3. NUNAVUT SETTLEMENT AREA

This section provides an overview of the landfill monitoring program for the DEW Line sites in the Nunavut Settlement Area. This section is to be updated, as required, following the completion of pre-tender site investigations.

The cleanup of sites in the Nunavut Settlement Area is anticipated to be carried out generally according to the schedule outlined in Figure 3.1. Also indicated on this figure is the proposed monitoring event schedule until the completion of Phase II Monitoring. Table 3.1 summarizes the landfills and monitoring requirements for each of the existing and proposed landfills at the DEW Line sites. The classification of each landfill as presented in Table 3.1, with the exception of those landfills at CAM-M and FOX-4, is preliminary and will be reviewed following the pre-tender site investigation at that site. The classification of each landfill will be reviewed with the Environmental Working Group, in accordance with the Terms of the Cooperation Agreement.

As indicated in Section 2.0, an important component of the monitoring program is the baseline/background assessment to be completed for each landfill. Preliminary information on the environmental status of the landfills was obtained during the initial environmental investigations. As part of the site investigations to be carried out in the two year period prior to cleanup, a more detailed sampling and testing program will be carried out to collect sufficient information to establish baseline conditions for comparison to subsequent monitoring events. Recommended sampling locations for specific landfills are outlined on the accompanying figures.

Required analyses for the baseline monitoring program are to be consistent with the monitoring criteria, as outlined in Section 2.0.

In the remaining annexes to this report, a brief summary of the environmental status and corresponding remediation design of each of the DEW Line landfills in the NSA is provided. The information provided is consistent with the outline of the Landfill Risk Assessment Matrix. Baseline and long term monitoring program is detailed.

√ √					N	DVE W Cope Dwer
_	<	<			Tier II Soil Disposal Facility	
√ Location to be determined.	<	~		New Landfill - Non-Hazardous Wastes	Lower Site Landfill	
✓ Location to be confirmed.	<	~		New Landfill - Non-Hazrdous Wastes	Station Area Landfill	
No monitoring required following excavation				Class A - Excavation	Existing Airstrip Landfill	
<	<	<		Class B - Leachate Containment	Main Landfill	
110, 2013, 2018, 2028	2004, 2005, 2006, 2007, 2008, 2010, 2013, 2018, 2028	2004,	1998 2003			FOX-5 Broughton Island (2001-2003)
V V	<	<			Tier II Soil Disposal Facility	, .
	<	<		Regrading	Tanner Bay Landfill	
	<	<		Regrading	Airstrip Landfill	
<	<	<		New Landfill - Non-Hazardous Waste	Lower Site Landfill	
No monitoring required as bedrock exposed during debris and contaminated soil removal operations.				Debris Removal, Contaminated Soil Excavation	Upper Site Landfill - West	
	<	<		Regrading	Barrel Dump	
Groundwater Thermal	Soil	Visual				
onitoring Program Comments	Post Construction Landfill Monitoring Program	Pos	Pre-tender Investigation/ Baseline Monitoring (year)	Landfill Classification	Landfill Designation	Site (Year of Landfill Closure)
AREA -SUMMARY OF DEW LINE CLEANUP LANDFILL MONITORING PROGRAM	CLEANUP LANDFIL	RY OF DEW LINE		TABLE 3.1 NUNAVUT SETTLEMENT		

		TABLE 3.1 NUNAVUT SETTLEMENT		RY OF DEW LINE	CLEANUP LANI	AREA - SUMMARY OF DEW LINE CLEANUP LANDFILL MONITORING PROGRAM	G PROGRAM	
Site (Year of Landfill Closure)	Landfill Designation	Landfill Classification	Pre-tender Investigation/ Baseline Monitoring (year)	P	ost Construction Land	Post Construction Landfill Monitoring Program		Comments
	Ď.			Visual	Soil	Groundwater	Thermal	
FOX-M Hall Beach (2002-2004)			1997&2000/	200	5, 2006, 2007, 2008, 20	2005, 2006, 2007, 2008, 2009, 2011, 2014, 2019, 2029		
	South Beach Landfill	Class B/C		<	<			Status of Landfill to be confirmed.
	Barrel Dump Areas - North and South	Class C - Regrading		<	<			Status of Landfill to be confirmed
	West Beach Landfill	New Landfill for Non-Hazardous Wastes		<	<	<		Location of Landfill to be confirmed.
	Tier II Soil Disposal Facility			<		<	<	
FOX-2 Longstaff Bluff (2004-2006)			2002/2006	200	7, 2008, 2009, 2010, 20	2007, 2008, 2009, 2010, 2011, 2013, 2016, 2021, 2031	_	
	Upper Site Landfill	Class B - Leachate Containment		<	<	<	<	
	West Landfill	Class C - Regrading		~	<			
	Beach Landfill	Class C - Regrading		<	<			
	Airstrip Landfill	Class C - Regrading		٧.	<			
	Station Area Landfill	New Landfill - Non-Hazardous Wastes		√	✓	V		Location to be confirmed.
	Hangar Landfill	New Landfill - Non-Hazardous Wastes		< \	√	\ \		Location to be confirmed.
	Tier II Soil Disposal Facility			√	V	V	√	Requirement for and location of to be confirmed.
FOX-3 Dewar Lakes (2005-2007)			2002/2007	200	08, 2009, 2010, 2011, 20	2008, 2009, 2010, 2011, 2012, 2014, 2017, 2022, 2032	2	
	Main Landfill and Extension	Class B - Leachate Containment and Extension of Non-Hazardous Wastes		V	V	V	~	
	Station Landfills - East and West	Class C - Regrading		√	V			
	Airstrip Landfills	Class C - Regrading		V	√			Status of Landifils to be confirmed
	West Landfill	Class C - Regrading		√	V			
	Tier II Soil Disposal Facility			√	<i>^</i>	√	V	Requirement for and location of to be confirmed.
FOX-4 Cape Hooper (1996-1999)			1999	199	99, 2000, 2001, 2002, 20	1999, 2000, 2001, 2002, 2003, 2005, 2008, 2013, 2023	3	Cleanup of this site started prior to NTI/DND agreement. As a result additional monitoring wells placed at this site, including at those landfills where only regrading required.
	Upper Site Dump	Excavation						No monitoring required.
	Station Area Landfill	New Landfill - Non-Hazardous Waste		<	<	<		
	Helipad Landfills	Regrading		V	/	V		

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Requirement for and location of to be confirmed.	<	<	_					
						to be confirmed	USAF Closure Landfills	
Status of Landfill to be confirmed.			_	<		Class C - Regrading	Lower Site Landfill - North	
Status of Landfill to be confirmed.			<	\ \		Class C - Regrading	Lower Site Landfill - South	
		<	<	\		New Landfill for Non-Hazardous Wastes	Station Area Landfill	
	<	<	<	<		Class B - Leachate Containment	Upper Site Landfill	
		2005, 2006, 2007, 2008, 2009, 2011, 2014, 2019, 2029	05, 2006, 2007, 2008, 20	20	2001/2004			CAM-5 Mackar Inlet (2003-2005)
Environmental status to be confirmed in 1999. It is anticipated that no additional fill material is required.						Class C	USAF Closure Landfills	
Evaluation of excavation to be carried out. If excavated no additional monitoring is required.						Class B	Barrow Lake Landfill	
Confirmation of leachate to be confirmed in 1999. Monitoring requirements to be confirmed.						Class B - Leachate Containment of portions of the landfill	Lower Site Landfill	
			<	<		Class C - Regrading	Airstrip Landfill	
			<	<		Class C - Regrading	Abandoned Camp Landfill	
Requirement for and location of to be confirmed.	<	<	<	<			Tier II Soil Disposal Facility	
Location to be confirmed.		<	<	<		New Non-Hazardous Waste Landfill	Station Area Landfill	
If complete excavation is carried out, no monitoring is required. Consideration is being given to partial excavation and leachate containment.						Class A - Excavation	Upper Site Landfill	
		2004, 2005, 2006, 2007, 2008, 2010, 2013, 2018, 2028	04, 2005, 2006, 2007, 200	200	1997-1999/2003			CAM-4 Pelly Bay (2001-2003)
Requirement for and location of to be confirmed.	<	<	<	<			Tier II Soil Disposal Facility	
Status of Landfills to be confirmed.			<	<		Class C - Regrading	USAF /NWS Landfill	
		<	<	<		Class C- Regrading & Extension for non- hazrdous waste materials	Northeast Landfill & Extensions	
			<	<		Class C - Regrading	Station Area Landfill	
			<	<		Class C - Regrading	North Landfill	
		2004, 2005, 2006, 2007, 2008, 2010, 2013, 2018, 2028	4, 2005, 2006, 2007, 200	200	2000/2003			CAM-3 Shepherd Bay (2002/2003)
	Thermal	Groundwater	Soil	Visual				
Comments	e de la constante de la consta	ll Monitoring Program	Post Construction Landfill Monitoring Program	P	Pre-tender Investigation/ Baseline Monitoring (year)	Landfill Classification	Landfill Designation	Site (Year of Landfill Closure)
	3 PROGRAM	FILL MONITORING	CLEANUP LAND	Y OF DEW LINE	SETTLEMENT AREA - SUMMARY OF DEW LINE CLEANUP LANDFILL MONITORING PROGRAM	TABLE 3.1 NUNAVUT SETTLEME	H	

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		TABLE 3.1 NUNAVUT SETTLEMENT		RY OF DEW LIN	E CLEANUP LAN	AREA - SUMMARY OF DEW LINE CLEANUP LANDFILL MONITORING PROGRAM	NG PROGRAM	
Site (Year of Landfill Closure)	Landfill Designation	Landfill Classification	Pre-tender Investigation/		Post Construction Land	Post Construction Landfill Monitoring Program		Comments
		400	baseline Monitoring (year)					
				Visual	Soil	Groundwater	Thermal	
CAM-M Cambridge Bay (1998-1999)			1996/1999	20	900, 2001, 2002, 2003, 20	2000, 2001, 2002, 2003, 2004, 2006, 2009, 2014, 2024	24	
	Main Landfills North and South	Class B - Leachate Containment (extension for non-hazardous waste materials)		V	√	V	V	
	South Shore Landfill	Class C - Regrading		√	V			
	West Landfill	Class C - Regrading		γ	/			
	Airstrip	Class A/C-excavation of select areas of buried debris, regrading of other areas.		V	√			
	Tier II Soil Disposal Facility			V	V	V	<	
CAM-1 Jenny Lind Island (2004-2005)			2002/2005	20	06, 2007, 2008, 2009, 20	2006, 2007, 2008, 2009, 2010, 2012, 2015, 2020, 2030	30	
	Main Landfill & Extension	Class C - Regrading & Extension for Non-Hazardous Waste		~	√	V		
	Tier II Soil Disposal Facility			V	~	V	<	Requirement for and location of to be confirmed.
CAM-2 Gladman Point ((2003-2004)			2001/2004	2()05, 2006, 2007, 2008, 20	2005, 2006, 2007, 2008, 2009, 2011, 2014, 2019, 2029	29	
	West Landfill - North	Class C - Regrading		√	<			
	West Landfill - South	Class C - Regrading		V	√			
	Station Area Landfill	New Non-hazardous waste landfill		√	V	V		Location to be confirmed
	Airstrip Landfill	Class C - Regrading		V	V			Status of Landfill to be confirmed.
	Tier II Soil Disposal Facility			V	V	V	√	Requirement for and location of to be confirmed.
	USAF Closure Landfills							Requirements to be confirmed

Station Area Landfill - West North Landfill Northwest Landfill South Landfill Area Airstrip Landfill Beach Landfill Tier II Soil Disposal Facility	Station Area La North Landfill Northwest Land South Landfill / Airstrip Landfill Beach Landfill	Station Area La North Landfill Northwest Land South Landfill /	Station Area La North Landfill Northwest Land South Landfill	Station Area La North Landfill Northwest Land	Station Area La North Landfill	Station Area La		Station Area Landfill -	PIN-4 Byron Bay (2005/2006)	Tier II Soil Disposal Facility	South Area Landfills	North Landfill	Main NWS Landfill	Main Landfill & Extension	PIN-3 Lady Franklin Point (2006/2007)	USAF Closure Landfills	Tier II Soil Disposal Facility	Beach Landfill	South Landfill -	Station Area Landfill	PIN-2 Cape Young (2007/2008)		Site Landfill Designation (Year of Landfill Closure)	
osal Facility		Class C		Area Class C -		Class C -		East		osal Facility	dfills Class C -	Class C -				Landfills	posal Facility	Class C -	East and West			A.	esignation	
		C - Regrading	Class C- Regrading	C - Regrading	Class B - Leachate Containment Class C - Regrading	C - Regrading	Class C - Regrading	New Non-Hazardous Waste Landfill			C - Regrading	C - Regrading	Class C - Regrading	Class C - Regrading and Extension to existing landfill				C - Regrading	Class C - Regrading	New Non-Hazardous Waste Landfill			Landfill Classification	TABLE 3.1 NUNAVUT SETTLEMENT
									2003/2006						2004/2007						2005/2008		Pre-tender Investigation/ Baseline Monitoring (year)	
	<	√	√	√	< <	√	√	V	2	√	V	√	√	√	2		√	√	<	<	2	Visual		RY OF DEW LIP
	<	<	<	<	< <	V	~	<	2007, 2008, 2009, 2010, 2011, 2013, 2016, 2021, 2031	√	~	<	<	<	2008, 2009, 2010, 2011, 2012, 2014, 2017, 2022, 2032		<	<	<	<	2009, 2010, 2011, 2012, 2013, 2015, 2018, 2023, 2033	Soil	Post Construction Landfill Monitoring Program	AREA - SUMMARY OF DEW LINE CLEANUP LANDFILL MONITORING PROGRAM
	<				~			<	11, 2013, 2016, 2021, 20	<				<	12, 2014, 2017, 2022, 20		<			<	13, 2015, 2018, 2023, 20	Groundwater	ill Monitoring Program	FILL MONITORI
	<				<				31	<					32		<				33	Thermal		NG PROGRAM
	Requirement for and location of to be confirmed.				One lobe of buried material to be provided with leachate containment.			Location to be confirmed.		Requirement for and location of to be confirmed.				Location of extension to be confirmed.		to be confirmed.	Requirement for and location of to be confirmed.			Location to be confirmed			Comments	

MONITORING I BASELINE/BACKGROUND PHASE 1	Construction Monitoring PIN-3 LADY FRANKLI Construction Monitoring PIN-2 CAPE YOUNG Construction Monitoring PIN-2 CAPE YOUNG Monitoring	Monitoring FOX-2 LONGSTAFF BLUFF Construction Monitoring FOX-3 DEWAR LAKES Construction Monitoring CAM-1 JENNY LIND ISLAND CONSTRUCTION Monitoring Monitoring PIN-4 RYRON BAY	Construction Monitoring CAM-3 SHEPHERD BAY Construction Monitoring DYE-M CAPE DYER Construction Monitoring CAM-2 GLADMAN POINT Construction	FOX-5 BROUGHTON ISL Construction Monitoring CAM-4 PELLY BAY Construction Monitoring FOX-M HALL BEACH Construction Monitoring CAM-5 MACKAR INLET	FOX-4 CAPE HOOPER Construction Monitoring CAM-M CAMBRIDGE B Construction Monitoring
MONITORING LEGEND BACKGROUND	Construction Monitoring PIN-3 LADY FRANKLIN POINT Construction Monitoring PIN-2 CAPE YOUNG Construction Monitoring	Monitoring FOX-2 LONGSTAFF BLUFF Construction Monitoring FOX-3 DEWAR LAKES Construction Monitoring Monitoring CAM-1 JENNY LIND ISLAND Construction Construction Monitoring CAM-1 JENNY LIND ISLAND CONSTRUCTION Monitoring PINAL BYRON BAY	HERD BAY on DYER ON MAN POINT ON	FOX-5 BROUGHTON ISLAND Construction Monitoring CAM-4 PELLY BAY Construction Monitoring FOX-M HALL BEACH Construction Construction Monitoring Monitoring CAM-5 MACKAR INLET CAM-5 MACKAR INLET	FOX-4 CAPE HOOPER Construction Monitoring CAM-M CAMBRIDGE BAY Construction Monitoring
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