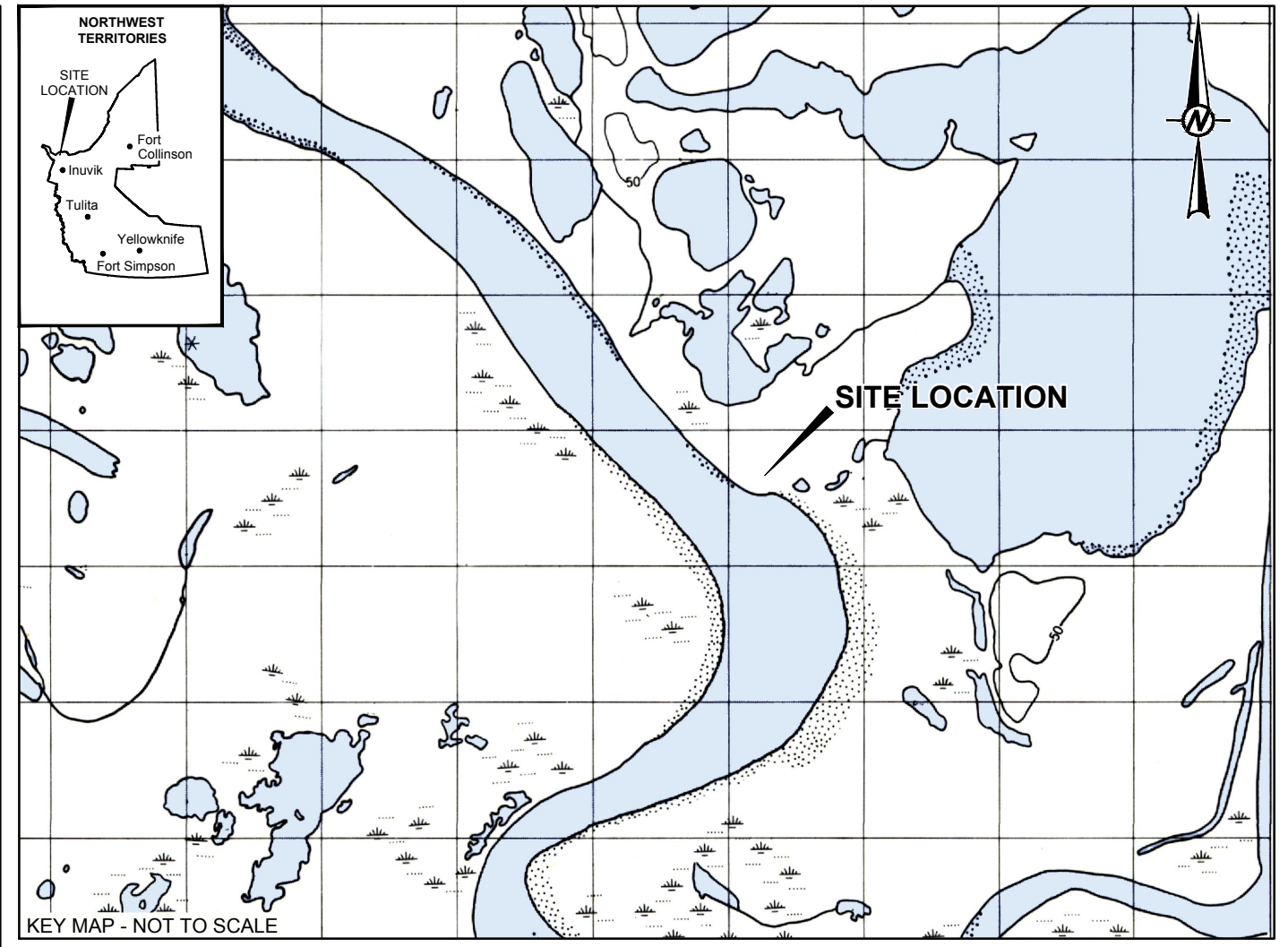
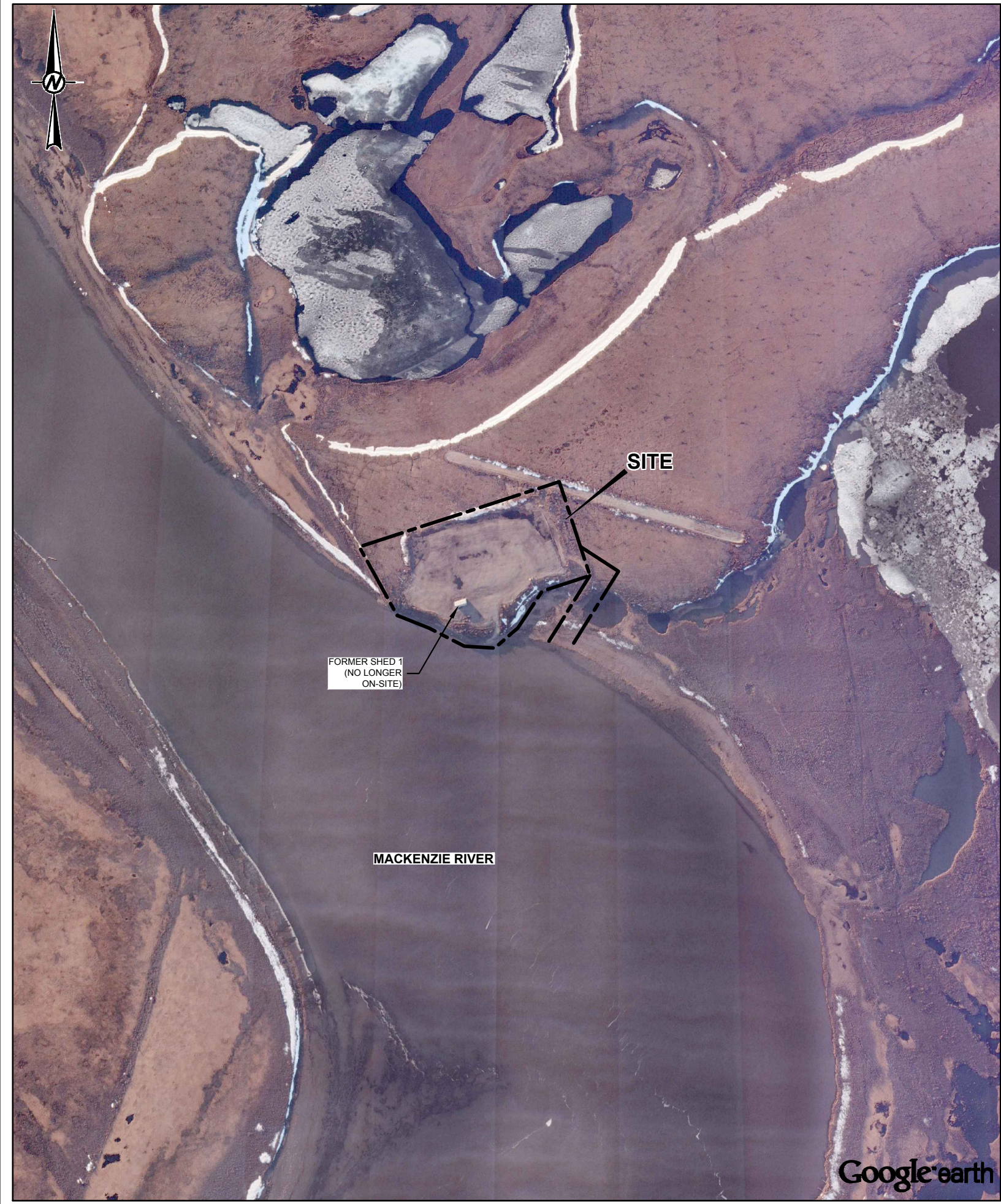


FIGURES

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LEGEND

--- PROPERTY BOUNDARY

REFERENCE

ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No.: 35136_Shellfarewell_Golder-130901; SCALE: 1:750; DATE: SEPTEMBER 1, 2021.
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 TOPOGRAPHIC MAP 107C/4E OBTAINED FROM Canmatrix. © 1958 THE ARMY SURVEY ESTABLISHMENT, R.C.E. PROJECTION: TRANSVERSE MERCATOR; DATUM: NAD27; COORDINATE SYSTEM: UTM ZONE 8.



CLIENT
SHELL CANADA LIMITED

PROJECT
CAMP FAREWELL
INUVALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES

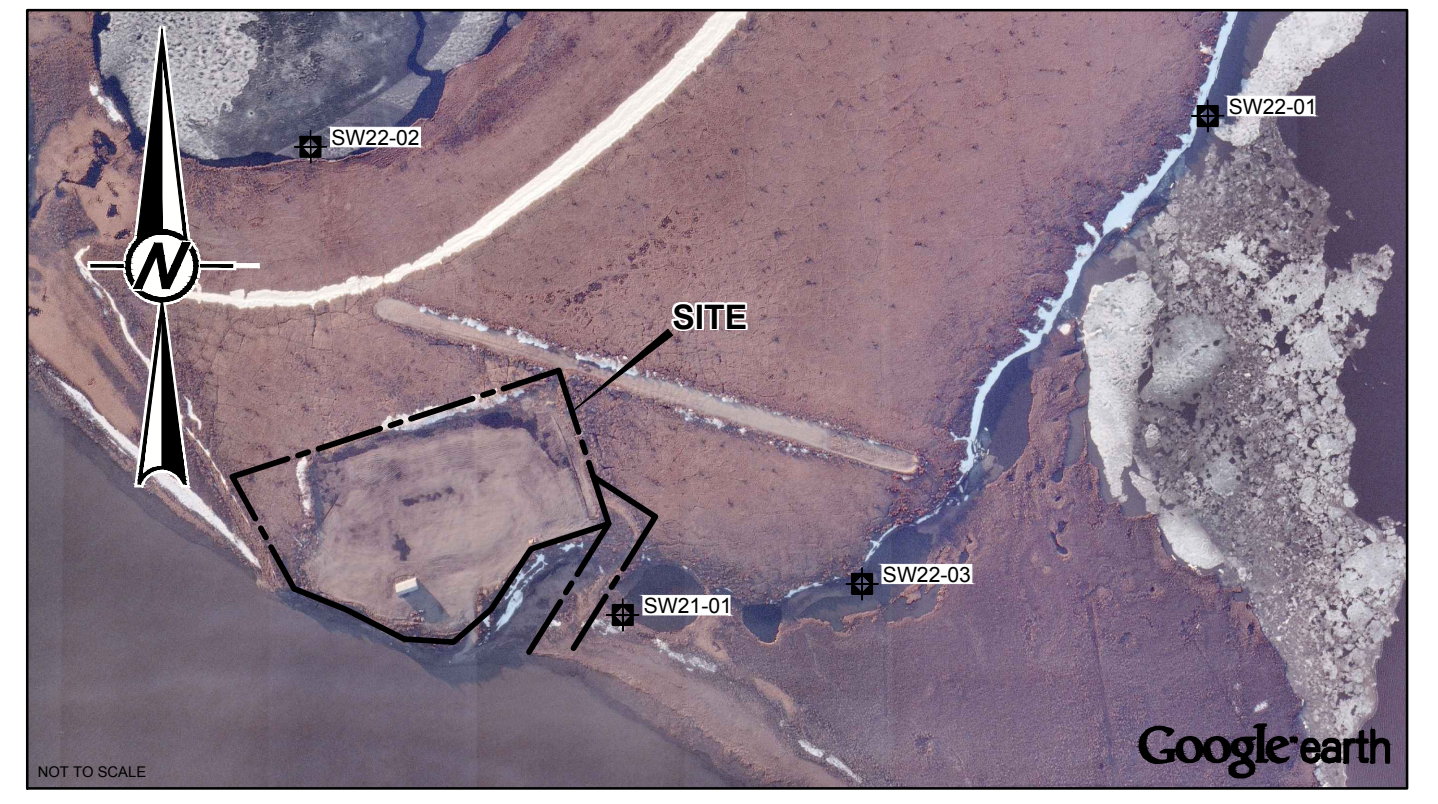
CONSULTANT	DATE	REVISION
	2023-02-08	DESIGNED
		CMcLean
		LMoraes
		ABellavance
		LHaderlein

PROJECT NO.	PHASE-TASK	REV.	FIGURE
22525414	1200-1201	0	1



25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANS1/B

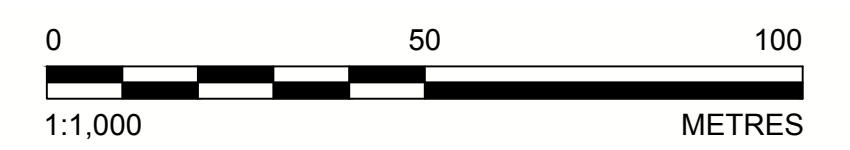
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LEGEND

- PROPERTY BOUNDARY
- - - EXCAVATION LIMITS (FORMER)
- SHORELINE / WATER BODY
- - - 30 METRES SURFACE WATER BUFFER
- ⊕ BOREHOLE LOCATION
- ⊙ BOREHOLE LOCATION COMPLETED AS A MONITORING WELL
- ⊛ SURFACE WATER SAMPLE LOCATION

REFERENCE
 ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No.: 35136_ShellCamp_Farewell_130901; SCALE: 1:750; DATE: SEPTEMBER 1, 2021.
 IMAGE OBTAINED FROM GOOGLE EARTH © 2022 MAXAR TECHNOLOGIES. USED WITH PERMISSION. GOOGLE AND GOOGLE LOGO ARE REGISTERED TRADEMARKS OF GOOGLE INC. IMAGERY DATE: UNKNOWN. GOOGLE EARTH IMAGE IS NOT TO SCALE. DATUM: NAD83, PROJECTION: UTM ZONE 8.



CLIENT
 SHELL CANADA LIMITED

PROJECT
 CAMP FAREWELL
 INUVIALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES

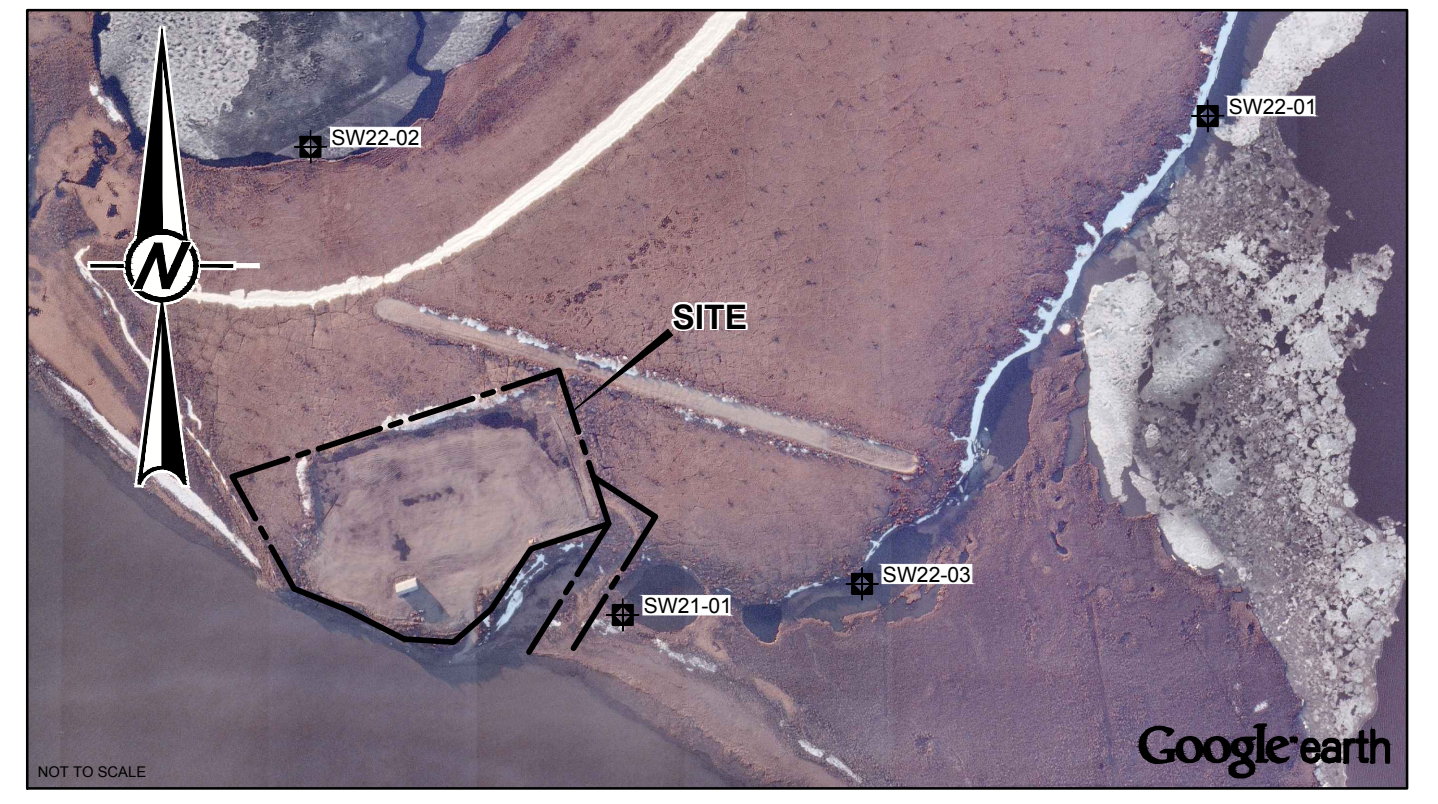
TITLE
 SITE PLAN WITH BOREHOLE, SURFACE WATER SAMPLE AND
 MONITORING WELL LOCATIONS

CONSULTANT	YYYY-MM-DD	2023-02-08
DESIGNED	CMcLean	
PREPARED	LMoraes	
REVIEWED	ABellavance	
APPROVED	LHaderlein	

PROJECT NO. 22525414 PHASE-TASK 1200-1201 REV. 0 FIGURE 2

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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LEGEND

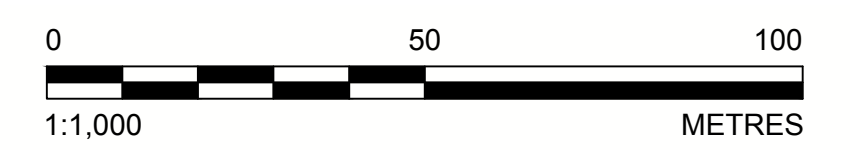
- PROPERTY BOUNDARY
- - - EXCAVATION LIMITS (FORMER)
- 11.00 GROUNDWATER CONTOUR (masl)
- SHORELINE / WATER BODY
- - - 30 METRES SURFACE WATER BUFFER
- ⊕ BOREHOLE LOCATION
- ⊕ BOREHOLE LOCATION COMPLETED AS A MONITORING WELL
- ⊕ SURFACE WATER SAMPLE LOCATION
- 12.49 GROUNDWATER ELEVATION (masl)
- DIRECTION OF GROUNDWATER FLOW

LIST OF APPLICABLE ABBREVIATIONS

masl METER ABOVE SEA LEVEL

NOTE
CONTROL POINTS CO-ORDINATES DERIVED FROM NATURAL RESOURCES CANADA PRECISE POINT POSITIONING PROCEDURE.

REFERENCE
ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No.: 35136_ShieldCamp_S489r-130901; SCALE: 1:750; DATE: SEPTEMBER 1, 2021.
IMAGE OBTAINED FROM GOOGLE EARTH © 2022 MAXAR TECHNOLOGIES. USED WITH PERMISSION. GOOGLE AND GOOGLE LOGO ARE REGISTERED TRADEMARKS OF GOOGLE INC. IMAGERY DATE: UNKNOWN. GOOGLE EARTH IMAGE IS NOT TO SCALE. DATUM: NAD83. PROJECTION: UTM ZONE 8.



CLIENT
SHELL CANADA LIMITED

PROJECT
CAMP FAREWELL
INUVALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES

TITLE
GROUNDWATER ELEVATIONS
August 15, 2022

CONSULTANT	YYYY-MM-DD	2023-02-08
	DESIGNED	MLord
	PREPARED	KWray
	REVIEWED	ABellavance
	APPROVED	LHaderlein

PROJECT NO. 22525414	PHASE-TASK 1200-1201	REV. 0	FIGURE 3
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25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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LEGEND

- PROPERTY BOUNDARY
- EXCAVATION LIMITS (FORMER)
- SHORELINE / WATER BODY
- 30 METRES SURFACE WATER BUFFER
- BOREHOLE LOCATION
- BOREHOLE LOCATION COMPLETED AS A MONITORING WELL

ANALYTICAL RESULT SYMBOLOGY

- LOCATIONS WHERE ALL SOIL SAMPLES MEET GNWT GUIDELINES FOR ALL PARAMETERS ANALYZED SHOWN AS A GREEN DIAMOND ON THE LEFT HALF.
- LOCATIONS WHERE AT LEAST ONE SOIL SAMPLE EXCEEDS GNWT GUIDELINES FOR AT LEAST ONE OF THE PARAMETERS ANALYZED SHOWN AS A RED DIAMOND ON THE LEFT HALF.
- LOCATIONS WHERE ALL SOIL SAMPLES MEET AMSRP GUIDELINES FOR ALL PARAMETERS ANALYZED SHOWN AS A GREEN DIAMOND ON THE RIGHT HALF.
- LOCATIONS WHERE AT LEAST ONE SOIL SAMPLE EXCEEDS AMSRP GUIDELINES FOR AT LEAST ONE OF THE PARAMETERS ANALYZED SHOWN AS A RED CIRCLE ON THE RIGHT HALF.
- LOCATIONS WHERE ALL SOIL SAMPLES MEET BOTH GNWT AND AMSRP GUIDELINES FOR ALL PARAMETERS ANALYZED SHOWN AS A GREEN DIAMOND.
- LOCATIONS WHERE AT LEAST ONE SOIL SAMPLE EXCEEDS BOTH GNWT AND AMSRP GUIDELINES FOR AT LEAST ONE OF THE PARAMETERS ANALYZED SHOWN AS A RED CIRCLE.

NOTES

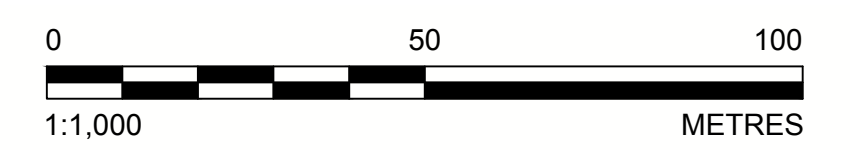
- LOCATION WHERE NO SAMPLES WERE TAKEN IN THE CURRENT SAMPLING EVENT SHOWN IN BLACK
- FOR ANALYTICAL RESULTS REFER TO THE TABLES IN THE REPORT.

LIST OF APPLICABLE ABBREVIATIONS

GNWT GOVERNMENT OF NORTHWEST TERRITORIES
 AMSRP ABANDONED MILITARY SITE REMEDIATION PROTOCOL

REFERENCE

ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No.: 35136_Shellfarewell_0409r-130901; SCALE: 1:750; DATE: SEPTEMBER 1, 2021.
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CLIENT
 SHELL CANADA LIMITED

PROJECT
 CAMP FAREWELL
 INUVIALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES

TITLE
 SOIL ANALYTICAL RESULTS - PETROLEUM HYDROCARBONS

CONSULTANT	YYYY-MM-DD	2023-02-08
	DESIGNED	CMcLean
	PREPARED	LMoraes
	REVIEWED	ABellavance
	APPROVED	LHaderlein

PROJECT NO. 22525414 PHASE-TASK 1200-1201 REV. 0 FIGURE 4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D 25 mm

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LEGEND

- PROPERTY BOUNDARY
- - - EXCAVATION LIMITS (FORMER)
- ⊕ BOREHOLE LOCATION
- ⊙ BOREHOLE LOCATION COMPLETED AS A MONITORING WELL

ANALYTICAL RESULT SYMBOLOLOGY

- ◆ LOCATIONS WHERE CURRENT SOIL SAMPLE MEETS APPLICABLE GUIDELINES/STANDARDS FOR ALL PARAMETERS ANALYZED SHOWN AS A GREEN DIAMOND.
- LOCATIONS WHERE CURRENT SOIL SAMPLE EXCEEDS APPLICABLE GUIDELINES/STANDARDS FOR AT LEAST ONE OF THE PARAMETERS ANALYZED SHOWN AS A RED CIRCLE.
- BACKGROUND BOREHOLE LOCATION SHOWN AS A BLUE SQUARE.

NOTES

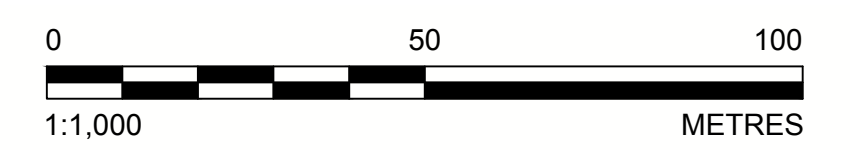
1. LOCATION WHERE NO SAMPLES WERE TAKEN IN THE CURRENT SAMPLING EVENT SHOWN IN BLACK
2. FOR ANALYTICAL RESULTS REFER TO THE TABLES IN THE REPORT.

LIST OF APPLICABLE ABBREVIATIONS

GNWT GOVERNMENT OF NORTHWEST TERRITORIES
 AMSRP ABANDONED MILITARY SITE REMEDIATION PROTOCOL

REFERENCE

ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No.: 35136_Shellfarewell_0409r-130901; SCALE: 1:750; DATE: SEPTEMBER 1, 2021.
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CLIENT
 SHELL CANADA LIMITED

PROJECT
 CAMP FAREWELL
 INUVIALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES

TITLE
 SOIL ANALYTICAL RESULTS - POLYCYCLIC AROMATIC
 HYDROCARBONS

CONSULTANT	YYYY-MM-DD	2023-02-08
	DESIGNED	CMcLean
	PREPARED	LMoraes
	REVIEWED	ABellavance
	APPROVED	LHaderlein

PROJECT NO. 22525414 PHASE-TASK 1200-1201 REV. 0 FIGURE 5

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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LEGEND

- PROPERTY BOUNDARY
- - - EXCAVATION LIMITS (FORMER)
- ⊕ BOREHOLE LOCATION
- ⊙ BOREHOLE LOCATION COMPLETED AS A MONITORING WELL

ANALYTICAL RESULT SYMBOLOLOGY

- ◆ LOCATIONS WHERE CURRENT SOIL SAMPLE MEETS APPLICABLE GUIDELINES/STANDARDS FOR ALL PARAMETERS ANALYZED SHOWN AS A GREEN DIAMOND.
- LOCATIONS WHERE CURRENT SOIL SAMPLE EXCEEDS APPLICABLE GUIDELINES/STANDARDS FOR AT LEAST ONE OF THE PARAMETERS ANALYZED SHOWN AS A RED CIRCLE.
- BACKGROUND BOREHOLE LOCATION SHOWN AS A BLUE SQUARE.

NOTES

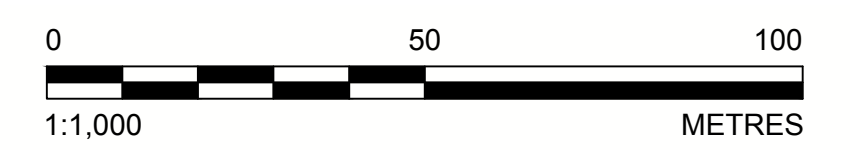
1. LOCATION WHERE NO SAMPLES WERE TAKEN IN THE CURRENT SAMPLING EVENT SHOWN IN BLACK
2. FOR ANALYTICAL RESULTS REFER TO THE TABLES IN THE REPORT.

LIST OF APPLICABLE ABBREVIATIONS

GNWT GOVERNMENT OF NORTHWEST TERRITORIES
 AMSRP ABANDONED MILITARY SITE REMEDIATION PROTOCOL

REFERENCE

ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No.: 35136_Shellfarewell_0409r-130901; SCALE: 1:750; DATE: SEPTEMBER 1, 2021.
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CLIENT
 SHELL CANADA LIMITED

PROJECT
 CAMP FAREWELL
 INUVIALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES

TITLE
 SOIL ANALYTICAL RESULTS - SALINITY

	CONSULTANT	YYYY-MM-DD	2023-02-08
	DESIGNED		CMcLean
	PREPARED		LMoraes
	REVIEWED		ABellavance
	APPROVED		LHaderlein

PROJECT NO. 22525414	PHASE-TASK 1200-1201	REV. 0	FIGURE 6
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25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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LEGEND

- PROPERTY BOUNDARY
- - - EXCAVATION LIMITS (FORMER)
- ⊕ BOREHOLE LOCATION
- ⊙ BOREHOLE LOCATION COMPLETED AS A MONITORING WELL

ANALYTICAL RESULT SYMBOLOLOGY

- ◆ LOCATIONS WHERE CURRENT SOIL SAMPLE MEETS APPLICABLE GUIDELINES/STANDARDS FOR ALL PARAMETERS ANALYZED SHOWN AS A GREEN DIAMOND.
- LOCATIONS WHERE CURRENT SOIL SAMPLE EXCEEDS APPLICABLE GUIDELINES/STANDARDS FOR AT LEAST ONE OF THE PARAMETERS ANALYZED SHOWN AS A RED CIRCLE.
- BACKGROUND BOREHOLE LOCATION SHOWN AS A BLUE SQUARE.

NOTES

1. LOCATION WHERE NO SAMPLES WERE TAKEN IN THE CURRENT SAMPLING EVENT SHOWN IN BLACK
2. FOR ANALYTICAL RESULTS REFER TO THE TABLES IN THE REPORT.

LIST OF APPLICABLE ABBREVIATIONS

GNWT GOVERNMENT OF NORTHWEST TERRITORIES
 AMSRP ABANDONED MILITARY SITE REMEDIATION PROTOCOL

REFERENCE

ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No.: 35136_ShieldCamp_Farewell_130901; SCALE: 1:750; DATE: SEPTEMBER 1, 2021.
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CLIENT
SHELL CANADA LIMITED

PROJECT
CAMP FAREWELL
INUVALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES

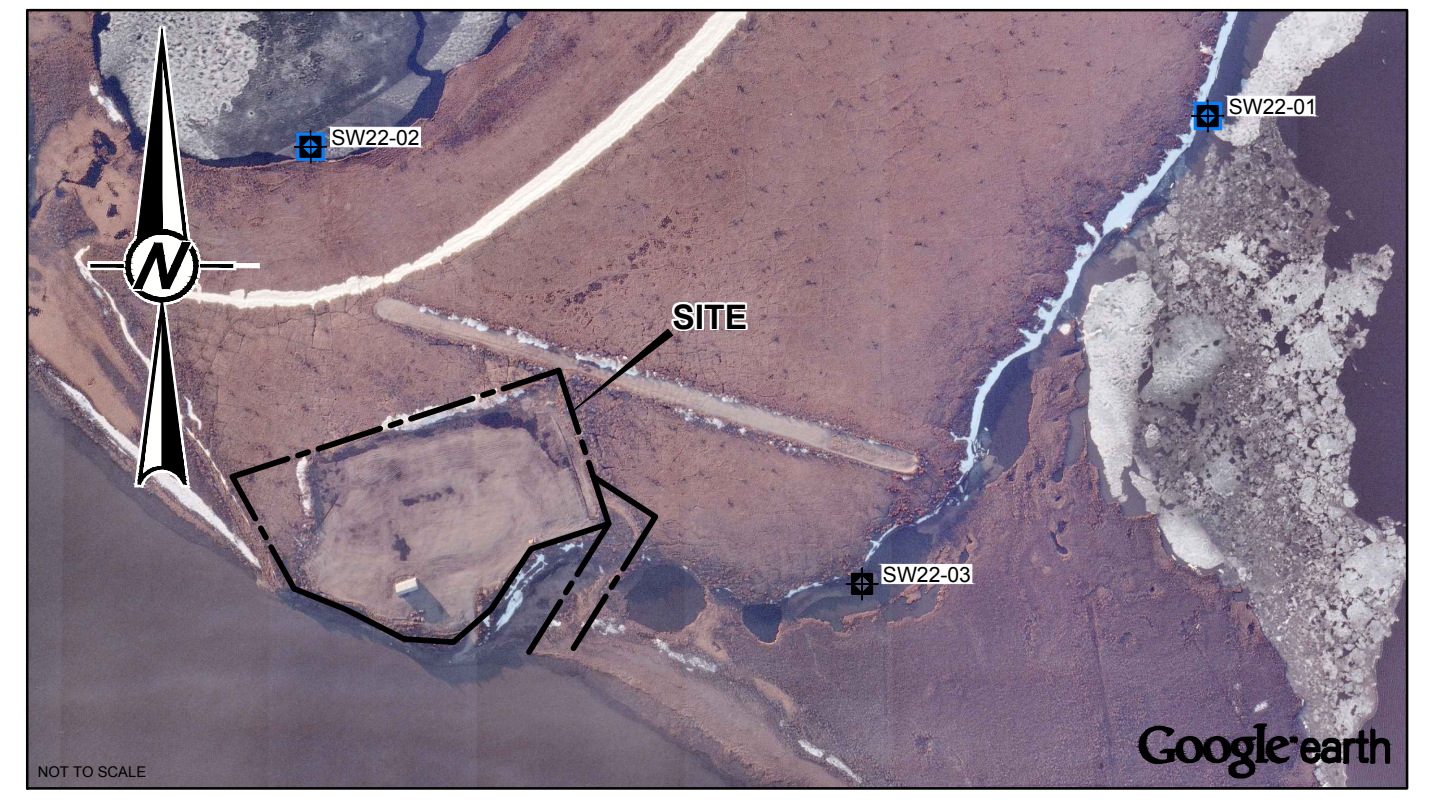
TITLE
SOIL ANALYTICAL RESULTS - METALS

CONSULTANT		YYYY-MM-DD 2023-02-08
		DESIGNED CMcLean
		PREPARED LMoraes
		REVIEWED ABellavance
		APPROVED LHaderlein

PROJECT NO. 22525414	PHASE-TASK 1200-1201	REV. 0	FIGURE 7
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25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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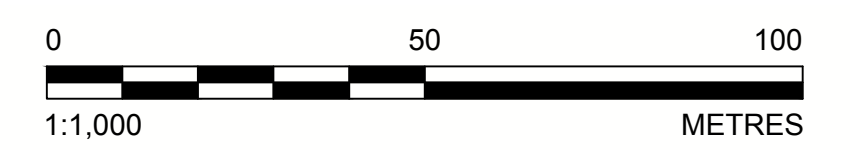
- PROPERTY BOUNDARY
- - - EXCAVATION LIMITS (FORMER)
- ⊕ BOREHOLE LOCATION COMPLETED AS A MONITORING WELL
- ⊕ SURFACE WATER SAMPLE LOCATION

ANALYTICAL RESULT SYMBOLOGY

- ◆ LOCATIONS WHERE CURRENT SOIL SAMPLE MEETS APPLICABLE GUIDELINES/STANDARDS FOR ALL PARAMETERS ANALYZED SHOWN AS A GREEN DIAMOND.
- LOCATIONS WHERE CURRENT SOIL SAMPLE EXCEEDS APPLICABLE GUIDELINES/STANDARDS FOR AT LEAST ONE OF THE PARAMETERS ANALYZED SHOWN AS A RED CIRCLE.
- BACKGROUND BOREHOLE LOCATION SHOWN AS A BLUE SQUARE.

- NOTES**
1. LOCATION WHERE NO SAMPLES WERE TAKEN IN THE CURRENT SAMPLING EVENT SHOWN IN BLACK
 2. FOR ANALYTICAL RESULTS REFER TO THE TABLES IN THE REPORT.

REFERENCE
 ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No: 35136_ShieldCamp_S48er-130901; SCALE: 1:750; DATE: SEPTEMBER 1, 2021.
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CLIENT
 SHELL CANADA LIMITED

PROJECT
 CAMP FAREWELL
 INUVIALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES

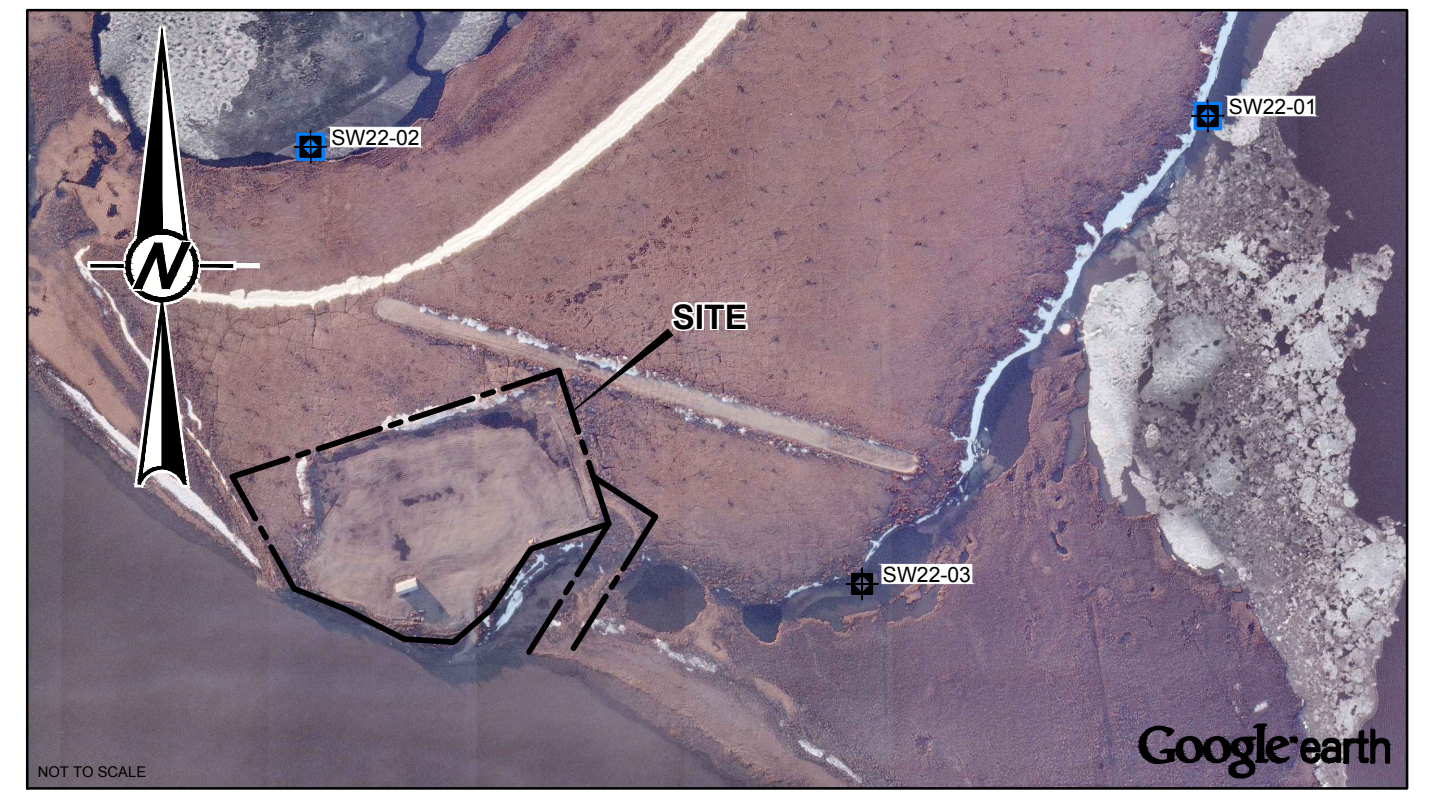
TITLE
 GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
 - PETROLEUM HYDROCARBONS

	CONSULTANT	YYYY-MM-DD	2023-02-08
	DESIGNED		CMcLean
	PREPARED		LMoraes
	REVIEWED		ABellavance
	APPROVED		LHaderlein

PROJECT NO. 22525414	PHASE-TASK 1200-1201	REV. 0	FIGURE 8
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25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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LEGEND

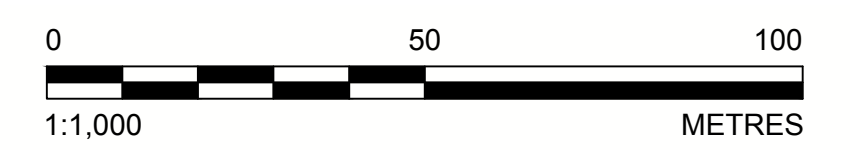
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	EXCAVATION LIMITS (FORMER)
	BOREHOLE LOCATION COMPLETED AS A MONITORING WELL
	SURFACE WATER SAMPLE LOCATION

ANALYTICAL RESULT SYMBOLOGY

	LOCATIONS WHERE CURRENT SOIL SAMPLE MEETS APPLICABLE GUIDELINES/STANDARDS FOR ALL PARAMETERS ANALYZED SHOWN AS A GREEN DIAMOND.
	LOCATIONS WHERE CURRENT SOIL SAMPLE EXCEEDS APPLICABLE GUIDELINES/STANDARDS FOR AT LEAST ONE OF THE PARAMETERS ANALYZED SHOWN AS A RED CIRCLE.
	BACKGROUND BOREHOLE LOCATION SHOWN AS A BLUE SQUARE.

- NOTES**
- LOCATION WHERE NO SAMPLES WERE TAKEN IN THE CURRENT SAMPLING EVENT SHOWN IN BLACK
 - FOR ANALYTICAL RESULTS REFER TO THE TABLES IN THE REPORT.

REFERENCE
 ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No: 35136_ShieldCamp_S48er-130901; SCALE: 1:750; DATE: SEPTEMBER 1, 2021.
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CLIENT
 SHELL CANADA LIMITED

PROJECT
 CAMP FAREWELL
 INUVIALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES

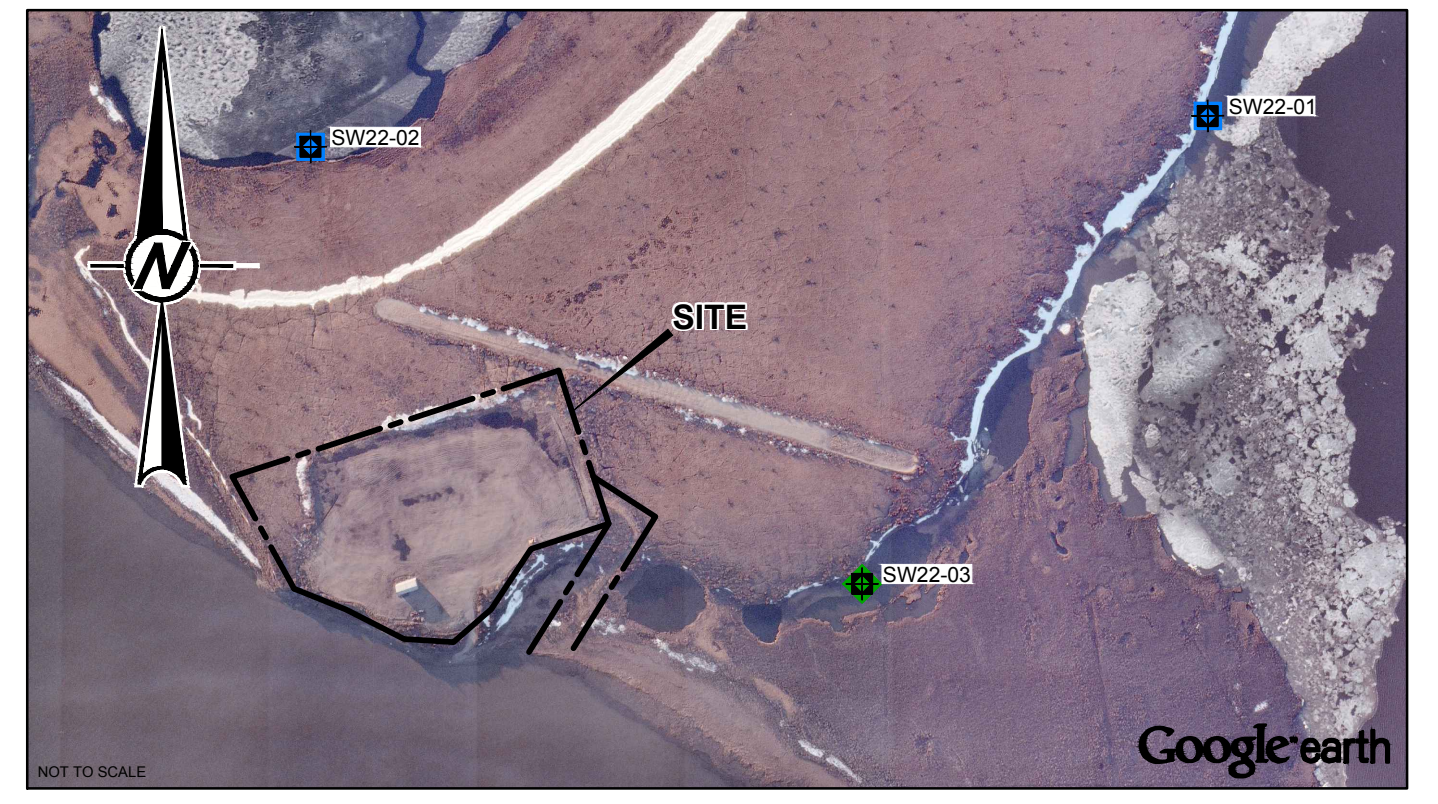
TITLE
 GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
 - POLYCYCLIC AROMATIC HYDROCARBONS

CONSULTANT		YYYY-MM-DD	2023-02-08
		DESIGNED	CMcLean
		PREPARED	LMoraes
		REVIEWED	ABellavance
		APPROVED	LHaderlein

PROJECT NO.	PHASE-TASK	REV.	FIGURE
22525414	1200-1201	0	9

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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LEGEND

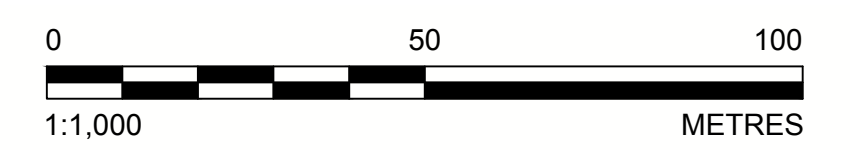
	PROPERTY BOUNDARY
	EXCAVATION LIMITS (FORMER)
	BOREHOLE LOCATION COMPLETED AS A MONITORING WELL
	SURFACE WATER SAMPLE LOCATION

ANALYTICAL RESULT SYMBOLOGY

	LOCATIONS WHERE CURRENT SOIL SAMPLE MEETS APPLICABLE GUIDELINES/STANDARDS FOR ALL PARAMETERS ANALYZED SHOWN AS A GREEN DIAMOND.
	LOCATIONS WHERE CURRENT SOIL SAMPLE EXCEEDS APPLICABLE GUIDELINES/STANDARDS FOR AT LEAST ONE OF THE PARAMETERS ANALYZED SHOWN AS A RED CIRCLE.
	BACKGROUND BOREHOLE LOCATION SHOWN AS A BLUE SQUARE.

- NOTES**
- LOCATION WHERE NO SAMPLES WERE TAKEN IN THE CURRENT SAMPLING EVENT SHOWN IN BLACK
 - FOR ANALYTICAL RESULTS REFER TO THE TABLES IN THE REPORT.

REFERENCE
 ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No: 35136_Shellfarewell_S48er-130901. SCALE: 1:750. DATE: SEPTEMBER 1, 2021.
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CLIENT
SHELL CANADA LIMITED

PROJECT
**CAMP FAREWELL
 INUVIALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES**

TITLE
**GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
 - SALINITY**

CONSULTANT	YYYY-MM-DD	2023-02-08
	DESIGNED	CMcLean
	PREPARED	LMoraes
	REVIEWED	ABellavance
	APPROVED	LHaderlein

PROJECT NO. 22525414	PHASE-TASK 1200-1201	REV. 0	FIGURE 10
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25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

Path: \\pdr\geogis\calgary\CALM\CAD\SHSHELL_Canada_Limited\Camp_Farewell\08_PROJECTS\22525414\200-1200\DWG | File Name: 22525414-200-1200-1200.dwg | Last Edited By: Inuvias Date: 2023-02-03 Time: 4:05:16 PM | Printed By: LMoraes Date: 2023-02-08 Time: 9:07:19 AM



LEGEND

	PROPERTY BOUNDARY
	SURFACE WATER SAMPLE LOCATION

REFERENCE
 ORIGINAL DRAWING OBTAINED FROM INUKSHUK GEOMATICS INC.; DWG No.: 35136_Shellfarewell_Golder-130901; SCALE: 1:750; DATE: SEPTEMBER 1, 2021.
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ANALYTICAL RESULT SYMBOLOLOGY

	LOCATIONS WHERE CURRENT SOIL SAMPLE MEETS APPLICABLE GUIDELINES/STANDARDS FOR ALL PARAMETERS ANALYZED SHOWN AS A GREEN DIAMOND .
	LOCATIONS WHERE CURRENT SOIL SAMPLE EXCEEDS APPLICABLE GUIDELINES/STANDARDS FOR AT LEAST ONE OF THE PARAMETERS ANALYZED SHOWN AS A RED CIRCLE .
	BACKGROUND BOREHOLE LOCATION SHOWN AS A BLUE SQUARE .

- NOTES**
- LOCATION WHERE NO SAMPLES WERE TAKEN IN THE CURRENT SAMPLING EVENT SHOWN IN **BLACK**.
 - FOR ANALYTICAL RESULTS REFER TO THE TABLES IN THE REPORT.

CLIENT
 SHELL CANADA LIMITED

CONSULTANT

	YYYY-MM-DD	2023-02-08
	DESIGNED	CMcLean
	PREPARED	LMoraes
	REVIEWED	ABellavance
	APPROVED	LHaderlein

PROJECT
 CAMP FAREWELL
 INUVIALUIT SETTLEMENT REGION, NORTHWEST TERRITORIES

TITLE
SURFACE WATER ANALYTICAL RESULTS - TOTAL METALS

PROJECT NO. 22525414	PHASE-TASK 1200-1201	REV. 0	FIGURE 11
-------------------------	-------------------------	-----------	--------------

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3/B

TABLES

Table 1
Summary of Groundwater Field Monitoring Results
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Well ID	Screen Interval (mbgs)	Top of Casing Elevation ^(a) (masl)	Ground Elevation ^(a) (masl)	Date	Depth to Groundwater (mbtoc)	Depth to Groundwater (mbgs)	Groundwater Elevation (masl)	LNAPL Thickness
P06-4	1.07 - 1.8	12.05	11.25	15-Aug-22	DRY	DRY	DRY	n/d
P06-6	0.2 - 0.93	15.37	14.32	15-Aug-22	DRY	DRY	DRY	n/d
P06-7	0.15 - 0.56	15.41	14.73	15-Aug-22	1.08	0.40	14.33	n/d
P19-2	0.4 - 0.8	14.28	13.60	15-Aug-22	1.40	0.72	12.88	n/d
P19-4	0.7 - 1.9	12.64	11.92	15-Aug-22	DRY	DRY	DRY	n/d
P19-5	0.3 - 1.2	11.86	11.16	15-Aug-22	1.66	0.95	10.21	n/d
P19-6	0.3 - 0.8	13.80	13.03	15-Aug-22	1.31	0.54	12.49	n/d
MW22-02	0.3 - 0.45	13.55	12.75	15-Aug-22	DRY	DRY	DRY	n/d
MW22-09	0.6 - 0.8	12.93	12.25	15-Aug-22	DRY	DRY	DRY	n/d
MW22-13	0.35 - 0.5	12.55	11.89	15-Aug-22	DRY	DRY	DRY	n/d
MW22-16	0.6 - 0.8	9.76	9.07	15-Aug-22	DRY	DRY	DRY	n/d
MW22-22	1.5 - 2.7	1.38	0.77	15-Aug-22	1.38	0.77	0.00	n/d
MW22-23	0.7 - 2.1	1.08	0.29	15-Aug-22	1.15	0.36	-0.07	n/d
MW22-43	0.41 - 0.56	13.33	12.54	15-Aug-22	DRY	DRY	DRY	n/d
MW22-50	0.3 - 0.5	12.78	12.13	15-Aug-22	DRY	DRY	DRY	n/d

Notes:

^(a) Control points co-ordinates derived from Natural Resources Canada Precise point positioning procedure

LNAPL - light non-aqueous phase liquid

masl - metres above sea level

mbgs - metres below ground surface

mbtoc - metres below top of casing

n/d - not detected

°C - degrees Celsius

Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-01		BH22-03	BH22-04	BH22-05		BH22-06	BH22-07	BH22-08	BH22-10
Sample ID					BH22-01-01	DUP B	BH22-03-01	BH22-04-01	BH22-05-01	BH22-05-02	BH22-06-02	BH22-07-01	BH22-08-01	BH22-10-01
BVL Sample ID					AZF963	AZF964	AZF966	AZF967	AZF968	AZF969	AZF970	AZF971	AZF972	AZY183
BVL Job Number					C259077	C259077	C259077	C259077	C259077	C259077	C259077	C259077	C259077	C262029
Sample Date					07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22	13-Aug-22
Sample Depth (mbgs)					0.0 - 0.42	0.0 - 0.42	0.0 - 0.48	0.0 - 0.48	0.0 - 0.35	0.35 - 0.44	0.1 - 0.48	0.0 - 0.38	0.0 - 0.35	0.00 - 0.25
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)										
Benzene	mg/kg	0.0050	0.5	0.5	<0.028	<0.028	<0.026	<0.017	<0.020	<0.0050	<0.0050	<0.016	<0.021	<0.041
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	4.0	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.080
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.056	<0.057	<0.052	<0.034	<0.039	<0.010	<0.010	<0.031	<0.041	<0.030
Xylenes	mg/kg	0.045	1	1	<0.25	<0.25	<0.23	<0.15	<0.18	<0.045	<0.045	<0.14	<0.18	<0.37
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<35	<36	<33	<24	<25	<10	<10	<24	<26	<24
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	<31	<33	280	<20	<28	34	56	27	110	76
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	290	310	4,800	310	400	730	530	410	1,300	780
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	<150	<170	2,000	<100	<140	170	120	110	450	380

Notes:

^(a) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003).

^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (i.e., peat) and is therefore not considered an exceedance of the applied criteria

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

GNWT - Government of Northwest Territories

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

RDL - reportable detection limit

> - greater than

< - less than

Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-11		BH22-12			BH22-14			BH22-15				
					Sample ID	BH22-11-01	BH22-11-02	BH22-12-01	BH22-12-02	BH22-12-03	BH22-14-01	BH22-14-02	BH22-14-03	BH22-15-01	BH22-15-02	BH22-15-03	DUPL
BVL Sample ID					AZY180	AZY181	AZY358	AZY383	AZY385	AZY347	AZY348	AZY349	AZY352	AZY353	AZY354	AZY355	
BVL Job Number					C262029	C262029	C262079	C262079	C262079	C262079	C262079	C262079	C262079	C262079	C262079	C262079	C262079
Sample Date					13-Aug-22	13-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22
Sample Depth (mbgs)					0.00 - 0.30	0.30 - 1.10	0.00 - 0.30	0.30 - 0.80	0.80 - 1.20	0.00 - 0.30	0.30 - 0.60	0.60 - 0.90	0.00 - 0.40	0.40 - 0.70	0.70 - 1.10	0.70 - 1.10	
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)													
Benzene	mg/kg	0.0050	0.5	0.5	<0.0050	0.024	<0.039	<0.042	<0.010	<0.023	<0.014	<0.0050	<0.026	<0.0050	<0.0050	<0.0050	
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	9.9	3.7	<0.10	<0.089	3.9	0.66	<0.098	<0.050	<0.050	<0.050	
Ethylbenzene	mg/kg	0.010	1.2	1.2	0.016	0.12	<0.059	<0.064	<0.015	<0.035	<0.022	<0.010	<0.039	<0.010	<0.010	<0.010	
Xylenes	mg/kg	0.045	1	1	0.12	0.47	<0.37	<0.40	<0.093	<0.22	<0.14	<0.045	<0.24	<0.045	<0.045	<0.045	
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	110	86	<61	<66	<21	<36	<22	<10	<40	<10	<10	<10	
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	6,400	13	<55	<60	<10	24	45	39	54	<10	<10	<10	
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	520	<50	1,600	330	64	700	2,000	440	740	51	<50	<50	
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	140	<50	430	<300	<50	190	810	190	270	<50	<50	<50	

Notes:

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^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

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RDL - reportable detection limit

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< - less than

Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-17				BH22-18				BH22-19			
					Sample ID	BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03
BVL Sample ID					AZM154	AZM155	AZM156	AZM157	AZM282	AZM283	AZM284	AZM285	AZM158	AZM159	AZM160	AZM161
BVL Job Number					C260012	C260012	C260012	C260012	C260031	C260031	C260031	C260031	C260013	C260013	C260013	C260013
Sample Date					08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22
Sample Depth (mbgs)					0.00 - 0.50	0.50 - 1.00	1.00 - 1.50	1.50 - 1.80	0.00 - 0.60	0.60 - 1.00	1.00 - 1.50	1.50 - 1.80	0.00 - 0.50	0.50 - 1.00	1.00 - 1.30	1.30 - 1.80
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)												
Benzene	mg/kg	0.0050	0.5	0.5	<0.017	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.014	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.025	<0.010	<0.010	<0.010	<0.010	<0.010	0.025	<0.010	<0.010	<0.010	<0.021	<0.010
Xylenes	mg/kg	0.045	1	1	<0.17	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.14	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<18	<10	<10	<10	<10	<10	<10	<10	<10	<10	<15	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	<24	<10	<10	<10	18	<10	<10	<10	14	<10	44	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	370	180	<50	<50	310	<50	<50	<50	160	<50	580	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	120	<50	<50	<50	140	<50	<50	<50	73	<50	190	<50

Notes:

^(a) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003).

^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

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Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-20					BH22-21			
					Sample ID	BH22-20-01	BH22-20-02	BH22-20-03	BH22-20-04	DUP E	BH22-21-01	BH22-21-02	BH22-21-03
BVL Sample ID					AZM281	AZM280	AZM279	AZM278	AZM277	AZY134	AZY135	AZY136	AZY137
BVL Job Number					C260031	C260031	C260031	C260031	C260031	C262020	C262020	C262020	C262020
Sample Date					08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22
Sample Depth (mbgs)					0.00 - 0.50	0.50 - 1.00	1.00 - 1.50	1.50 - 1.70	1.50 - 1.70	0.00 - 0.40	0.40 - 0.80	0.80 - 1.20	1.20 - 1.50
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)									
Benzene	mg/kg	0.0050	0.5	0.5	0.022	<0.0050	<0.0050	<0.0050	<0.0050	<0.012	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	0.12	<0.050	<0.050	<0.050	<0.050	<0.12	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	0.026	<0.010	<0.010	<0.010	<0.010	<0.024	<0.010	<0.010	<0.010
Xylenes	mg/kg	0.045	1	1	0.16	<0.045	<0.045	<0.045	<0.045	<0.11	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<10	<10	<10	<10	<10	<24	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	94	14	300	100	41	19	15	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	400	<50	670	130	81	380	180	<50	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	160	<50	260	<50	<50	170	72	<50	<50

Notes:

^(a) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003).

^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

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F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

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Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-24									BH22-25				
Sample ID					BH22-24-01	BH22-24-02	BH22-24-03	BH22-24-04	BH22-24-05	BH22-24-06	BH22-24-07	DUP D	BH22-25-01	BH22-25-02	BH22-25-03	BH22-25-04	BH22-25-05	
BVL Sample ID					AZM220	AZM221	AZM222	AZM223	AZM224	AZM225	AZM226	AZM227	AZM180	AZM181	AZM179	AZM182	AZM183	
BVL Job Number					C260023	C260023	C260023	C260023	C260023	C260023	C260023	C260023	C260016	C260016	C260016	C260016	C260016	
Sample Date					08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	
Sample Depth (mbgs)					0.00 - 0.30	0.30 - 0.80	0.80 - 1.40	1.40 - 1.50	1.50 - 2.00	2.00 - 2.50	2.50 - 3.15	2.50 - 3.15	0.00 - 0.20	0.20 - 0.50	0.50 - 0.80	0.80 - 1.00	1.00 - 1.20	
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)														
Benzene	mg/kg	0.0050	0.5	0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0090	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.014	<0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Xylenes	mg/kg	0.045	1	1	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.092	<0.10	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<10	<10	<10	<10	<10	<10	<21	<23	<10	<10	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	<10	44	31	<10	<10	<10	<10	<10	36	29	<10	14	380	
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	77	82	360	<50	<50	<50	<50	<50	180	160	<50	<50	190	
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	<50	<50	92	<50	<50	<50	<50	<50	55	<50	<50	<50	<50	<50

Notes:

^(a) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003).

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Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-26				BH22-27				BH22-28		
Sample ID	BH22-26-01	BH22-26-02	BH22-26-03	BH22-26-04	BH22-27-05	DUP C	BH22-27-06	BH22-27-07	BH22-28-01	BH22-28-02	BH22-28-03				
BVL Sample ID	AZM252	AZM253	AZM254	AZM255	AZM162	AZM163	AZM164	AZM165	AZM245	AZM246	AZM247				
BVL Job Number	C260028	C260028	C260028	C260028	C260013	C260013	C260013	C260013	C260028	C260028	C260028				
Sample Date	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22				
Sample Depth (mbgs)	0.00 - 0.30	0.30 - 0.60	0.60 - 0.90	0.90 - 1.30	1.50 - 1.90	1.50 - 1.90	1.90 - 2.60	2.60 - 3.10	0.00 - 0.40	0.40 - 0.50	0.50 - 1.50				
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)											
Benzene	mg/kg	0.0050	0.5	0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.011	<0.0050	<0.0050	<0.010	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.017	<0.010	<0.010	<0.019	<0.010
Xylenes	mg/kg	0.045	1	1	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.11	<0.045	<0.045	<0.11	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<10	<10	<10	<10	<10	<10	<12	<10	<10	<24	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	15	22	22	38	22	25	<10	<10	<10	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	80	130	130	220	88	140	<50	<50	180	110	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	<50	<50	<50	100	<50	54	<50	<50	97	<50	<50

Notes:

^(a) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003).

^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (i.e., peat) and is therefore not considered an exceedance of the applied criteria

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

GNWT - Government of Northwest Territories

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

RDL - reportable detection limit

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< - less than

Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-29				BH22-40				BH22-41		BH22-42	
Sample ID					BH22-29-01	BH22-29-02	DUP J	BH22-29-03	BH22-40-02	BH22-40-03	DUP G	BH22-40-04	BH22-41-01	DUP A	BH22-42-01	BH22-42-02
BVL Sample ID					AZM178	AZM177	AZM176	AZM175	AZM250	AZM249	AZM251	AZM248	AZF960	AZF961	AZF954	AZF955
BVL Job Number					C260016	C260016	C260016	C260016	C260028	C260028	C260028	C260028	C259075	C259075	C259075	C259075
Sample Date					09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	06-Aug-22	06-Aug-22	06-Aug-22	06-Aug-22
Sample Depth (mbgs)					0.00 - 0.15	0.15 - 0.80	0.15 - 0.80	0.80 - 1.20	0.50 - 1.00	1.00 - 1.50	1.00 - 1.50	1.50 - 2.10	0.00 - 0.46	0.00 - 0.46	0.00 - 0.30	0.30 - 0.60
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)												
Benzene	mg/kg	0.0050	0.5	0.5	<0.0050	<0.0050	<0.0050	<0.012	<u>0.88</u>	0.016	0.022	<0.0050	<0.016	<0.013	<0.028	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	<0.050	<0.050	<u>16</u>	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.010	<0.010	<0.010	<0.022	<u>12</u>	0.025	0.020	<0.010	<0.031	<0.026	<0.057	<0.010
Xylenes	mg/kg	0.045	1	1	<0.045	<0.045	<0.045	<0.13	<u>57</u>	<0.045	<0.045	<0.045	<0.14	<0.12	<0.25	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<10	<10	<10	<18	2,200	<10	<10	<10	<24	<24	<36	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	11	<10	<10	48	<u>17,000</u>	<10	<10	37	<21	29	<28	11
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	160	<50	100	790	<u>1,300</u>	<50	<50	<50	360	<u>410</u>	370	140
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	72	<50	<50	240	470	<50	<50	<50	120	93	<140	<50

Notes:

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Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-44	BH22-45	BH22-46	BH22-47	BH22-48	BH22-49				BH22-51		
Sample ID					BH22-44-01	BH22-45-01	BH22-46-01	BH22-47-01	BH22-48-01	BH22-49-01	DUP M	BH22-49-02	BH22-49-03	BH22-51-01	BH22-51-02	
BVL Sample ID					AZF956	AZF958	AZF959	AZY182	AZY184	AZY176	AZY177	AZY178	AZY179	BAK864	BAK865	
BVL Job Number					C259075	C259075	C259075	C262029	C262029	C262029	C262029	C262029	C262029	C264065	C264065	
Sample Date					06-Aug-22	06-Aug-22	07-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	15-Aug-22	15-Aug-22	
Sample Depth (mbgs)					0.00 - 0.34	0.00 - 0.42	0.00 - 0.35	0.00 - 0.30	0.00 - 0.30	0.00 - 0.50	0.00 - 0.50	0.50 - 0.60	0.90 - 1.20	0.00 - 0.50	0.50 - 1.00	
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)												
Benzene	mg/kg	0.0050	0.5	0.5	<0.026	<0.016	<0.032	<0.057	<0.026	<0.023	0.060	0.012	0.010	<0.0050	<0.0050	
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	<0.050	13	<0.080	0.36	48	8.2	0.088	<0.050	<0.050	
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.052	<0.032	<0.064	<0.040	<0.030	<0.047	0.27	<0.022	<0.010	<0.010	<0.010	
Xylenes	mg/kg	0.045	1	1	<0.23	<0.14	<0.28	<0.51	<0.24	<0.21	1.2	<0.098	<0.045	<0.045	0.10	
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<33	<24	<40	<30	<24	<24	<44	<22	<10	<10	<10	
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	28	120	340	380	140	930	190	21	<10	69	23	
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	370	2,100	2,900	8,300	2,300	8,700	2,800	660	<50	230	240	
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	<120	650	930	3,200	990	2,700	1,100	230	<50	64	70	

Notes:

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^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

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Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-52		BH22-53		BH22-54		BH22-55		BH22-56		
Sample ID					BH22-52-01	BH22-52-02	BH22-53-01	BH22-53-02	BH22-54-01	BH22-54-02	BH22-55-01	BH22-55-02	BH22-56-01	BH22-56-02	BH22-56-03
BVL Sample ID					BAK866	BAK867	BAK868	BAK869	BAK857	BAK858	BAK859	BAK860	BAW749	BAW750	BAW751
BVL Job Number					C264065	C264065	C264065	C264065	C264062	C264062	C264062	C264062	C266077	C266077	C266077
Sample Date					15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22
Sample Depth (mbgs)					0.00 - 0.50	0.50 - 1.00	0.00 - 0.30	0.30 - 0.50	0.00 - 0.40	0.40 - 0.50	0.00 - 0.30	0.30 - 0.50	0.00 - 0.50	1.00 - 1.50	1.50 - 2.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)											
Benzene	mg/kg	0.0050	0.5	0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.014	<0.0050	<0.029	<0.023	<0.018	<0.051	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	0.080	<0.050	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	0.81	2.0	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.010	<0.010	<0.010	<0.010	<0.029	<0.010	<0.058	<0.046	<0.043	<0.12	<0.010
Xylenes	mg/kg	0.045	1	1	<0.045	<0.045	<0.045	<0.045	<0.13	<0.045	<0.26	<0.21	<0.14	<0.34	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<10	<10	<10	<10	<24	<10	<24	<24	<12	<33	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	16	20	20	16	<24	16	<41	<35	88	49	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	150	170	290	210	340	310	600	350	2,600	1,100	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	50	54	71	58	<120	74	<210	<170	990	320	<50

Notes:

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^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

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Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-57			BH22-58	BH22-59				BH22-60		
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	BH22-57-01	BH22-57-02	BH22-57-03	BH22-58-01	BH22-59-01	BH22-59-02	BH22-59-03	BH22-59-04	BH22-60-01	BH22-60-02	BH22-60-03
					BH22-57-01	BH22-57-02	BH22-57-03	BH22-58-01	BH22-59-01	BH22-59-02	BH22-59-03	BH22-59-04	BH22-60-01	BH22-60-02	BH22-60-03
					BAW752	BAW753	BAW754	BAW755	BAW756	BAW757	BAW758	BAW759	BAW666	BAW667	BAW668
					C266077	C266077	C266077	C266077	C266077	C266077	C266077	C266077	C266062	C266062	C266062
					24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22
					0.00 - 0.50	1.50 - 1.80	1.80 - 2.10	0.00 - 0.50	0.00 - 0.50	1.00 - 1.50	1.50 - 1.90	2.50 - 3.00	0.60 - 1.20	1.50 - 2.00	2.50 - 3.00
Benzene	mg/kg	0.0050	0.5	0.5	<0.035	<0.039	<0.0050	<0.014	<0.0080	<0.0080	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	<0.11	1.8	<0.050	<0.050	0.86	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.081	<0.092	<0.010	<0.033	<0.018	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010
Xylenes	mg/kg	0.045	1	1	<0.23	<0.26	<0.045	<0.10	<0.092	<0.097	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<23	47	<10	<10	<21	<22	<10	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	<50	<56	<10	<23	60	<10	<10	<10	16	51	59
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	470	600	<50	300	1,100	97	89	<50	71	120	130
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	<250	<280	<50	<110	400	<50	<50	<50	<50	<50	<50

Notes:

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Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-61				BH22-62			BH22-63		
					Sample ID	BH22-61-01	BH22-61-02	BH22-61-03	BH22-61-04	BH22-62-01	BH22-62-02	BH22-62-03	BH22-63-01	BH22-63-02
BVL Sample ID					BAW662	BAW663	BAW664	BAW665	BAW659	BAW660	BAW661	BAW742	BAW743	BAW744
BVL Job Number					C266062	C266062	C266062	C266062	C266062	C266062	C266062	C266076	C266076	C266076
Sample Date					26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22
Sample Depth (mbgs)					0.80 - 1.50	1.50 - 2.00	2.50 - 3.00	3.50 - 4.00	0.40 - 1.00	1.50 - 2.00	2.50 - 3.00	0.10 - 0.70	0.70 - 1.50	1.50 - 1.80
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)										
Benzene	mg/kg	0.0050	0.5	0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.035	<0.010	<0.010
Xylenes	mg/kg	0.045	1	1	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.11	<0.045	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<10	16	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	17	20	<10	17	17	18	16	<29	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	100	82	<50	93	82	77	77	870	<50	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	<50	<50	<50	<50	<50	<50	<50	240	<50	<50

Notes:

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Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-64				BH22-65				BH22-66		
Sample ID	BH22-64-01	BH22-64-02	BH22-64-03	BH22-64-04	BH22-65-01	BH22-65-02	BH22-65-03	BH22-65-04	BH22-66-01	BH22-66-02	BH22-66-03				
BVL Sample ID	BAW738	BAW739	BAW740	BAW741	BAW760	BAW761	BAW762	BAW763	BAW735	BAW736	BAW737				
BVL Job Number	C266076	C266076	C266076	C266076	C266077	C266077	C266077	C266077	C266076	C266076	C266076				
Sample Date	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22				
Sample Depth (mbgs)	0.00 - 1.20	1.50 - 2.00	2.50 - 3.00	3.50 - 4.00	0.20 - 1.00	1.60 - 2.00	2.50 - 3.00	3.50 - 4.00	0.00 - 0.50	1.50 - 2.00	2.50 - 3.00				
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)											
Benzene	mg/kg	0.0050	0.5	0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Xylenes	mg/kg	0.045	1	1	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	53	<22	<10	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	380	<10	<10	<10	<10	<10	<10	<10	<10	51	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	<50	<50	<50	<50	<50	<50	<50	<50	<50	76	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Notes:

^(a) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003).

^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (i.e., peat) and is therefore not considered an exceedance of the applied criteria

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

GNWT - Government of Northwest Territories

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

RDL - reportable detection limit

> - greater than

< - less than

Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-67				BH22-68			BH22-69			
					Sample ID	BH22-67-01	BH22-67-02	BH22-67-03	BH22-67-04	BH22-68-01	BH22-68-02	BH22-68-03	BH22-69-01	BH22-69-02	BH22-69-03
BVL Sample ID					BAW745	BAW746	BAW747	BAW748	BAW656	BAW657	BAW658	BAW780	BAW781	BAW782	BAW783
BVL Job Number					C266076	C266076	C266076	C266076	C266062	C266062	C266062	C266081	C266081	C266081	C266081
Sample Date					26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22
Sample Depth (mbgs)					0.00 - 0.50	0.50 - 1.40	1.40 - 2.00	2.50 - 3.00	0.50 - 1.00	1.50 - 2.00	2.50 - 3.00	0.50 - 1.20	1.50 - 2.00	2.50 - 3.00	3.50 - 4.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)											
Benzene	mg/kg	0.0050	0.5	0.5	<0.0050	<0.014	<0.0050	<0.0050	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	<0.050	<0.050	<0.060	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.010	<0.033	<0.010	<0.010	<0.046	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Xylenes	mg/kg	0.045	1	1	<0.045	<0.10	<0.045	<0.045	<0.13	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<10	<10	<10	<10	<13	<10	<10	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	<10	51	<10	<10	38	<10	<10	56	65	12	17
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	60	1,000	<50	<50	880	<50	<50	130	140	85	110
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	<50	360	<50	<50	270	<50	<50	<50	<50	<50	<50

Notes:

^(a) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003).

^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (i.e., peat) and is therefore not considered an exceedance of the applied criteria

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

GNWT - Government of Northwest Territories

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

RDL - reportable detection limit

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Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-70			MW22-02	MW22-09			MW22-13	
Sample ID					BH22-70-01	BH22-70-02	BH22-70-03	MW22-02-01	MW22-09-01	MW22-09-02	MW22-09-03	MW22-13-01	MW22-13-02
BVL Sample ID					BAW784	BAW785	BAW786	AZF965	AZY173	AZY174	AZY175	AZY350	AZY351
BVL Job Number					C266081	C266081	C266081	C259077	C262029	C262029	C262029	C262079	C262079
Sample Date					26-Aug-22	26-Aug-22	26-Aug-22	07-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	12-Aug-22	12-Aug-22
Sample Depth (mbgs)					0.00 - 0.50	0.50 - 1.00	1.00 - 1.60	0.00 - 0.45	0.00 - 0.30	0.30 - 0.60	0.60 - 0.80	0.00 - 0.30	0.30 - 0.80
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)									
Benzene	mg/kg	0.0050	0.5	0.5	<0.0090	<0.0050	<0.0050	<0.019	<0.015	<0.014	<0.0050	<0.023	<0.044
Toluene	mg/kg	0.050	0.8	0.8	0.52	<0.050	<0.050	<0.050	0.85	<u>1.3</u>	<0.050	<0.087	<u>3.7</u>
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.017	<0.010	<0.010	<0.037	<0.030	<0.028	<0.010	<0.034	<0.066
Xylenes	mg/kg	0.045	1	1	<0.096	<0.045	<0.045	<0.17	<0.13	<0.13	<0.045	<0.21	<0.41
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<21	<10	<10	<24	<24	<24	<10	<35	<68
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	42	13	53	110	180	120	15	34	140
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	1,200	84	61	2,200	2,300	1,500	170	850	2,800
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	490	<50	<50	750	690	410	<50	350	1,000

Notes:

^(a) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003).

^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

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mg/kg - milligrams per kilogram

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Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					MW22-16		MW22-22					
					Sample ID	MW22-16-01	MW22-16-02	MW22-22-01	MW22-22-02	DUP K	MW22-22-03	MW22-22-04
BVL Sample ID					AZY356	AZY357	AZY128	AZY129	AZY131	AZY130	AZY132	AZY133
BVL Job Number					C262079	C262079	C262020	C262020	C262020	C262020	C262020	C262020
Sample Date					12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22
Sample Depth (mbgs)					0.00 - 0.50	0.50 - 0.70	0.00 - 0.75	0.75 - 1.50	1.50 - 2.00	1.50 - 2.00	2.00 - 2.60	2.60 - 3.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)								
Benzene	mg/kg	0.0050	0.5	0.5	<0.013	<0.0050	<0.0050	0.15	<u>1.7</u>	<u>2.3</u>	<0.0050	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	<0.051	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.020	<0.010	<0.010	0.19	<0.010	0.022	<0.010	<0.010
Xylenes	mg/kg	0.045	1	1	<0.12	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<21	<10	<10	15	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	11	<10	19	24	31	91	<10	17
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	310	<50	100	100	84	130	<50	74
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	80	<50	<50	<50	<50	<50	<50	<50

Notes:

^(a) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003).

^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

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BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

GNWT - Government of Northwest Territories

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

RDL - reportable detection limit

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Table 2A
Summary of Soil Analytical Results - Petroleum Hydrocarbons and GNWT Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					MW22-23				MW22-43	MW22-50		
					Sample ID	DUP N	MW22-23-02	MW22-23-03	MW22-43-01	MW22-50-01	MW22-50-02	MW22-50-03
BVL Sample ID					AZY121	AZY123	AZY122	AZY124	AZF957	AZY125	AZY126	AZY127
BVL Job Number					C262019	C262019	C262019	C262019	C259075	C262019	C262019	C262019
Sample Date					13-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	06-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22
Sample Depth (mbgs)					0.00 - 1.50	1.50 - 2.40	1.50 - 2.40	2.40 - 3.00	0.00 - 0.54	0.00 - 0.50	0.50 - 1.00	1.00 - 1.20
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)								
Benzene	mg/kg	0.0050	0.5	0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	0.8	0.8	<0.050	<0.050	<0.050	<0.050	<0.050	0.098	0.083	<0.050
Ethylbenzene	mg/kg	0.010	1.2	1.2	<0.010	<0.010	<0.010	<0.010	<0.010	0.022	<0.010	<0.010
Xylenes	mg/kg	0.045	1	1	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	130	230	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	150	150	<10	<10	<10	23	14	22	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	400	2,500	<50	87	100	260	300	900	74	110
F4 (C ₃₄ -C ₅₀)	mg/kg	50	2,800	10,000	<50	<50	<50	87	86	290	<50	<50

Notes:

^(a) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003).

^(b) GNWT Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (i.e., peat) and is therefore not considered an exceedance of the applied criteria

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

GNWT - Government of Northwest Territories

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

RDL - reportable detection limit

> - greater than

< - less than

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-01		BH22-03	BH22-04	BH22-05		BH22-06	BH22-07
Sample ID							BH22-01-01	DUP B	BH22-03-01	BH22-04-01	BH22-05-01	BH22-05-02	BH22-06-02	BH22-07-01
BVL Sample ID							AZF963	AZF964	AZF966	AZF967	AZF968	AZF969	AZF970	AZF971
BVL Job Number							C259077	C259077	C259077	C259077	C259077	C259077	C259077	C259077
Sample Date							07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22	07-Aug-22
Sample Depth (mbgs)							0.0 - 0.42	0.0 - 0.42	0.0 - 0.48	0.0 - 0.48	0.0 - 0.35	0.35 - 0.44	0.1 - 0.48	0.0 - 0.38
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)								
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.028	<0.028	<0.026	<0.017	<0.020	<0.0050	<0.0050	<0.016
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	4.0	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.056	<0.057	<0.052	<0.034	<0.039	<0.010	<0.010	<0.031
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.25	<0.25	<0.23	<0.15	<0.18	<0.045	<0.045	<0.14
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<35	<36	<33	<24	<25	<10	<10	<24
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<35	<36	<33	<24	<25	<10	<10	<24
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	<31	<33	280	<20	<28	34	56	27
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	290	310	4,800	310	400	730	530	410
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	<150	<170	2,000	<100	<140	170	120	110
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	290	310	6,800	410	400	900	650	520
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (ie. peat) and is therefore not considered an exceedance of the applied criteria

AMSRP - Abandoned Military Site Remediation Protocol

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-08	BH22-10	BH22-11		BH22-12			BH22-14		
Sample ID							BH22-08-01	BH22-10-01	BH22-11-01	BH22-11-02	BH22-12-01	BH22-12-02	BH22-12-03	BH22-14-01	BH22-14-02	BH22-14-03
BVL Sample ID							AZF972	AZY183	AZY180	AZY181	AZY358	AZY383	AZY385	AZY347	AZY348	AZY349
BVL Job Number							C259077	C262029	C262029	C262029	C262079	C262079	C262079	C262079	C262079	C262079
Sample Date							07-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22
Sample Depth (mbgs)							0.0 - 0.35	0.00 - 0.25	0.00 - 0.30	0.30 - 1.10	0.00 - 0.30	0.30 - 0.80	0.80 - 1.20	0.00 - 0.30	0.30 - 0.60	0.60 - 0.90
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)										
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.021	<0.041	<0.0050	0.024	<0.039	<0.042	<0.010	<0.023	<0.014	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.080	<0.050	<0.050	9.9	3.7	<0.10	<0.089	3.9	0.66
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.041	<0.030	0.016	0.12	<0.059	<0.064	<0.015	<0.035	<0.022	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.18	<0.37	0.12	0.47	<0.37	<0.40	<0.093	<0.22	<0.14	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<26	<24	110	87	<61	<66	<21	<36	<22	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<26	<24	110	86	<61	<66	<21	<36	<22	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	110	76	6,400	13	<55	<60	<10	24	45	39
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	1,300	780	520	<50	1,600	330	64	700	2,000	440
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	450	380	140	<50	430	<300	<50	190	810	190
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	1,750	NA	NA	NA	2,030	330	64	NA	2,810	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	856	<u>7,030</u>	100	NA	NA	NA	724	NA	479

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

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NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

**Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited**

Sample Location							BH22-15				BH22-17			
							Sample ID	BH22-15-01	BH22-15-02	BH22-15-03	DUPL	BH22-17-01	BH22-17-02	BH22-17-03
BVL Sample ID							AZY352	AZY353	AZY354	AZY355	AZM154	AZM155	AZM156	AZM157
BVL Job Number							C262079	C262079	C262079	C262079	C260012	C260012	C260012	C260012
Sample Date							12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22
Sample Depth (mbgs)							0.00 - 0.40	0.40 - 0.70	0.70 - 1.10	0.70 - 1.10	0.00 - 0.50	0.50 - 1.00	1.00 - 1.50	1.50 - 1.80
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)								
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.026	<0.0050	<0.0050	<0.0050	<0.017	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.098	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.039	<0.010	<0.010	<0.010	<0.025	<0.010	<0.010	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.24	<0.045	<0.045	<0.045	<0.17	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<40	<10	<10	<10	<18	<10	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<40	<10	<10	<10	<18	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	54	<10	<10	<10	<24	<10	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	740	51	<50	<50	370	180	<50	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	270	<50	<50	<50	120	<50	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	NA	51	NA	NA	490	180	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	794	NA	NA	NA	NA	NA	NA	NA

Notes:

- ^(a) AMSRP Protection of Human Health (INAC 2008).
- ^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).
- ^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).
- ^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (ie. peat) and is therefore not considered an exceedance of the applied criteria

AMSRP - Abandoned Military Site Remediation Protocol

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-18				BH22-19			
							Sample ID	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03
BVL Sample ID							AZM282	AZM283	AZM284	AZM285	AZM158	AZM159	AZM160	AZM161
BVL Job Number							C260031	C260031	C260031	C260031	C260013	C260013	C260013	C260013
Sample Date							08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22
Sample Depth (mbgs)							0.00 - 0.60	0.60 - 1.00	1.00 - 1.50	1.50 - 1.80	0.00 - 0.50	0.50 - 1.00	1.00 - 1.30	1.30 - 1.80
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)								
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.014	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.010	0.025	<0.010	<0.010	<0.010	<0.021	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.14	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	<10	<10	<10	<15	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	<10	<10	<10	<15	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	18	<10	<10	<10	14	<10	44	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	310	<50	<50	<50	160	<50	580	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	140	<50	<50	<50	73	<50	190	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	NA	NA	NA	NA	233	NA	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	328	NA	NA	NA	NA	NA	624	NA

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

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AMSRP - Abandoned Military Site Remediation Protocol

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-20					BH22-21			
							Sample ID	BH22-20-01	BH22-20-02	BH22-20-03	BH22-20-04	DUP E	BH22-21-01	BH22-21-02	BH22-21-03
BVL Sample ID							AZM281	AZM280	AZM279	AZM278	AZM277	AZY134	AZY135	AZY136	AZY137
BVL Job Number							C260031	C260031	C260031	C260031	C260031	C262020	C262020	C262020	C262020
Sample Date							08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22
Sample Depth (mbgs)							0.00 - 0.50	0.50 - 1.00	1.00 - 1.50	1.50 - 1.70	1.50 - 1.70	0.00 - 0.40	0.40 - 0.80	0.80 - 1.20	1.20 - 1.50
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)									
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	0.022	<0.0050	<0.0050	<0.0050	<0.0050	<0.012	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	0.12	<0.050	<0.050	<0.050	<0.050	<0.12	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	0.026	<0.010	<0.010	<0.010	<0.010	<0.024	<0.010	<0.010	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	0.16	<0.045	<0.045	<0.045	<0.045	<0.11	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	<10	<10	<24	<10	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	<10	<10	<24	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	94	14	300	100	41	19	15	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	400	<50	670	130	81	380	180	<50	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	160	<50	260	<50	<50	170	72	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	NA	NA	NA	NA	NA	NA	252	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	494	14	970	230	122	399	NA	NA	NA

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

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AMSRP - Abandoned Military Site Remediation Protocol

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F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-24							
							Sample ID	BH22-24-01	BH22-24-02	BH22-24-03	BH22-24-04	BH22-24-05	BH22-24-06	BH22-24-07
BVL Sample ID							AZM220	AZM221	AZM222	AZM223	AZM224	AZM225	AZM226	AZM227
BVL Job Number							C260023	C260023	C260023	C260023	C260023	C260023	C260023	C260023
Sample Date							08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22
Sample Depth (mbgs)							0.00 - 0.30	0.30 - 0.80	0.80 - 1.40	1.40 - 1.50	1.50 - 2.00	2.00 - 2.50	2.50 - 3.15	2.50 - 3.15
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)								
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0090	<0.010
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.014	<0.015
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.092	<0.10
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	<10	<10	<10	<21	<23
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	<10	<10	<10	<21	<23
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	<10	44	31	<10	<10	<10	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	77	82	360	<50	<50	<50	<50	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	<50	<50	92	<50	<50	<50	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	77	NA	452	NA	NA	NA	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	126	NA	NA	NA	NA	NA	NA

Notes:

- ^(a) AMSRP Protection of Human Health (INAC 2008).
- ^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).
- ^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).
- ^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

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m - metres

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mg/kg - milligrams per kilogram

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RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-25					BH22-26			
							Sample ID	BH22-25-01	BH22-25-02	BH22-25-03	BH22-25-04	BH22-25-05	BH22-26-01	BH22-26-02	BH22-26-03
BVL Sample ID							AZM180	AZM181	AZM179	AZM182	AZM183	AZM252	AZM253	AZM254	AZM255
BVL Job Number							C260016	C260016	C260016	C260016	C260016	C260028	C260028	C260028	C260028
Sample Date							09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22
Sample Depth (mbgs)							0.00 - 0.20	0.20 - 0.50	0.50 - 0.80	0.80 - 1.00	1.00 - 1.20	0.00 - 0.30	0.30 - 0.60	0.60 - 0.90	0.90 - 1.30
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)									
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	<10	<10	<10	<10	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	36	29	<10	14	380	15	22	22	38
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	180	160	<50	<50	190	80	130	130	220
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	55	<50	<50	<50	<50	<50	<50	<50	100
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	235	NA	NA	NA	NA	NA	NA	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	189	NA	14	570	95	152	152	258

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

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BTEX - benzene, toluene, ethylbenzene, xylenes

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m - metres

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NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-27				BH22-28		
							Sample ID	DUP C	BH22-27-06	BH22-27-07	BH22-28-01	BH22-28-02	BH22-28-03
BVL Sample ID							AZM162	AZM163	AZM164	AZM165	AZM245	AZM246	AZM247
BVL Job Number							C260013	C260013	C260013	C260013	C260028	C260028	C260028
Sample Date							08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22
Sample Depth (mbgs)							1.50 - 1.90	1.50 - 1.90	1.90 - 2.60	2.60 - 3.10	0.00 - 0.40	0.40 - 0.50	0.50 - 1.50
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)							
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.0050	<0.011	<0.0050	<0.0050	<0.010	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.010	<0.017	<0.010	<0.010	<0.019	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.045	<0.11	<0.045	<0.045	<0.11	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<12	<10	<10	<24	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<12	<10	<10	<24	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	22	25	<10	<10	<10	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	88	140	<50	<50	180	110	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	<50	54	<50	<50	97	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	NA	194	NA	NA	277	110	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	110	NA	NA	NA	NA	NA	NA

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (ie. peat) and is therefore not considered an exceedance of the applied criteria

AMSRP - Abandoned Military Site Remediation Protocol

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-29				BH22-40			
							Sample ID	BH22-29-01	BH22-29-02	DUP J	BH22-29-03	BH22-40-02	BH22-40-03	DUP G
BVL Sample ID							AZM178	AZM177	AZM176	AZM175	AZM250	AZM249	AZM251	AZM248
BVL Job Number							C260016	C260016	C260016	C260016	C260028	C260028	C260028	C260028
Sample Date							09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22
Sample Depth (mbgs)							0.00 - 0.15	0.15 - 0.80	0.15 - 0.80	0.80 - 1.20	0.50 - 1.00	1.00 - 1.50	1.00 - 1.50	1.50 - 2.10
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)								
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.0050	<0.0050	<0.012	0.88	0.016	0.022	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	16	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.010	<0.010	<0.022	12	0.025	0.020	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.045	<0.045	<0.13	57	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	<18	2,300	<10	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	<18	2,200	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	11	<10	<10	48	17,000	<10	<10	37
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	160	<50	100	790	1,300	<50	<50	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	72	<50	<50	240	470	<50	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	232	NA	100	NA	NA	NA	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	NA	NA	838	20,600	NA	NA	37

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (ie. peat) and is therefore not considered an exceedance of the applied criteria

AMSRP - Abandoned Military Site Remediation Protocol

BTEX - benzene, toluene, ethylbenzene, xylenes

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F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-41		BH22-42		BH22-44	BH22-45	BH22-46	BH22-47
Sample ID							BH22-41-01	DUP A	BH22-42-01	BH22-42-02	BH22-44-01	BH22-45-01	BH22-46-01	BH22-47-01
BVL Sample ID							AZF960	AZF961	AZF954	AZF955	AZF956	AZF958	AZF959	AZY182
BVL Job Number							C259075	C259075	C259075	C259075	C259075	C259075	C259075	C262029
Sample Date							06-Aug-22	06-Aug-22	06-Aug-22	06-Aug-22	06-Aug-22	06-Aug-22	07-Aug-22	13-Aug-22
Sample Depth (mbgs)							0.00 - 0.46	0.00 - 0.46	0.00 - 0.30	0.30 - 0.60	0.00 - 0.34	0.00 - 0.42	0.00 - 0.35	0.00 - 0.30
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)								
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.016	<0.013	<0.028	<0.0050	<0.026	<0.016	<0.032	<0.057
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	13
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.031	<0.026	<0.057	<0.010	<0.052	<0.032	<0.064	<0.040
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.14	<0.12	<0.25	<0.045	<0.23	<0.14	<0.28	<0.51
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<24	<24	<36	<10	<33	<24	<40	<30
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<24	<24	<36	<10	<33	<24	<40	<30
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	<21	29	<28	11	28	120	340	380
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	360	410	370	140	370	2,100	2,900	8,300
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	120	93	<140	<50	<120	650	930	3,200
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	480	503	370	NA	NA	2,750	3,830	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	NA	NA	151	398	NA	NA	<u>8,680</u>

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

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m - metres

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n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

							Sample Location	BH22-48	BH22-49				BH22-51		BH22-52	
							Sample ID	BH22-48-01	BH22-49-01	DUP M	BH22-49-02	BH22-49-03	BH22-51-01	BH22-51-02	BH22-52-01	BH22-52-02
							BVL Sample ID	AZY184	AZY176	AZY177	AZY178	AZY179	BAK864	BAK865	BAK866	BAK867
							BVL Job Number	C262029	C262029	C262029	C262029	C262029	C264065	C264065	C264065	C264065
							Sample Date	13-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22
							Sample Depth (mbgs)	0.00 - 0.30	0.00 - 0.50	0.00 - 0.50	0.50 - 0.60	0.90 - 1.20	0.00 - 0.50	0.50 - 1.00	0.00 - 0.50	0.50 - 1.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)										
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.026	<0.023	0.060	0.012	0.010	<0.0050	<0.0050	<0.0050	<0.0050	
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.080	0.36	48	8.2	0.088	<0.050	<0.050	0.080	<0.050	
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.030	<0.047	0.27	<0.022	<0.010	<0.010	<0.010	<0.010	<0.010	
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.24	<0.21	1.2	<0.098	<0.045	<0.045	0.10	<0.045	<0.045	
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<24	<24	67	<22	<10	<10	<10	<10	<10	
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<24	<24	<44	<22	<10	<10	<10	<10	<10	
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	140	930	190	21	<10	69	23	16	20	
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	2,300	8,700	2,800	660	<50	230	240	150	170	
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	990	2,700	1,100	230	<50	64	70	50	54	
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	3,290	NA	NA	890	NA	NA	310	200	224	
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	<u>9,630</u>	<u>3,057</u>	NA	NA	299	NA	NA	NA	

Notes:

- ^(a) AMSRP Protection of Human Health (INAC 2008).
- ^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).
- ^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).
- ^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (ie. peat) and is therefore not considered an exceedance of the applied criteria

AMSRP - Abandoned Military Site Remediation Protocol

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

		Sample Location					BH22-53		BH22-54		BH22-55		BH22-56		
		Sample ID					BH22-53-01	BH22-53-02	BH22-54-01	BH22-54-02	BH22-55-01	BH22-55-02	BH22-56-01	BH22-56-02	BH22-56-03
		BVL Sample ID					BAK868	BAK869	BAK857	BAK858	BAK859	BAK860	BAW749	BAW750	BAW751
		BVL Job Number					C264065	C264065	C264062	C264062	C264062	C264062	C266077	C266077	C266077
		Sample Date					15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22
		Sample Depth (mbgs)					0.00 - 0.30	0.30 - 0.50	0.00 - 0.40	0.40 - 0.50	0.00 - 0.30	0.30 - 0.50	0.00 - 0.50	1.00 - 1.50	1.50 - 2.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)									
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.0050	<0.014	<0.0050	<0.029	<0.023	<0.018	<0.051	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.059	<0.050	0.81	2.0	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.010	<0.029	<0.010	<0.058	<0.046	<0.043	<0.12	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.045	<0.13	<0.045	<0.26	<0.21	<0.14	<0.34	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<24	<10	<24	<24	<12	<33	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<24	<10	<24	<24	<12	<33	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	20	16	<24	16	<41	<35	88	49	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	290	210	340	310	600	350	2,600	1,100	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	71	58	<120	74	<210	<170	990	320	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	361	268	340	384	600	350	3,590	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	NA	NA	NA	NA	NA	NA	1,149	NA

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

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RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-57			BH22-58	BH22-59			
							Sample ID	BH22-57-01	BH22-57-02	BH22-57-03	BH22-58-01	BH22-59-01	BH22-59-02	BH22-59-03
BVL Sample ID							BAW752	BAW753	BAW754	BAW755	BAW756	BAW757	BAW758	BAW759
BVL Job Number							C266077	C266077	C266077	C266077	C266077	C266077	C266077	C266077
Sample Date							24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22
Sample Depth (mbgs)							0.00 - 0.50	1.50 - 1.80	1.80 - 2.10	0.00 - 0.50	0.00 - 0.50	1.00 - 1.50	1.50 - 1.90	2.50 - 3.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)								
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.035	<0.039	<0.0050	<0.014	<0.0080	<0.0080	<0.0050	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.11	1.8	<0.050	<0.050	0.86	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.081	<0.092	<0.010	<0.033	<0.018	<0.020	<0.010	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.23	<0.26	<0.045	<0.10	<0.092	<0.097	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<23	49	<10	<10	<21	<22	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<23	47	<10	<10	<21	<22	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	<50	<56	<10	<23	60	<10	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	470	600	<50	300	1,100	97	89	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	<250	<280	<50	<110	400	<50	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	470	600	NA	300	NA	97	89	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	NA	NA	NA	1,160	NA	NA	NA

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

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RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-60			BH22-61				BH22-62		
Sample ID							BH22-60-01	BH22-60-02	BH22-60-03	BH22-61-01	BH22-61-02	BH22-61-03	BH22-61-04	BH22-62-01	BH22-62-02	BH22-62-03
BVL Sample ID							BAW666	BAW667	BAW668	BAW662	BAW663	BAW664	BAW665	BAW659	BAW660	BAW661
BVL Job Number							C266062	C266062	C266062	C266062	C266062	C266062	C266062	C266062	C266062	C266062
Sample Date							26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22
Sample Depth (mbgs)							0.60 - 1.20	1.50 - 2.00	2.50 - 3.00	0.80 - 1.50	1.50 - 2.00	2.50 - 3.00	3.50 - 4.00	0.40 - 1.00	1.50 - 2.00	2.50 - 3.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)										
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	<10	16	<10	<10	<10	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	<10	16	<10	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	16	51	59	17	20	<10	17	17	18	16
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	71	120	130	100	82	<50	93	82	77	77
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	87	171	189	117	118	NA	110	99	95	93

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (ie. peat) and is therefore not considered an exceedance of the applied criteria

AMSRP - Abandoned Military Site Remediation Protocol

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

							Sample Location			BH22-63				BH22-64			
							Sample ID	BH22-63-01	BH22-63-02	BH22-63-03	BH22-64-01	BH22-64-02	BH22-64-03	BH22-64-04			
							BVL Sample ID	BAW742	BAW743	BAW744	BAW738	BAW739	BAW740	BAW741			
							BVL Job Number	C266076	C266076	C266076	C266076	C266076	C266076	C266076			
							Sample Date	26-Aug-22	26-Aug-22	26-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22			
							Sample Depth (mbgs)	0.10 - 0.70	0.70 - 1.50	1.50 - 1.80	0.00 - 1.20	1.50 - 2.00	2.50 - 3.00	3.50 - 4.00			
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)											
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050				
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050				
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.035	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010				
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.11	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045				
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	53	<22	<10	<10				
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	53	<22	<10	<10				
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	<29	<10	<10	380	<10	<10	<10				
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	870	<50	<50	<50	<50	<50	<50				
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	240	<50	<50	<50	<50	<50	<50				
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	1,110	NA	NA	NA	NA	NA	NA				
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	NA	NA	433	NA	NA	NA				

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (ie. peat) and is therefore not considered an exceedance of the applied criteria

AMSRP - Abandoned Military Site Remediation Protocol

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-65				BH22-66		
							Sample ID	BH22-65-01	BH22-65-02	BH22-65-03	BH22-65-04	BH22-66-01	BH22-66-02
BVL Sample ID							BAW760	BAW761	BAW762	BAW763	BAW735	BAW736	BAW737
BVL Job Number							C266077	C266077	C266077	C266077	C266076	C266076	C266076
Sample Date							24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22	24-Aug-22
Sample Depth (mbgs)							0.20 - 1.00	1.60 - 2.00	2.50 - 3.00	3.50 - 4.00	0.00 - 0.50	1.50 - 2.00	2.50 - 3.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)							
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	<10	<10	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	<10	<10	<10	<10	51	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	<50	<50	<50	<50	76	<50	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	<50	<50	<50	<50	<50	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	NA	NA	NA	NA	NA	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	NA	NA	NA	127	NA	NA

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Green/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (ie. peat) and is therefore not considered an exceedance of the applied criteria

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BTEX - benzene, toluene, ethylbenzene, xylenes

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F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4
m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-67				BH22-68		
							Sample ID	BH22-67-01	BH22-67-02	BH22-67-03	BH22-67-04	BH22-68-01	BH22-68-02
BVL Sample ID							BAW745	BAW746	BAW747	BAW748	BAW656	BAW657	BAW658
BVL Job Number							C266076	C266076	C266076	C266076	C266062	C266062	C266062
Sample Date							26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22
Sample Depth (mbgs)							0.00 - 0.50	0.50 - 1.40	1.40 - 2.00	2.50 - 3.00	0.50 - 1.00	1.50 - 2.00	2.50 - 3.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)							
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.014	<0.0050	<0.0050	<0.020	<0.0050	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.060	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.033	<0.010	<0.010	<0.046	<0.010	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.10	<0.045	<0.045	<0.13	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	<10	<13	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	<10	<13	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	<10	51	<10	<10	38	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	60	1,000	<50	<50	880	<50	<50
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	<50	360	<50	<50	270	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	60	NA	NA	NA	NA	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	1,051	NA	NA	918	NA	NA

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

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BTEX - benzene, toluene, ethylbenzene, xylenes

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F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4
m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							BH22-69				BH22-70		
							Sample ID	BH22-69-01	BH22-69-02	BH22-69-03	BH22-69-04	BH22-70-01	BH22-70-02
BVL Sample ID							BAW780	BAW781	BAW782	BAW783	BAW784	BAW785	BAW786
BVL Job Number							C266081	C266081	C266081	C266081	C266081	C266081	C266081
Sample Date							26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22
Sample Depth (mbgs)							0.50 - 1.20	1.50 - 2.00	2.50 - 3.00	3.50 - 4.00	0.00 - 0.50	0.50 - 1.00	1.00 - 1.60
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)							
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0090	<0.0050	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	0.52	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.010	<0.010	<0.010	<0.017	<0.010	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.045	<0.045	<0.045	<0.096	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	<10	<21	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	<10	<21	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	56	65	12	17	42	13	53
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	130	140	85	110	1,200	84	61
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	<50	<50	<50	<50	490	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	NA	NA	NA	NA	1,690	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	186	205	97	127	NA	97	114

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

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BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4
m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

							Sample Location	MW22-02				MW22-09				MW22-13	
							Sample ID	MW22-02-01	MW22-09-01	MW22-09-02	MW22-09-03	MW22-13-01	MW22-13-02				
							BVL Sample ID	AZF965	AZY173	AZY174	AZY175	AZY350	AZY351				
							BVL Job Number	C259077	C262029	C262029	C262029	C262079	C262079				
							Sample Date	07-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	12-Aug-22	12-Aug-22				
							Sample Depth (mbgs)	0.00 - 0.45	0.00 - 0.30	0.30 - 0.60	0.60 - 0.80	0.00 - 0.30	0.30 - 0.80				
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)											
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.019	<0.015	<0.014	<0.0050	<0.023	<0.044					
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	0.85	1.3	<0.050	<0.087	3.7					
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.037	<0.030	<0.028	<0.010	<0.034	<0.066					
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.17	<0.13	<0.13	<0.045	<0.21	<0.41					
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<24	<24	<24	<10	<35	<68					
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<24	<24	<24	<10	<35	<68					
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	110	180	120	15	34	140					
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	2,200	2,300	1,500	170	850	2,800					
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	750	690	410	<50	350	1,000					
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	2,950	2,990	1,910	NA	1,200	NA					
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	NA	NA	185	NA	2,940					

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

Green highlight - laboratory analysis indicated the hydrocarbon parameter was of biogenic origin (ie. peat) and is therefore not considered an exceedance of the applied criteria

AMSRP - Abandoned Military Site Remediation Protocol

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							MW22-16		MW22-22					
							Sample ID	MW22-16-01	MW22-16-02	MW22-22-01	MW22-22-02	DUP K	MW22-22-03	MW22-22-04
BVL Sample ID							AZY356	AZY357	AZY128	AZY129	AZY131	AZY130	AZY132	AZY133
BVL Job Number							C262079	C262079	C262020	C262020	C262020	C262020	C262020	C262020
Sample Date							12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22
Sample Depth (mbgs)							0.00 - 0.50	0.50 - 0.70	0.00 - 0.75	0.75 - 1.50	1.50 - 2.00	1.50 - 2.00	2.00 - 2.60	2.60 - 3.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)								
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.013	<0.0050	<0.0050	0.15	1.7	2.3	<0.0050	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.051	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.020	<0.010	<0.010	0.19	<0.010	0.022	<0.010	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.12	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<21	<10	<10	15	<10	<10	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<21	<10	<10	15	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	11	<10	19	24	31	91	<10	17
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	310	<50	100	100	84	130	<50	74
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	80	<50	<50	<50	<50	<50	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	390	NA	100	NA	NA	NA	NA	NA
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	NA	NA	139	115	221	NA	91

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

Bold/Underlined - value exceeds criteria

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AMSRP - Abandoned Military Site Remediation Protocol

BTEX - benzene, toluene, ethylbenzene, xylenes

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F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

m - metres

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 2B
Summary of Soil Analytical Results - Petroleum Hydrocarbons and AMSRP Criteria
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location							MW22-23				MW22-43	MW22-50		
Sample ID							MW22-23-01	DUP N	MW22-23-02	MW22-23-03	MW22-43-01	MW22-50-01	MW22-50-02	MW22-50-03
BVL Sample ID							AZY121	AZY123	AZY122	AZY124	AZF957	AZY125	AZY126	AZY127
BVL Job Number							C262019	C262019	C262019	C262019	C259075	C262019	C262019	C262019
Sample Date							13-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	06-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22
Sample Depth (mbgs)							0.00 - 1.50	1.50 - 2.40	1.50 - 2.40	2.40 - 3.00	0.00 - 0.54	0.00 - 0.50	0.50 - 1.00	1.00 - 1.20
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Criteria ^(c)	Criteria ^(d)								
Benzene	mg/kg	0.0050	n/g	n/g	n/g	n/g	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Toluene	mg/kg	0.050	n/g	n/g	n/g	n/g	<0.050	<0.050	<0.050	<0.050	<0.050	0.098	0.083	<0.050
Ethylbenzene	mg/kg	0.010	n/g	n/g	n/g	n/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.022	<0.010	<0.010
Xylenes	mg/kg	0.045	n/g	n/g	n/g	n/g	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045
F1 (C ₆ -C ₁₀)	mg/kg	10	n/g	1,290	n/g	n/g	<10	<10	<10	<10	<10	<10	<10	<10
F1 (C ₆ -C ₁₀) - BTEX	mg/kg	10	n/g	n/g	n/g	n/g	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C ₁₀ -C ₁₆)	mg/kg	10	11,000	330	n/g	n/g	<10	<10	<10	23	14	22	<10	<10
F3 (C ₁₆ -C ₃₄)	mg/kg	50	20,000	n/g	n/g	n/g	<50	87	100	260	300	900	74	110
F4 (C ₃₄ -C ₅₀)	mg/kg	50	n/g	n/g	n/g	n/g	<50	<50	<50	87	86	290	<50	<50
Type A (F3+F4)	mg/kg	-	20,000	n/g	n/g	n/g	NA	87	100	347	386	1,190	74	110
Type B (F1+F2+F3)	mg/kg	-	n/g	330	2,500	5,000	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

^(a) AMSRP Protection of Human Health (INAC 2008).

^(b) AMSRP Protection of Freshwater Aquatic Life exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008).

^(c) AMSRP Protection of Terrestrial Wildlife, for surface soil to 0.5 m depth (INAC 2008).

^(d) AMSRP Management Limit, below 0.5m depth (INAC 2008).

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BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

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mbgs - metres below ground surface

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NA - not applicable

RDL - reportable detection limit

Type A (F3+F4) - non-mobile hydrocarbons, consists of the sum of F3 and F4 fractions. For type A contaminated soil, the sum of F3 plus F4 must be greater than 70% of the TPH concentration (F1 [including BTEX] through F4) and the F2 concentration must be less than the F4 concentration.

Type B (F1+F2+F3) - mobile hydrocarbons, consists of the sum of F1 (including BTEX) through F3 fractions

< - less than

- not available

Table 3A
ASummary of Soil Analytical Results - Polycyclic Aromatic Hydrocarbons Background Range
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

		Sample Location				BH22-42		BH22-44	BH22-45	BH22-46	BH22-53		BH22-54		BH22-55		MW22-43
		Sample ID	BH22-42-01	BH22-42-02	BH22-44-01	BH22-45-01	BH22-46-01	BH22-53-01	BH22-53-02	BH22-54-01	BH22-54-02	BH22-55-01	BH22-55-02	MW22-43-01			
		BVL Sample ID	AZF954	AZF955	AZF956	AZF957	AZF959	BAK868	BAK869	BAK857	BAK858	BAK859	BAK860	AZF957			
		BVL Job Number	C259075	C259075	C259075	C259075	C259075	C264065	C264065	C264062	C264062	C264062	C264062	C259075			
		Sample Date	06-Aug-22	06-Aug-22	06-Aug-22	06-Aug-22	07-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	06-Aug-22			
		Sample Depth (mbgs)	0.00 - 0.30	0.30 - 0.60	0.00 - 0.34	0.00 - 0.42	0.00 - 0.35	0.00 - 0.30	0.30 - 0.50	0.00 - 0.40	0.40 - 0.50	0.00 - 0.30	0.30 - 0.50	0.00 - 0.54			
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Background Range ^(d)												
Acenaphthene	mg/kg	0.0050	n/g	0.28	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Acenaphthylene	mg/kg	0.0050	n/g	320	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Acridine	mg/kg	0.010	n/g	n/g	<0.010 - 0.040	<0.027	0.015	0.026	<0.022	<0.034	0.040	0.029	0.032	<0.010	0.058	0.055	<0.010
Anthracene	mg/kg	0.0040	n/g	2.5	<0.015	<0.011	<0.0040	<0.0092	<0.0088	<0.014	<0.0040	<0.0040	<0.0088	<0.0040	<0.015	<0.012	<0.0040
Benzo[a]anthracene	mg/kg	0.0050	1	1	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
B(a)P	mg/kg	0.0050	0.7	0.6*	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Benzo[e]pyrene	mg/kg	0.0050	n/g	n/g	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Benzo[b,j]fluoranthene	mg/kg	0.0050	n/g	n/g	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Benzo[g,h,i]perylene	mg/kg	0.0050	n/g	n/g	<0.019 - 0.036	<0.014	<0.0050	<0.012	0.036	0.031	0.0093	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Benzo[k]fluoranthene	mg/kg	0.0050	1	1	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Benzo[c]phenanthrene	mg/kg	0.0050	n/g	n/g	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Chrysene	mg/kg	0.0050	n/g	6.2	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Dibenzo[a,h]anthracene	mg/kg	0.0050	1	1	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Fluoranthene	mg/kg	0.0050	n/g	50	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Fluorene	mg/kg	0.0050	n/g	0.25	<0.019 - 0.086	<0.014	<0.0050	0.020	0.037	0.086	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	0.012
Indeno[1,2,3-cd]pyrene	mg/kg	0.0050	1	1	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
1-Methylnaphthalene	mg/kg	0.0050	n/g	n/g	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
2-Methylnaphthalene	mg/kg	0.0050	n/g	n/g	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Naphthalene	mg/kg	0.0050	0.6	0.013*	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Perylene	mg/kg	0.0050	n/g	n/g	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Phenanthrene	mg/kg	0.0050	5	0.046*	<0.019	<0.014	<0.0050	0.013	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Pyrene	mg/kg	0.0050	10	7.7*	<0.019	<0.014	<0.0050	<0.012	<0.011	<0.017	<0.0050	<0.0050	<0.011	<0.0050	<0.019	<0.016	<0.0050
Quinoline	mg/kg	0.010	n/g	n/g	<0.027 - 0.076	<0.027	<0.010	<0.023	<0.022	<0.034	0.026	0.020	0.031	0.019	0.076	0.054	<0.010
B(a)P TPE	mg/kg	0.0071	n/g	5.3 ^(c)	<0.026	<0.019	<0.0071	<0.016	<0.016	<0.024	<0.0071	<0.0071	<0.016	<0.0071	<0.026	<0.022	<0.0071
IACR (C)	none	0.10	n/g	n/g	-	-	-	-	-	-	-	-	-	-	-	-	-
IACR (F)	none	0.10	n/g	n/g	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).

^(b) Canadian Council of Ministers of the Environment Soil Quality Guidelines for residential/parkland land use (CCME 1999 and updates). Criteria shown is the SQGE, if calculated. If not calculated, the value is the interim soil quality criteria or the lowest criteria of the applicable pathways, whichever is most conservative.

^(c) Criteria is for SQGHH.

^(d) Background range based on results from 2022 background data

B(a)P - benzo(a)pyrene

BVL - Bureau Veritas Laboratories

GNWT - Government of Northwest Territories

IACR - index of additive cancer risk

mg/kg - milligrams per kilogram

n/g - no guideline

RDL - reportable detection limit

SQGE - soil quality guideline for environmental health

SQGHH - soil quality guideline for human health

TPE - total potency equivalents

< - less than

- not available

*criteria not applied because it is less than the applicable GNWT criteria.

Table 3B
Summary of Soil Analytical Results - Polycyclic Aromatic Hydrocarbons
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location						BH22-24								BH22-25					BH22-51	
Sample ID						BH22-24-01	BH22-24-02	BH22-24-03	BH22-24-04	BH22-24-05	BH22-24-06	BH22-24-07	DUP D	BH22-25-01	BH22-25-02	BH22-25-03	BH22-25-04	BH22-25-05	BH22-51-01	BH22-51-02
BVL Sample ID						AZM220	AZM221	AZM222	AZM223	AZM224	AZM225	AZM226	AZM227	AZM180	AZM181	AZM179	AZM182	AZM183	BAK864	BAK865
BVL Job Number						C260023	C260023	C260023	C260023	C260023	C260023	C260023	C260023	C260016	C260016	C260016	C260016	C260016	C264065	C264065
Sample Date						08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	15-Aug-22	15-Aug-22
Sample Depth (mbgs)						0.00 - 0.30	0.30 - 0.80	0.80 - 1.40	1.40 - 1.50	1.50 - 2.00	2.00 - 2.50	2.50 - 3.15	2.50 - 3.15	0.00 - 0.20	0.20 - 0.50	0.50 - 0.80	0.80 - 1.00	1.00 - 1.20	0.00 - 0.50	0.50 - 1.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Background Range ^(d)															
Acenaphthene	mg/kg	0.0050	n/g	0.28	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	
Acenaphthylene	mg/kg	0.0050	n/g	320	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	
Acridine	mg/kg	0.010	n/g	n/g	<0.010 - 0.040	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	
Anthracene	mg/kg	0.0040	n/g	2.5	<0.015	-	-	-	-	-	-	-	-	-	-	-	-	<0.0040	<0.0040	
Benzo[a]anthracene	mg/kg	0.0050	1	1	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	
B(a)P	mg/kg	0.0050	0.7	0.6*	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	0.0095	
Benzo[e]pyrene	mg/kg	0.0050	n/g	n/g	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	0.018	0.029	
Benzo[b,j]fluoranthene	mg/kg	0.0050	n/g	n/g	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	0.017	0.025	
Benzo[g,h,i]perylene	mg/kg	0.0050	n/g	n/g	<0.019 - 0.036	-	-	-	-	-	-	-	-	-	-	-	-	0.022	0.036	
Benzo[k]fluoranthene	mg/kg	0.0050	1	1	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	
Benzo[c]phenanthrene	mg/kg	0.0050	n/g	n/g	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	
Chrysene	mg/kg	0.0050	n/g	6.2	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	0.0087	0.013	
Dibenzo[a,h]anthracene	mg/kg	0.0050	1	1	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	
Fluoranthene	mg/kg	0.0050	n/g	50	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	0.0095	0.014	
Fluorene	mg/kg	0.0050	n/g	0.25	<0.019 - 0.086	-	-	-	-	-	-	-	-	-	-	-	-	0.012	0.015	
Indeno[1,2,3-cd]pyrene	mg/kg	0.0050	1	1	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	0.0065	0.011	
1-Methylnaphthalene	mg/kg	0.0050	n/g	n/g	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	0.046	0.045	
2-Methylnaphthalene	mg/kg	0.0050	n/g	n/g	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	0.069	0.073	
Naphthalene	mg/kg	0.0050	0.6	0.013*	<0.019	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0088	0.026	0.035	
Perylene	mg/kg	0.0050	n/g	n/g	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	0.062	0.10	
Phenanthrene	mg/kg	0.0050	5	0.046*	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	0.044	0.066	
Pyrene	mg/kg	0.0050	10	7.7*	<0.019	-	-	-	-	-	-	-	-	-	-	-	-	0.019	0.025	
Quinoline	mg/kg	0.010	n/g	n/g	<0.027 - 0.076	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	
B(a)P TPE	mg/kg	0.0071	n/g	5.3 ^(c)	<0.026	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	0.0080	0.017	
IACR (C)	none	0.10	n/g	n/g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
IACR (F)	none	0.10	n/g	n/g	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes:
^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).
^(b) Canadian Council of Ministers of the Environment Soil Quality Guidelines for residential/parkland land use (CCME 1999 and updates). Criteria shown is the SQGE, if calculated. If not calculated, the value is the interim soil quality criteria or the lowest criteria of the applicable pathways, whichever is most conservative.
^(c) Criteria is for SQGHH.
^(d) Background range based on results from 2022 background data
Bold/Underlined - value exceeds criteria
 B(a)P - benzo(a)pyrene
 BVL - Bureau Veritas Laboratories
 GNWT - Government of Northwest Territories
 IACR - index of additive cancer risk
 mg/kg - milligrams per kilogram
 n/g - no guideline
 RDL - reportable detection limit
 SQGE - soil quality guideline for environmental health
 SQGHH - soil quality guideline for human health
 TPE - total potency equivalents
 < - less than
 - not available
 *criteria not applied because it is less than the applicable GNWT criteria.

**Table 3B
Summary of Soil Analytical Results - Polycyclic Aromatic Hydrocarbons
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited**

Sample Location						BH22-52		BH22-60		BH22-61				BH22-62			MW22-13	
Sample ID						BH22-52-01	BH22-52-02	BH22-60-01	BH22-60-02	BH22-61-01	BH22-61-02	BH22-61-03	BH22-61-04	BH22-62-01	BH22-62-02	BH22-62-03	MW22-13-01	MW22-13-02
BVL Sample ID						BAK866	BAK867	BAW666	BAW667	BAW662	BAW663	BAW664	BAW665	BAW659	BAW660	BAW661	AZY350	AZY351
BVL Job Number						C264065	C264065	C266062	C266062	C266062	C266062	C266062	C266062	C266062	C266062	C266062	C262079	C262079
Sample Date						15-Aug-22	15-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	26-Aug-22	12-Aug-22	12-Aug-22
Sample Depth (mbgs)						0.00 - 0.50	0.50 - 1.00	0.60 - 1.20	1.50 - 2.00	0.80 - 1.50	1.50 - 2.00	2.50 - 3.00	3.50 - 4.00	0.40 - 1.00	1.50 - 2.00	2.50 - 3.00	0.00 - 0.30	0.30 - 0.80
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Background Range ^(d)													
Acenaphthene	mg/kg	0.0050	n/g	0.28	<0.019	<0.0050	<0.0050	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Acenaphthylene	mg/kg	0.0050	n/g	320	<0.019	<0.0050	<0.0050	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Acridine	mg/kg	0.010	n/g	n/g	<0.010 - 0.040	<0.010	<0.010	-	-	-	-	-	-	-	-	-	0.11	0.19
Anthracene	mg/kg	0.0040	n/g	2.5	<0.015	<0.0040	<0.0040	-	-	-	-	-	-	-	-	-	<0.010	<0.021
Benzo[a]anthracene	mg/kg	0.0050	1	1	<0.019	<0.0050	<0.0050	-	-	-	-	-	-	-	-	-	<0.013	<0.027
B(a)P	mg/kg	0.0050	0.7	0.6*	<0.019	0.0071	0.0071	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Benzo[e]pyrene	mg/kg	0.0050	n/g	n/g	<0.019	0.028	0.025	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Benzo[b,j]fluoranthene	mg/kg	0.0050	n/g	n/g	<0.019	0.023	0.021	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Benzo[g,h,i]perylene	mg/kg	0.0050	n/g	n/g	<0.019 - 0.036	0.034	0.030	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Benzo[k]fluoranthene	mg/kg	0.0050	1	1	<0.019	<0.0050	<0.0050	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Benzo[c]phenanthrene	mg/kg	0.0050	n/g	n/g	<0.019	<0.0050	<0.0050	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Chrysene	mg/kg	0.0050	n/g	6.2	<0.019	0.013	0.011	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Dibenzo[a,h]anthracene	mg/kg	0.0050	1	1	<0.019	<0.0050	<0.0050	-	-	-	-	-	-	-	-	-	0.031	<0.027
Fluoranthene	mg/kg	0.0050	n/g	50	<0.019	0.012	0.011	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Fluorene	mg/kg	0.0050	n/g	0.25	<0.019 - 0.086	0.012	0.011	-	-	-	-	-	-	-	-	-	<0.013	0.070
Indeno[1,2,3-cd]pyrene	mg/kg	0.0050	1	1	<0.019	0.0083	0.0075	-	-	-	-	-	-	-	-	-	<0.013	<0.027
1-Methylnaphthalene	mg/kg	0.0050	n/g	n/g	<0.019	0.038	0.036	-	-	-	-	-	-	-	-	-	<0.013	<0.027
2-Methylnaphthalene	mg/kg	0.0050	n/g	n/g	<0.019	0.064	0.061	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Naphthalene	mg/kg	0.0050	0.6	0.013*	<0.019	0.027	0.026	0.022	0.029	0.031	0.026	<0.0050	0.019	0.026	0.028	0.032	<0.013	<0.027
Perylene	mg/kg	0.0050	n/g	n/g	<0.019	0.091	0.087	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Phenanthrene	mg/kg	0.0050	5	0.046*	<0.019	0.062	0.062	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Pyrene	mg/kg	0.0050	10	7.7*	<0.019	0.023	0.022	-	-	-	-	-	-	-	-	-	<0.013	<0.027
Quinoline	mg/kg	0.010	n/g	n/g	<0.027 - 0.076	<0.010	<0.010	-	-	-	-	-	-	-	-	-	<0.026	<0.053
B(a)P TPE	mg/kg	0.0071	n/g	5.3 ^(c)	<0.026	0.014	0.013	0.013	0.013	0.015	0.015	<0.0071	0.015	0.0090	0.016	0.015	0.040	<0.038
IACR (C)	none	0.10	n/g	n/g	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IACR (F)	none	0.10	n/g	n/g	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).
^(b) Canadian Council of Ministers of the Environment Soil Quality Guidelines for residential/parkland land use (CCME 1999 and updates). Criteria shown is the SQGE, if calculated. If not calculated, the value is the interim soil quality criteria or the lowest criteria of the applicable pathways, whichever is most conservative.
^(c) Criteria is for SQGHH.
^(d) Background range based on results from 2022 background data
Bold/Underlined - value exceeds criteria
 B(a)P - benzo(a)pyrene
 BVL - Bureau Veritas Laboratories
 GNWT - Government of Northwest Territories
 IACR - index of additive cancer risk
 mg/kg - milligrams per kilogram
 n/g - no guideline
 RDL - reportable detection limit
 SQGE - soil quality guideline for environmental health
 SQGHH - soil quality guideline for human health
 TPE - total potency equivalents
 < - less than
 - not available
 *criteria not applied because it is less than the applicable GNWT criteria.

Table 3B
Summary of Soil Analytical Results - Polycyclic Aromatic Hydrocarbons
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location						MW22-22						MW22-23			
						Sample ID	MW22-22-01	MW22-22-02	DUP K	MW22-22-03	MW22-22-04	MW22-22-05	MW22-23-01	DUP N	MW22-23-02
BVL Sample ID						AZY128	AZY129	AZY131	AZY130	AZY132	AZY133	AZY121	AZY123	AZY122	AZY124
BVL Job Number						C262020	C262020	C262020	C262020	C262020	C262020	C262019	C262019	C262019	C262019
Sample Date						12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22
Sample Depth (mbgs)						0.00 - 0.75	0.75 - 1.50	1.50 - 2.00	1.50 - 2.00	2.00 - 2.60	2.60 - 3.00	0.00 - 1.50	1.50 - 2.40	1.50 - 2.40	2.40 - 3.00
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Background Range ^(d)										
Acenaphthene	mg/kg	0.0050	n/g	0.28	<0.019	<0.0050	<0.0050	<0.0050	0.012	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	0.0050	n/g	320	<0.019	<0.0050	<0.0050	<0.0050	0.0072	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acridine	mg/kg	0.010	n/g	n/g	<0.010 - 0.040	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	mg/kg	0.0040	n/g	2.5	<0.015	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Benzo[a]anthracene	mg/kg	0.0050	1	1	<0.019	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B(a)P	mg/kg	0.0050	0.7	0.6*	<0.019	<0.0050	0.0066	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo[e]pyrene	mg/kg	0.0050	n/g	n/g	<0.019	0.027	0.029	0.025	0.026	<0.0050	0.024	<0.0050	<0.0050	0.0067	0.030
Benzo[b,j]fluoranthene	mg/kg	0.0050	n/g	n/g	<0.019	0.018	0.021	0.018	0.020	<0.0050	0.018	<0.0050	<0.0050	0.0061	0.024
Benzo[g,h,i]perylene	mg/kg	0.0050	n/g	n/g	<0.019 - 0.036	0.034	0.032	0.026	0.028	<0.0050	0.026	<0.0050	<0.0050	0.0081	0.034
Benzo[k]fluoranthene	mg/kg	0.0050	1	1	<0.019	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo[c]phenanthrene	mg/kg	0.0050	n/g	n/g	<0.019	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chrysene	mg/kg	0.0050	n/g	6.2	<0.019	0.011	0.011	0.012	0.010	<0.0050	0.013	<0.0050	<0.0050	<0.0050	0.012
Dibenzo[a,h]anthracene	mg/kg	0.0050	1	1	<0.019	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	mg/kg	0.0050	n/g	50	<0.019	0.0083	0.0090	0.0082	0.0081	<0.0050	0.0081	<0.0050	<0.0050	<0.0050	0.011
Fluorene	mg/kg	0.0050	n/g	0.25	<0.019 - 0.086	<0.0050	<0.0050	0.0086	0.021	<0.0050	0.0076	<0.0050	<0.0050	<0.0050	0.0096
Indeno[1,2,3-cd]pyrene	mg/kg	0.0050	1	1	<0.019	0.0066	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0083
1-Methylnaphthalene	mg/kg	0.0050	n/g	n/g	<0.019	0.023	0.031	0.22	0.88	<0.0050	0.025	<0.0050	<0.0050	<0.0050	0.025
2-Methylnaphthalene	mg/kg	0.0050	n/g	n/g	<0.019	0.034	0.043	0.33	1.3	<0.0050	0.040	<0.0050	<0.0050	0.0063	0.037
Naphthalene	mg/kg	0.0050	0.6	0.013*	<0.019	0.018	0.061	0.37	<u>1.3</u>	<0.0050	0.017	<0.0050	<0.0050	<0.0050	0.016
Perylene	mg/kg	0.0050	n/g	n/g	<0.019	0.051	0.075	0.069	0.067	<0.0050	0.070	0.0091	0.023	0.028	0.091
Phenanthrene	mg/kg	0.0050	5	0.046*	<0.019	0.028	0.042	0.036	0.038	<0.0050	0.039	<0.0050	0.0063	0.0087	0.039
Pyrene	mg/kg	0.0050	10	7.7*	<0.019	0.016	0.018	0.015	0.016	<0.0050	0.016	<0.0050	<0.0050	<0.0050	0.018
Quinoline	mg/kg	0.010	n/g	n/g	<0.027 - 0.076	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
B(a)P TPE	mg/kg	0.0071	n/g	5.3 ^(c)	<0.026	0.0080	0.012	0.0080	0.0080	<0.0071	0.0080	<0.0071	<0.0071	<0.0071	0.0090
IACR (C)	none	0.10	n/g	n/g	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10
IACR (F)	none	0.10	n/g	n/g	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10

Notes:

^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).

^(b) Canadian Council of Ministers of the Environment Soil Quality Guidelines for residential/parkland land use (CCME 1999 and updates). Criteria shown is the SQGE, if calculated. If not calculated, the value is the interim soil quality criteria or the lowest criteria of the applicable pathways, whichever is most conservative.

^(c) Criteria is for SQGHH.

^(d) Background range based on results from 2022 background data

Bold/Underlined - value exceeds criteria

B(a)P - benzo(a)pyrene

BVL - Bureau Veritas Laboratories

GNWT - Government of Northwest Territories

IACR - index of additive cancer risk

mg/kg - milligrams per kilogram

n/g - no guideline

RDL - reportable detection limit

SQGE - soil quality guideline for environmental health

SQGHH - soil quality guideline for human health

TPE - total potency equivalents

< - less than

- not available

*criteria not applied because it is less than the applicable GNWT criteria.

Table 4A
Summary of Soil Analytical Results - Salinity Background Range
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location				BH22-42		BH22-44	BH22-45	BH22-46	BH22-53		BH22-54		BH22-55		MW22-43	
Sample ID				BH22-42-01	BH22-42-02	BH22-44-01	BH22-45-01	BH22-46-01	BH22-53-01	BH22-53-02	BH22-54-01	BH22-54-02	BH22-55-01	BH22-55-02	MW22-43-01	
BVL Sample ID				AZF954	AZF955	AZF956	AZF958	AZF959	BAK868	BAK869	BAK857	BAK858	BAK859	BAK860	AZF957	
BVL Job Number				C259075	C259075	C259075	C259075	C259075	C264065	C264065	C264062	C264062	C264062	C264062	C259075	
Sample Date				06-Aug-22	06-Aug-22	06-Aug-22	06-Aug-22	07-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	06-Aug-22	
Sample Depth (mbgs)				0.00 - 0.30	0.30 - 0.60	0.00 - 0.34	0.00 - 0.42	0.00 - 0.35	0.00 - 0.30	0.30 - 0.50	0.00 - 0.40	0.40 - 0.50	0.00 - 0.30	0.30 - 0.50	0.00 - 0.54	
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(b)												
EC	dS/m	0.020	2	0.17 - 0.65	0.23	0.27	0.18	0.17	0.18	0.31	0.35	0.65	0.38	0.64	0.50	0.29
SAR	n/a	0.10	5	0.63 - 1.1	0.76	0.93	0.80	0.65	0.63	0.94	1.1	0.96	1.1	0.71	0.84	0.86
pH	pH units	n/a	6 - 8	6.15 - 6.98	6.71	6.98	6.43	6.15	6.29	6.53	6.67	6.72	6.74	6.52	6.25	6.77
Calcium	mg/kg	1.2	n/g	20 - 240	29	39	39	37	72	39	20	67	47	240	130	35
Magnesium	mg/kg	0.81	n/g	11 - 110	11	11	13	14	25	17	8.5	31	16	110	51	13
Sodium	mg/kg	2.0	n/g	15 - 98	17	23	32	22	40	29	15	41	38	98	69	21
Potassium	mg/kg	1.1	n/g	0.93 - 56	2.7	1.1	4.3	3.8	10	2.0	0.93	10	2.0	56	10	1.7
Chloride	mg/kg	15	n/g	5.5 - 58	12	12	21	<15	<26	15	5.5	48	23	58	44	11
Sulphate	mg/kg	13	n/g	8.1 - 110	11	15	22	18	35	17	8.1	64	50	110	82	21

Notes:

^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).

^(b) Background range based on results from 2022 background data

BVL - Bureau Veritas Laboratories

dS/m - deciSiemens per metre

EC - electrical conductivity

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/a - not applicable

n/g - no guideline

RDL - reportable detection limit

SAR - sodium adsorption ratio

< - less than

Table 4B
Summary of Soil Analytical Results - Salinity
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-51		BH22-52		MW22-13		MW22-23			
Sample ID					BH22-51-01	BH22-51-02	BH22-52-01	BH22-52-02	MW22-13-01	MW22-13-02	MW22-23-01	DUP N	MW22-23-02	MW22-23-03
BVL Sample ID					BAK864	BAK865	BAK866	BAK867	AZY350	AZY351	AZY121	AZY123	AZY122	AZY124
BVL Job Number					C264065	C264065	C264065	C264065	C262079	C262079	C262019	C262019	C262019	C262019
Sample Date					15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	12-Aug-22	12-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22
Sample Depth (mbgs)					0.00 - 0.50	0.50 - 1.00	0.00 - 0.50	0.50 - 1.00	0.00 - 0.30	0.30 - 0.80	0.00 - 1.50	1.50 - 2.40	1.50 - 2.40	2.40 - 3.00
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(b)										
EC	dS/m	0.020	2	0.17 - 0.65	1.0	1.0	1.1	1.4	0.52	0.26	0.55	0.70	0.69	0.80
SAR	n/a	0.10	5	0.63 - 1.1	1.6	1.3	2.0	1.9	1.0	1.5	1.7	1.6	1.6	1.3
pH	pH units	n/a	6 - 8	6.15 - 6.98	7.65	7.58	7.49	7.56	<u>4.73</u>	<u>4.87</u>	7.63	7.64	7.57	7.62
Calcium	mg/kg	1.2	n/g	20 - 240	59	77	53	77	200	48	16	19	19	37
Magnesium	mg/kg	0.81	n/g	11 - 110	12	14	12	15	62	20	4.8	4.2	3.9	9.1
Sodium	mg/kg	2.0	n/g	15 - 98	37	35	48	52	140	76	19	17	17	24
Potassium	mg/kg	1.1	n/g	0.93 - 56	2.6	2.7	3.5	3.4	28	4.9	2.3	2.8	2.8	6.0
Chloride	mg/kg	15	n/g	5.5 - 58	47	54	95	140	100	50	16	13	13	26
Sulphate	mg/kg	13	n/g	8.1 - 110	150	240	96	110	150	46	69	32	32	44

Notes:
^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).
^(b) Background range based on results from 2022 background data
Bold/Underlined - value exceeds criteria
 BVL - Bureau Veritas Laboratories
 dS/m - deciSiemens per metre
 EC - electrical conductivity
 mbgs - metres below ground surface
 mg/kg - milligrams per kilogram
 n/a - not applicable
 n/g - no guideline
 RDL - reportable detection limit
 SAR - sodium adsorption ratio
 < - less than

Table 5A
Summary of Soil Analytical Results - Metals Background Range
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location				BH22-42		BH22-44	BH22-45	BH22-46	BH22-53		BH22-54		BH22-55		MW22-43	
Sample ID				BH22-42-01	BH22-42-02	BH22-44-01	BH22-45-01	BH22-46-01	BH22-53-01	BH22-53-02	BH22-54-01	BH22-54-02	BH22-55-01	BH22-55-02	MW22-43-01	
BVL Sample ID				AZF954	AZF955	AZF956	AZF958	AZF959	BAK868	BAK869	BAK857	BAK858	BAK859	BAK860	AZF957	
BVL Job Number				C259075	C259075	C259075	C259075	C259075	C264065	C264065	C264062	C264062	C264062	C264062	C259075	
Sample Date				06-Aug-22	06-Aug-22	06-Aug-22	06-Aug-22	07-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	15-Aug-22	06-Aug-22	
Sample Depth (mbgs)				0.00 - 0.30	0.30 - 0.60	0.00 - 0.34	0.00 - 0.42	0.00 - 0.35	0.00 - 0.30	0.30 - 0.50	0.00 - 0.40	0.40 - 0.50	0.00 - 0.30	0.30 - 0.50	0.00 - 0.54	
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(c)												
Antimony	mg/kg	0.50	20	<1.0	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50
Arsenic	mg/kg	1.0	12	2.6 - 6.9	4.9	4.5	6.9	3.5	2.6	5.4	6.9	4.4	4.0	5.1	4.8	5.8
Barium	mg/kg	1.0	500	100 - 490	100	250	210	230	250	290	210	250	280	490	380	190
Barium (True Total)	mg/kg	50	10,000 ^(b)	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/kg	0.40	4	<0.80	<0.40	<0.40	<0.40	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.40
Cadmium	mg/kg	0.050	10	0.079 - 0.82	0.083	0.17	0.10	0.12	0.18	0.20	0.13	0.24	0.26	0.62	0.82	0.079
Chromium	mg/kg	1.0	64	5.9 - 25	5.9	7.6	8.9	8.6	9.0	14	25	9.0	12	7.9	9.9	10
Hexavalent Chromium	mg/kg	0.080	0.4	<0.33	<0.22	<0.080	<0.19	<0.18	<0.27	<0.080	<0.080	<0.20	<0.080	<0.33	<0.080	<0.080
Cobalt	mg/kg	0.50	50	2.3 - 20	3.1	4.3	2.7	3.0	2.3	5.5	5.2	3.9	5.1	19	20	3.7
Copper	mg/kg	1.0	63	3.6 - 19	3.6	5.8	5.4	5.4	6.2	7.0	6.1	6.4	6.6	11	19	5.7
Lead	mg/kg	0.50	140	3.0 - 5.1	3.0	3.7	3.4	4.0	3.0	4.6	5.0	4.1	4.3	3.8	4.3	5.1
Mercury	mg/kg	0.050	6.6	<0.10	<0.050	<0.050	0.053	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.050
Molybdenum	mg/kg	0.40	10	0.55 - 1.3	0.76	0.55	0.88	<0.80	0.91	0.81	1.1	<0.80	<0.80	1.3	0.92	0.65
Nickel	mg/kg	1.0	50	8.4 - 36	8.4	12	10	9.7	9.0	14	19	12	14	24	36	11
Selenium	mg/kg	0.50	1	0.55 - <1.0	<0.50	<0.50	0.55	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50
Silver	mg/kg	0.20	20	<0.40	<0.20	<0.20	<0.20	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.20
Thallium	mg/kg	0.10	1	<0.20	<0.10	<0.10	<0.10	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.10
Tin	mg/kg	1.0	50	<2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
Uranium	mg/kg	0.20	n/g	0.30 - 1.8	0.30	0.39	0.41	<0.40	<0.40	<0.40	<0.40	0.50	0.74	0.94	1.8	0.37
Vanadium	mg/kg	1.0	130	11 - 20	11	15	14	15	11	20	21	15	20	15	19	20
Zinc	mg/kg	10	200	<20 - 91	29	47	23	<20	49	45	33	48	55	91	66	34

Notes:
^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).
^(b) Alberta Environment's Soil Remediation Guidelines for Barite (AENV 2009).
^(c) Background range based on results from 2022 background data
 BVL - Bureau Veritas Laboratories
 mbgs - metres below ground surface
 mg/kg - milligrams per kilogram
 n/g - no guideline
 RDL - reportable detection limit
 < - less than
 - not available

Table 5B
Summary of Soil Analytical Results - Metals
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-17				BH22-18				BH22-19			
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(c)	BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
					BH22-17-01	BH22-17-02	BH22-17-03	BH22-17-04	BH22-18-01	BH22-18-02	BH22-18-03	BH22-18-04	BH22-19-01	BH22-19-02	BH22-19-03	BH22-19-04
Antimony	mg/kg	0.50	20	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.61	<0.50	<0.50	<0.50
Arsenic	mg/kg	1.0	12	2.6 - 6.9	2.9	4.3	3.5	4.1	5.6	6.9	5.2	5.2	4.0	4.4	2.7	6.3
Barium	mg/kg	1.0	500	100 - 490	770	110	62	82	300	130	89	76	1,300	200	290	310
Barium (True Total)	mg/kg	50	10,000 ^(b)	-	11,400	-	-	-	-	-	-	-	7,750	-	-	-
Beryllium	mg/kg	0.40	4	<0.80	<0.80	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Cadmium	mg/kg	0.050	10	0.079 - 0.82	0.18	0.081	0.085	0.069	0.086	0.055	0.078	0.056	0.13	<0.050	0.33	0.069
Chromium	mg/kg	1.0	64	5.9 - 25	6.9	6.4	4.6	7.0	20	7.7	4.8	6.4	5.5	5.8	7.8	12
Hexavalent Chromium	mg/kg	0.080	0.4	<0.33	<0.19	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.18	<0.080
Cobalt	mg/kg	0.50	50	2.3 - 20	5.2	3.3	2.6	3.0	3.1	3.9	2.8	3.1	1.8	1.5	4.0	3.7
Copper	mg/kg	1.0	63	3.6 - 19	6.1	3.6	2.8	3.1	6.0	2.8	2.7	3.2	15	3.5	7.5	5.6
Lead	mg/kg	0.50	140	3.0 - 5.1	7.2	3.5	2.7	2.9	6.2	3.7	3.2	2.7	38	6.7	4.6	6.9
Mercury	mg/kg	0.050	6.6	<0.10	<0.10	<0.050	<0.050	<0.050	0.064	<0.050	<0.050	<0.050	<0.050	<0.050	0.051	<0.050
Molybdenum	mg/kg	0.40	10	0.55 - 1.3	1.3	0.52	0.62	1.3	1.4	0.54	0.54	0.57	0.75	0.67	0.63	1.2
Nickel	mg/kg	1.0	50	8.4 - 36	7.5	8.5	7.5	8.3	12	8.4	7.0	8.5	4.6	3.8	17	10
Selenium	mg/kg	0.50	1	0.55 - <1.0	<1.0	<0.50	<0.50	<0.50	0.56	<0.50	<0.50	<0.50	<0.50	<0.50	0.77	<0.50
Silver	mg/kg	0.20	20	<0.40	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	mg/kg	0.10	1	<0.20	<0.20	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tin	mg/kg	1.0	50	<2.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Uranium	mg/kg	0.20	n/g	0.30 - 1.8	<0.40	0.28	0.30	0.33	0.52	0.26	0.26	0.29	0.36	0.35	0.55	0.31
Vanadium	mg/kg	1.0	130	11 - 20	10	12	8.4	10	21	16	9.7	13	9.2	11	20	15
Zinc	mg/kg	10	200	<20 - 91	28	19	18	20	19	23	20	22	68	11	<10	29

Notes:
^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).
^(b) Alberta Environment's Soil Remediation Guidelines for Barite (AENV 2009).
^(c) Background range based on results from 2022 background data

Bold/Underlined - value exceeds criteria
 BVL - Bureau Veritas Laboratories
 mbgs - metres below ground surface
 mg/kg - milligrams per kilogram
 n/g - no guideline
 RDL - reportable detection limit
 < - less than
 - not available

Table 5B
Summary of Soil Analytical Results - Metals
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-20					BH22-21			
Sample ID					BH22-20-01	BH22-20-02	BH22-20-03	BH22-20-04	DUP E	BH22-21-01	BH22-21-02	BH22-21-03	BH22-21-04
BVL Sample ID					AZM281	AZM280	AZM279	AZM278	AZM277	AZY134	AZY135	AZY136	AZY137
BVL Job Number					C260031	C260031	C260031	C260031	C260031	C262020	C262020	C262020	C262020
Sample Date					08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22
Sample Depth (mbgs)					0.00 - 0.50	0.50 - 1.00	1.00 - 1.50	1.50 - 1.70	1.50 - 1.70	0.00 - 0.40	0.40 - 0.80	0.80 - 1.20	1.20 - 1.50
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(c)									
Antimony	mg/kg	0.50	20	<1.0	1.9	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50
Arsenic	mg/kg	1.0	12	2.6 - 6.9	4.7	4.7	5.3	6.8	7.3	4.7	5.2	6.0	5.3
Barium	mg/kg	1.0	500	100 - 490	2,200	380	120	140	360	1,200	110	90	67
Barium (True Total)	mg/kg	50	10,000 ^(b)	-	3,010	-	-	-	-	1,130	-	-	-
Beryllium	mg/kg	0.40	4	<0.80	<0.40	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.40	<0.40
Cadmium	mg/kg	0.050	10	0.079 - 0.82	0.25	0.091	0.24	0.10	0.12	0.29	<0.050	0.099	0.084
Chromium	mg/kg	1.0	64	5.9 - 25	12	42	10	8.7	21	8.8	6.4	6.1	6.1
Hexavalent Chromium	mg/kg	0.080	0.4	<0.33	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
Cobalt	mg/kg	0.50	50	2.3 - 20	2.8	2.5	12	4.8	4.7	4.3	2.3	3.9	3.7
Copper	mg/kg	1.0	63	3.6 - 19	56	6.3	9.6	5.6	7.9	12	2.5	3.7	3.6
Lead	mg/kg	0.50	140	3.0 - 5.1	110	9.0	5.2	4.2	7.8	13	4.2	3.8	3.1
Mercury	mg/kg	0.050	6.6	<0.10	<0.050	<0.050	0.051	<0.050	<0.050	0.12	<0.050	<0.050	<0.050
Molybdenum	mg/kg	0.40	10	0.55 - 1.3	1.6	1.6	0.74	0.93	1.7	1.5	0.65	0.57	0.51
Nickel	mg/kg	1.0	50	8.4 - 36	9.1	21	32	13	17	12	6.4	10	10
Selenium	mg/kg	0.50	1	0.55 - <1.0	<0.50	<0.50	0.86	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50
Silver	mg/kg	0.20	20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.20
Thallium	mg/kg	0.10	1	<0.20	<0.10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.10
Tin	mg/kg	1.0	50	<2.0	1.5	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
Uranium	mg/kg	0.20	n/g	0.30 - 1.8	0.37	0.29	2.3	0.51	0.69	0.77	0.23	0.30	0.32
Vanadium	mg/kg	1.0	130	11 - 20	13	15	21	17	18	15	15	11	12
Zinc	mg/kg	10	200	<20 - 91	73	22	28	32	32	53	18	26	27

Notes:

^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).

^(b) Alberta Environment's Soil Remediation Guidelines for Barite (AENV 2009).

^(c) Background range based on results from 2022 background data

Bold/Underlined - value exceeds criteria

BVL - Bureau Veritas Laboratories

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

RDL - reportable detection limit

< - less than

- not available

Table 5B
Summary of Soil Analytical Results - Metals
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-24								BH22-25				
Sample ID					BH22-24-01	BH22-24-02	BH22-24-03	BH22-24-04	BH22-24-05	BH22-24-06	BH22-24-07	DUP D	BH22-25-01	BH22-25-02	BH22-25-03	BH22-25-04	BH22-25-05
BVL Sample ID					AZM220	AZM221	AZM222	AZM223	AZM224	AZM225	AZM226	AZM227	AZM180	AZM181	AZM179	AZM182	AZM183
BVL Job Number					C260023	C260023	C260023	C260023	C260023	C260023	C260023	C260023	C260016	C260016	C260016	C260016	C260016
Sample Date					08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22
Sample Depth (mbgs)					0.00 - 0.30	0.30 - 0.80	0.80 - 1.40	1.40 - 1.50	1.50 - 2.00	2.00 - 2.50	2.50 - 3.15	2.50 - 3.15	0.00 - 0.20	0.20 - 0.50	0.50 - 0.80	0.80 - 1.00	1.00 - 1.20
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(c)													
Antimony	mg/kg	0.50	20	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Arsenic	mg/kg	1.0	12	2.6 - 6.9	8.8	8.7	3.5	7.6	6.1	5.3	3.9	3.9	6.0	6.5	6.3	6.5	6.0
Barium	mg/kg	1.0	500	100 - 490	1,900	310	280	910	130	190	89	100	2,600	2,100	790	830	680
Barium (True Total)	mg/kg	50	10,000 ^(b)	-	4,930	-	-	3,650	-	-	-	-	36,400	9,770	3,560	3,770	1,960
Beryllium	mg/kg	0.40	4	<0.80	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Cadmium	mg/kg	0.050	10	0.079 - 0.82	0.14	0.12	0.10	0.075	0.093	0.082	0.068	0.073	0.20	0.17	0.085	0.10	0.089
Chromium	mg/kg	1.0	64	5.9 - 25	21	31	17	10	31	21	15	17	7.2	7.4	6.7	8.0	5.8
Hexavalent Chromium	mg/kg	0.080	0.4	<0.33	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
Cobalt	mg/kg	0.50	50	2.3 - 20	3.7	3.8	4.0	4.2	4.7	3.7	2.8	2.9	2.7	3.1	4.6	4.8	3.9
Copper	mg/kg	1.0	63	3.6 - 19	9.2	7.1	4.6	4.4	5.5	4.2	3.3	3.4	9.5	9.2	4.5	4.3	3.6
Lead	mg/kg	0.50	140	3.0 - 5.1	17	7.5	5.5	6.6	3.9	3.8	3.1	3.8	29	20	6.2	6.0	5.0
Mercury	mg/kg	0.050	6.6	<0.10	0.052	0.058	0.057	<0.050	<0.050	<0.050	<0.050	<0.050	0.084	<0.050	<0.050	<0.050	<0.050
Molybdenum	mg/kg	0.40	10	0.55 - 1.3	1.9	1.3	0.88	1.2	0.88	0.60	0.61	0.60	0.70	0.70	0.59	0.55	0.43
Nickel	mg/kg	1.0	50	8.4 - 36	14	20	9.8	8.6	14	10	7.5	8.1	6.5	7.1	8.1	10	9.9
Selenium	mg/kg	0.50	1	0.55 - <1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver	mg/kg	0.20	20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	mg/kg	0.10	1	<0.20	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tin	mg/kg	1.0	50	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Uranium	mg/kg	0.20	n/g	0.30 - 1.8	0.44	0.47	0.36	0.31	0.45	0.35	0.33	0.34	0.43	0.36	0.26	0.32	0.26
Vanadium	mg/kg	1.0	130	11 - 20	19	17	14	21	18	14	9.1	9.1	12	14	14	16	12
Zinc	mg/kg	10	200	<20 - 91	37	23	14	27	32	26	19	19	44	41	30	32	29

Notes:
^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).
^(b) Alberta Environment's Soil Remediation Guidelines for Barite (AENV 2009).
^(c) Background range based on results from 2022 background data

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Table 5B
Summary of Soil Analytical Results - Metals
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-26				BH22-30				BH22-31				
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(c)	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	DUP I	Sample ID			
					BH22-26-01	BH22-26-02	BH22-26-03	BH22-26-04	BH22-30-01	BH22-30-02	BH22-30-03	BH22-30-04	BH22-31-01	BH22-31-02	BH22-31-03	AZM260	BH22-31-04
					AZM252	AZM253	AZM254	AZM255	AZM270	AZM271	AZM272	AZM273	AZM256	AZM257	AZM258	AZM260	AZM259
					C260028	C260028	C260028	C260028	C260029	C260029	C260029	C260029	C260029	C260029	C260029	C260029	C260029
					09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22
					0.00 - 0.30	0.30 - 0.60	0.60 - 0.90	0.90 - 1.30	0.00 - 0.15	0.15 - 0.30	0.30 - 0.50	0.50 - 1.00	0.00 - 0.15	0.15 - 0.50	0.50 - 1.00	0.50 - 1.00	1.00 - 1.50
Antimony	mg/kg	0.50	20	<1.0	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-
Arsenic	mg/kg	1.0	12	2.6 - 6.9	5.3	4.6	4.8	4.5	-	-	-	-	-	-	-	-	-
Barium	mg/kg	1.0	500	100 - 490	1,600	1,200	1,500	1,400	-	-	-	-	-	-	-	-	-
Barium (True Total)	mg/kg	50	10,000 ^(b)	-	9,590	3,560	3,190	4,990	2,490	1,780	700	620	780	630	580	680	580
Beryllium	mg/kg	0.40	4	<0.80	<0.40	<0.40	<0.40	<0.40	-	-	-	-	-	-	-	-	-
Cadmium	mg/kg	0.050	10	0.079 - 0.82	0.19	0.19	0.19	0.15	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	1.0	64	5.9 - 25	7.8	15	27	20	-	-	-	-	-	-	-	-	-
Hexavalent Chromium	mg/kg	0.080	0.4	<0.33	<0.080	<0.080	<0.080	<0.080	-	-	-	-	-	-	-	-	-
Cobalt	mg/kg	0.50	50	2.3 - 20	2.2	2.8	3.2	3.1	-	-	-	-	-	-	-	-	-
Copper	mg/kg	1.0	63	3.6 - 19	7.9	7.6	7.5	6.5	-	-	-	-	-	-	-	-	-
Lead	mg/kg	0.50	140	3.0 - 5.1	19	14	15	11	-	-	-	-	-	-	-	-	-
Mercury	mg/kg	0.050	6.6	<0.10	0.054	<0.050	0.055	0.058	-	-	-	-	-	-	-	-	-
Molybdenum	mg/kg	0.40	10	0.55 - 1.3	0.41	0.87	1.3	0.98	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	1.0	50	8.4 - 36	5.5	10	16	13	-	-	-	-	-	-	-	-	-
Selenium	mg/kg	0.50	1	0.55 - <1.0	<0.50	<0.50	<0.50	<0.50	-	-	-	-	-	-	-	-	-
Silver	mg/kg	0.20	20	<0.40	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.10	1	<0.20	<0.10	<0.10	<0.10	<0.10	-	-	-	-	-	-	-	-	-
Tin	mg/kg	1.0	50	<2.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-
Uranium	mg/kg	0.20	n/g	0.30 - 1.8	0.40	0.46	0.44	0.43	-	-	-	-	-	-	-	-	-
Vanadium	mg/kg	1.0	130	11 - 20	16	12	12	14	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	10	200	<20 - 91	81	44	42	37	-	-	-	-	-	-	-	-	-

Notes:
^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).
^(b) Alberta Environment's Soil Remediation Guidelines for Barite (AENV 2009).
^(c) Background range based on results from 2022 background data

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Table 5B
Summary of Soil Analytical Results - Metals
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-32				BH22-33				BH22-34		
					BH22-32-01	BH22-32-02	BH22-32-03	DUP F	BH22-33-01	BH22-33-02	BH22-33-03	BH22-33-04	BH22-34-01	BH22-34-02	BH22-34-03
Sample ID					AZM240	AZM241	AZM243	AZM244	AZM237	AZM238	AZM239	AZM236	AZM233	AZM234	AZM235
BVL Sample ID					C260026	C260026	C260026	C260026	C260026	C260026	C260026	C260026	C260026	C260026	C260026
Sample Date					08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22	08-Aug-22
Sample Depth (mbgs)					0.00 - 0.50	0.50 - 1.00	1.00 - 1.50	1.00 - 1.50	0.00 - 0.50	0.50 - 1.00	1.00 - 1.40	1.40 - 1.50	0.00 - 0.80	0.80 - 1.20	1.20 - 1.50
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(c)											
Antimony	mg/kg	0.50	20	<1.0	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/kg	1.0	12	2.6 - 6.9	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/kg	1.0	500	100 - 490	-	-	-	-	-	-	-	-	-	-	-
Barium (True Total)	mg/kg	50	10,000 ^(b)	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/kg	0.40	4	<0.80	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/kg	0.050	10	0.079 - 0.82	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/kg	1.0	64	5.9 - 25	9.6	8.9	6.9	8.9	8.2	9.1	13	7.3	8.9	9.4	6.7
Hexavalent Chromium	mg/kg	0.080	0.4	<0.33	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/kg	0.50	50	2.3 - 20	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	1.0	63	3.6 - 19	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	0.50	140	3.0 - 5.1	-	-	-	-	-	-	-	-	-	-	-
Mercury	mg/kg	0.050	6.6	<0.10	-	-	-	-	-	-	-	-	-	-	-
Molybdenum	mg/kg	0.40	10	0.55 - 1.3	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	1.0	50	8.4 - 36	8.3	9.6	8.8	8.3	7.5	8.0	16	13	8.0	20	11
Selenium	mg/kg	0.50	1	0.55 - <1.0	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/kg	0.20	20	<0.40	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/kg	0.10	1	<0.20	-	-	-	-	-	-	-	-	-	-	-
Tin	mg/kg	1.0	50	<2.0	-	-	-	-	-	-	-	-	-	-	-
Uranium	mg/kg	0.20	n/g	0.30 - 1.8	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/kg	1.0	130	11 - 20	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	10	200	<20 - 91	-	-	-	-	-	-	-	-	-	-	-

Notes:

^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).

^(b) Alberta Environment's Soil Remediation Guidelines for Barite (AENV 2009).

^(c) Background range based on results from 2022 background data

Bold/Underlined - value exceeds criteria

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mg/kg - milligrams per kilogram

n/g - no guideline

RDL - reportable detection limit

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- not available

Table 5B
Summary of Soil Analytical Results - Metals
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-35			BH22-36			BH22-37		BH22-38			
					Sample ID	BH22-35-01	BH22-35-02	BH22-35-03	BH22-36-01	BH22-36-02	BH22-36-03	BH22-37-01	BH22-37-02	BH22-38-01	BH22-38-02	BH22-38-03
BVL Sample ID					AZM230	AZM231	AZM232	AZM261	AZM262	AZM263	AZM274	AZM275	AZM264	AZM265	AZM266	
BVL Job Number					C260026	C260026	C260026	C260029	C260029	C260029	C260029	C260029	C260029	C260029	C260029	C260029
Sample Date					08-Aug-22	08-Aug-22	08-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22	09-Aug-22
Sample Depth (mbgs)					0.00 - 0.50	0.50 - 1.00	1.00 - 1.50	0.00 - 0.20	0.20 - 0.50	0.50 - 0.80	0.00 - 0.20	0.20 - 0.80	0.00 - 0.20	0.20 - 0.50	0.50 - 0.70	
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(c)												
Antimony	mg/kg	0.50	20	<1.0	-	-	-	-	-	-	-	-	-	-	-	
Arsenic	mg/kg	1.0	12	2.6 - 6.9	-	-	-	-	-	-	-	-	-	-	-	
Barium	mg/kg	1.0	500	100 - 490	-	-	-	-	-	-	-	-	-	-	-	
Barium (True Total)	mg/kg	50	10,000 ^(b)	-	-	-	-	-	-	-	-	-	-	-	-	
Beryllium	mg/kg	0.40	4	<0.80	-	-	-	-	-	-	-	-	-	-	-	
Cadmium	mg/kg	0.050	10	0.079 - 0.82	-	-	-	-	-	-	-	-	-	-	-	
Chromium	mg/kg	1.0	64	5.9 - 25	8.4	6.1	6.9	9.9	11	11	7.5	7.4	13	10	9.7	
Hexavalent Chromium	mg/kg	0.080	0.4	<0.33	-	-	-	-	-	-	-	-	-	-	-	
Cobalt	mg/kg	0.50	50	2.3 - 20	-	-	-	-	-	-	-	-	-	-	-	
Copper	mg/kg	1.0	63	3.6 - 19	-	-	-	-	-	-	-	-	-	-	-	
Lead	mg/kg	0.50	140	3.0 - 5.1	-	-	-	-	-	-	-	-	-	-	-	
Mercury	mg/kg	0.050	6.6	<0.10	-	-	-	-	-	-	-	-	-	-	-	
Molybdenum	mg/kg	0.40	10	0.55 - 1.3	-	-	-	-	-	-	-	-	-	-	-	
Nickel	mg/kg	1.0	50	8.4 - 36	7.6	6.5	10	-	-	-	-	-	-	-	-	
Selenium	mg/kg	0.50	1	0.55 - <1.0	-	-	-	-	-	-	-	-	-	-	-	
Silver	mg/kg	0.20	20	<0.40	-	-	-	-	-	-	-	-	-	-	-	
Thallium	mg/kg	0.10	1	<0.20	-	-	-	-	-	-	-	-	-	-	-	
Tin	mg/kg	1.0	50	<2.0	-	-	-	-	-	-	-	-	-	-	-	
Uranium	mg/kg	0.20	n/g	0.30 - 1.8	-	-	-	-	-	-	-	-	-	-	-	
Vanadium	mg/kg	1.0	130	11 - 20	-	-	-	-	-	-	-	-	-	-	-	
Zinc	mg/kg	10	200	<20 - 91	-	-	-	-	-	-	-	-	-	-	-	

Notes:

^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).

^(b) Alberta Environment's Soil Remediation Guidelines for Barite (AENV 2009).

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Table 5B
Summary of Soil Analytical Results - Metals
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					BH22-39			BH22-51		BH22-52		MW22-13	
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(c)	BH22-39-01	BH22-39-02	DUP H	BH22-51-01	BH22-51-02	BH22-52-01	BH22-52-02	MW22-13-01	MW22-13-02
					Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
					BVL Sample ID	BVL Sample ID	BVL Sample ID	BVL Sample ID	BVL Sample ID	BVL Sample ID	BVL Sample ID	BVL Sample ID	BVL Sample ID
					Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date	Sample Date
					Sample Depth (mbgs)	Sample Depth (mbgs)	Sample Depth (mbgs)	Sample Depth (mbgs)	Sample Depth (mbgs)	Sample Depth (mbgs)	Sample Depth (mbgs)	Sample Depth (mbgs)	Sample Depth (mbgs)
Antimony	mg/kg	0.50	20	<1.0	-	-	-	0.61	0.56	0.67	0.58	<1.0	<1.0
Arsenic	mg/kg	1.0	12	2.6 - 6.9	-	-	-	8.9	8.4	11	9.2	2.3	<2.0
Barium	mg/kg	1.0	500	100 - 490	-	-	-	520	400	410	370	190	160
Barium (True Total)	mg/kg	50	10,000 ^(b)	-	-	-	-	1,430	-	-	-	-	-
Beryllium	mg/kg	0.40	4	<0.80	-	-	-	0.54	0.63	0.69	0.62	<0.80	<0.80
Cadmium	mg/kg	0.050	10	0.079 - 0.82	-	-	-	0.52	0.53	0.63	0.59	0.28	0.16
Chromium	mg/kg	1.0	64	5.9 - 25	9.2	6.9	5.0	55	24	21	21	11	12
Hexavalent Chromium	mg/kg	0.080	0.4	<0.33	-	-	-	<0.080	<0.080	<0.080	<0.080	<0.23	<0.47 ^(b)
Cobalt	mg/kg	0.50	50	2.3 - 20	-	-	-	9.9	10	11	10	2.7	1.8
Copper	mg/kg	1.0	63	3.6 - 19	-	-	-	23	22	25	23	5.7	3.7
Lead	mg/kg	0.50	140	3.0 - 5.1	-	-	-	18	13	13	12	2.2	3.0
Mercury	mg/kg	0.050	6.6	<0.10	-	-	-	0.064	0.061	0.057	0.066	<0.10	<0.10
Molybdenum	mg/kg	0.40	10	0.55 - 1.3	-	-	-	2.4	1.8	2.0	1.8	2.7	1.9
Nickel	mg/kg	1.0	50	8.4 - 36	-	-	-	45	32	34	32	8.4	8.5
Selenium	mg/kg	0.50	1	0.55 - <1.0	-	-	-	0.74	0.74	0.88	0.78	1.1	<1.0
Silver	mg/kg	0.20	20	<0.40	-	-	-	<0.20	<0.20	<0.20	<0.20	<0.40	<0.40
Thallium	mg/kg	0.10	1	<0.20	-	-	-	0.19	0.18	0.19	0.17	<0.20	<0.20
Tin	mg/kg	1.0	50	<2.0	-	-	-	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0
Uranium	mg/kg	0.20	n/g	0.30 - 1.8	-	-	-	0.82	0.83	0.85	0.87	0.60	0.97
Vanadium	mg/kg	1.0	130	11 - 20	-	-	-	32	36	36	36	8.9	7.0
Zinc	mg/kg	10	200	<20 - 91	-	-	-	100	110	110	110	<20	<20

Notes:

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Table 5B
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Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Sample Location					MW22-22						MW22-23			
Sample ID					MW22-22-01	MW22-22-02	DUP K	MW22-22-03	MW22-22-04	MW22-22-05	MW22-23-01	DUP N	MW22-23-02	MW22-23-03
BVL Sample ID					AZY128	AZY129	AZY131	AZY130	AZY132	AZY133	AZY121	AZY123	AZY122	AZY124
BVL Job Number					C262020	C262020	C262020	C262020	C262020	C262020	C262019	C262019	C262019	C262019
Sample Date					12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	12-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22	13-Aug-22
Sample Depth (mbgs)					0.00 - 0.75	0.75 - 1.50	1.50 - 2.00	1.50 - 2.00	2.00 - 2.60	2.60 - 3.00	0.00 - 1.50	1.50 - 2.40	1.50 - 2.40	2.40 - 3.00
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(c)										
Antimony	mg/kg	0.50	20	<1.0	<0.50	0.55	0.54	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.56
Arsenic	mg/kg	1.0	12	2.6 - 6.9	7.2	7.6	8.1	8.0	6.0	6.9	6.9	6.5	6.0	7.5
Barium	mg/kg	1.0	500	100 - 490	420	350	370	390	220	330	300	200	180	260
Barium (True Total)	mg/kg	50	10,000 ^(b)	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/kg	0.40	4	<0.80	0.44	0.52	0.56	0.58	<0.40	0.51	0.44	0.42	<0.40	0.55
Cadmium	mg/kg	0.050	10	0.079 - 0.82	0.36	0.46	0.50	0.51	0.29	0.45	0.38	0.30	0.25	0.46
Chromium	mg/kg	1.0	64	5.9 - 25	<u>93</u>	32	17	17	13	21	17	13	12	19
Hexavalent Chromium	mg/kg	0.080	0.4	<0.33	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
Cobalt	mg/kg	0.50	50	2.3 - 20	8.2	8.5	8.9	8.7	6.3	8.3	7.9	6.5	5.9	8.7
Copper	mg/kg	1.0	63	3.6 - 19	18	19	20	20	13	18	16	13	11	20
Lead	mg/kg	0.50	140	3.0 - 5.1	9.9	11	10	9.9	6.5	8.7	8.2	6.7	6.0	9.5
Mercury	mg/kg	0.050	6.6	<0.10	0.061	0.060	0.054	0.053	<0.050	0.052	<0.050	<0.050	<0.050	<0.050
Molybdenum	mg/kg	0.40	10	0.55 - 1.3	3.3	1.9	1.7	1.6	1.2	1.5	1.4	1.2	1.1	1.5
Nickel	mg/kg	1.0	50	8.4 - 36	<u>57</u>	32	27	26	19	25	24	20	18	27
Selenium	mg/kg	0.50	1	0.55 - <1.0	0.50	0.62	0.69	0.61	<0.50	0.57	0.57	<0.50	<0.50	0.75
Silver	mg/kg	0.20	20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	mg/kg	0.10	1	<0.20	0.13	0.16	0.16	0.16	0.11	0.15	0.14	0.11	<0.10	0.17
Tin	mg/kg	1.0	50	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Uranium	mg/kg	0.20	n/g	0.30 - 1.8	0.72	0.77	0.88	0.89	0.60	0.82	0.71	0.65	0.57	0.81
Vanadium	mg/kg	1.0	130	11 - 20	26	28	29	29	21	26	26	23	20	31
Zinc	mg/kg	10	200	<20 - 91	66	82	89	95	62	81	76	60	53	89

Notes:

^(a) Government of Northwest Territories Contaminated Site Remediation Tier 1 Guidelines for coarse-grained soil and residential/parkland land use (GNWT 2003).

^(b) Alberta Environment's Soil Remediation Guidelines for Barite (AENV 2009).

^(c) Background range based on results from 2022 background data

Bold/Underlined - value exceeds criteria

BVL - Bureau Veritas Laboratories

mbgs - metres below ground surface

mg/kg - milligrams per kilogram

n/g - no guideline

RDL - reportable detection limit

< - less than

- - not available

Table 6
Summary of Groundwater Analytical Results - Petroleum Hydrocarbons
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

				Sample Location	P19-06	P19-5
				Sample ID	P19-06	P19-05
				BVL Sample ID	BAK847	BAK848
				BVL Job Number	C264060	C264060
				Sample Date	16-Aug-22	16-Aug-22
Parameters	Units	RDL	Criteria ^(a)			
Benzene	mg/L	0.00040	0.14	0.0077	<0.00040	
Toluene	mg/L	0.00040	0.083	<0.00040	<0.00040	
Ethylbenzene	mg/L	0.00040	11	0.0015	0.00073	
Xylenes	mg/L	0.00089	3.9	0.0055	0.0016	
F1 (C ₆ -C ₁₀) - BTEX	mg/L	0.10	0.81	0.24	<0.10	
F2 (C ₁₀ -C ₁₆)	mg/L	0.10	1.3	<0.10	0.32	
F3 (C ₁₆ -C ₃₄)	mg/L	0.10	n/g	<0.10	0.13	
F4 (C ₃₄ -C ₅₀)	mg/L	0.20	n/g	<0.20	<0.20	

Notes:

^(a) Federal Contaminated Sites Action Plan. Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites (residential/parkland land use and coarse grained soils), updated June 2016 (Version 4). (GoC 2016a)

Bold/Underlined - value exceeds criteria

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2, F3, F4 - petroleum hydrocarbon fractions 1, 2, 3 and 4

mg/L - milligrams per litre

n/g - no guideline

RDL - reportable detection limit

< - less than

Table 7
Summary of Groundwater Analytical Results - Polycyclic Aromatic Hydrocarbons
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

				Sample Location	P19-06	P19-5
				Sample ID	P19-06	P19-05
				BVL Sample ID	BAK847	BAK848
				BVL Job Number	C264060	C264060
				Sample Date	16-Aug-22	16-Aug-22
Parameters	Units	RDL	Criteria ^(a)			
Acenaphthene	mg/L	0.00010	0.0058	<0.00010		0.00010
Acenaphthylene	mg/L	0.00010	0.046	<0.00010		<0.00010
Acridine	mg/L	0.000040	0.00005	<0.000040		<0.000040
Anthracene	mg/L	0.000010	0.000012	<0.000010		<0.000010
Benzo[a]anthracene	mg/L	0.0000085	0.000018	<0.0000085		<0.0000085
B(a)P	mg/L	0.0000075	0.00001	<0.0000075		<0.0000075
Benzo[b,i]fluoranthene	mg/L	0.0000085	0.00048	<0.0000085		<0.0000085
Benzo[c]phenanthrene	mg/L	0.000050	n/g	<0.000050		<0.000050
Benzo[e]pyrene	mg/L	0.000050	n/g	<0.000050		<0.000050
Benzo[g,h,i]perylene	mg/L	0.0000085	0.00017	<0.0000085		<0.0000085
Benzo[k]fluoranthene	mg/L	0.0000085	0.00048	<0.0000085		<0.0000085
Chrysene	mg/L	0.0000085	0.0001	<0.0000085		<0.0000085
Dibenzo[a,h]anthracene	mg/L	0.0000075	0.00026	<0.0000075		<0.0000075
Fluoranthene	mg/L	0.000010	0.00004	<0.000010		<0.000010
Fluorene	mg/L	0.000050	0.003	<0.000050		0.00016
Indeno[1,2,3-cd]pyrene	mg/L	0.0000085	0.00021	<0.0000085		<0.0000085
1-Methylnaphthalene	mg/L	0.00010	n/g	<0.00010		0.0014
2-Methylnaphthalene	mg/L	0.00010	n/g	<0.00010		0.0061
Naphthalene	mg/L	0.00010	0.0011	<0.00010		<u>0.0017</u>
Perylene	mg/L	0.000050	n/g	<0.000050		<0.000050
Phenanthrene	mg/L	0.000050	0.0004	<0.000050		<0.000050
Pyrene	mg/L	0.000020	0.000025	<0.000020		<0.000020
Quinoline	mg/L	0.00020	0.0034	<0.00020		<0.00020
B(a)P equivalency	mg/L	0.000010	n/g	<0.000010		<0.000010

Notes:

^(a) Federal Contaminated Sites Action Plan Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites (residential/parkland land use and coarse grained soils), updated June 2016 (Version 4). (GoC 2016a)

Bold/Underlined - value exceeds criteria

B(a)P - benzo(a)pyrene

BVL - Bureau Veritas Laboratories

mg/L - milligrams per litre

n/g - no guideline

RDL - reportable detection limit

< - less than

Table 8
Summary of Groundwater Analytical Results - Salinity
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

				Sample Location	P19-06	P19-5
				Sample ID	P19-06	P19-05
				BVL Sample ID	BAK847	BAK848
				BVL Job Number	C264060	C264060
				Sample Date	16-Aug-22	16-Aug-22
Parameters	Units	RDL	Criteria ^(a)			
pH	pH units	n/a	7 - 9	6.79	7.13	
Dissolved Calcium	mg/L	0.30	n/g	120	110	
Dissolved Chloride	mg/L	1.0	120	64	56	
Dissolved Magnesium	mg/L	0.20	n/g	71	31	
Dissolved Nitrate as Nitrogen	mg/L	0.010	13	<0.050	<0.010	
Dissolved Nitrite as Nitrogen	mg/L	0.010	0.06	<0.050	<0.010	
Dissolved Potassium	mg/L	0.30	n/g	4.1	46	
Dissolved Sodium	mg/L	0.50	n/g	46	36	
Dissolved Sulphate	mg/L	1.0	100	<1.0	64	

Notes:

^(a) Federal Contaminated Sites Action Plan Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites (residential/parkland land use and coarse grained soils), updated June 2016 (Version 4). (GoC 2016a)

Bold/Underlined - value exceeds criteria

BVL - Bureau Veritas Laboratories

mg/L - milligrams per litre

n/a - not applicable

n/g - no guideline

RDL - reportable detection limit

< - less than

Table 9
Summary of Surface Water Field Monitoring Results
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

Well ID	Date	Temperature (°C) ^(a)	pH ^(a)	Conductivity (µS/cm) ^(a)
SW22-01	14-Aug-22	11.1	8.19	289.9
SW22-02	14-Aug-22	12.3	8.19	106.3

Notes:

^(a) Field parameters measured on August 14, 2022

°C - degrees Celsius

µS/cm - microSiemens per centimetre

- not available

Table 10
Summary of Surface Water Analytical Results - Dissolved Organic Carbon
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

					Sample Location	SW22-01	SW22-02
					Sample ID	SW22-01	SW22-02
					BVL Sample ID	AZY559	BAK849
					BVL Job Number	C262125	C264060
					Sample Date	14-Aug-22	15-Aug-22
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)			
Dissolved Organic Carbon	mg/L	0.50	n/g	n/g	7.2	8.8	

Notes:

^(a) Canadian Council of Ministers of the Environment Water Quality Guidelines for the Protection of Aquatic Life (freshwater) (CCME 1999 and updates)

^(b) Environmental Quality Guidelines for Alberta Surface Waters (AEP 2018)

Bold/Underlined - value exceeds criteria

BVL - Bureau Veritas Laboratories

mg/L - milligrams per litre

n/g - no guideline

RDL - reportable detection limit

< - less than

Table 11
Summary of Surface Water Analytical Results - Petroleum Hydrocarbons Background Range
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

						Sample Location	SW22-02
						Sample ID	SW22-02
						BVL Sample ID	BAK849
						BVL Job Number	C264060
						Sample Date	15-Aug-22
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Background Range ^(d)		
Benzene	mg/L	0.00040	0.37	0.37	<0.00040		<0.00040
Toluene	mg/L	0.00040	0.002	0.002	<0.00040		<0.00040
Ethylbenzene	mg/L	0.00040	0.09	0.09	<0.00040		<0.00040
Xylenes	mg/L	0.00089	n/g	0.03	<0.00089		<0.00089
F1 (C ₆ -C ₁₀) - BTEX	mg/L	0.10	n/g	0.15 ^(c)	<0.10		<0.10
F2 (C ₁₀ -C ₁₆)	mg/L	0.10	n/g	0.11 ^(c)	<0.10		<0.10

Notes:

^(a) Canadian Council of Ministers of the Environment Water Quality Guidelines for the Protection of Aquatic Life (freshwater) (CCME 1999 and updates)

^(b) Environmental Quality Guidelines for Alberta Surface Waters (AEP 2018)

^(c) Interim guideline, short-term (acute) exposure value (AEP 2018)

^(d) Background range based on results from 2022 background data

BTEX - benzene, toluene, ethylbenzene, xylenes

BVL - Bureau Veritas Laboratories

F1, F2 - petroleum hydrocarbon fractions 1 and 2

mg/L - milligrams per litre

n/g - no guideline

RDL - reportable detection limit

< - less than

- not available

Table 12
Summary of Surface Water Analytical Results - Polycyclic Aromatic Hydrocarbons Background Range
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

						Sample Location	SW22-02
						Sample ID	SW22-02
						BVL Sample ID	BAK849
						BVL Job Number	C264060
						Sample Date	15-Aug-22
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Background Range ^(b)		
Acenaphthene	mg/L	0.00010	0.0058	0.0058	<0.00010		<0.00010
Acenaphthylene	mg/L	0.00010	0.046	n/g	<0.00010		<0.00010
Acridine	mg/L	0.000040	n/g	0.0044	<0.000040		<0.000040
Anthracene	mg/L	0.000010	0.000012	0.000012	<0.000010		<0.000010
Benzo[a]anthracene	mg/L	0.0000085	0.000018	0.000018	<0.0000085		<0.0000085
B(a)P	mg/L	0.0000075	0.00001	0.000015	<0.0000075		<0.0000075
Benzo[b,j]fluoranthene	mg/L	0.0000085	0.00048	n/g	<0.0000085		<0.0000085
Benzo[c]phenanthrene	mg/L	0.000050	n/g	n/g	<0.000050		<0.000050
Benzo[e]pyrene	mg/L	0.000050	n/g	n/g	<0.000050		<0.000050
Benzo[g,h,i]perylene	mg/L	0.0000085	0.00017	n/g	<0.0000085		<0.0000085
Benzo[k]fluoranthene	mg/L	0.0000085	0.00048	n/g	<0.0000085		<0.0000085
Chrysene	mg/L	0.0000085	0.0001	n/g	<0.0000085		<0.0000085
Dibenzo[a,h]anthracene	mg/L	0.0000075	0.00026	0.00026	<0.0000075		<0.0000075
Fluoranthene	mg/L	0.000010	0.00004	0.00004	<0.000010		<0.000010
Fluorene	mg/L	0.000050	0.003	0.003	<0.000050		<0.000050
Indeno[1,2,3-cd]pyrene	mg/L	0.0000085	0.00021	n/g	<0.0000085		<0.0000085
1-Methylnaphthalene	mg/L	0.00010	n/g	n/g	<0.00010		<0.00010
2-Methylnaphthalene	mg/L	0.00010	n/g	n/g	<0.00010		<0.00010
Naphthalene	mg/L	0.00010	0.0011	0.001	<0.00010		<0.00010
Perylene	mg/L	0.000050	n/g	n/g	<0.000050		<0.000050
Phenanthrene	mg/L	0.000050	0.0004	0.0004	<0.000050		<0.000050
Pyrene	mg/L	0.000020	0.000025	0.000025	<0.000020		<0.000020
Quinoline	mg/L	0.00020	n/g	0.0034	<0.00020		<0.00020
B(a)P Total Potency Equivalents	mg/L	0.000010	n/g	n/g	<0.000010		<0.000010

Notes:

^(a) Canadian Council of Ministers of the Environment Water Quality Guidelines for the Protection of Aquatic Life (freshwater) (CCME 1999 and updates)

^(b) Environmental Quality Guidelines for Alberta Surface Waters (AEP 2018)

^(c) Background range based on results from 2022 background data

B(a)P - benzo(a)pyrene

BVL - Bureau Veritas Laboratories

mg/L - milligrams per litre

n/g - no guideline

RDL - reportable detection limit

< - less than

Table 13A
Summary of Surface Water Analytical Results - Salinity Background Range
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

						Sample Location	SW22-01	SW22-02
						Sample ID	SW22-01	SW22-02
						BVL Sample ID	AZY559	AZY560
						BVL Job Number	C262125	C262125
						Sample Date	14-Aug-22	14-Aug-22
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Background Range ^(c)			
pH	pH units	n/a	6.5 - 9	6.5 - 9	8.18 - 8.19	8.19	8.18	
Dissolved Calcium	mg/L	0.30	n/g	n/g	29 - 43	43	29	
Dissolved Magnesium	mg/L	0.20	n/g	n/g	7.9 - 11	11	7.9	
Dissolved Potassium	mg/L	0.30	n/g	n/g	1.0 - 1.8	1.8	1.0	
Dissolved Sodium	mg/L	0.50	n/g	n/g	7.5 - 11	7.5	11	

Notes:

^(a) Canadian Council of Ministers of the Environment Water Quality Guidelines for the Protection of Aquatic Life (freshwater) (CCME 1999 and updates)

^(b) Environmental Quality Guidelines for Alberta Surface Waters (AEP 2018)

^(c) Background range based on results from 2022 background data

BVL - Bureau Veritas Laboratories

mg/L - milligrams per litre

n/a - not applicable

n/g - no guideline

RDL - reportable detection limit

< - less than

Table 13B
Summary of Surface Water Analytical Results - Salinity
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

						Sample Location	SW22-03
						Sample ID	SW22-03
						BVL Sample ID	BAK846
						BVL Job Number	C264060
						Sample Date	15-Aug-22
Parameters	Units	RDL	Criteria ^(a)	Criteria ^(b)	Background Range ^(c)		
pH	pH units	n/a	6.5 - 9	6.5 - 9	8.18 - 8.19	-	
Dissolved Calcium	mg/L	0.30	n/g	n/g	29 - 43	39	
Dissolved Magnesium	mg/L	0.20	n/g	n/g	7.9 - 11	19	
Dissolved Potassium	mg/L	0.30	n/g	n/g	1.0 - 1.8	<0.30	
Dissolved Sodium	mg/L	0.50	n/g	n/g	7.5 - 11	26	

Notes:

^(a) Canadian Council of Ministers of the Environment Water Quality Guidelines for the Protection of Aquatic Life (freshwater) (CCME 1999 and updates)

^(b) Environmental Quality Guidelines for Alberta Surface Waters (AEP 2018)

^(c) Background range based on results from 2022 background data

Bold/Underlined - value exceeds criteria

BVL - Bureau Veritas Laboratories

mg/L - milligrams per litre

n/g - no guideline

RDL - reportable detection limit

< - less than

Table 14A
Summary of Surface Water Analytical Results - Total Metals Background Range
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

					Sample Location	SW22-01	SW22-02
					Sample ID	SW22-01	SW22-02
					BVL Sample ID	AZY559	AZY560
					BVL Job Number	C262125	C262125
					Sample Date	14-Aug-22	14-Aug-22
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(e)			
Aluminum	mg/L	0.0030	0.1 ^(b)	0.035 - 0.90	0.90	0.035	
Antimony	mg/L	0.00060	n/g	<0.00060	<0.00060	<0.00060	
Arsenic	mg/L	0.00020	0.005	0.00047 - 0.0014	0.0014	0.00047	
Barium	mg/L	0.010	n/g	0.11 - 0.12	0.12	0.11	
Boron	mg/L	0.020	1.5	<0.020	<0.020	<0.020	
Cadmium	mg/L	0.000020	0.00009	<0.000020 - 0.000046	0.000046	<0.000020	
Chromium	mg/L	0.0010	n/g	<0.0010 - 0.0014	0.0014	<0.0010	
Copper	mg/L	0.00020	0.003 ^(b)	<0.0010 - 0.0056	0.0056	<0.0010	
Iron	mg/L	0.060	0.3	0.16 - 2.4	2.4	0.16	
Lead	mg/L	0.00020	0.005 ^(b)	<0.00020 - 0.0013	0.0013	<0.00020	
Manganese	mg/L	0.0040	0.26 ^(b)	0.024 - 0.046	0.046	0.024	
Nickel	mg/L	0.00050	0.13 ^(b)	0.00087 - 0.0036	0.0036	0.00087	
Selenium	mg/L	0.00020	0.001	<0.00020 - 0.00045	0.00045	<0.00020	
Silver	mg/L	0.00010	0.00025	<0.00010	<0.00010	<0.00010	
Uranium	mg/L	0.00010	0.015	0.00020 - 0.00091	0.00091	0.00020	
Zinc (dissolved)	mg/L	0.0030	0.01 ^(c,d)	<0.0030 - 0.068	0.068	<0.0030	

Notes:

^(a) Canadian Council of Ministers of the Environment Water Quality Guidelines for the Protection of Aquatic Life (freshwater) (CCME 1999 and updates)

^(b) Guideline value for the protection of aquatic life varies with pH and/or hardness. The selected value is based on a pH of 8.19 and a hardness of 145 mg/L CaCO₃ (average of surface water samples).

^(c) The selected value is based on a hardness of 145 mg/L (as CaCO₃) and pH of 8.19 and dissolved organic carbon value of 8 mg/L (average of Site data).

^(d) The CCME guideline value for zinc applies to the dissolved zinc concentration (CCME 2018).

^(e) Background range based on results from 2022 background data

BVL - Bureau Veritas Laboratories

CaCO₃ - calcium carbonate

CCME - Canadian Council of the Ministers of the Environment

mg/L - milligrams per litre

n/g - no guideline

RDL - reportable detection limit

< - less than

Table 14B
Summary of Surface Water Analytical Results - Total Metals
Camp Farewell, Inuvialuit Settlement Region, Northwest Territories
Shell Canada Limited

					Sample Location	SW22-03
					Sample ID	SW22-03
					BVL Sample ID	BAK846
					BVL Job Number	C264060
					Sample Date	15-Aug-22
Parameters	Units	RDL	Criteria ^(a)	Background Range ^(e)		
Aluminum	mg/L	0.0030	0.1 ^(b)	0.035 - 0.90		0.028
Antimony	mg/L	0.00060	n/g	<0.00060		<0.00060
Arsenic	mg/L	0.00020	0.005	0.00047 - 0.0014		0.00064
Barium	mg/L	0.010	n/g	0.11 - 0.12		0.098
Boron	mg/L	0.020	1.5	<0.020		<0.020
Cadmium	mg/L	0.000020	0.00009	<0.000020 - 0.000046		<0.000020
Chromium	mg/L	0.0010	n/g	<0.0010 - 0.0014		0.0013
Copper	mg/L	0.00020	0.003 ^(b)	<0.0010 - 0.0056		0.0023
Iron	mg/L	0.060	0.3	0.16 - 2.4		0.19
Lead	mg/L	0.00020	0.005 ^(b)	<0.00020 - 0.0013		<0.00020
Manganese	mg/L	0.0040	0.26 ^(b)	0.024 - 0.046		0.014
Nickel	mg/L	0.00050	0.13 ^(b)	0.00087 - 0.0036		0.0024
Selenium	mg/L	0.00020	0.001	<0.00020 - 0.00045		0.00039
Silver	mg/L	0.00010	0.00025	<0.00010		<0.00010
Uranium	mg/L	0.00010	0.015	0.00020 - 0.00091		0.00089
Zinc (dissolved)	mg/L	0.0030	0.01 ^(c,d)	<0.0030 - 0.068		<0.0030

Notes:

^(a) Canadian Council of Ministers of the Environment Water Quality Guidelines for the Protection of Aquatic Life (freshwater) (CCME 1999 and updates)

^(b) Guideline value for the protection of aquatic life varies with pH and/or hardness. The selected value is based on a pH of 8.19 and a hardness of 145 mg/L CaCO₃ (average of surface water samples).

^(c) The selected value is based on a hardness of 145 mg/L (as CaCO₃) and pH of 8.19 and dissolved organic carbon value of 8 mg/L (average of Site data).

^(d) The CCME guideline value for zinc applies to the dissolved zinc concentration (CCME 2018).

^(e) Background range based on results from 2022 background data

Bold/Underlined - value exceeds criteria

BVL - Bureau Veritas Laboratories

CaCO₃ - calcium carbonate

CCME - Canadian Council of the Ministers of the Environment

mg/L - milligrams per litre

n/g - no guideline

RDL - reportable detection limit

< - less than

APPENDIX A

Site Photographs



Photo 1 – Unloading the barge at Camp Farewell, facing east (August 3, 2022).



Photo 2 – Bear tracks observed on the Site near the barge staging area (August 3, 2022).

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Photo 3 – Preparing the Site for drilling activities. The emergency shack, wood piles, field staff and sample coolers are visible, facing southeast (August 5, 2022).

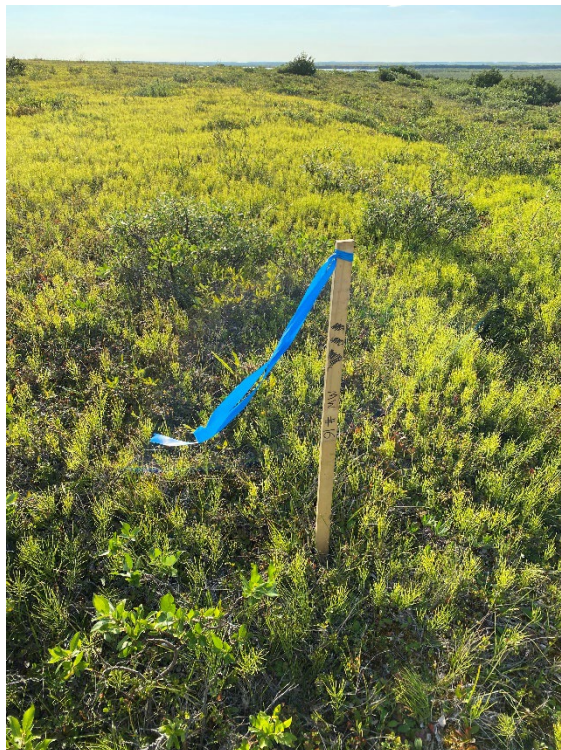


Photo 4 – View of the staked location of MW22-16 prior to drilling, facing southeast (August 5, 2022).

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Photo 5 – Drilling at BH22-42, facing northwest (August 6, 2022).



Photo 6 – View of the peat observed at BH22-42 (August 6, 2022).

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Photo 7 – View of the barge camp, facing south (August 8, 2022).



Photo 8 – Drilling at BH22-18, facing southwest (August 8, 2022).

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Photo 9 – View of the helicopter used for aerial recon of Shell wellsites, facing west (August 9, 2022).



Photo 10 – View of the floating dock for the emergency boat on the east side of the barge camp, facing southeast (August 9, 2022).

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Photo 11 – A wooden post and an electrical riser with plug-in observed on the northeast portion of the Site. The staked BH22-11 location is visible in the background, facing southeast (August 12, 2022).



Photo 12 – Labelling soil samples at BH22-15, facing west (August 12, 2022).

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Photo 13 – Soil sampling at MW22-09 (August 13, 2022).



Photo 14 – Ice observed at BH22-11 (August 13, 2022).

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Photo 15 – Drill rig at BH22-65 on the former airstrip, facing northwest (August 24, 2022).



Photo 16 – Drilling BH22-60. The barge camp is visible on the left and MW22-22 on the right, facing northwest (August 26, 2022).

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Photo 17 – Looking east toward the newly installed MW22-22. A pond is visible in the background, facing east (August 9, 2022).



Photo 18 – Staining on the soil core from BH22-61 at 1.0 metres below ground surface (August 26, 2022).

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APPENDIX B

Regulatory Framework

Table B1: Regulatory Framework Summary – Site Conditions

Assessment Item	Description/Comments	Selection	
LAND USE	The Government of Northwest Territories (GNWT 2003), Canadian Council of Ministers of the Environment (CCME 2006) and Federal Contaminated Sites Action Plan (FCSAP) (Government of Canada 2016) define the four land use categories used for guideline criteria as agricultural, residential/parkland, commercial and industrial. In order to apply the guidelines, the appropriate land use must be determined. The residential/parkland land use designation includes activities that are recreational in nature and requires the natural or human designed capability of the land to sustain that activity. This land use is often readily accessible to the public (GNWT 2003).		
	On-Site Land Use		
	Historic	Parkland (Kendall Island Bird Sanctuary), former staging and storage site	Residential/parkland
	Current	Parkland (Kendall Island Bird Sanctuary), tundra	
	Bylaw zoning	Not applicable	
	Off-Site Land Use within 30 metres (m) from Site Boundary		
	North	North – Tundra, Kendall Island Bird Sanctuary, former airstrip	Residential/parkland
East	East – Tundra, Kendall Island Bird Sanctuary		
South	South – MacKenzie River and tundra		
West	West – MacKenzie River and tundra		
SUBSURFACE CONDITIONS	Stratigraphy		
	Stratigraphy	Sand and gravel fill were observed at surface on the Site footprint, extending from surface to 4.50 metres below ground surface (mbgs), the maximum depth investigated. This layer was underlain by peat or sand. Frozen soil, representative of permafrost, was encountered between about 0.2 to 0.7 mbgs in undisturbed areas to the east, west and north of the Site footprint. Depth to permafrost in previously disturbed areas on the Site footprint ranged from 1.2 to >3.15 mbgs.	Coarse-grained
	Grain size	Based on field observations, predominantly coarse-grained soils are on-site. This is consistent with historical observations and grain-size analysis.	
NEARBY RECEPTORS	Groundwater Use (within 500 m)		
	On-site	None	
	Public/municipal sources	None	
	Private water wells	None	
	Surface Water (within 500 m)		
	Drainage	Surface water drainage is radial, draining toward the MacKenzie River to the south and the ponds to the east-southeast.	
	Wetlands	The Site is on peatlands over permafrost.	
	Permanent surface water bodies	Adjacent to the MacKenzie River to the west and south. Ponds about 50 m east-southeast	
Dugouts	None		
Other Receptors			
None	No other receptors were identified within 500 m from the Site.		

Table B2: Regulatory Framework Summary – Exposure Pathway Applicability

	Assessment Item	Description/Comments	Pathway Exclusion
EXPOSURE PATHWAYS / RECEPTORS	Human Pathways		
	Direct soil contact	Not applicable – no human occupancy	Excluded
	Vapour inhalation (basement)	Not applicable – no human occupancy	Excluded
	Vapour inhalation (slab)	Not applicable – no human occupancy	Excluded
	Protection of domestic use aquifer	Not applicable – groundwater in the area not used by humans	Excluded
	Off-site migration	Not applicable – no human occupancy in the area	Excluded
	Ecological Pathways		
	Direct soil contact	Applicable	Not excluded
	Nutrient/Energy cycling check	Not applicable – no agricultural land use in area	Excluded
	Livestock soil and food ingestion	Not applicable – no livestock in the area	Excluded
	Wildlife soil and food ingestion	Applicable – wildlife in the area	Not excluded
	Freshwater aquatic life (FAL)	Surface water bodies identified within 30 m; therefore, the FAL exposure pathway is considered applicable	Not excluded
	Livestock water	Not applicable – no livestock in the area	Excluded
	Wildlife water	Applicable	Not excluded
	Irrigation water	Not applicable – no irrigation in the area	Excluded
Other			
Management limit (Abandoned Military Site Remediation Protocol [AMSRP])	Applicable below 0.5 m	Not excluded	

Table B3: Regulatory Framework Summary – Selected Guidelines

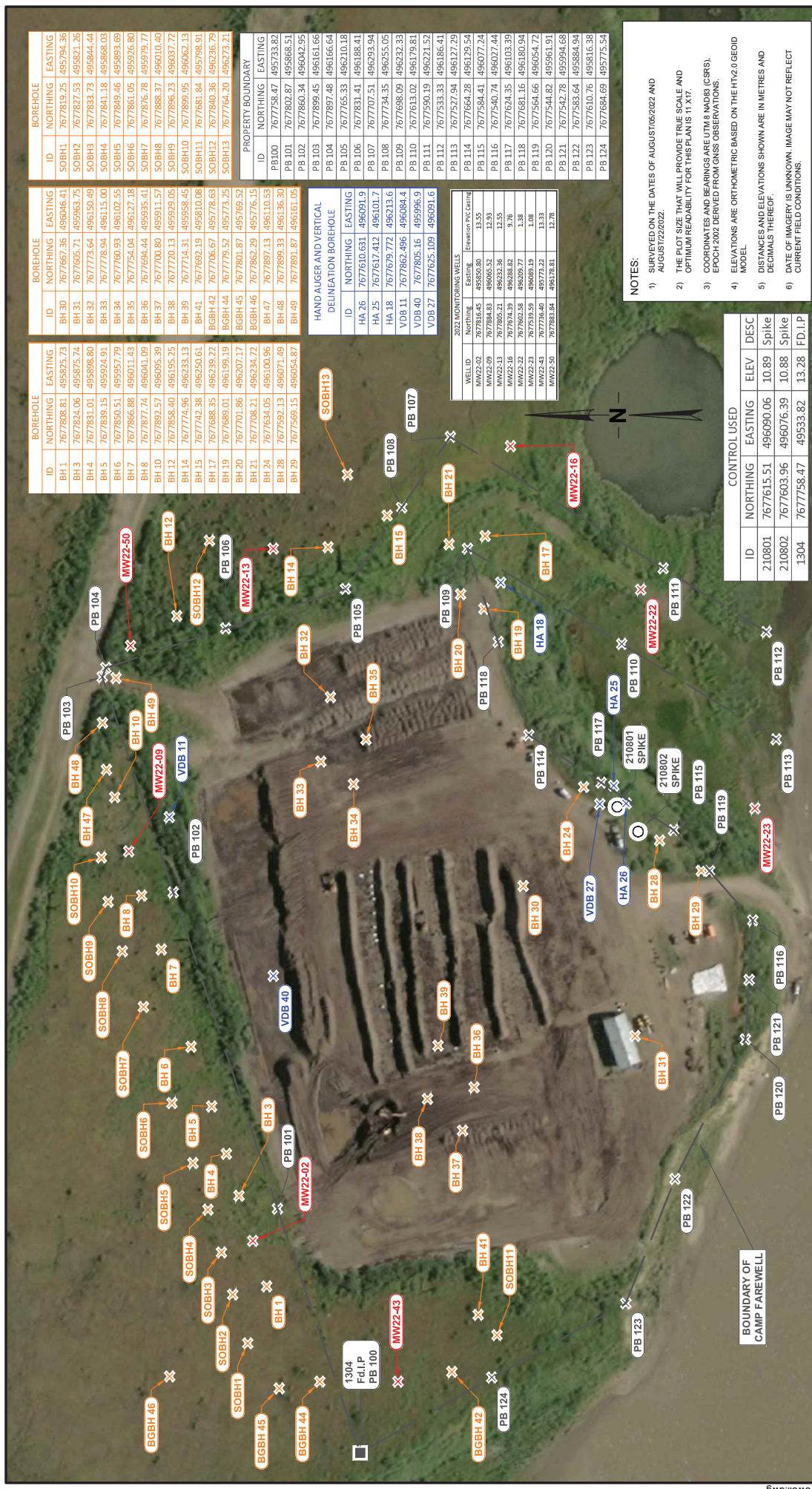
SELECTED GUIDELINES	Soil Guidelines	
	Benzene, toluene, ethylbenzene and xylene (BTEX) / Petroleum hydrocarbon (PHC) Fractions F1 to F4	<ul style="list-style-type: none"> - GNWT Contaminated Site Remediation Tier 1 Guidelines for fine- or coarse-grained soil and residential/parkland land use (<1.5-m depth) (GNWT 2003) - AMSRP, Protection of Human Health (INAC 2008) - AMSRP, Protection of FAL exposure pathway (applied for locations <30 m from freshwater body) (INAC 2008) - AMSRP, Protection of Terrestrial Wildlife, for surface soil up to 0.5-m depth (INAC 2008)
	Polycyclic aromatic hydrocarbon (PAH)	<ul style="list-style-type: none"> - GNWT Contaminated Site Remediation Tier 1 Guidelines for residential/parkland land use (GNWT 2003) - CCME Soil Quality Guidelines for residential/parkland land use (CCME 1999 and updates). <i>CCME guidelines used in the absence of GNWT guidelines.</i>
	Salinity	
	Metals	<ul style="list-style-type: none"> - GNWT Contaminated Site Remediation Tier 1 Guidelines for residential/parkland land use (GNWT 2003) - CCME Soil Quality Guidelines for residential/parkland land use (CCME 1999 and updates). <i>CCME guidelines used in the absence of GNWT guidelines.</i> - Alberta Environment Soil Remediation Guidelines for Barite (True Total Barium) for residential/parkland land use (AENV 2009). <i>Alberta guidelines used in the absence of GNWT and CCME guidelines.</i>
	Subsoil PHC Guidelines	
	BTEX/PHC Fractions F1 to F4	<ul style="list-style-type: none"> - GNWT Contaminated Site Remediation Tier 1 Guidelines for fine- or coarse-grained soil and residential/parkland land use (>1.5-m depth) (GNWT 2003) - AMSRP, Management Limit (>0.5-m depth) (INAC 2008)
	Sediment Guidelines	
	BTEX/PHC Fractions F1 to F4	<ul style="list-style-type: none"> - CCME Sediment Quality Guidelines for the Protection of Aquatic Life – Freshwater (CCME 1999 and updates) - Atlantic Risk Based Corrective Action (RBCA) Ecological Tier I Environmental Quality Standards for sediment (Atlantic PIRI 2021). <i>Atlantic RBCA guidelines used in the absence of CCME guidelines.</i>
	PAH	
	Salinity	
	Metals	
	Groundwater Guidelines	
	BTEX/PHC Fractions F1 to F2	<ul style="list-style-type: none"> - FCSAP, Guidance Document on Federal Interim Groundwater Quality Guidelines for Federal Contaminated Sites for fine- or coarse-grained soil and residential/parkland land use (Government of Canada 2016)
	PAH	
	Salinity	
	Metals	
	Surface Water Guidelines	
BTEX/PHC Fractions F1 to F2	<ul style="list-style-type: none"> - CCME Water Quality Guidelines for the Protection of Aquatic Life – Freshwater (CCME 1999 and updates) - Alberta Environment and Parks Quality Guidelines for surface waters protective of FAL (AEP 2018). <i>Alberta guidelines used in the absence of CCME guidelines.</i> 	
PAH		
Salinity		
Metals		
Applicable Buffers		
Not applicable	Surrounding land use is residential/parkland	

REFERENCES

- AENV (Alberta Environment). 2009. Soil Remediation Guidelines for Barite: Environmental and Human Health. ISBN: 978-0-7785-7690-7 (printed version). February 2009.
- AEP (Alberta Environment and Parks). 2018. Environmental Quality Guidelines for Alberta Surface Waters. Water Policy Branch, Policy Division. March 28, 2018. Edmonton, AB. ISBN: 978-1-4601-3873-1 (Online).
- Atlantic PIRI (Atlantic Partnership in Risk-Based Corrective Action Implementation). 2021. Atlantic RBCA Environmental Quality Standards, Rationale and Guidance Document. July 2021.
- CCME (Canadian Council of Ministers of the Environment). 1999 (and updates). Canadian Environmental Quality Guidelines and Summary Table. [updated to 2022]. <https://ccme.ca/en/summary-table>.
- CCME. 2006. A Protocol for the Derivation of Environmental and Human Health Soil Quality Guidelines. 2006.
- GNWT (Government of the Northwest Territories). 2003. Environmental Guideline for Contaminated Site Remediation. November 2003.
- Government of Canada. 2016. FCSAP Federal Interim Groundwater Quality Guidelines. June 2016.
- INAC (Indian and Northern Affairs Canada). 2008. Abandoned Military Site Remediation Protocol, Volume 1 and 2. December 2008.

APPENDIX C

Survey



BOREHOLE			BOREHOLE			BOREHOLE		
ID	NORTHING	EASTING	ID	NORTHING	EASTING	ID	NORTHING	EASTING
BH 1	7677908.81	495825.74	BH 30	7677667.36	496046.41	SOBH1	7677819.25	495794.36
BH 3	7677824.06	495875.74	BH 31	7677605.71	495963.75	SOBH2	7677827.53	495821.26
BH 4	7677831.01	495898.80	BH 32	7677773.64	496150.49	SOBH3	7677833.73	495844.44
BH 5	7677839.15	495924.91	BH 33	7677778.94	496115.00	SOBH4	7677841.18	495868.03
BH 6	7677850.51	495957.79	BH 34	7677780.93	496102.55	SOBH5	7677849.46	495893.69
BH 7	7677866.88	496011.43	BH 35	7677754.04	496127.18	SOBH6	7677861.05	495926.80
BH 8	7677882.57	496041.09	BH 36	7677694.44	495935.41	SOBH7	7677876.78	495979.17
BH 10	7677893.57	496005.99	BH 37	7677700.80	495911.57	SOBH8	7677893.37	496010.40
BH 12	7677858.40	496055.25	BH 38	7677720.13	495929.05	SOBH9	7677896.23	496037.72
BH 14	7677748.96	496233.13	BH 39	7677714.31	495958.45	SOBH10	7677899.95	496062.13
BH 17	7677688.35	496239.22	BH 41	7677692.32	495810.08	SOBH11	7677881.84	495798.91
BH 19	7677689.01	496199.19	BH 42	7677706.67	495778.63	SOBH12	7677840.36	496236.79
BH 20	7677701.86	496207.17	BH 44	7677779.52	495773.25	SOBH13	7677764.20	496273.21
BH 21	7677708.21	496234.72	BGBH 45	7677801.87	495769.52	PROPERTY BOUNDARY		
BH 24	7677634.05	496100.36	BGBH 46	7677862.29	495776.15	ID <td>NORTHING<td>EASTING</td></td>	NORTHING <td>EASTING</td>	EASTING
BH 28	7677592.13	496071.49	BH 47	7677897.13	496110.33	PB 100	767758.47	495733.82
BH 29	7677569.15	496054.87	BH 48	7677899.33	496136.30	PB 101	7677802.87	495868.51
			BH 49	7677891.87	496161.05	PB 102	7677860.34	496042.95

HAND AUGER AND VERTICAL DELINEATION BOREHOLE		
ID	NORTHING	EASTING
HA 26	7677610.831	496091.9
HA 25	7677617.412	496101.7
HA 18	7677679.772	496213.6
VDB 11	7677862.496	496084.4
VDB 40	7677805.16	495996.9
VDB 27	7677635.109	496091.6

2022 MONITORING WELLS		
WELL ID	WELL TYPE	Screening PVC Casing
MW22-01	210801	13.55
MW22-02	210802	13.55
MW22-08	210801	13.55
MW22-13	210801	12.55
MW22-16	210801	12.55
MW22-22	210801	12.55
MW22-23	210801	12.55
MW22-43	210801	12.55
MW22-50	210801	12.55

CONTROL USED			
ID	NORTHING	EASTING	DESC
210801	7677615.51	496090.06	10.89 Spike
210802	7677603.96	496076.39	10.88 Spike
1304	7677758.47	49533.82	13.28 F.I.P

NOTES:

- 1) SURVEYED ON THE DATES OF AUGUST 05/2022 AND AUGUST 12/2022.
- 2) THE PLOT SIZE THAT WILL PROVIDE TRUE SCALE AND OPTIMUM READABILITY FOR THIS PLAN IS 1:117.
- 3) COORDINATES AND BEARINGS ARE UTM 8 MADR (CGRS), EPOCH 2011 DERIVED FROM GNSS OBSERVATIONS.
- 4) ELEVATIONS ARE ORTHOMETRIC BASED ON THE HTV2.0 GEOD MODEL.
- 5) DISTANCES AND ELEVATIONS SHOWN ARE IN METRES AND DECIMALS THEREOF.
- 6) DATE OF IMAGE IS UNKNOWN. IMAGE MAY NOT REFLECT CURRENT FIELD CONDITIONS.

SCALE 1 : 2000

2022 LAYOUT AT CAMP FAREWELL MACKENZIE RIVER, NWT

WSP-GOLDER

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Scale: 1:2000 Date: 2022-09-12 Drawing: 22-35141-002
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 R No: Description: 0 ISSUED ORIGINAL DRAWING 2022-09-12 CS/MH

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