BG-24 Culvert Crossing

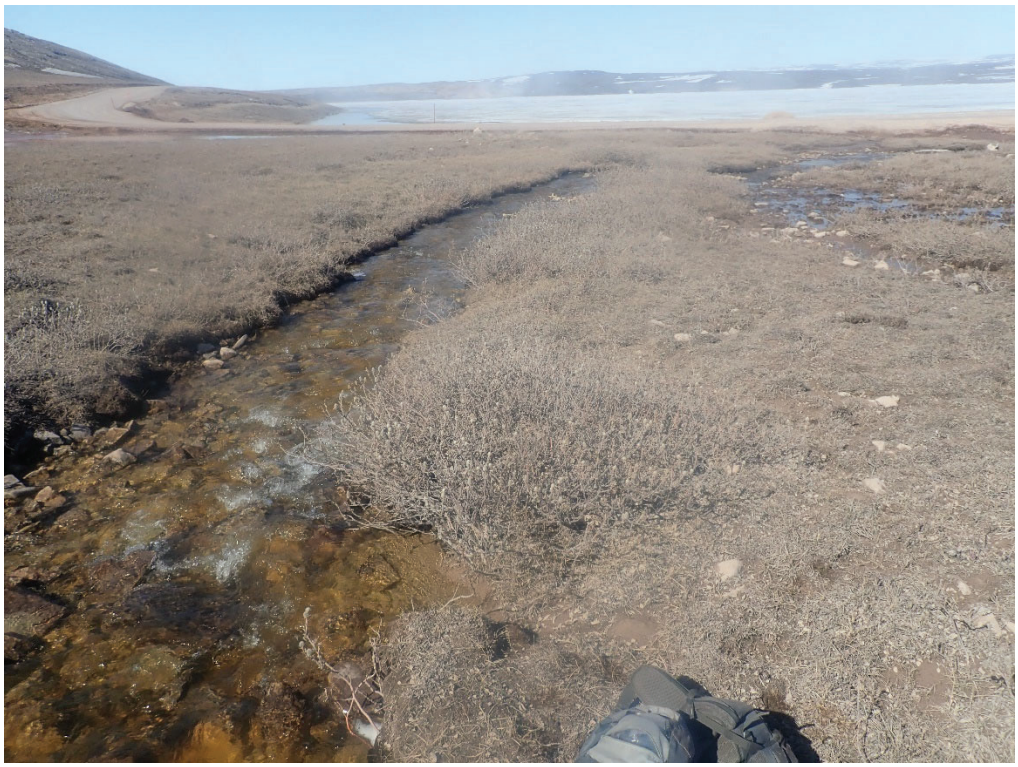

Photo 1. BG-24 Culvert Crossing Upstream on June 8, 2021

Photo 2. BG-24 Culvert Crossing Downstream on June 8, 2021

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Photo 3. BG-24 Culvert Crossing Downstream on June 13, 2021

Photo 4. BG-24 Culvert Crossing Downstream on July 05, 2021

CV-093 Culvert Crossing

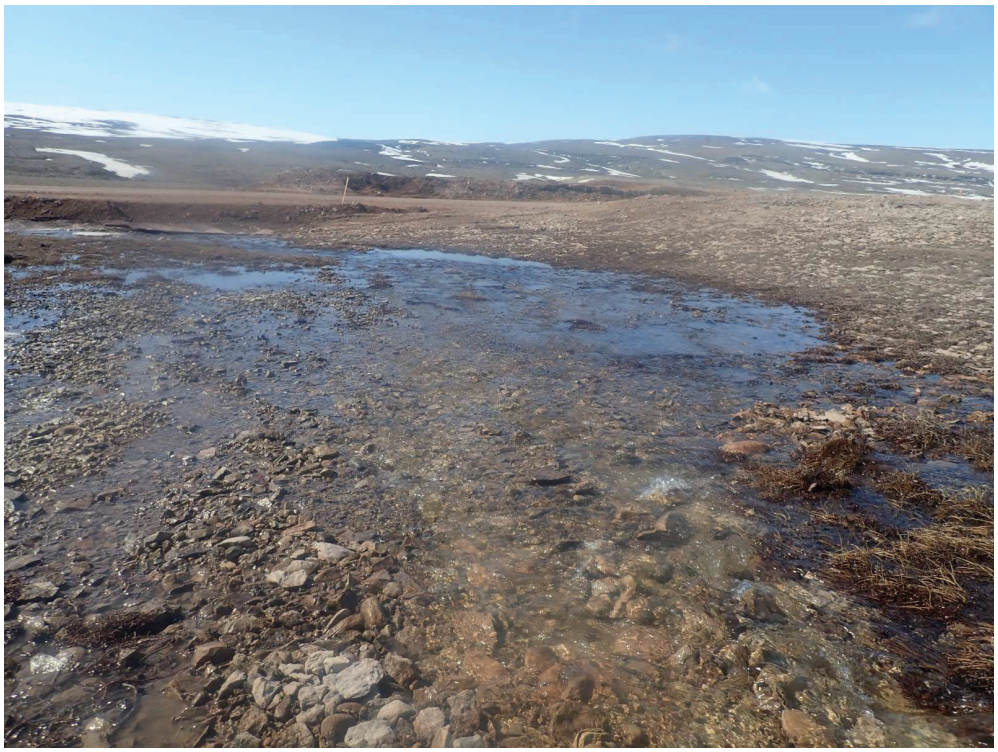

Photo 1. CV-093 Culvert Crossing Upstream on June 9, 2021

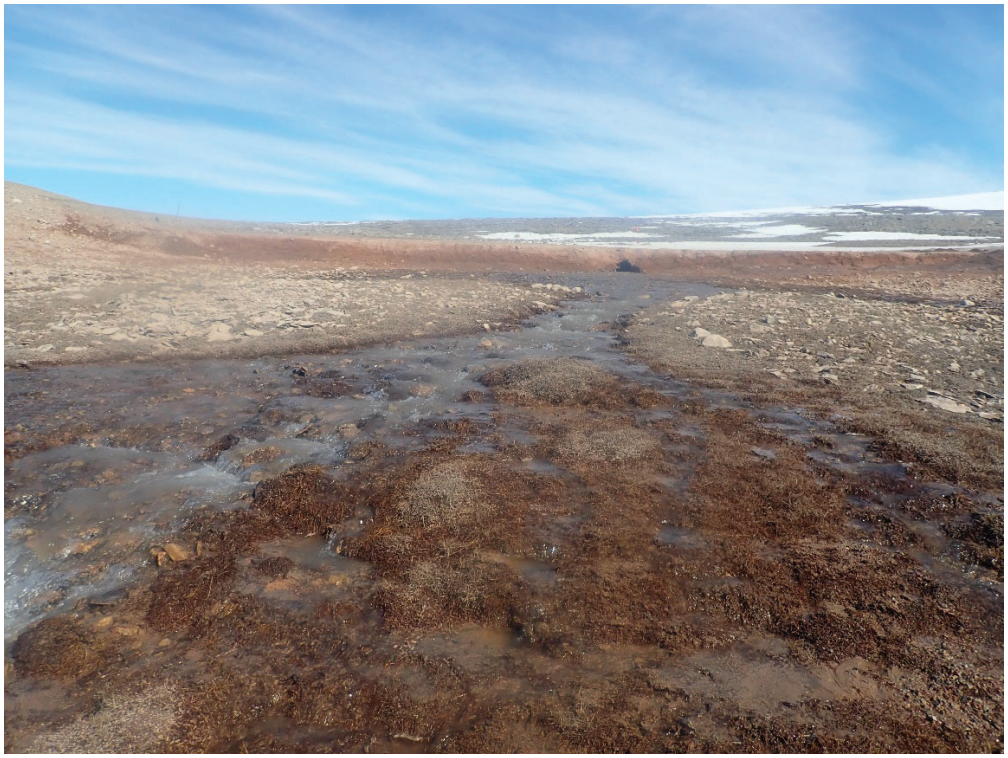

Photo 2. CV-093 Downstream Culvert Crossing on June 9, 2021

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Photo 3. CV-093 Culvert Crossing Downstream on June 14, 2021

Photo 4. CV-093 Culvert Crossing Upstream July 13 2021

Photo 5. CV-093 Culvert Crossing Downstream July 13 2021

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Attachment 2

TRMP Culvert Crossing Monitoring Locations

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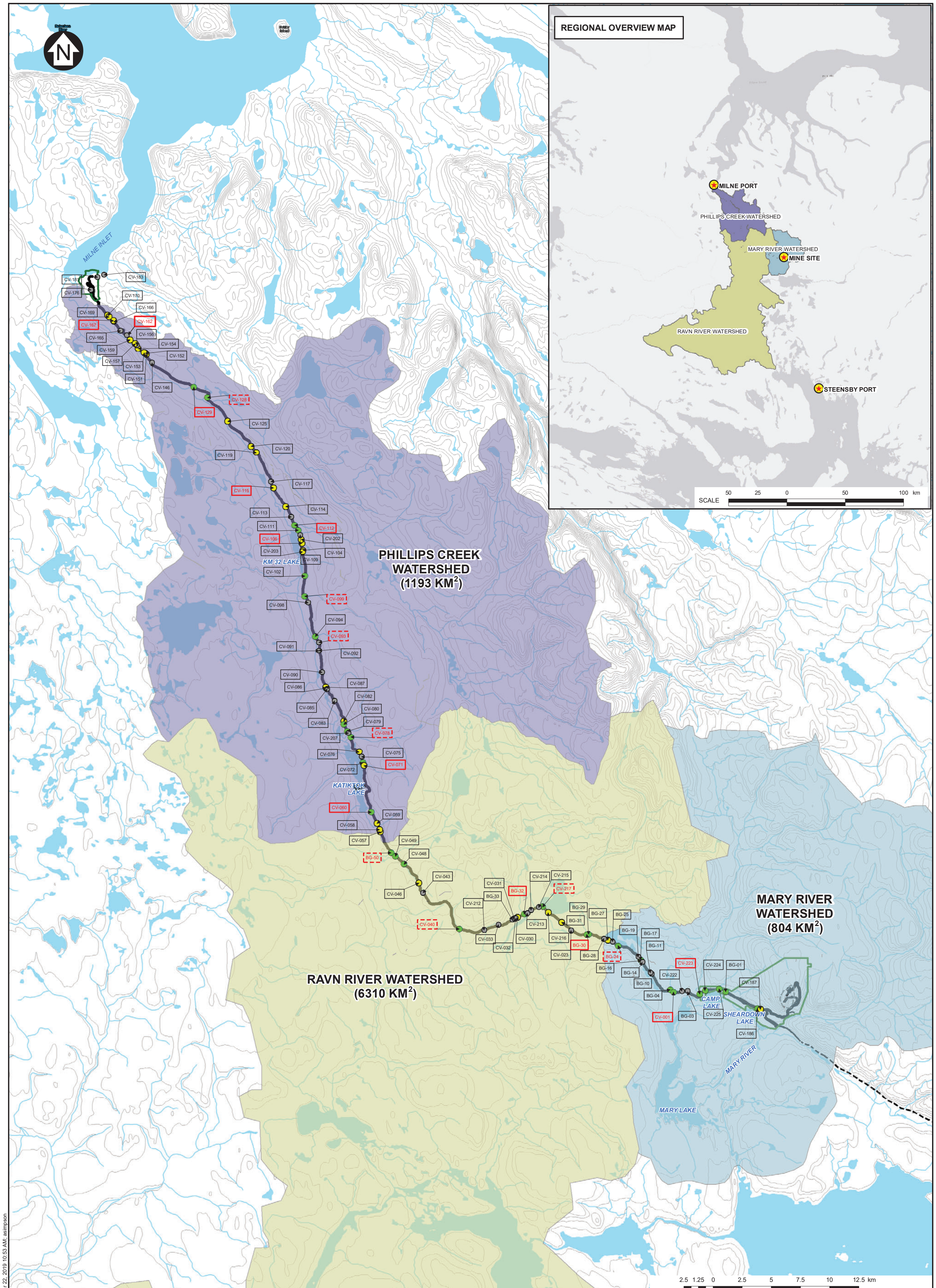

LEGEND:

- WATER
- MILNE INLET TOTE ROAD
- POTENTIAL DEVELOPMENT AREA
- WATER CROSSING MONITORED BY TOTE ROAD MONITORING PROGRAM
- HADD FISH BEARING WATER CROSSING MONITORED BY TOTE ROAD MONITORING PROGRAM

FISH BEARING STATUS

- NO
- MARGINAL
- IMPORTANT

NOTES:

1. COORDINATE GRID IS IN METRES. COORDINATE SYSTEM: UTM NAD83 ZONE 17N.
2. BASE MAP: © HER MAJESTY THE QUEEN IN RIGHTS OF CANADA DEPARTMENT OF NATURAL RESOURCES (2009). ALL RIGHTS RESERVED.
3. CONTOUR INTERVAL IS 40 METRES.
4. CATCHMENT BASED ON JULY 2006 INSPECTIONS.
5. FISH BEARING STATUS BASED ON: BAFFINLAND IRON MINES CORP., FISH HABITAT MONITORING 2017 ANNUAL REPORT, TABLE 2, DECEMBER 2017.

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	22MAR19	ISSUED WITH TRANSMITTAL	AV	AS	AV

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

TOTE ROAD MONITORING PROGRAM

Baffinland

P/A NO.	REF NO.
NB102-181/54	NB19-00240

FIGURE D-1 REV 0

Attachment 3

Baffinland NT-NU Spill Report #2021-247

2275 Upper Middle Road East, Suite 300 | Oakville, ON, Canada L6H 0C3
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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 **06-15-2021**	REPORT TIME **19:00 HRS**	☒ ORIGINAL SPILL REPORT, OR ☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER **21 - 247**
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 ☐ NWT ☒ NUNAVUT ☐ 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**	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 areas, high flows**	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 the Tote Road Monitoring Program, water crossings CV-154-A, CV-115, CV-112 and CV-001 monitored during Freshet were identified from lab results to be above the applicable criteria for Total Suspended Sediments (TSS) downstream of the crossing, as outlined in the Roads Management Plan. The sediment appeared to be generated by the melting snow pack adjacent to the road. In accordance with the Surface Water Aquatic Effects Management Plan erosion and sediment control measures were implemented and are planned where possible based on safe access, snow, ice cover and frozen ground. The Tote Road Monitoring Program is ongoing, including follow-up sampling. 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(5) of the Fisheries Act.

L	REPORTED TO SPILL LINE BY **Kendra Button**	POSITION **Env Superintendent**	EMPLOYER **Baffinland**	LOCATION CALLING FROM **647.253.0596**	TELEPHONE **Ext 6255**
M	ANY ALTERNATE CONTACT **Shawn Stevens**	POSITION **Manager of HSEST**	EMPLOYER **Baffinland**	ALTERNATE CONTACT LOCATION **647.253.0596**	ALTERNATE TELEPHONE **Ext 6006**

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 ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC | SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN | FILE STATUS ☐ OPEN ☐ CLOSED

AGENCY	CONTACT NAME	CONTACT TIME	REMARKS
LEAD AGENCY			
FIRST SUPPORT AGENCY			
SECOND SUPPORT AGENCY			
THIRD SUPPORT AGENCY			

Baffinland

Attachment 4

Water Quality Results

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Surface Water Quality Results CV-154

Analyte	Sample ID				CV-154-A-DS_2021-06-01_1745	CV-154-A-US_2021-06-01_1755	CV-154-A-DS_2021-06-10_1005	CV-154-A-US_2021-06-10_1015
	ALS Laboratory Sample ID				L2597794-10	L2597794-11	L2602352-31	L2602352-32
	Sample Date & Time				2021-06-01 17:45	2021-06-01 17:55	2021-06-10 10:05	2021-06-10 10:15
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	8.19	8.00	7.89	7.76
Total Suspended Solids	mg/L	1.0/2.0	30	See note [1]	**455**	74.7	16.3	6.4
Total Dissolved Solids	mg/L	10	-	-	138	121	66	79
Turbidity	NTU	0.1	-	-	186	50.5	6.10	4.14

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Baffinland

Surface Water Quality Results CV-154

Analyte	Sample ID				CV-154-A-US01_2021-06-10_1015	CV-154-A-DS_2021-06-15_1450	CV-154-A-US_2021-06-15_1455	CV-154-A-DS_2021-06-21_1605
	ALS Laboratory Sample ID				L2602352-33	L2603802-23	L2603802-24	L2605811-39
	Sample Date & Time				2021-06-10 10:15	2021-06-15 14:50	2021-06-15 14:55	2021-06-21 16:05
	QA/QC Sample Type				Field Duplicate	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	7.86	8.07	8.06	7.99
Total Suspended Solids	mg/L	1.0/2.0	30	See note [1]	6.6	7.0	5.4	3.7
Total Dissolved Solids	mg/L	10	-	-	73	74	69	83
Turbidity	NTU	0.1	-	-	4.80	7.11	5.43	4.51

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Baffinland

Surface Water Quality Results CV-154

Analyte	Sample ID				CV-154-A-US_2021-06-21_1615
	ALS Laboratory Sample ID				L2605811-40
	Sample Date & Time				2021-06-21 16:15
	QA/QC Sample Type				N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria	
pH	pH units	0.1	6.0 - 9.5	-	8.09
Total Suspended Solids	mg/L	1.0/2.0	30	See note [1]	3.9
Total Dissolved Solids	mg/L	10	-	-	80
Turbidity	NTU	0.1	-	-	4.75

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Baffinland

Surface Water Quality Results CV-154

Analyte	Sample ID				CV-154-A-DS_2021-06-28_1320	CV-154-A-US_2021-06-28_1340	CV-154-A-DS_2021-07-04_0735	CV-154-A-US_2021-07-04_0745
	ALS Laboratory Sample ID				L2608262-41	L2608262-42	L2610075-3	L2610075-4
	Sample Date & Time				2021-06-28 13:20	2021-06-28 13:40	2021-07-04 7:35	2021-07-04 7:45
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	8.11	8.14	8.12	8.13
Total Suspended Solids	mg/L	1.0/2.0	30	See note [1]	17.2	16.7	2.8	6.0
Total Dissolved Solids	mg/L	10	-	-	97	97	161	135
Turbidity	NTU	0.1	-	-	21.0	23.1	8.47	18.6

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Baffinland

Surface Water Quality Results CV-112

Analyte	Sample ID				CV-112-DS_2021-06-01_1605	CV-112-US_2021-06-01_1620	CV-112-DS_2021-06-09_1620	CV-112-US_2021-06-09_1630
	ALS Laboratory Sample ID				L2597794-6	L2597794-7	L2602352-21	L2602352-22
	Sample Date & Time				2021-06-01 16:05	2021-06-01 16:20	2021-06-09 16:20	2021-06-09 16:30
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	8.38	8.16	7.75	7.75
Total Suspended Solids	mg/L	1.0/2.0	30	See note [1]	**807**	230	33.0	6.3
Total Dissolved Solids	mg/L	10	-	-	230	108	66	66
Turbidity	NTU	0.1	-	-	954	104	2.40	1.50

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Baffinland

Surface Water Quality Results CV-112

Analyte	Sample ID				CV-112-DS_2021-06-15_1100	CV-112-US_2021-06-15_1105	CV-112-DS_2021-06-21_1350	CV-112-US_2021-06-21_1400
	ALS Laboratory Sample ID				L2603802-17	L2603802-18	L2605811-33	L2605811-34
	Sample Date & Time				2021-06-15 11:00	2021-06-15 11:05	2021-06-21 13:50	2021-06-21 14:00
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	7.99	7.98	8.09	8.10
Total Suspended Solids	mg/L	1.0/2.0	30	See note [1]	2.6	1.1	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	57	67	74	75
Turbidity	NTU	0.1	-	-	1.79	1.21	0.82	0.58

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Baffinland

Surface Water Quality Results CV-112

Analyte	Sample ID				CV-112-DS_2021-06-28_1050	CV-112-US_2021-06-28_1100	CV-112-DS_2021-07-04_0930	CV-112-US_2021-07-04_0940
	ALS Laboratory Sample ID				L2608262-33	L2608262-34	L2610075-11	L2610075-12
	Sample Date & Time				2021-06-28 10:50	2021-06-28 11:00	2021-07-04 9:30	2021-07-04 9:40
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	8.09	8.15	8.23	8.26
Total Suspended Solids	mg/L	1.0/2.0	30	See note [1]	<2.0	<2.0	<1.0	<1.0
Total Dissolved Solids	mg/L	10	-	-	105	104	121	116
Turbidity	NTU	0.1	-	-	0.33	0.25	0.65	0.14

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

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Surface Water Quality Results CV-115

Analyte	Sample ID				CV-115-DS_2021-05-26_0915	CV-115-DS01_2021-05-26_0915	CV-115-US_2021-05-26_0930	CV-115-DS_2021-06-01_1640
	ALS Laboratory Sample ID				L2594754-1	L2594754-2	L2594754-3	L2597794-8
	Sample Date & Time				2021-05-26 9:15	2021-05-26 9:15	2021-05-26 9:30	2021-06-01 16:40
	QA/QC Sample Type				N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	8.02	8.03	7.95	8.15
Total Suspended Solids	mg/L	1.0/2.0	30	See note [1]	21.7	22.9	3.6	**114**
Total Dissolved Solids	mg/L	10	-	-	174	168	143	173
Turbidity	NTU	0.1	-	-	30.8	31.3	12.6	125

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Baffinland

Surface Water Quality Results CV-115

Analyte	Sample ID				CV-115-US_2021-06-01_1650	CV-115-DS_2021-06-09_1645	CV-115-US_2021-06-09_1650	CV-115-DS_2021-06-15_1125
	ALS Laboratory Sample ID				L2597794-9	L2602352-23	L2602352-24	L2603802-19
	Sample Date & Time				2021-06-01 16:50	2021-06-09 16:45	2021-06-09 16:50	2021-06-15 11:25
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	8.25	7.92	7.83	8.29
Total Suspended Solids	mg/L	1.0/2.0	30	See note [1]	5.5	9.6	7.1	2.2
Total Dissolved Solids	mg/L	10	-	-	171	70	87	140
Turbidity	NTU	0.1	-	-	4.10	2.27	1.19	4.74

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Baffinland

Surface Water Quality Results CV-115

Analyte	Sample ID				CV-115-US_2021-06-15_1140	CV-115-DS_2021-06-28_1120	CV-115-US_2021-06-28_1130
	ALS Laboratory Sample ID				L2603802-20	L2608262-35	L2608262-36
	Sample Date & Time				2021-06-15 11:00	2021-06-28 11:20	2021-06-28 11:30
	QA/QC Sample Type				N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria			
pH	pH units	0.1	6.0 - 9.5	-	8.18	8.26	8.11
Total Suspended Solids	mg/L	1.0/2.0	30	See note [1]	<1.0	4.6	<2.0
Total Dissolved Solids	mg/L	10	-	-	112	172	170
Turbidity	NTU	0.1	-	-	0.39	8.56	1.00

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

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Surface Water Quality Results CV-093

Analyte	Sample ID				CV-093-DS_2021-06-09_1325	CV-093-US_2021-06-09_1340	CV-093-DS_2021-06-21_1130	CV-093-US_2021-06-21_1140
	ALS Laboratory Sample ID				L2602352-14	L2602352-15	L2605811-27	L2605811-28
	Sample Date & Time				2021-06-09 13:35	2021-06-09 13:40	2021-06-09 11:30	2021-06-09 11:30
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	8.21	8.14	8.17	8.13
Total Suspended Solids	mg/L	2	30	See note [1]	**133**	48.9	2.9	8.9
Total Dissolved Solids	mg/L	10	-	-	86	97	102	93
Turbidity	NTU	0.1	-	-	28.5	1.61	3.39	10.0

Notes:
Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Baffinland

Surface Water Quality Results CV-093

Analyte	Sample ID				CV-093-DS_2021-06-28_0920	CV-093-US_2021-06-28_0930
	ALS Laboratory Sample ID				L2608262-27	L2608262-28
	Sample Date & Time				2021-06-28 9:20	2021-06-28 9:30
	QA/QC Sample Type				N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria		
pH	pH units	0.1	6.0 - 9.5	-	8.17	8.14
Total Suspended Solids	mg/L	2	30	See note [1]	5.4	<2.0
Total Dissolved Solids	mg/L	10	-	-	122	125
Turbidity	NTU	0.1	-	-	0.74	0.24

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Baffinland

Surface Water Quality Results BG-24

Analyte	Sample ID				BG-24-DS_2021-06-08_1405	BG-24-US_2021-06-08_1420	BG-24-US01_2021-06-08_1420	BG-24-DS_2021-06-20_1230
	ALS Laboratory Sample ID				L2602352-5	L2602352-6	L2602352-7	L2605811-5
	Sample Date & Time				2021-06-08 14:05	2021-06-08 14:20	2021-06-08 14:20	2021-06-20 12:30
	QA/QC Sample Type				N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	7.64	7.57	7.56	7.90
Total Suspended Solids	mg/L	2	30	See note [1]	**60.2**	9.4	8.7	<2.0
Total Dissolved Solids	mg/L	10	-	-	77	43	50	65
Turbidity	NTU	0.1	-	-	11.4	21.4	1.93	0.89

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

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Surface Water Quality Results BG-24

Analyte	Sample ID				BG-24-US_2021-06-20_1240	BG-24-DS_2021-06-27_1130	BG-24-US_2021-06-27_1140	BG-24-DS_2021-07-05_1050
	ALS Laboratory Sample ID				L2605811-6	L2608262-6	L2608262-7	L2610075-35
	Sample Date & Time				2021-06-20 12:40	2021-06-27 11:30	2021-06-27 11:40	2021-07-05 10:50
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	7.89	7.98	7.97	8.14
Total Suspended Solids	mg/L	2	30	See note [1]	<2.0	<2.0	<2.0	<1.0
Total Dissolved Solids	mg/L	10	-	-	64	87	81	96
Turbidity	NTU	0.1	-	-	0.55	0.53	0.47	0.59

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

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Surface Water Quality Results BG-24

Analyte	Sample ID				BG-24-US_2021-07-05_1100
	ALS Laboratory Sample ID				L2610075-36
	Sample Date & Time				2021-07-05 11:00
	QA/QC Sample Type				N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria	
pH	pH units	0.1	6.0 - 9.5	-	8.14
Total Suspended Solids	mg/L	2	30	See note [1]	<1.0
Total Dissolved Solids	mg/L	10	-	-	96
Turbidity	NTU	0.1	-	-	0.51

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

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Surface Water Quality Results CV-001

Analyte	Sample ID				CV-001-DS_2021-05-26_1430	CV-001-US_2021-05-26_1440	CV-001-DS_2021-05-31_1135	CV-001-US_2021-05-31_1140
	ALS Laboratory Sample ID				L2594754-4	L2594754-5	L2597794-4	L2597794-5
	Sample Date & Time				2021-05-26 14:30	2021-05-26 14:40	2021-05-31 11:35	2021-05-31 11:40
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	7.46	7.32	7.18	7.09
Total Suspended Solids	mg/L	2	30	See note [1]	**169**	29.1	4.5	2.7
Total Dissolved Solids	mg/L	10	-	-	60	63	45	50
Turbidity	NTU	0.1	-	-	169	39.9	7.20	6.15

Notes:
Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Baffinland

Surface Water Quality Results CV-001

Analyte	Sample ID				CV-001-DS_2021-06-08_1330	CV-001-US_2021-06-08_1335	CV-001-DS_2021-06-13_1130	CV-001-US_2021-06-13_1135
	ALS Laboratory Sample ID				L2602352-3	L2602352-4	L2603802-3	L2603802-4
	Sample Date & Time				2021-06-08 13:30	2021-06-08 13:35	2021-06-13 11:30	2021-06-13 11:35
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	7.47	7.36	7.77	7.79
Total Suspended Solids	mg/L	2	30	See note [1]	11.8	5.1	1.9	<1.0
Total Dissolved Solids	mg/L	10	-	-	39	33	40	43
Turbidity	NTU	0.1	-	-	5.57	2.84	1.51	1.36

Notes:
Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

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Surface Water Quality Results CV-001

Analyte	Sample ID				CV-001-DS_2021-06-20_1140	CV-001-US_2021-06-20_1145	CV-001-DS_2021-06-27_1055	CV-001-DS02_2021-06-27_1055
	ALS Laboratory Sample ID				L2605811-3	L2605811-4	L2608262-3	L2608262-4
	Sample Date & Time				2021-06-20 11:40	2021-06-20 11:45	2021-06-27 10:55	2021-06-27 10:55
	QA/QC Sample Type				N/A	N/A	N/A	Field Blank
	Units	LOR	Water Licence Criteria[1]	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	7.65	7.72	7.61	5.75
Total Suspended Solids	mg/L	2	30	See note [1]	1.8	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	56	58	92	25
Turbidity	NTU	0.1	-	-	1.76	1.76	1.84	<0.10

Notes:
Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

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Surface Water Quality Results CV-001

Analyte	Sample ID				CV-001-US_2021-06-27_1105
	ALS Laboratory Sample ID				L2608262-5
	Sample Date & Time				2021-06-27 11:05
	QA/QC Sample Type				N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria	
pH	pH units	0.1	6.0 - 9.5	-	7.71
Total Suspended Solids	mg/L	2	30	See note [1]	<2.0
Total Dissolved Solids	mg/L	10	-	-	90
Turbidity	NTU	0.1	-	-	1.48

Notes:
Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Baffinland

Surface Water Quality Results CV-001

Analyte	Sample ID				CV-001-DS_2021-07-05_1125	CV-001-US_2021-07-05_1135
	ALS Laboratory Sample ID				L2610075-37	L2610075-38
	Sample Date & Time				2021-07-05 11:25	2021-07-05 11:35
	QA/QC Sample Type				N/A	N/A
	Units	LOR	Water Licence Criteria[1]	Screening Criteria		
pH	pH units	0.1	6.0 - 9.5	-	7.66	7.77
Total Suspended Solids	mg/L	2	30	See note [1]	<1.0	1.3
Total Dissolved Solids	mg/L	10	-	-	77	69
Turbidity	NTU	0.1	-	-	2.23	1.46

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

[1] When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Spill Report Number:

21-268

July 28, 2021

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Re: Follow-up to Spill #2021-268
Mary River Project - Water Licence No. 2AM-MRY1325

Summary:

On June 28th 2021, at approximately 09:30, personnel completing routine monitoring observed 2 small seepages at the Km 106 ROM ore stockpile from the diversion berm. A visual tracer dye test was conducted following those observations to confirm conclusions that the observed seepage originated on the ROM ore stockpile pad rather than non-contact surface water. The incident occurred on IOL located approximately 300 meters from Mary River, the nearest fish bearing waters. Third party analytical laboratory results of the release were compliant with applicable water license and MDMER criteria, with the exception of MS-106OS-02, where the TSS of 15.9 mg/L exceeded the TSS criteria of 15 mg/L under the Water License 2AM-MRY1325. However, the low flow conditions and substrate of the tundra at the sample location resulted in poor sampling conditions and elevated TSS measurements from disturbance of the substrate during sampling that could not be mitigated by sampling technique.

Sample Location	Description	Coordinates (Lat/Long)
MS-106OS-01	Seepage observed along the south of the pad	N71° 18' 43.4" W79° 13' 33.8"
MS-106OS-02	Seepage observed along the east of the pad	N71° 18' 47.3" W79° 13' 13.2"

Photos and a map showing the spill locations are provided in Attachment 1 and Attachment 2, respectively. The spill was reported to the NT-NU Spill Reporting Line on June 28th, 2021 and an update provided on June 30th with updated coordinates. The NT-NU Spill Report (#2021- 268) and Update #1 is attached in Attachment 3. External laboratory water quality results are in Attachment 4.

Immediate and Follow-Up Action:

Upon discovering the seepage locations, external laboratory results for surface water samples were collected at the two (2) identified seepage locations on June 28th, 2021. The external laboratory water quality results confirmed the seepage was compliant with all applicable water license and MDMER criteria. The analysis also demonstrated the seepage water was not acutely toxic.

A temporary diversion swale has been constructed to capture the seepage noted at MS-106OS-01, and divert it into the KM106 ROM Ore Stockpile Facility Pond (MS-07) in accordance with Baffinland's MDMER Emergency Response Plan (BAF-PH1-830-P16-0047). For MS-106OS-02, a diversion swale for non-contact water and swale /sump combination for contact water were dug to capture the seepage. The water collected in this sump is pumped into the KM106 ROM Ore Stockpile Facility Pond (MS-07) as required in accordance with Baffinland's MDMER Emergency Response Plan (BAF-PH1-830-P16-0047).

Current Status:

The temporary diversion swale at MS-106OS-01 is functioning as intended and diverting seepage back into MS-07. The diversion berm and sump at MS-106OS-02 is functioning as intended, and is pumped as required into MS-07. Both features are inspected on a regular basis.

As per Section 31 of the Metal and Diamond Mining Effluent Regulations (MDMER):

a. Seepage from the KM106 ROM Ore Stockpile Pad.
b. Unknown quantity.
c. The release was first observed at approximately 09:30 on June 28th, 2021. A summary of the sampling events that occurred upon observation of the uncontrolled release, which includes date, time and respective water quality results is included in Attachment 4.
d. The quantity of surface water released is unknown because of low flow conditions that remained in the vicinity of the release, therefore; the quantity of deleterious substance cannot be determined. The locations of the release are listed below and shown in Attachment 2.
   MS-106OS-01 - N71° 18' 43.4" W79° 13' 33.8", MS-106OS-02 - N71° 18' 47.3" W79° 13' 13.2"
e. Not applicable as the release did not occur through the final discharge point.
f. The incident occurred on IOL located approximately 300 meters from Mary River, the nearest fish bearing waters and given the low amount of discharge, it did not migrate from the vicinity of the release.
g. Toxicity samples collected at both MS-106OS-01 and MS-106OS-02 were found to be not acutely toxic. The external laboratory results are included in Attachment 4.
h. See the summary above for the circumstances of the surface water release. As per Baffinland's MDMER Emergency Response Plan, an excavator was dispatched to dig a diversion swale and or sump to allow water to be diverted back into the MS-07 Pond.
i. Ground works were completed to ensure all contact water reports to the MS-07 Pond. Inspections of the ROM Ore Stockpile facility continue on a regular basis and no additional releases have been observed.

Should you require further information or clarification on the incident described above, please feel free to contact Connor Devereaux or Kendra Button (647) 253-0596 (ext. 6016).

Prepared by:

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Attachments

Attachment 1: Photos
Attachment 2: Spill Locations Map
Attachment 3: Baffinland NT-NU Spill Report #2021-268
Attachment 4: Surface Water Quality Results

Attachment 1

Photos

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MS-106OS-01

Photo 1. Upstream of MS-106OS-01 spill location on June 29, 2021

Photo 2. Spill location MS-106OS-01 on June 29, 2021

Photo 3. Downstream of MS-106OS-01 spill location on June 29, 2021

Photo 4. Temporary Diversion Swale at MS-106OS-01 spill location on July 2, 2021

MS-106OS-02

Photo 1. Upstream of MS-106OS-02 spill location on June 29, 2021

Photo 2. Spill location MS-106OS-02 on June 29, 2021

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Photo 3. Downstream of MS-106OS-02 spill location on June 29, 2021

Photo 4. Enhanced sump at MS-106OS-02 spill location on July 27, 2021