Preliminary Phase II Monitoring Summary Report

Site	Landfill Name	Landfill Type	Completed Monitoring Events	Future Monitoring Events	Next Monitoring Year #	Most Recent Overall Landfill Performance Rating[1]	Any Concerns Identified Related to Soil Sampling Results?	Any Concerns Identified Related to Groundwater Sampling Results?	Does Ground Temperature Data from Thermistors Indicate Frozen Conditions?[2]	Notes/ Actions Taken/ Recommendations[3]	# Soil Sampling Locations	# Monitoring Wells	# Wells In Good Condition[4]	#Thermistors	# Thermistors in Good Condition
PIN-2 Cape Young															
	Airstrip	Regrade	**Phase I** 2012 2013 2014 2015 2016 **Phase II** 2018	**Phase II** 2024 2026 2036	13	Acceptable	No	-	-	Acceptable rating and soil results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program.	6	-	-	-	-
	USAF	Regrade				Acceptable	No	-	-	Acceptable rating and soil results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program.	4	-	-	-	-
	Station West	Regrade				Acceptable	No	-	-	Acceptable rating and soil results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program.	4	-	-	-	-
	Tier II	Tier II Soil Disposal				Acceptable	No	No	TBD	Acceptable rating and soil/water results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program. Thermal performance will be evaluated in more detail in upcoming study.	4	4	4	4	3
	Airstrip South	Regrade				Acceptable	No	-	-	Acceptable rating and soil results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program.	4	-	-	-	-
	Pallet Line West	Regrade				Acceptable	No	-	-	Acceptable rating and soil results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program.	4	-	-	-	-
	NHWL	Non-Hazardous Waste				Acceptable	No	No	-	Acceptable rating and soil/water results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program.	4	4	3	-	-
	South East	Regrade				Acceptable	No	-	-	Acceptable rating and soil results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program.	4	-	-	-	-
	South Borrow	Regrade				Acceptable	No	-	-	Acceptable rating and soil results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program.	4	-	-	-	-

Reference: "Long-Term Landfill Monitoring at the PIN-2 Former DEW Line Site, Cape Young, Nunavut" (Arcadis, 2019)
Report Signed and Stamped by Geotechnical Engineer Charles F. Gravelle, M.Sc.E., P.Eng. (ON, NU/NT)

Notes:

1. Acceptable landfill performance is defined as: "Noted features are of little consequence. The landfill is performing as designed. Minor deviations in environmental or physical performance may be observed, such as isolated areas of erosion, settlement."
2. Evaluation based on review of most recent ground temperature data.
3. As Phase II monitoring will not be completed until the 2030s, an assessment of how the landfills are expected to perform beyond Phase II has not yet been completed.
4. Includes all wells that are consistently sampled, including those with minor maintenance issues that do not interfere with the ability to collect samples.

Landfill Types:

Regrade Existing landfills that were regraded and capped with gravel.

Non-Hazardous Waste Landfills constructed during DEW Line Clean-Up to contain non-hazardous waste.

Tier II Soil Disposal Facility Landfills constructed during DEW Line Clean-Up to contain Tier II contaminated soils (as defined by the DEW Line Clean-Up Criteria);
Constructed with an impermeable liner underneath and on top, as well as saturated granular fill berms keyed into the permafrost; and,
Sufficient cover of granular material was placed to promote permafrost aggradation into the saturated berms and throughout the landfill contents.