

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
DYE-M Cape Dyer			Phase I 2014 2015 2016 2017 2018 Phase II 2023 2025 2028 2038	Phase II 2014 2015 2016 2017 2018 Phase II 2023 2025 2028 2038	10										
	Lower Site NWS	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	-	-	-	-
	Lower Site Tier II	Tier II Soil Disposal				Marginal	No	No	Yes	Marginal rating and soil/groundwater results indicate landfill is performing as designed. Recommendation to conduct further assessment of north and west slopes. Thermal performance has been assessed as satisfactory.	4	4	2	4	4
	Lower Site Crossroads	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.	3	-	-	-	-
	Lower Site Foundation	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.	3	-	-	-	-
	Lower Site Powerhouse	Leachate Contained				Acceptable	No	No	Yes	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	0	3	3
	Lower Site NHWL	Non-Hazardous Waste				Marginal	No	-	-	Marginal rating and soil/groundwater results indicate landfill is performing as designed. Marginal rating will be closely monitored and evaluated. Thermal performance has been assessed as satisfactory.	5	5	2	-	-

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	Upper Site Tier II	Tier II Soil Disposal	Phase I 2014 2015 2016 2017 2018 Phase II 2023	Phase II 2025 2028 2038	10	Acceptable	No	No	Yes	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 has been assessed as satisfactory.	5	5	1	4	4
	Upper Site West - West Lobe	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.	9	-	-	-	-
	Upper Site West - Centre & East Lobes	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.	13	-	-	-	-
	Upper Site Pallet Line	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.	10	-	-	-	-
	Upper Site 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	1	-	-
	Upper Site NWS	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.	5	-	-	-	-
	Upper Site South - West	Regrade				Acceptable	No	No	-	Acceptable rating and soil results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program.	8	-	-	-	-
	Helipad Buried Debris Area	Regrade				Acceptable	No	No	-	Acceptable rating and soil results indicate landfill is performing as designed. No current recommendations for actions beyond scope of regular monitoring program.	7	-	-	-	-
Reference: "Monitoring Report Draft - DYE-M Cape Dyer" (BLM-KEL-60 Corp., 2024) Final Report Will Be Signed and Stamped by Geotechnical Engineer Brent Hay, M.Sc., P.Eng. (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.

Leachate Contained Existing landfills that were capped with gravel and provided with an impermeable membrane keyed into the permafrost to contain leachate;

Membranes may cover the entire landfill surface or only the sides; and,
Sufficient cover of granular material was placed to promote permafrost aggradation throughout the landfill contents.