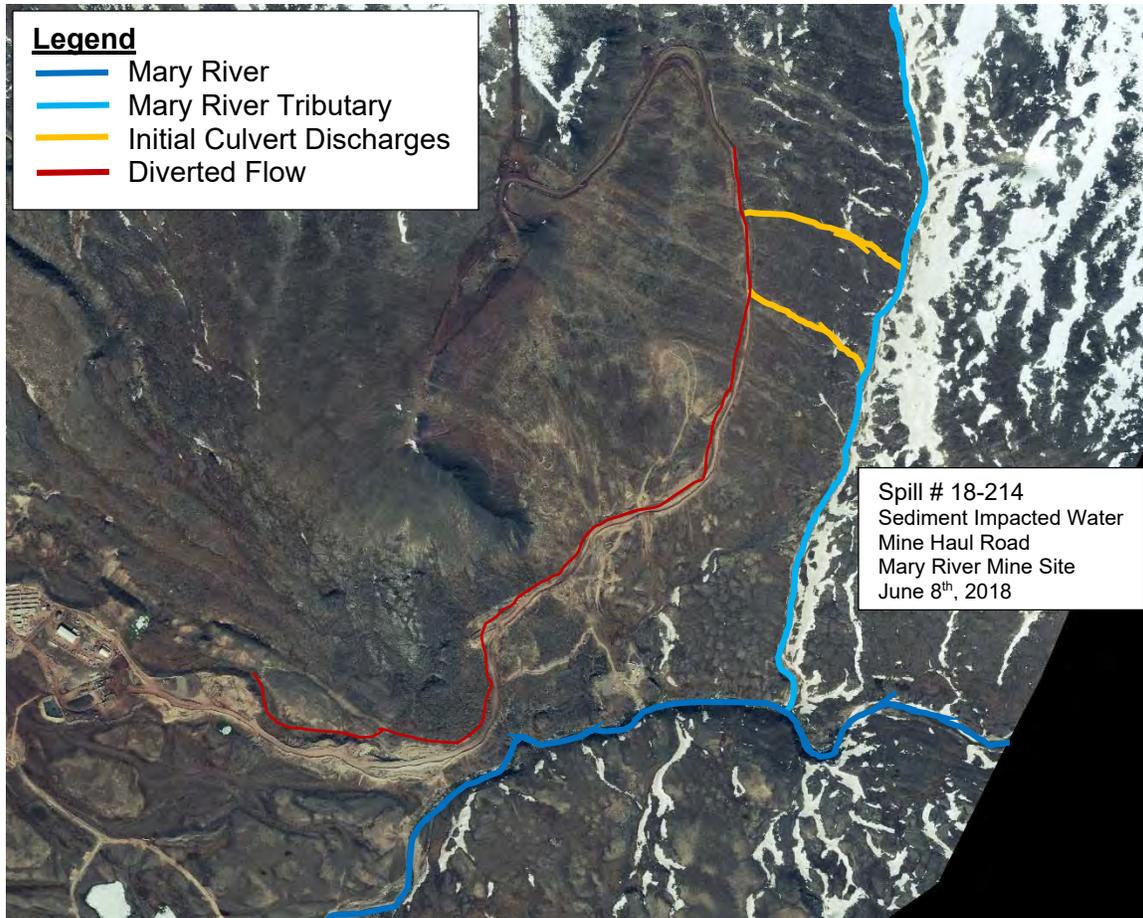


Figure 1 – Overview map of sediment release locations



NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
 TEL: (867) 920-8130
 FAX: (867) 873-6024
 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 06-09-2018	REPORT TIME 21:00	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 214	
	OCURRENCE DATE: MONTH - DAY - YEAR 06-08-2018	OCURRENCE TIME Unknown			
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"			
	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Mine Site, Baffin Island, NU	REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN			
E	LATITUDE	LONGITUDE			
	DEGREES MINUTES SECONDS	DEGREES MINUTES SECONDS			
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Sutie 300, Oakville, ON L6H 0C3			
	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A			
H	PRODUCT SPILLED Sediment	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Unquantifiable	U.N. NUMBER N/A		
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A		
I	SPILL SOURCE Spring freshet/melt	SPILL CAUSE Rapid snow melt	AREA OF CONTAMINATION IN SQUARE METRES N/A		
	FACTORS AFFECTING SPILL OR RECOVERY Steep embankment, poor access	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS				
	<p>On June 8th, 2018, runoff from the tundra was observed to be flowing into the adjacent ditches between kilometer 107 and 108 along the Mine Haul Road. Upon initial investigation, it appears surface water runoff through two culverts has resulted in sediment impacted water entering Mary River tributary. Sedimentation mitigation measures such as check dams and silt fences/curtains are being implemented in an attempt to settle sediments prior to discharge to the receiving environment. Surface water is also being diverted away from problematic areas to locations that will minimize flows towards Mary River. A follow up report will be provided with further information on mitigation measures. This incident is being reported as required by the conditions of Water License no. 2AM-MRY1325, Part H, item 9(b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act and as required by subsection 38(4) of the Fisheries Act.</p>				
L	REPORTED TO SPILL LINE BY Connor Devereaux	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM 416-364-8820	TELEPHONE ext. 6016
	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of Environment	EMPLOYER Baffinland	ALTERNATE CONTACT 416-364-8820	ALTERNATE TELEPHONE ext. 6054
REPORT LINE USE ONLY					
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130
	LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME		CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					

Figure 2 – NT-NU Spill report



July 15, 2018

Resource Management Officer
Nunavut Field Operations
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Jonathan.Meshier@aandc-aadnc.gc.ca

Manager, Major Projects
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-232, Reported on June 15, 2018, Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On June 14 2018, during an inspection a spill was discovered at the Port Site Hazardous Waste Berm #1 (MP-HWB-01). Upon investigation, it was determined that the source of the spill was caused by damage to a waste oil tote. The spill is contained within the MP-HWB-01 which is an engineered lined containment berm. Estimates of product released is approx. one cubic metre.

Immediate and Follow-Up Action:

Upon discovery of the spill, crews cleaned up waste oil using absorbent pads and the contaminated berm cover material was removed. Clean material was then placed in the influenced areas to return the berm back to its original condition. The damaged tote was pumped out and packed for backhaul disposal. The remaining water in MP-HWB-01 was transferred to the contaminated snow dump to be treated utilizing the oily water treatment facility

Recommendations:

Standard Operating Procedures (SOP) have been reviewed by operators working within containment facilities.

Current Status:

The containment berm has been cleaned of all oil and contaminated material. Influenced area has been replaced with clean cover material.

Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253- 0596 x6016.

Prepared by:

Dominic Ritgen
Environmental Coordinator

Reviewed by:

Connor Devereaux
Environmental Superintendent

Attach: Photos, Map, Baffinland NT-NU Spill Report

cc. Tim Sewell, Grant Goddard, Sylvain Proulx, William Bowden, Gerald Rogers, Francois Gaudreau (Baffinland), Stephen Bathory (QIA), Ian Parsons, Jeremy Fraser (INAC).



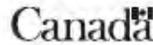
Photo 1. MP-HWB-01 oil spill



Photo 2. MP-HWB-01 after clean up



Figure 1. Map of spill location



NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 06-15-2018	REPORT TIME 21:00	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 2321
B	OCCURRENCE DATE: MONTH - DAY - YEAR Unknown	OCCURRENCE TIME Unknown		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Mine Site, Baffin Island, NU	REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 71 MINUTES 53 SECONDS 12	LONGITUDE DEGREES 80 MINUTES 53 SECONDS 14		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Sutie 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Waste Oil	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Approx. 1 cubic meter	U.N. NUMBER N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A	
I	SPILL SOURCE Damaged plastic tote	SPILL CAUSE Punctured tote	AREA OF CONTAMINATION IN SQUARE METRES N/A	
J	FACTORS AFFECTING SPILL OR RECOVERY On water in lined berm	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On June 14 2018, during an inspection a spill was discovered at the Port Site Hazardous Waste Berm #1 (MP-HWB-01). Upon investigation, it is suspected that the source of the spill was caused by damage to a waste oil tote during the winter months. The spill is contained within the MP-HWB-01 which is an engineered lined containment berm. The facility is located approximately 100 m from the nearest water body. Initial estimates of product released is approx. 1 cubic metre. The free product will be removed and disposed of and the remaining water in MP-HWB-01 will be treated utilizing the oily water treatment facility. A detailed report of the of the incident will be provided within the thirty day reporting period. This incident is being reported as required by the conditions of Water License no. 2AM-MRY1325, Part H, item 9(b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act.			
L	REPORTED TO SPILL LINE BY Connor Devereaux	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM 416-364-8820
M	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of Environment	EMPLOYER Baffinland	ALTERNATE CONTACT LOCATION 416-364-8820
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> OCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> ITC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2. Baffinland NT NU spill report



July 20, 2018

Jonathan Mesher, Resource Management Officer
Nunavut Field Operations
Iqaluit Office
Indigenous Affairs and Northern Development Canada
Box 100
Iqaluit, NU X0A 0H0

Curtis Didham, Enforcement Officer
David MacDonald, Enforcement Officer
Environment and Climate Change
Canada
933 Mivvik Street
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-244, Reported on June 20, 2018, Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On June 19th, personnel monitoring the Waste Rock Stockpile Pond (MS-08) and facility's ditching, observed an overflow of water from the west drainage ditch of the facility. This water under normal operating conditions reports to the Waste Rock Stockpile Pond. Upon investigation, the overflow was resultant of specific berm walls being insufficient to contain the surface water flow sourcing from the stockpile and reporting to the Waste Rock Stockpile Pond at a crossing where a culvert was installed which resulted in pooling water and overflow.

Baffinland took immediate action and arrested the overflow. The capacity of the west drainage ditch was increased to eliminate pooling within the ditch at the culvert and the overflow was contained. The perimeter emergency ditch was extended to contain overflow runoff still located at the spill location and as a future preventative action. The overflow water was tested and determined to have pH levels below 6.0 after the incident was initially identified. However, follow up water quality monitoring of the over flow spill location indicated pH levels above 6, having returned to above applicable MMER and Water licence criteria. The overflow occurred on a flat IOL tundra plateau >5km away from the nearest fisheries receiving water bodies of Camp Lake and Camp Lake Tributary. Water quality monitoring results down gradient of the spill location and further downstream in potential receiving environments are presented in this follow-up report.

As per MMER Reporting section 31(1)

31(2)

- (a) Waste rock surface water runoff overflowed the west drainage ditch at one discrete location, which reports to the Waste Rock Stockpile Pond. Monitoring of the overflow indicates water quality was below applicable pH guidelines on initial onset of the incident.
- (b) The estimated quantity of the deposit is unknown, however was arrested within the hour of being identified. Monitoring of the Waste Rock facility the previous day to the incident occurring had not identified the overflow occurring.
- (c) Exceedances of pH concentrations were deposited at the overflow location identified on the west drainage ditch.
- (d) No deleterious substances were deposited through the Final Discharge Point.
- (e) Camp Lake and Camp Lake Tributary would be the ultimate receiving body of water. It is located >5km away from the seepage
- (f) An Acute lethality test was conducted downstream on Camp Lake Tributary, a potential fisheries receiving water body, and is presented in this follow up as sample ID L1-02.
- (g) N/A
- (h) See summary above for circumstances of deposit. The west drainage ditch berm wall was increased in size and the capacity of the drainage ditch increased to eliminate potential pooling water. The emergency containment ditch down gradient of the spill was extended to capture overflow water in the immediate spill location down gradient of the west ditch overflow.

Immediate and Follow-Up Action:

The overflow was arrested upon discovery and monitoring of the over flow location was initiated. The west drainage ditch berm wall was increased in size and the capacity of the drainage ditch was increased to eliminate pooling within the ditch and promote flow from the ditch into the Waste Rock Stockpile Pond. Overflow water was captured by extending the emergency ditch around the west perimeter of the pond and culvert overflow location.

Recommendations:

Ensure effective drainage ditching flow path into the Waste Rock Stockpile Pond with earth works as required. Continued daily monitoring of both the drainage ditch and emergency ditches that are resident of the Waste Rock Stockpile Facility to safeguard against future incidents. .

Current Status:

The West drainage ditch is flowing as intended and no further overflow has been observed from either drainage ditch resident of the facility during daily monitoring.

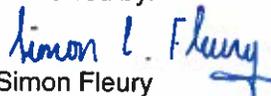
Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253-0596 x6016.

Prepared by:



William Bowden
Environmental Superintendent

Reviewed by:



Simon Fleury
Mine Manager

Attach: Photos, Map, Monitoring Results, NT-NU Spill Report

cc. Tim Sewell, Grant Goddard, Sylvain Proulx, Gerald Rogers, Francois Gaudreau, Connor Devereaux (Baffinland), Stephen Bathory (QIA), Ian Parsons, Jeremy Fraser (INAC)



Photo 1. June 19th, 2018 -Heavy equipment support upon discovery to arrest over flow from West Drainage Ditch.



Photo 2. June 20th, 2018 – West drainage ditch inflow into the Waste Rock Stockpile Pond following berm reinforcement.



Figure 1 – Overview map of overflow location

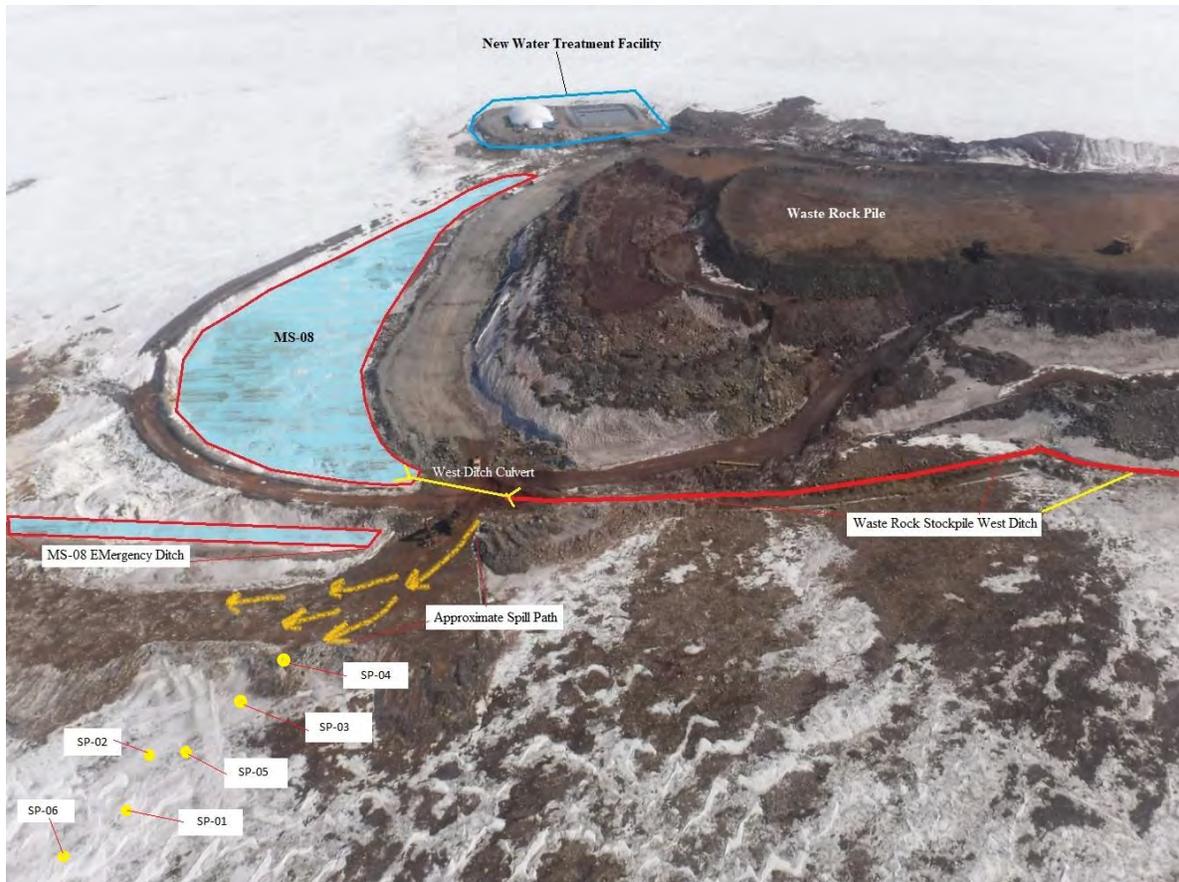


Figure 2 – Detailed map of spill location

Overflow In-Situ Monitoring Data

Date	Sample ID	Sample Time	pH	Temp. (°C)	Specific Conductivity (µs/cm)	Dissolved Oxygen (%)	Turbidity (NTU)	GPS Location
19-Jun-18	SP-01	18:20	5.32	4.3	3168	85.1	52.33	71°20'41"N 79°14'36"E
19-Jun-18	SP-02	18:30	5.4	5.5	3170	86.9	12.8	71°20'42"N 79°14'43"E
19-Jun-18	SP-03	18:35	6.03	5.5	2695	79.2	0.29	71°20'43"N 79°14'51"E
19-Jun-18	SP-04	18:40	6.38	5.7	2142	86.24	53.02	71°20'44"N 79°14'54"E
19-Jun-18	SP-05	18:55	5.77	6.1	2964	5.77	5.7	71°20'42"N 79°14'44"E
19-Jun-18	SP-06	19:05	5.49	5.1	3117	79	50.1	71°20'39"N 79°14'30"E
20-Jun-18	SP-01	12:25	6.07	7.5	2663	53.6	105	71°20'41"N 79°14'36"E
20-Jun-18	SP-03	12:45	6.67	4.5	1873	90.1	0	71°20'43"N 79°14'51"E
20-Jun-18	SP-04	12:55	6.81	5.5	1983	100.6	0.72	71°20'44"N 79°14'54"E
20-Jun-18	SP-05	13:00	6.57	7.6	1865	85.8	1.03	71°20'42"N 79°14'44"E
22-Jun-18	SP-01	1:16	6.34	2.7	816	85.2	2.09	71°20'41"N 79°14'36"E
22-Jun-18	SP-02	1:25	6.5	3.5	1374	78.3	13.04	71°20'42"N 79°14'43"E
22-Jun-18	SP-03	1:30	6.62	2.7	1593	79.7	1.15	71°20'43"N 79°14'51"E
22-Jun-18	SP-04	1:37	7.32	3.3	1119	91.1	1.05	71°20'44"N 79°14'54"E
22-Jun-18	SP-05	1:43	7.15	3.8	1165	87.5	2.2	71°20'42"N 79°14'44"E
22-Jun-18	SP-06	1:50	6.81	3.2	915	72.8	32.95	71°20'39"N 79°14'30"E

Camp Lake Tributary Receiving Environment

ALS		Sample ID	L1-02
7/20/2018		ALS ID	L2122777-4
L2122777		Date Sampled	7/3/2018 11:50:00 AM
Analyte	Units	LOR	Water
Conductivity	umhos/cm	3	105
Hardness (as CaCO3)	mg/L	10	51
pH	pH units	0.1	7.95
Total Suspended Solids	mg/L	2	<2.0
Total Dissolved Solids	mg/L	10	49 *
Turbidity	NTU	0.1	0.72
Alkalinity, Total (as CaCO3)	mg/L	10	48
Ammonia, Total (as N)	mg/L	0.02	<0.020
Bromide (Br)	mg/L	0.1	<0.10
Chloride (Cl)	mg/L	0.5	0.91
Nitrate and Nitrite as N	mg/L	0.021	0.022
Nitrate (as N)	mg/L	0.02	0.022
Nitrite (as N)	mg/L	0.005	<0.0050
Total Kjeldahl Nitrogen	mg/L	0.15	<0.15
Phosphorus, Total	mg/L	0.003	0.0036
Sulfate (SO4)	mg/L	0.3	5.51
Dissolved Organic Carbon	mg/L	0.5	1.94
Total Organic Carbon	mg/L	0.5	2.16
Mercury (Hg)-Total	mg/L	0.00001	<0.000010
Aluminum (Al)-Total	mg/L	0.003	0.0112
Antimony (Sb)-Total	mg/L	0.0001	<0.00010
Arsenic (As)-Total	mg/L	0.0001	<0.00010
Barium (Ba)-Total	mg/L	0.00005	0.0072
Beryllium (Be)-Total	mg/L	0.0005	<0.00050
Bismuth (Bi)-Total	mg/L	0.0005	<0.00050
Boron (B)-Total	mg/L	0.01	<0.010
Cadmium (Cd)-Total	mg/L	0.00001	<0.000010
Calcium (Ca)-Total	mg/L	0.05	10.5
Chromium (Cr)-Total	mg/L	0.0005	<0.00050
Cobalt (Co)-Total	mg/L	0.0001	<0.00010
Copper (Cu)-Total	mg/L	0.0005	0.00167
Iron (Fe)-Total	mg/L	0.03	<0.030
Lead (Pb)-Total	mg/L	0.00005	<0.000050
Lithium (Li)-Total	mg/L	0.001	<0.0010
Magnesium (Mg)-Total	mg/L	0.05	6.44
Manganese (Mn)-Total	mg/L	0.00007	0.000293
Molybdenum (Mo)-Total	mg/L	0.00005	0.000274
Nickel (Ni)-Total	mg/L	0.0005	0.00053
Potassium (K)-Total	mg/L	0.2	1.19
Selenium (Se)-Total	mg/L	0.001	<0.0010
Silicon (Si)-Total	mg/L	0.1	0.58
Silver (Ag)-Total	mg/L	0.00001	<0.000010
Sodium (Na)-Total	mg/L	0.05	0.601

Camp Lake Tributary Receiving Environment

ALS		Sample ID	L1-02
7/20/2018		ALS ID	L2122777-4
L2122777		Date Sampled	7/3/2018 11:50:00 AM
Analyte	Units	LOR	Water
Strontium (Sr)-Total	mg/L	0.0001	0.00532
Thallium (Tl)-Total	mg/L	0.0001	<0.00010
Tin (Sn)-Total	mg/L	0.0001	<0.00010
Titanium (Ti)-Total	mg/L	0.01	<0.010
Uranium (U)-Total	mg/L	0.00001	0.000472
Vanadium (V)-Total	mg/L	0.001	<0.0010
Zinc (Zn)-Total	mg/L	0.003	<0.0030
Aluminum (Al)-Dissolved	mg/L	0.003	0.0062
Antimony (Sb)-Dissolved	mg/L	0.0001	<0.00010
Arsenic (As)-Dissolved	mg/L	0.0001	<0.00010
Barium (Ba)-Dissolved	mg/L	0.00005	0.00717
Beryllium (Be)-Dissolved	mg/L	0.0005	<0.00050
Bismuth (Bi)-Dissolved	mg/L	0.0005	<0.00050
Boron (B)-Dissolved	mg/L	0.01	<0.010
Cadmium (Cd)-Dissolved	mg/L	0.00001	<0.000010
Calcium (Ca)-Dissolved	mg/L	0.05	10.2
Chromium (Cr)-Dissolved	mg/L	0.0005	<0.00050
Cobalt (Co)-Dissolved	mg/L	0.0001	<0.00010
Copper (Cu)-Dissolved	mg/L	0.0005	0.00159
Iron (Fe)-Dissolved	mg/L	0.03	<0.030
Lead (Pb)-Dissolved	mg/L	0.00005	<0.000050
Lithium (Li)-Dissolved	mg/L	0.001	<0.0010
Magnesium (Mg)-Dissolved	mg/L	0.05	6.29
Manganese (Mn)-Dissolved	mg/L	0.00007	0.000165
Mercury (Hg)-Dissolved	mg/L	0.00001	<0.000010
Molybdenum (Mo)-Dissolved	mg/L	0.00005	0.000293
Nickel (Ni)-Dissolved	mg/L	0.0005	<0.00050
Potassium (K)-Dissolved	mg/L	0.2	1.21
Selenium (Se)-Dissolved	mg/L	0.001	<0.0010
Silicon (Si)-Dissolved	mg/L	0.1	0.55
Silver (Ag)-Dissolved	mg/L	0.00001	<0.000010
Sodium (Na)-Dissolved	mg/L	0.05	0.607
Strontium (Sr)-Dissolved	mg/L	0.0001	0.00521
Thallium (Tl)-Dissolved	mg/L	0.0001	<0.00010
Tin (Sn)-Dissolved	mg/L	0.0001	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.01	<0.010
Uranium (U)-Dissolved	mg/L	0.00001	0.000456
Vanadium (V)-Dissolved	mg/L	0.001	<0.0010
Zinc (Zn)-Dissolved	mg/L	0.003	<0.0030
Phenols (4AAP)	mg/L	0.001	0.0016
Chlorophyll a	ug/L	0.1	0.18
Phaeophytin a	ug/L	0.1	0.18



AquaTox Testing & Consulting Inc.
B-11 Nicholas Beaver Rd.
Puslinch ON N0B 2J0
Tel: (519) 763-4412 Fax: (519) 763-4419

TOXICITY TEST REPORT
Daphnia magna
Page 1 of 2

Work Order : 236482
Sample Number : 55347

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sampled By :	Not provided
Location :	Waterloo ON	Time Collected :	16:20
Job Number :	L2117340	Date Collected :	2018-06-20
Substance :	L2117340-1 L1-02	Date Received :	2018-06-22
Sampling Method :	Not provided	Date Tested :	2018-06-22
Sample Description :	Clear, light yellow, odourless.	Temp. on arrival :	19.0° C
Test Method :	Reference Method for Determining Acute Lethality of Effluents to <i>Daphnia magna</i> . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).		

48-h TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested.

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride	Historical Mean LC50 :	6.0 g/L
Date Tested :	2018-06-12	Warning Limits (\pm 2SD) :	5.6 - 6.4 g/L
LC50 :	6.6 g/L*	Organism Batch :	Dm18-11
95% Confidence Limits :	6.3 - 6.9 g/L	Analyst(s) :	MDS, SEW, AW
Statistical Method :	Spearman-Kärber		

Daphnia magna CULTURE HEALTH DATA

Time to First Brood :	7 days	Mean Young Per Brood :	28.7
Culture Mortality :	2.2% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Test Organisms / Replicate :	10
Test Aeration :	None	Total Organisms / Test Level :	30
Organism Batch :	Dm18-11	Organism Loading Rate :	15.0 mL/organism
		Test Method Deviation(s) :	None

*Note: The reference toxicant test result exceeded the 95% warning limits for historical data. No other unusual circumstances were observed and therefore the test result is considered acceptable.

Date: 2018-06-26
yyyy-mm-dd

Approved by: Nancy Meyer
Project Manager

Work Order: 236482
 Sample Number: 55347

	Hardness (mg/L as CaCO ₃)	Hardness Adjustment	pH	D.O. (mg/L)	Cond. (µmhos/cm)	Temp. (°C)	O ₂ Sat. (%)*	Total Pre-Aeration Time (h) @ 30 mL/min/L
Initial Water Chemistry:	48	None	8.1	9.5	85	20.0	109	0:30

0 hours

Date & Time	2018-06-22	13:50						
Technician:	CZN/TZL							
Test Conc. (%)	Mortality	Immobility	pH	D.O.	Cond.	Temp.	O ₂ Sat. (%)*	Hardness
100A	0	0	8.1	9.2	99	20.0	106	48
100B	0	0	8.1	9.2	99	20.0	106	48
100C	0	0	8.1	9.2	99	20.0	106	48
Control A	0	0	8.6	8.6	769	20.0	100	240
Control B	0	0	8.6	8.6	769	20.0	100	240
Control C	0	0	8.6	8.6	769	20.0	100	240

Notes:

24 hours

Date & Time	2018-06-23	13:50						
Technician:	MDS							
Test Conc. (%)	Mortality	Immobility	pH	D.O.	Cond.	Temp.		
100A	-	0	-	-	-	20.0		
100B	-	0	-	-	-	20.0		
100C	-	0	-	-	-	20.0		
Control A	-	0	-	-	-	20.0		
Control B	-	0	-	-	-	20.0		
Control C	-	0	-	-	-	20.0		

Notes:

48 hours

Date & Time	2018-06-24	13:50						
Technician:	MDS							
Test Conc. (%)	Mortality	Immobility	pH	D.O.	Cond.	Temp.		
100A	0	0	8.1	8.5	92	21.0		
100B	0	0	8.2	8.4	99	21.0		
100C	0	0	8.3	8.5	95	21.0		
Control A	0	0	8.6	8.4	780	21.0		
Control B	0	0	8.6	8.4	777	21.0		
Control C	0	0	8.6	8.3	777	21.0		

Notes:

Control organisms showing stress: 0
 Organism Batch : Dm18-11

Number immobile does not include number of mortalities.

- = not measured/not required

* adjusted for actual temp. & barometric pressure

Test Data Reviewed By: J
 Date: 2018-06-26



AquaTox Testing & Consulting Inc.
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TOXICITY TEST REPORT
Rainbow Trout
 Page 1 of 2

Work Order : 236482
 Sample Number : 55347

SAMPLE IDENTIFICATION

Company :	ALS Laboratory Group, Waterloo	Sampled By :	Not provided
Location :	Waterloo ON	Time Collected :	16:20
Job Number :	L2117340	Date Collected :	2018-06-20
Substance :	L2117340-1 L1-02	Date Received :	2018-06-22
Sampling Method :	Not provided	Date Tested :	2018-06-22
Sample Description :	Clear, light yellow, odourless.	Temp. on arrival :	19.0°C
Test Method :	Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007 and February 2016 amendments).		

96-h TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

POTASSIUM CHLORIDE REFERENCE TOXICANT DATA

Organism Batch :	T18-14	Date Tested :	2018-06-08
LC50 :	3308 mg/L	Historical Mean LC50 :	3710 mg/L
95% Confidence Limits :	3012 - 3772 mg/L	Warning Limits (± 2SD) :	3074 - 4476 mg/L
Statistical Method :	Linear Regression (MLE)	Analyst(s) :	FS, TA, AW

TEST FISH

Control Fish Sample Size :	10	Cumulative stock tank mortality:	0 % (prev. 7 days)
Mean Fish Weight (± 2 SD) :	0.39 ± 0.20 g	Mean Fish Fork Length (± 2 SD) :	36.7 ± 6.9 mm
Range of Weights :	0.21 - 0.52 g	Range of Fork Lengths (mm) :	30 - 40 mm
Fish Loading Rate :	0.2 g/L		

TEST CONDITIONS

Test Organism :	<i>Oncorhynchus mykiss</i>	Volume Tested (L) :	19
Sample Treatment :	None	Number of Replicates :	1
pH Adjustment :	None	Organisms Per Replicate :	10
Test Aeration :	Yes	Total Organisms Per Test Level :	10
Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Test Method Deviation(s) :	None

Date: 2018-06-26
 yyyy-mm-dd

Approved by: Nancy Kueper
 Project Manager

Work Order: 236482
 Sample Number: 55347

Total Pre-Aeration Time (h)		pH	D.O. (mg/L)	Cond. (µmhos/cm)	Temp. (°C)	O ₂ Sat. (%)*
0:30	Initial Water Chemistry:	7.7	9.1	84	16.0	–
	Chemistry after 30min air:	7.7	9.3	86	16.0	99

0 hours

Date & Time	2018-06-22	13:50					
Technician:	TA						
Test Conc. (%)	Mortality	Immobility	pH	D.O.	Cond.	Temp.	O ₂ Sat. (%)*
100	0	0	7.7	9.3	86	16.0	99
Control	0	0	8.1	9.7	872	14.5	99

Notes:

24 hours

Date & Time	2018-06-23	13:50					
Technician:	TA(SF)						
Test Conc. (%)	Mortality	Immobility	pH	D.O.	Cond.	Temp.	
100	0	0	–	–	–	14.0	
Control	0	0	–	–	–	14.0	

Notes:

48 hours

Date & Time	2018-06-24	13:50					
Technician:	TA(SF)						
Test Conc. (%)	Mortality	Immobility	pH	D.O.	Cond.	Temp.	
100	0	0	–	–	–	14.0	
Control	0	0	–	–	–	14.0	

Notes:

72 hours

Date & Time	2018-06-25	13:50					
Technician:	MW(FS)						
Test Conc. (%)	Mortality	Immobility	pH	D.O.	Cond.	Temp.	
100	0	0	–	–	–	15.0	
Control	0	0	–	–	–	15.0	

Notes:

96 hours

Date & Time	2018-06-26	13:50					
Technician:	FS						
Test Conc. (%)	Mortality	Immobility	pH	D.O.	Cond.	Temp.	
100	0	0	7.9	8.8	89	15.0	
Control	0	0	8.1	9.5	821	15.0	

Notes:

Control organisms showing stress: 0

Organism Batch : T18-14

"-" = not measured/not required

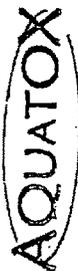
Number immobile does not include number of mortalities.

* adjusted for actual temp. & barometric pressure

 Test Data Reviewed By: J

 Date: 2018-06-26

CHAIN OF CUSTODY RECORD



Aquatox Work Order No:
23648a

P.O. Number: 450004047
 Field Sampler Name (print):
 Signature: ALS ENV
 Affiliation: ALS ENV
 Sample Storage (prior to shipping):
 Custody Relinquished by: RL
 Date/Time Shipped: 2018 Jun 8

Shipping Address: AquaTox Testing & Consulting Inc.
 B-11 Nicholas Beaver Road
 Puslinch, Ontario Canada N0B 2J0

Voice: (519) 763-4412 Fax: (519) 763-4419

Client: ALS Environmental
Waterloo
QH 162705399-18
 Phone: 519-886-6910
 Fax: 519-886-9047
 Contact: Wayne Smith / Rick Hawthorne

Sample Identification		Analyses Requested										Sample Method and Volume			
Date Collected (YYYY-mm-dd)	Time Collected (e.g. 14:30, 24 hr clock)	Aquatox Sample Number	Temp. on arrival	Rainbow Trout Single Concentration	Rainbow Trout LC50	Daphnia magna Single Concentration	Daphnia magna LC50	Fathead Minnow Survival & Growth	Carodaphnia dubia Survival & Reproduction	Lemna minor Growth	Pseudokirchneriella subcapitata Growth	Other (Please specify)	Grab	Composite	# of Containers and Volume (e.g. 2 x 1L, 3 x 10L, etc.)
<u>2018-06-20</u>	<u>1620</u>	<u>55347</u>	<u>19.0</u>	<u>X</u>		<u>X</u>									<u>1 Pair</u>

For Lab Use Only
 Received By: RD
 Date: 2018 06-22
 Time: 11:30
 Storage Location:
 Storage Temp. (C):

Please list any special requests or instructions:
Regular Baffled Toxicity Tests
Back w/ daily updates



L2117340

WATERLOO

Subcontract Request Form

Subcontract To:

AQUATOX TESTING AND CONSULTING

11B NICHOLAS BEAVER ROAD
RR3
GUELPH, ON N1H 6H9

NOTES: Please reference on final report and invoice: PO# L2117340
ALS requires QC data to be provided with your final results.

Please see enclosed 1 sample(s) in 1 Container(s)

SAMPLE NUMBER	ANALYTICAL REQUIRED	DATE SAMPLED	Priority Flag
		DUE DATE	
L2117340-1 L1-02		6/20/2018	E
	Special Request Aquatox (SPECIAL REQUEST-AQT 14)	6/28/2018	
	Special Request Aquatox (SPECIAL REQUEST-AQT 14)	6/28/2018	

Subcontract Info Contact: Sarah Houm (519) 886-6910
 Analysis and reporting info contact: Rick Hawthorne
 60 NORTHLAND ROAD, UNIT 1
 WATERLOO, ON N2V 2B8
 Phone: (519) 886-6910 Email: Rick.Hawthorne@alsglobal.com

Please email confirmation of receipt to: Rick.Hawthorne@alsglobal.com

Shipped By: _____ Date Shipped: _____
 Received By: _____ Date Received: _____
 Verified By: _____ Date Verified: _____
 Temperature: _____
 Sample Integrity Issues: _____



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
 TEL: (867) 920-8130
 FAX: (867) 873-6924
 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 06-20-2018	REPORT TIME 19:00	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 244
	B	OCCURRENCE DATE: MONTH - DAY - YEAR 06-19-2018		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENSE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Mine Site, Baffin Island, NU	REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 71 MINUTES 20 SECONDS 38	LONGITUDE DEGREES 79 MINUTES 14 SECONDS 19		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Surface Water	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Unquantifiable	U/N NUMBER N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U/N NUMBER N/A	
I	SPILL SOURCE Waste Rock Stockpile	SPILL CAUSE High overland flow	AREA OF CONTAMINATION IN SQUARE METRES N/A	
J	FACTORS AFFECTING SPILL OR RECOVERY Drainage to tundra	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On June 19th, Environmental personnel monitoring the Waste Rock Stockpile Pond (MS-08), observed water seeping out of the west drainage ditch. The seepage was tested and determined to have pH levels below 6.0. The capacity of the drainage ditch was increased to eliminate pooling within ditch and seepage contained. The perimeter emergency ditch was also extended to contain seepage runoff. Preliminary testing indicates impacted water was in the immediate vicinity of the waste rock stockpile. Water quality monitoring results and corrective actions will be presented in the follow-up report. The seepage occurred on IOL located > 3 km from nearest fish bearing water. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9(b); under the Fisheries Act as required by section 31 of the Metal Mining Effluent Regulations; and as required by the Government of Nunavut's, Environmental Protection Act paragraph 5.1(a).			
L	REPORTED TO SPILL LINE BY Connor Devereaux	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM 416-364-8820
M	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of Environment	EMPLOYER Baffinland	ALTERNATE CONTACT LOCATION 416-364-8820
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
				REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 3 – NT-NU Spill report



August 22, 2018

Jonathan Mesher, Resource Management Officer
Nunavut Field Operations
Indigenous and Northern Affairs Canada
Box 100
Iqaluit, NU X0A 0H0

Curtis Didham, Enforcement Officer
Environment and Climate Change Canada
933 Mivvik Street
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-286, Reported on July 23, 2018
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On July 22, 2018, authorities were notified that a tug owned by Group Ocean (OCEAN K. RUSBY) had experienced equipment malfunction on the starboard oil pump z-drive clutch while travelling through Eclipse Sound. The vessel reported to be slowly losing gear oil, and proceeded to the intended destination, Milne Inlet Port. The OCEAN K. RUSBY arrived and docked at the Baffinland Port Ship Loader dock that evening. Baffinland proactively deployed oil containment booms and sorbents around the vessel immediately, containing the release and the oil circuit was blanked. Group Ocean reported to regulators that approximately 30 liters of gear oil was released during the incident prior to boom containment at the Baffinland Port Ship Loader dock. A sheen and minor product was visible by helicopter reconnaissance travelling up the channel into Milne Inlet. Spill recovery efforts were initiated. Helicopter reconnaissance continued and showed that the release was readily dissipating through weather and wave action. A call was held with Group Ocean and the Canadian Coast Guard (CCG) on July 24th in which the CCG stated that spill recovery methods were not recommended.

Immediate and Follow-Up Action:

Upon the tug's arrival at the Milne Port Ship Loading dock, emergency response and spill containment procedures were activated immediately around the OCEAN K. RUSBY, under the Spill at Sea Response Plan (SSRP) and the Shipboard Oil Pollution Emergency Response Plan (SOPEP). On July 23rd OCEAN K. RUSBY was moved from the west side of the dock to the east side of the dock for safety and operations rationale. During the vessel move, double spill containment booms remained in place, encircling the vessel and were tightened and locked in place upon completion. On July 27th divers surveyed the hull of the vessel and assessed the equipment malfunction and damage. Residual product was cleaned and recovered from the damaged engine and hull of the tug with sorbents. Once no further sheen was observed on the hull or within the spill containment booms the OCEAN K. RUSBY was released after being cleared for use by CCG.

Recommendations:

Baffinland will continue to ensure marine spill response equipment is stocked and response personnel are trained in safe and efficient deployment. Update and evaluate spill response materials available at Milne Port: Mount vertical spill boom anchors on the Ship Loader Dock for decreased deployment time.

Current Status:

OCEAN K. RUSBY has ceased operation of the affected engine and is currently operating in Milne Inlet. No sheen or impact visible in the Inlet from the incident.

Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253-0596 x6016



Prepared by:

Benjamin Widdowson

Ben Widdowson
Environmental Coordinator

Reviewed by:

Bill Bowden

William Bowden
Environmental Superintendent

Attach: Photos, Map, NT-NU Spill Report

cc. Sylvain Proulx, Gerald Rogers, Francois Gaudreau, Jared Gardner Tim Sewell, Connor Devereaux (Baffinland), Stephen Bathory, Fai Ndofor (QIA), Erik Allain, Ian Parsons (INAC)



Photo 1 – OCEAN K. RUSBY at Milne Port upon arrival with two spill containment booms in place, July 22nd, 2018.



Photo 2 – July 24th, 02:00. Vessel following relocation contained within double booms.



Photo 3 – OCEAN K. RUSBY at East side of Milne Port Ship Loading dock with two spill containment booms in place, July 27th, 2018.

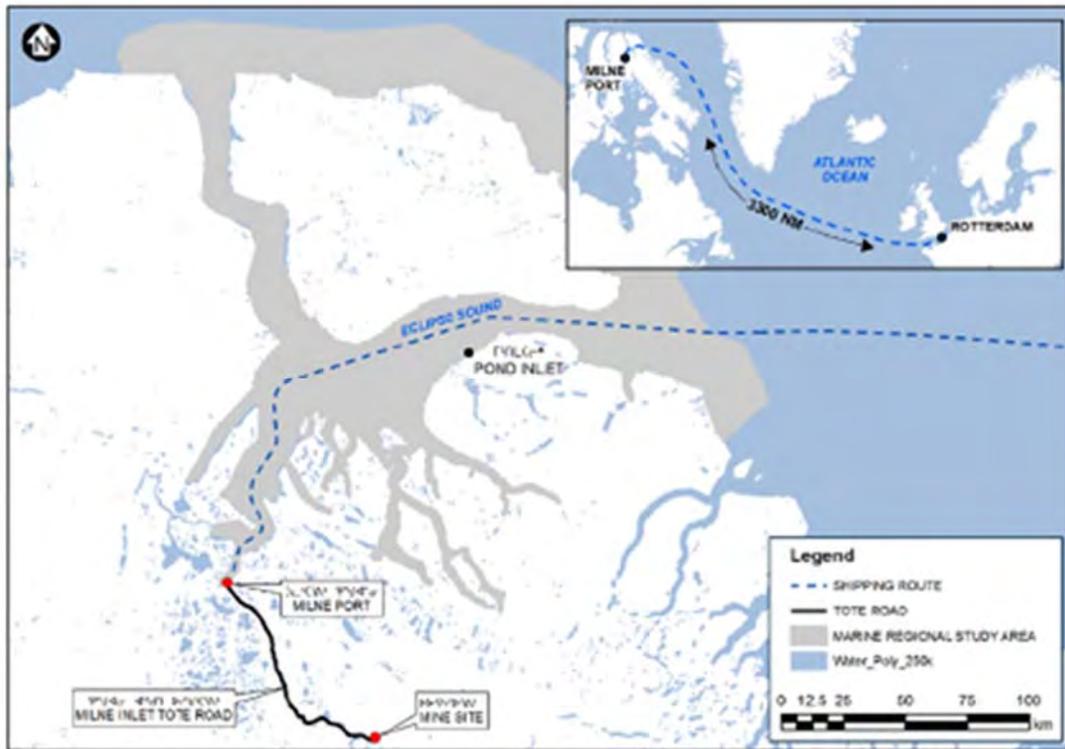


Figure 2 – Shipping route and map.



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
 TEL: (867) 920-8130
 FAX: (867) 873-6924
 EMAIL: spills@gov.nt.ca

A REPORT DATE: MONTH - DAY - YEAR 07-22-2018		REPORT TIME 23:45	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT		REPORT NUMBER _____
B OCCURRENCE DATE: MONTH - DAY - YEAR 07-22-2018		OCCURRENCE TIME unknown			
C LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301			WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Milne Inlet Site, Baffin Island, NU			REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E LATITUDE DEGREES MINUTES SECONDS			LONGITUDE DEGREES MINUTES SECONDS		
F RESPONSIBLE PARTY OR VESSEL NAME OCEAN K. RUSBY		RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 105, Abraham-Martin, #500 Quebec, QC G1K 8N1			
G ANY CONTRACTOR INVOLVED Groupe Ocean		CONTRACTOR ADDRESS OR OFFICE LOCATION 105, Abraham-Martin, #500 Quebec, QC G1K 8N1			
H PRODUCT SPILLED Gear Oil		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Approx. 30 litres	U.N. NUMBER N/A		
SECOND PRODUCT SPILLED (IF APPLICABLE) N/A		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A		
I SPILL SOURCE Ocean Tug		SPILL CAUSE Mechanical Failure	AREA OF CONTAMINATION IN SQUARE METRES unknown		
J FACTORS AFFECTING SPILL OR RECOVERY spill on water		DESCRIBE ANY ASSISTANCE REQUIRED		HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On July 22, 2018, the NORDREG, Canadian Coast Guard, and Department of Ocean and Fisheries was notified that OCEAN K. RUSBY had experienced equipment malfunction on the starboard oil pump z-drive clutch while travelling through Eclipse Sound. The vessel reported to be slowly losing gear oil, and proceeded to the intended destination, Milne Inlet. OCEAN K. RUSBY arrived and docked at the Baffinland Port Ship Loader dock that evening. An oil containment boom and sorbents were deployed around the vessel and the oil circuit was blanked. Groupe Ocean reported to regulators that approximately 30 liters of gear oil was released during the incident prior to boom containment at the Baffinland Port Ship Loader dock. A sheen was visible by helicopter reconnaissance travelling up the channel into Milne Inlet. The investigation is ongoing and further details will be provided in the follow-up report. Reporting as required by Water Licence 2AM-MRY1325, Part H, Items 9 & 10. Arctic Waters Pollution Prevention Act S. 5(1), and Fisheries Act subsection 38(4).					
L REPORTED TO SPILL LINE BY William Bowden		POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM Mary River	TELEPHONE 416 364 8820
M ANY ALTERNATE CONTACT Tim Sewell		POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE 6016
REPORT LINE USE ONLY					
N RECEIVED AT SPILL LINE BY		POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME		CONTACT TIME	REMARKS	
LEAD AGENCY					
FIRST SUPPORT AGENCY					
SECOND SUPPORT AGENCY					
THIRD SUPPORT AGENCY					

Figure 2 – NT-NU Spill report



September 12, 2018

Resource Management Officer
Nunavut Field Operations
Crown-Indigenous Relations and Northern Affairs Canada
Box 100
Iqaluit, NU X0A 0H0
Jonathan.mesher@aadnc-aadnc.gc.ca

Manager, Major Projects
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-324, Reported on August 13, 2018
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On August 12, 2018 at approximately 12:00hrs, an operator was filling the second compartment of fuel tanker (FLT-004) at the designated Milne Port Fueling Module, when the operator determined that fuel had begun to release from the tanker overflow. The operator immediately stopped the pump, closed the valve and utilized sorbents to arrest and contain the release. Approximately 200L of diesel fuel was released to the ground surface impacting an approximate area of 15m² within the lined engineered containment berm of the refueling area. The spill occurred >100 m to the nearest water course and had no possibility of migration from the affected area.

Immediate and Follow-Up Action:

The operator immediately shut off the fuel pump, closed the valves and laid down spill pads to contain the spill. The contaminated material was removed and properly disposed of in the landfarm. New material was placed and leveled to return the lined refueling area cover substrate back to its original state. Standard operating procedures have been reviewed with operators and the importance of monitoring levels at all times.

Recommendations:

Procurement of overflow protection system that can be outfitted on all fuel trucks used at the Project to eliminate operator error.

Current Status:

The refueling and transportation of fuel continues and no further incidents have occurred.

Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253-0596 x6016.

Prepared By:

Handwritten signature of Connor Devereaux in black ink.

Connor Devereaux
Environmental Superintendent

Reviewed by:

Handwritten signature of James Martin in black ink.

James Martin
Surface Works Superintendent

Attach: Photos, Map, NT-NU Spill Report

cc. Tim Sewell, Grant Goddard, Sylvain Proulx, Gerald Rogers, Francois Gaudreau, William Bowden
(Baffinland), Fai Ndofor (QIA), Justin Hack, Jeremy Fraser (INAC)



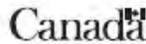
Photo 1. Spill location before clean-up



Photo 2. Spill location following clean-up



Figure 1 – Map of spill location



NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
 TEL: (867) 920-8130
 FAX: (867) 873-6924
 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 08-13-2018	REPORT TIME 13:00	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 324
B	OCCURRENCE DATE: MONTH - DAY - YEAR 08-12-2018	OCCURRENCE TIME 12:00		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Mine Site, Baffin Island, NU		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN	
E	LATITUDE DEGREES 71 MINUTES 53 SECONDS 08	LONGITUDE DEGREES 80 MINUTES 53 SECONDS 34		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED: N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Arctic Diesel	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Approx. 200L	U.N. NUMBER N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A	
I	SPILL SOURCE Fuel tanker	SPILL CAUSE Fueling of tanker	AREA OF CONTAMINATION IN SQUARE METRES 15m2	
J	FACTORS AFFECTING SPILL OR RECOVERY None	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS <p>On August 12, 2018 at approximately 12:00hrs, an operator was filling the second compartment of fuel tanker (FLT-004) at the designated Milne Port Fueling Module, when the operator determined that fuel had begun to release from the tanker overflow. The operator immediately stopped the pump, closed the valve and utilized sorbents to arrest and contain the release. Approximately 200L of diesel fuel was released to the ground surface impacting an approximate area of 15m2 within the lined engineered containment berm of the refueling area. The contaminated material was removed and properly disposed of in the landfarm. The spill occurred >100 m to the nearest water course and had no possibility of migration from the affected area. The investigation is ongoing and further details will be provided in the follow-up report. This spill is being reported as required by the conditions of NWB Water License no. 2AM-MRY1325, Part H, item 9 (b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act.</p>			
L	REPORTED TO SPILL LINE BY William Bowden	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM Mary River
M	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE CONTACT LOCATION ext. 6016
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
				REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> OCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME		CONTACT TIME	REMARKS
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2 – NT-NU Spill report

APPENDIX E.8.4
INITIAL AND FOLLOW-UP SPILL REPORTS
(PART 4 OF 4)



September 26, 2018

Resource Management Officer
Nunavut Field Operations
Crown-Indigenous Relations and Northern Affairs Canada
Box 100
Iqaluit, NU X0A 0H0
Jonathan.mesher@aandc-aadnc.gc.ca

Manager, Major Projects
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-363, Reported on August 27, 2018
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On August 27, personnel observed a release of Arctic diesel in the Bulk Fuel Tank Farm at the Mine Site. Upon initial investigation, a bulk fuel tank in a lined engineered containment facility experienced an overflow of diesel from the top of the tank during resupply operations. The fuel tanker resupply was immediately arrested upon overflow discovery and lines were isolated and closed from the fuel resupply module. Spill clean-up in the lined berm mitigated berm contamination. Approximately 1.1 m³ was released and contained in the lined engineered berm, with no possibility of migration outside of containment, and is >100 meters from the nearest water course.

Immediate and Follow-Up Action:

Upon notice of the overflow, the operator immediately shut off the tanker fuel pump, and closed all valves. Once flow had stopped, the valves between TK-001 and TK-002 were opened, allowing the fuel level in TK-001 to return to 91%. Standard operating procedures have been reviewed with operators and updated. Updates include: pre-offload and post-offload fuel percentages in tanks added to the Fuel Transfer sheets, and a secondary inspection of valve position before offloading fuel.

Recommendations:

Retrofit valve signage of valves to be larger and easily visible when in both OFF and ON positions.

Current Status:

The fuel module and fuel tanks are currently in operation and no further release has occurred.

Should you require further information or clarification on the above noted spill, please feel free to contact William Bowden or Connor Devereaux at (647) 253-0596 x6016.

Prepared By:


William Bowden
Environmental Superintendent

Reviewed By:


James Martin
Surface Works Superintendent

Attach: Photos, Map, NT-NU Spill Report

cc. Tim Sewell, Grant Goddard, Sylvain Proulx, Gerald Rogers, Francois Gaudreau, William Bowden (Baffinland), Fai Ndofor (QIA), Justin Hack, Jeremy Fraser (INAC)



Photo 1. Spill location, TK-001.



Photo 2. Spill contained within fuel mod berm.

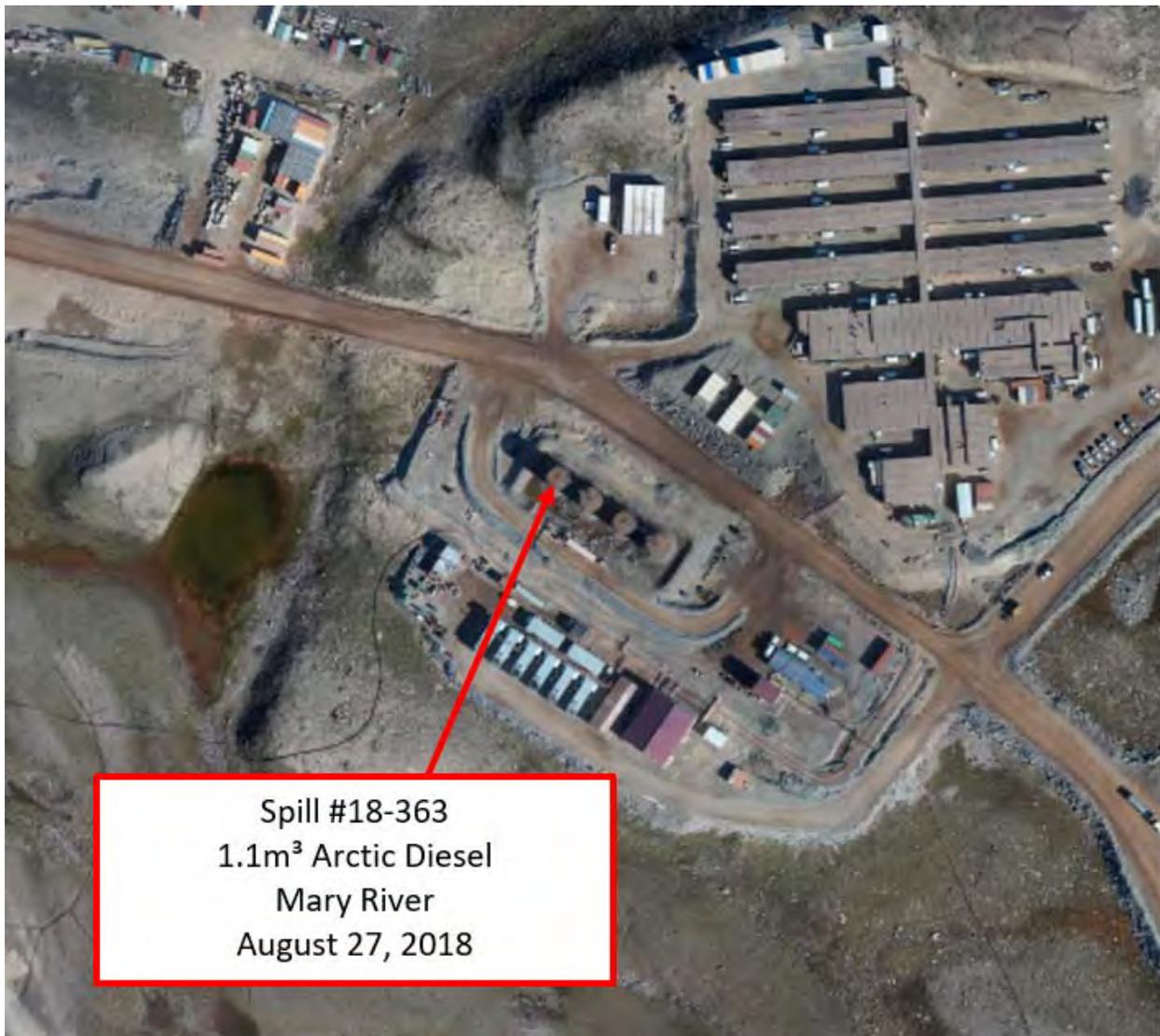


Figure 1 – Map of spill location.



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
 TEL: (867) 920-8150
 FAX: (867) 873-6924
 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 08-28-2018	REPORT TIME 11:00	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18
	B	OCCURRENCE DATE: MONTH - DAY - YEAR 08-27-2018	OCCURRENCE TIME 11:00	
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Mine Site, Baffin Island, NU	REGION: <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 71 MINUTES 18 SECONDS 55	LONGITUDE DEGREES 79 MINUTES 17 SECONDS 04		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Diesel Fuel	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Approx. 1.1m3	U.N. NUMBER N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A	
I	SPILL SOURCE MS Bulk Fuel Tank 1	SPILL CAUSE Tank overflow	AREA OF CONTAMINATION IN SQUARE METRES	
J	FACTORS AFFECTING SPILL OR RECOVERY N/A	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On August 27, personnel observed a release of Arctic diesel in the Bulk Fuel Tank Farm at the Mine Site. Upon initial investigation, a bulk fuel tank in a lined engineered containment facility experienced an overflow of diesel from the top of the tank during resupply operations. The fuel tanker resupply was immediately arrested upon overflow discovery and lines were isolated and closed from the fuel resupply module. Fuel recovery and clean up in the lined berm will mitigate berm contamination. Approximately 1.1 m3 was released and contained in the lined engineered berm, with no possibility of migration outside of containment, and is >100 meters from the nearest water course. The investigation is ongoing and further details of the incident will be provided in the follow-up report. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9 (b).			
L	REPORTED TO SPILL LINE BY William Bowden	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM 647-253-0596
M	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE CONTACT LOCATION ext. 6016
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> IMAG <input type="checkbox"/> NER <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN	
AGENCY			FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED	
CONTACT NAME		CONTACT TIME		REMARKS
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2 – NT-NU Spill report



Nov 24, 2018

Resource Management Officer
Nunavut Field Operations
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Box 100
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Jonathan.Meshier@aandc-aadnc.gc.ca

Manager, Major Projects
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-436
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

At 17:45 Hrs on October 25, 2018, a housing maintainer observed water adjacent to the sewage holding tank for the Mobile Maintenance building at Milne Port. Upon investigation, it was determined that the toilet had a malfunctioning valve which caused the tank to overflow, releasing approximately 1m³ of raw sewage. The spill was confined to the laydown and is greater than 100 m from the nearest water body, which is currently frozen. A second minor release of approximately 40L from the holding tank occurred Oct 31, 2018 due to high volumes in the tank resulting in an overflow.

Immediate and Follow-Up Action:

A vacuum truck was utilised to remove sewage from the holding tank to prevent any further release. Sewage released onto the surrounding pad was removed and placed in an engineered lined containment facility. Upon further investigation it was determined that a faulty valve within the toilet caused the tank to over flow. The second minor release, was determined to be the result of a non functioning over flow alarm due to a non functioning emergency float.

Recommendations:

Building occupants are to alert the Housing Maintainer as soon as a toilet is observed to be malfunctioning. An overflow alarm system to be researched with focus on an audible alarm to the system. Operators will complete visual tank inspections of volume capacities every site visit.

Current Status:

The faulty valve has been replaced and the issues with the holding tank overflow alarm system have been repaired. The holding tank and toilet are operating as designed.

Should you require further information or clarification on the above noted spill, please feel free to contact Connor Devereaux or William Bowden at (647) 253- 0596 x6016.

Prepared by:

Handwritten signature of Connor Devereaux in black ink.

Connor Devereaux
Environmental Superintendent

Reviewed by:

Handwritten signature of James Martin in blue ink.

James Martin
Site Services Superintendent

Attach: Photos, Map, Baffinland NT-NU Spill Report
cc. Grant Goddard, Sylvain Proulx, Tim Sewell, William Bowden, Gerald Rogers, Francois Gaudreau (Baffinland), Fai Ndofor (QIA), Justin Hack, Jeremy Fraser (CIRNAC).



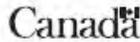
Photo 1. Overflow spill on ground surrounding the holding tank. Oct 25, 2018.



Photo 2. Holding tank area after site clean up. Nov 01, 2018.



Figure 1. Map of spill location



NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 10-26-2018	REPORT TIME 17:30	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 436
	B	OCCURRENCE DATE: MONTH - DAY - YEAR 10-25-2018		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Mine Site, Baffin Island, NU	REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 71 MINUTES 53 SECONDS 09	LONGITUDE DEGREES 80 MINUTES 53 SECONDS 26		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Raw Sewage	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Approx. 1m3	U.N. NUMBER N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A	
I	SPILL SOURCE Sewage Holding Tank	SPILL CAUSE Unknown	AREA OF CONTAMINATION IN SQUARE METRES Approx. 140m2	
J	FACTORS AFFECTING SPILL OR RECOVERY Congested area, snow and ice	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS At 17:45 Hrs on October 25, 2018, a housing maintainer observed water adjacent to the sewage holding tank for the Mobile Maintenance building at Milne Port. Upon initial investigation, it was determined that the toilet had malfunctioned which caused the tank to overflow. The holding tank was immediately pumped down to prevent any further release. Crews then initiated removal of all contaminated snow which was disposed of in the polishing waste stabilization pond. Approximately 1m3 was released impacting the surrounding laydown covering an area of approx. 140m2. The location of the spill was confined to the laydown and is greater than 100 m from the nearest water body which is currently frozen. The investigation and cleanup are ongoing, further details will be provided in the follow-up report. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9 (b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act.			
L	REPORTED TO SPILL LINE BY Connor Devereaux	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM Mary River
M	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE CONTACT ext. 6016
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> OCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2. Baffinland NT NU spill report



Dec 12, 2018

Resource Management Officer
Nunavut Field Operations
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Jonathan.Meshier@aandc-aadnc.gc.ca

Manager, Major Projects
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-451
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

At 07:25 Hrs on November 13, 2018 the Site Services Supervisor, on inspection observed liquid sourcing from the main sewage lift station at the Mine Site Complex (MSC), impacting the adjacent MSC pad. Upon investigation it was determined that the high level float malfunctioned and failed to engage the lift station pumps which caused the tank to overflow, releasing approximately 0.5m³ of raw sewage. The spill was confined to the MSC pad, impacting an area of approximately 20m², and was greater than 100m from the nearest water body which is currently frozen.

Immediate and Follow-Up Action:

The sewage overflow was immediately arrested, and the lift station holding tank pumped down to prevent further release. The contaminated snow was collected, to the extent possible, and deposited in an engineered lined containment facility. The lift station pumps were serviced and the high level float was replaced and tested. Following the repair both pumps turn on when the high level float is engaged.

Recommendations:

Continue inspections of lift stations to mitigate potential releases.

Upgrade the alarm system to identify pump failure with externally visible lights.

Current Status:

The faulty high level float has been replaced and the pumping system tested. The holding tank and pumps are operating as designed.

Should you require further information or clarification on the above noted spill, please feel free to contact Connor Devereaux or William Bowden at (647) 253- 0596 x6016.

Prepared by:

A handwritten signature in cursive script, appearing to read "Bill Bowden".

William Bowden
Environmental Superintendent

Reviewed by:

Jeff Bush
Site Services Superintendent

Attach: Photos, Map, Baffinland NT-NU Spill Report
cc. Grant Goddard, Sylvain Proulx, Tim Sewell, Connor Devereaux, Gerald Rogers, Francois Gaudreau (Baffinland), Stephen Bathory, Fai Ndofor (QIA), Justin Hack, Jeremy Fraser (INAC).



Photo 1. Overflow release on camp pad adjacent to main holding tank..



Photo 2. Overflow release after site clean up..



Figure 1. Map of spill location



Canada

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 11-13-2018	REPORT TIME 22:00	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 451
	B	OCCURRENCE DATE: MONTH - DAY - YEAR 11-13-2018		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Mine Site, Baffin Island, NU	REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES 71 MINUTES 18 SECONDS 50	LONGITUDE DEGREES 79 MINUTES 16 SECONDS 59		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Raw Sewage	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Approx. 0.5 m3	U.N. NUMBER N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A	
I	SPILL SOURCE lift station tank	SPILL CAUSE float malfunction	AREA OF CONTAMINATION IN SQUARE METRES Approx. 20 m2	
J	FACTORS AFFECTING SPILL OR RECOVERY Congested area, snow and Ice	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS: At 07:25 Hrs on November 13, 2018, the Site Services Supervisor, on inspection, observed liquid sourcing from the main sewage lift station at the Mine Site Complex (MSC), impacting the adjacent MSC pad. The sewage overflow was immediately arrested, and the Lift station holding tank pumped down to prevent further release. Upon initial investigation, it was determined that float malfunction had failed to engage the lift station pumps which caused the tank to overflow. Approximately 0.5 m3 was released, contained to the adjacent MSC pad, impacting an area of approx. 20 m2. The spill is >100 m from the nearest fish bearing water body which is currently frozen. The investigation and cleanup are ongoing, further details will be provided in the follow-up report. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9 (b), pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act, and the GN EPA paragraph 5.1(a).			
L	REPORTED TO SPILL LINE BY William Bowden	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM Mary River
M	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE TELEPHONE ext. 6016
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
			REPORT LINE NUMBER (867) 920-8130	
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NES <input type="checkbox"/> TC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS: <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2. Baffinland NT NU spill report



December 19, 2018

Water Resources Officer
Nunavut Field Operations
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Jonathan.Meshera@aandc-aadnc.gc.ca

Regulatory Manager
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Spill #18-459 - Follow-Up Spill Report
Mary River Project - Water Licence No. 2AM-MRY1325 – Amendment 1

Summary:

At approximately 17:00 HRS on November 19, 2018 during a routine inspection, a release of water from the piping of the Mary River Mine Site Complex (MSC) was discovered. At the time of the discovery, the release of water was frozen solid and was not active. Because the water was originally assessed to be greywater from the MSC kitchen, the release, estimated to be 0.5 m³, was reported to the NT-NU Spill Line and other relevant regulators on November 20, 2018. Upon further investigation, the release was determined to be potable water from a drain associated with the MSC ice machine, and not a greywater spill from the MSC kitchen.

Current Status:

The piping associated with the release has been addressed. No further action is required.

Should you require further information or clarification on the above noted spill, please feel free to contact Connor Devereaux or William Bowden at (647) 253-0596 x6016.

Prepared by:

A handwritten signature in black ink, appearing to read "Connor Devereaux".

Connor Devereaux
Environmental Superintendent

Reviewed by:

A handwritten signature in black ink, appearing to read "James Martin".

James Martin
Site Services Superintendent

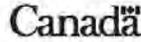
Attach: Photos, Map, Baffinland NT-NU Spill Report
cc. Grant Goddard, Sylvain Proulx, Tim Sewell, William Bowden, Gerald Rogers, Francois Gaudreau (Baffinland), Sean Joseph, Fai Ndofor (QIA), Justin Hack, Jeremy Fraser (CIRNAC).



Photo 1 - Potable Water Release (Nov. 19, 2018)



Figure 1 – Location of Potable Water Release



NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
 TEL: (867) 920-8130
 FAX: (867) 873-6924
 EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR 11-20-2018	REPORT TIME 1800	<input checked="" type="checkbox"/> ORIGINAL SPILL REPORT OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER 18 - 459
B	OCCURRENCE DATE: MONTH - DAY - YEAR unknown	OCCURRENCE TIME unknown		
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease: Q13C301	WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION Mary River Mine Site, Baffin Island, NU		REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN	
E	LATITUDE DEGREES 71 MINUTES 18 SECONDS 53	LONGITUDE DEGREES 79 MINUTES 17 SECONDS 03		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3		
G	ANY CONTRACTOR INVOLVED N/A	CONTRACTOR ADDRESS OR OFFICE LOCATION N/A		
H	PRODUCT SPILLED Grey Water	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES Approx. 0.5 m3	U.N. NUMBER N/A	
	SECOND PRODUCT SPILLED (IF APPLICABLE) N/A	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES N/A	U.N. NUMBER N/A	
I	SPILL SOURCE Kitchen Piping	SPILL CAUSE piping failure	AREA OF CONTAMINATION IN SQUARE METRES Approx. 4 m2	
J	FACTORS AFFECTING SPILL OR RECOVERY Confined Space	DESCRIBE ANY ASSISTANCE REQUIRED N/A	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT N/A	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS On November 19, 2018, at approx. 1700 Hrs, during routine inspection, a release of grey water sourcing from the Mine Site Complex (MSC) Kitchen piping was discovered. Housing maintenance was notified and the leak was not active at the time and was frozen. Prior to frozen conditions arresting the leak, it is estimated that approx. 0.5 m3 of grey water was released, contained to the MSC Pad, impacting an area of approx. 4 m2. The spill is >100 m from the nearest water body which is currently frozen. The investigation, repairs and cleanup are ongoing, further details will be provided in the follow-up report. This spill is being reported as required by the conditions of water license no. 2AM-MRY1325, Part H, item 9 (b) pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act, and the GN EPA paragraph 5.1(a).			
L	REPORTED TO SPILL LINE BY William Bowden	POSITION Env. Superintendent	EMPLOYER Baffinland	LOCATION CALLING FROM Mary River
M	ANY ALTERNATE CONTACT Tim Sewell	POSITION Head of HSE	EMPLOYER Baffinland	ALTERNATE CONTACT LOCATION ext. 6016
REPORT LINE USE ONLY				
N	RECEIVED AT SPILL LINE BY STATION OPERATOR	POSITION	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT
				REPORT LINE NUMBER (867) 920-8130
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC		SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS: <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY	CONTACT NAME	CONTACT TIME	REMARKS	
LEAD AGENCY				
FIRST SUPPORT AGENCY				
SECOND SUPPORT AGENCY				
THIRD SUPPORT AGENCY				

Figure 2 - Baffinland NT NU Spill Report



Dec 24, 2018

Water Resources Officer
Nunavut Field Operations
Crown Indigenous Relations and Northern Affairs Canada
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Jonathan.Meshier@aandc-aadnc.gc.ca

Regulatory Manager
Qikiqtani Inuit Association
P.O. Box 219
Iqaluit, NU X0A 0H0

Re: Follow-up to Spill #18-463
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

At ~01:00 Hrs on November 25, an operator was filling the vacuum truck with raw sewage from the RBC holding tank at the Mine Site. Upon completion, the operator placed the intake hose into travel position without closing the valve or attaching the end cap and started to drive away, which allowed sewage to drain out through the hose. The operator stopped the truck after a short distance to close the valve and prevent further release. Crews then initiated removal of contaminated snow/ice which was disposed of in the engineered lined containment facility. Approximately 0.5 m³ was released, impacting the road and covering an area of approx. 140 m². The location of the spill is greater than 100 m from the nearest water body which is currently frozen.

Immediate and Follow-Up Action:

The sewage release was immediately arrested. The contaminated snow was collected and deposited in an Polishing Waste Stabilization Pond. Standard operating procedures were reviewed with operators.

Recommendations:

Standard operating procedures will require the operator to verify the valve is closed and an end cap is attached to the hose upon completion of filling or emptying holding tanks.

Current Status:

The use of the vacuum truck continues and no further incidents have occurred.

Should you require further information or clarification on the above noted spill, please feel free to contact Connor Devereaux or William Bowden at (647) 253- 0596 x6016.

Prepared by:

A handwritten signature in black ink, appearing to read "Connor Devereaux".

Connor Devereaux
Environmental Superintendent

Reviewed by:

A handwritten signature in blue ink, appearing to read "Jim Martin".

Jim Martin
Surface Works Superintendent

Attach: Photos, Map, Baffinland NT-NU Spill Report

cc. Grant Goddard, Sylvain Proulx, Tim Sewell, William Bowden, Gerald Rogers, Francois Gaudreau (Baffinland), Fai Ndofo, Sean Joseph (QIA), Justin Hack, Jeremy Fraser (CIRNAC).



Photo 1. Sewage drainage release on camp pad adjacent to RBC holding tank.



Photo 2. Camp pad adjacent to RBC holding tank after site clean-up.