KM18
Layout of Preliminary Reclamation Trial

Baffinland
Iron Mines Corporation

514000 514050 514100 514150 514200 514250 514300 514350 514400 514450 514500 514550

7965400 7965350 7965300 7965250 7965200 7965150 7965100 7965050 7965000 7964950

KM18-C100
KM18-C50
KM18-D100
KM18-C0
KM18-D50
KM18-D0

Legend

- Tote Road
- Reclamation Treatment Boundary
- Tote Road (25m Buffer)
- Survey Marker

0 25 50 75 100
Meters

N

Map Scale = 1:2,000 (printed on 11 x 17)
Map Projection: NAD 1983 UTM Zone 17N

Data Sources

- Main map. Baffinland Iron Mines Corporation Imagery. 2020
- Inset map. National Geographic World Map. National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Disclaimer

EDI Environmental Dynamics Inc. has made every effort to ensure this map is free of errors. Data has been derived from a variety of digital sources and, as such, EDI does not warrant the accuracy, completeness, or reliability of this map or its data.

Drawn:	Checked:		
Y. Navarro	P. Audet	**Map 9**	Date: 2021-10-12

EDI
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Path: L:\PROJECTS\Baffinland_Spatial\2021_Spatial\Data\Baffinland2021.aprx

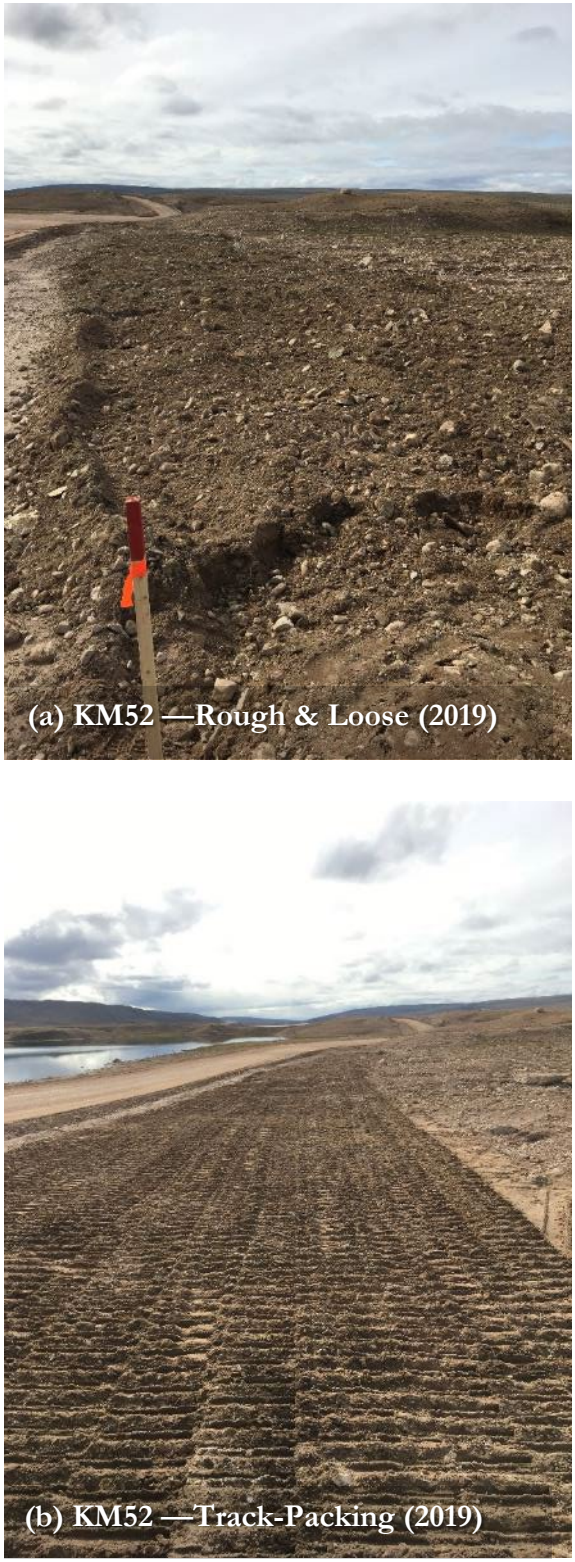


Photo 10. KM52 — Rough-and-loose (a) and track-packing (b).

Photo 11. KM16 — Rough-and-loose (a) and Track-Packing (b).

Photo 12. KM18 — Initial site preparation (a) and surface track-packing (b).

3.2 FOLLOW-UP MONITORING

2020–2021 SURVEY — KM52 & KM16

The KM52 and KM16 trial sites were revisited as part of a qualitative walk-over assessment in 2020 and a quantitative assessment in 2021 using the same methods described in Section 2.2. No measurable changes in revegetation at either site (both at transect and vegetation quadrat scales) were noted, but a few small volunteer forbs and graminoids were found to have colonized the area (Photo 13a and Photo 14a; refer to highlighted plants). A key observation was that the surface preparations (i.e., rough-and-loose and track-packing) had been 'washed out' due to weathering and were no longer apparent at both trial sites (Photo 13b and Photo 14b). The surface preparations are intended to create surface heterogeneity and micro-site conditions favourable to seed establishment and germination while reducing erosion potential and enhancing surface stability. Both sites were stable and deemed to have a low erosion potential. However, due to the nature of the growth substrate and surficial geology (i.e., predominantly sand and sandy loam), surface texturing and micro-topographical variations had been 'washed out' progressively in 2020 and 2021 as a result of snowfall/snowmelt, rainfall, wind and weathering.

Photo 13. KM16 — 2021 Status of Cover Vegetation (a) and Surface Preparations (b).

(a) KM52 — Status of Cover Vegetation (2021)

(b) KM52 — Status of Surface Preparations (2021)

Photo 14. KM52 — 2021 Status of Cover Vegetation (a) and Surface Preparations (b).

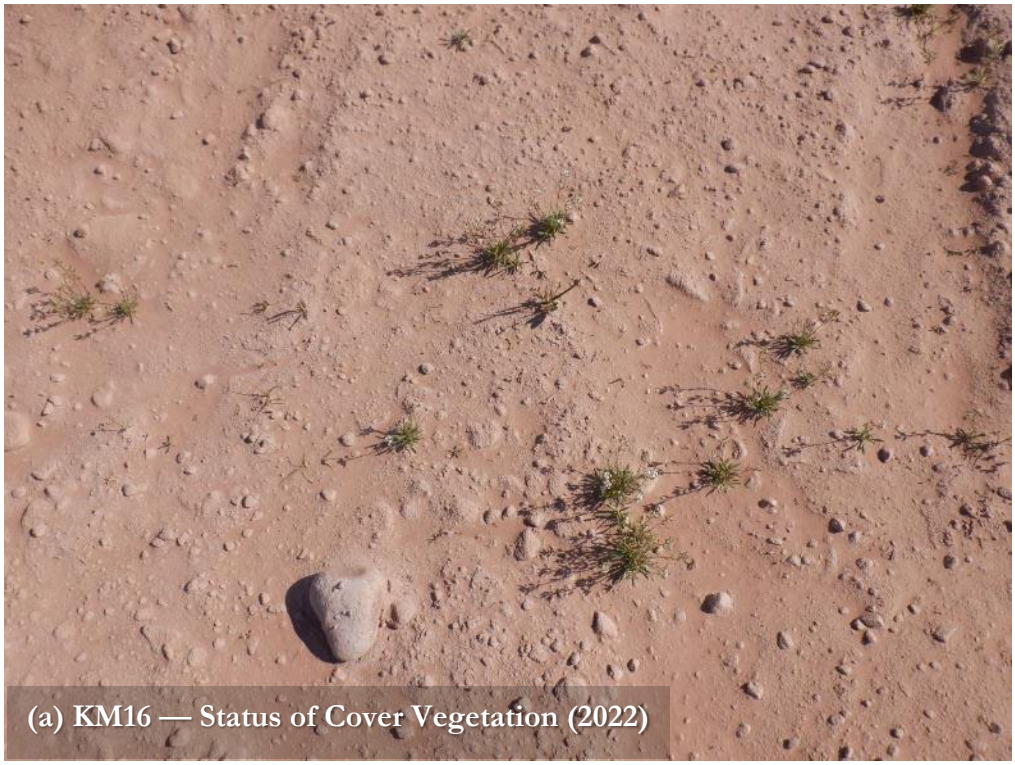
2022 SURVEY — KM52, KM18 & KM16

The KM52, KM18 and KM16 trial sites were revisited as part of a qualitative walk-over assessment in July 2022, comprising visual evaluation and documentation. As observed previously, surface preparations (i.e., rough-and-loose and track-packing) had been 'washed out' due to weathering and were no longer apparent at any trial sites. All sites were stable and deemed to have low erosion potential; but wind erosion and 'wind-swept' surface soil were apparent. Given that the Project setting is prone to prolonged periods of high wind, these surface preparations appear to provide short-term mitigation.

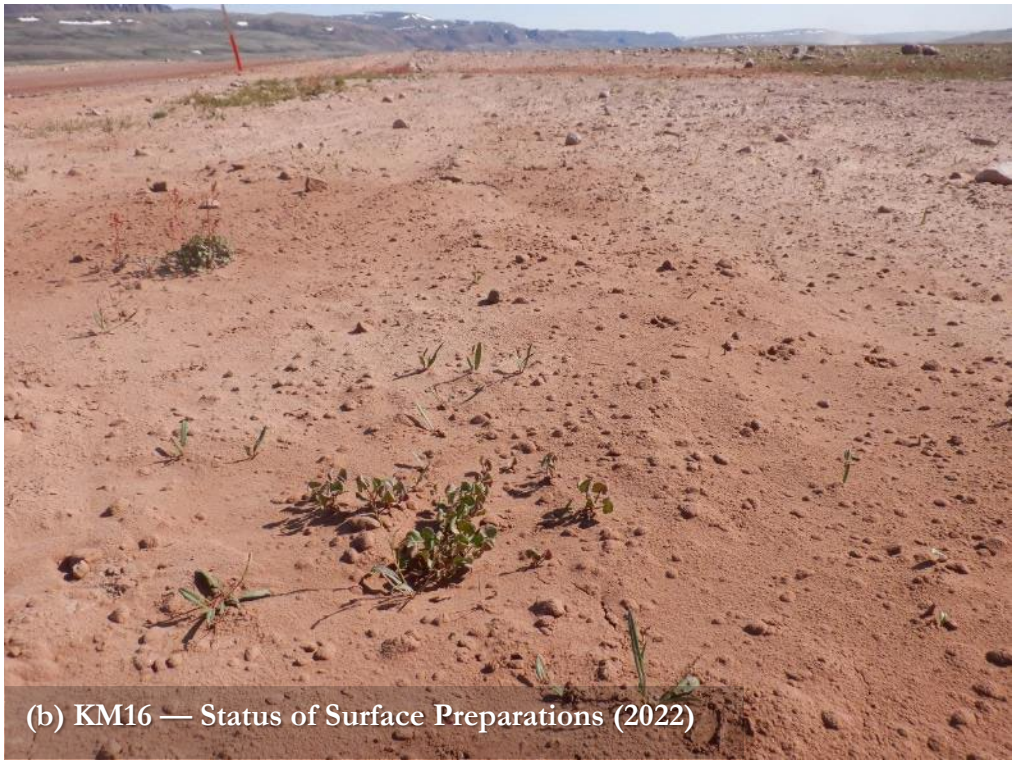
An increasing number of small volunteer forbs and graminoids were found to have colonized all sites (KM16, Photo 15a-b; KM18, PPhoto 16a-b; KM52, Photo 17a-b). The highest levels of revegetation (i.e., based on visual assessment) were observed at KM18 and KM16 (both characterized as subxeric), whereas KM52 (characterized as xeric) had the lowest levels of revegetation. Notably, the status of volunteer colonization and revegetation by Arctic willow (*Salix arctophila*) — a common low-lying, creeping shrub known to hold multiple ethnobiological usages, including fire fuel (*personal communications*) — at KM18 was at a more advanced level than expected, given only 1-year post-disturbance. In this case, adjacent land vegetation cover remained intact and viable. Following 2021 surface preparations, this species is suspected of having quickly adapted to site conditions leading to its predominance within the disturbed landscape. A similar observation regarding the proximity and viability of adjacent vegetation cover was made with respect to the vegetation cover conditions at KM16 during the 2019 assessment (refer to Section 2.5).

2023 SURVEY — KM52, KM18 & KM16

The KM52, KM18 and KM16 trial sites were revisited as part of a qualitative walk-over assessment in July 2023, again comprising visual evaluation and documentation. Consistent with 2022 observations, an increasing number of small volunteer forbs and graminoids were found to have colonized all sites (KM16, Photo 18a-b; KM18, Photo 19a-b; KM52, Photo 20a-b). Indicators of early vegetation re-establishment were most apparent at KM18 and KM16 (both characterized as subxeric), whereas KM52 (characterized as xeric) was still mostly comprised of bare soil.



(a) KM16 — Status of Cover Vegetation (2022)



(b) KM16 — Status of Surface Preparations (2022)

Photo 15. KM16 — 2022 Status of Cover Vegetation (a) and Surface Preparations (b).

(a) KM18 — Status of Cover Vegetation (2022)

(b) KM18 — Status of Surface Preparations (2022)

Photo 16. KM18 — 2022 Status of Cover Vegetation (a) and Surface Preparations (b).

(a) KM52 — Status of Cover Vegetation (2022)

(b) KM52 — Status of Surface Preparations (2022)

Photo 17. KM52 — 2022 Status of Cover Vegetation (a) and Surface Preparations (b).

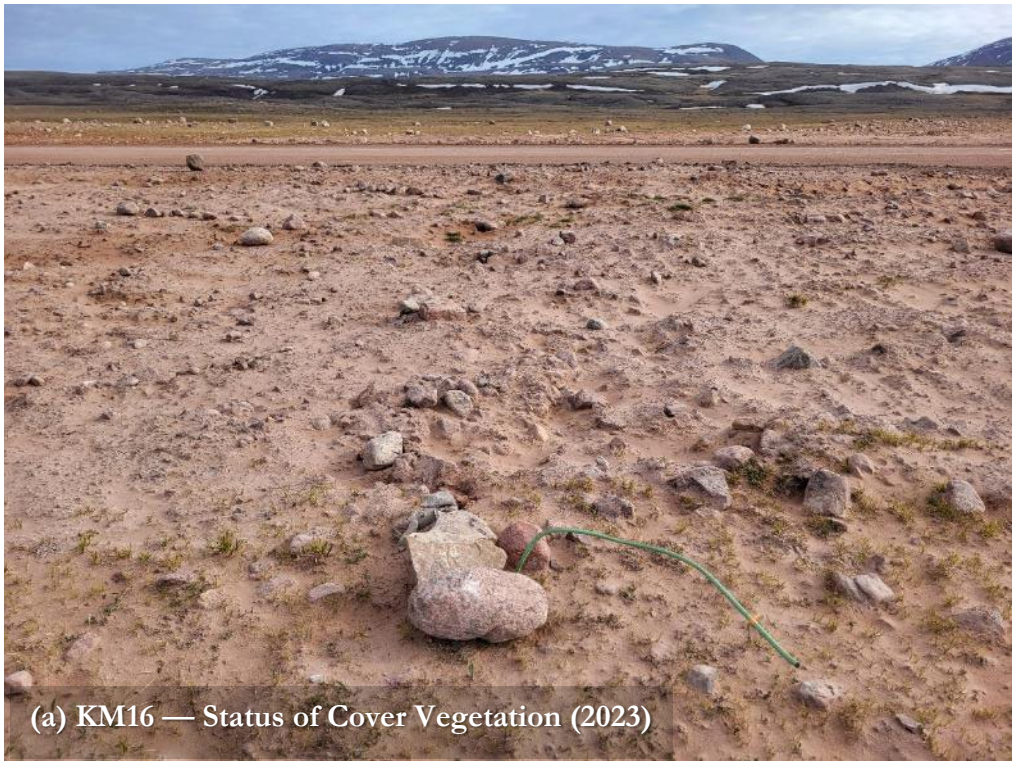


Photo 18. KM16 — 2023 Status of Cover Vegetation (a) and Surface Preparations (b).

(a) KM18 — Status of Cover Vegetation (2023)

(b) KM18 — Status of Surface Preparations (2023)

Photo 19. KM18 — 2023 Status of Cover Vegetation (a) and Surface Preparations (b).

Photo 20. KM52 — 2023 Status of Cover Vegetation (a) and Surface Preparations (b).

2024 SURVEY — KM52, KM18 & KM16

Quantitative evaluations of vegetation cover at the KM52, KM18 and KM16 trial sites were conducted in July 2024 following the methods described in Section 2.2 for assessing vegetation surface cover and composition at quadrat-scale. Visual evaluations and photo-documentation of the trial sites and adjacent areas were also completed. Table 13 to Table 15 summarize observed vegetation and mean surface projective cover (%), respectively, at the KM16, KM18 and KM52 trial sites.

Consistent with 2022 and 2023 observational trends, an increasing number of small volunteer forbs and graminoids were found to have colonized all sites (KM16, Photo 21a-b; KM18, Photo 22a-b; KM52, Photo 23a-b). The proportion of unvegetated bare soil/rock at the trial sites is still high (ranging from ~90-95% depending on location), but vegetation cover re-establishment and accumulated litter has increased (ranging from ~5-10%). Each site had different vegetation species composition that comprised similar species to the adjacent (control) biodiversity. Arctic mountain avens (*Dryas* sp.) were commonly observed at each trial site; Arctic willow had establied as the predominant species at the KM18 trial site.

Note: surface soil disturbances (e.g., rutting and equipment tracking) were observed across and/or along portions of the each trial site as a result of third-party access, Tote Road snow removal and road maintenance activities. Surface soil disturbance are primary along the margins of each trial site nearest to the Tote Road.

2025 SURVEY — KM52, KM18 & KM16

The KM52, KM18 and KM16 trial sites were revisited as part of a qualitative walk-over assessment in July 2025, comprising visual evaluation and photo-documentation. Consistent with 2024 observations, an increasing number of small volunteer forbs and graminoids were found to have colonized all sites (KM16, Photo 24a-b; KM18, Photo 25a-b; KM52, Photo 26a-b). As previously observed, indicators of early revegetation establishment continue to be most apparent at KM18 and KM16 (both characterized as subxeric), whereas KM52 (characterized as xeric) was still mostly comprised of bare soil. Notably, Arctic Willow at the KM18 trial site has become the predominant cover species. The health and vigour of cover vegetation at all sites was deemed to be good and continues to improve (e.g., at some location vegetation were flowering). Established vegetation appeared to have benefited from recent rain resulting in good growth, vibrant tissues, and deep rooting.

Table 13. KM16 Reclamation trial — 2024 Observed vegetation and mean surface projective cover (%).

Survey Site (Survey Marker ID)	KM16 — Trial (KM16-0, -75, -150)	KM16 — Control (KM16-C0, -C75, -C150)	
*Bare Soil/Rock	90.6% (±9.0 SD)	41.3% (±14.5 SD)	
*Forbs/Perennial Herbs/Shrubs	8.3% (±8.5 SD)	35.3% (±6.0 SD)	
*Litter	1.0% (±1.0 SD)	17.7% (±8.5 SD)	
*Exotic Weeds	*<None>*	*<None>*	
Predominant Vegetation Observed	*Oxyria sp.* *Dryas sp.* *Braya sp.* *Bistorta sp.*	*Carex sp.* *Cassiope sp.* *Bistorta sp.* *Dryas sp.*	*Pedicularis sp.* *Saxifragaceae sp.* *Salix sp.* *Vaccinium*

*Mean values // SD: Standard Deviation

Table 14. KM18 Reclamation trial — 2024 Observed vegetation and mean surface projective cover (%).

Survey Site (Survey Marker ID)	KM18 — Trial (KM18-0, -50, -100)		KM18 — Control (KM18-C0, -C50, -C100)	
*Bare Soil/Rock	89.7% (±12.7 SD)		55.3% (±10.0 SD)	
*Forbs/Perennial Herbs/Shrubs	8.0% (±8.7 SD)		20.7% (±2.9 SD)	
*Litter	2.3% (±4.0 SD)		14.3% (±5.8 SD)	
*Bryophytes/Lichen	*<None>*		9.7% (±6.5 SD)	
*Exotic Weeds	*<None>*		*<None>*	
Predominant Vegetation Observed	*Carex sp.* *Dryas sp.* *Oxyria sp.*	*Chamaenerion sp.* *Salix sp.*	*Carex sp.* *Dryas sp.* *Oxyria sp.* *Cassiope sp.*	*Silene acaulis* *Saxifragaceae sp.* *Salix sp.*

*Mean values // SD: Standard Deviation

Table 15. KM52 Reclamation trial — 2024 Observed vegetation and mean surface projective cover (%).

Survey Site (Survey Marker ID)	KM52 — Trial (KM52-0, -50, -100)	KM52 — Control (KM52-C0, -C50, -C100)	
*Bare Soil/Rock	95.0% (±0.0 SD)	81.0% (±22.7 SD)	
*Forbs/Perennial Herbs/Shrubs	5.5% (±0.0 SD)	10.3% (±10.2 SD)	
*Litter	*<None>*	8.7% (±12.5 SD)	
*Exotic Weeds	*<None>*	*<None>*	
Predominant Vegetation Observed	*Dryas sp.*	*Carex sp.* *Draba sp.* *Dryas sp.*	*Pedicularis sp.* *Saxifragaceae sp.* *Salix sp.*

*Mean values // SD: Standard Deviation

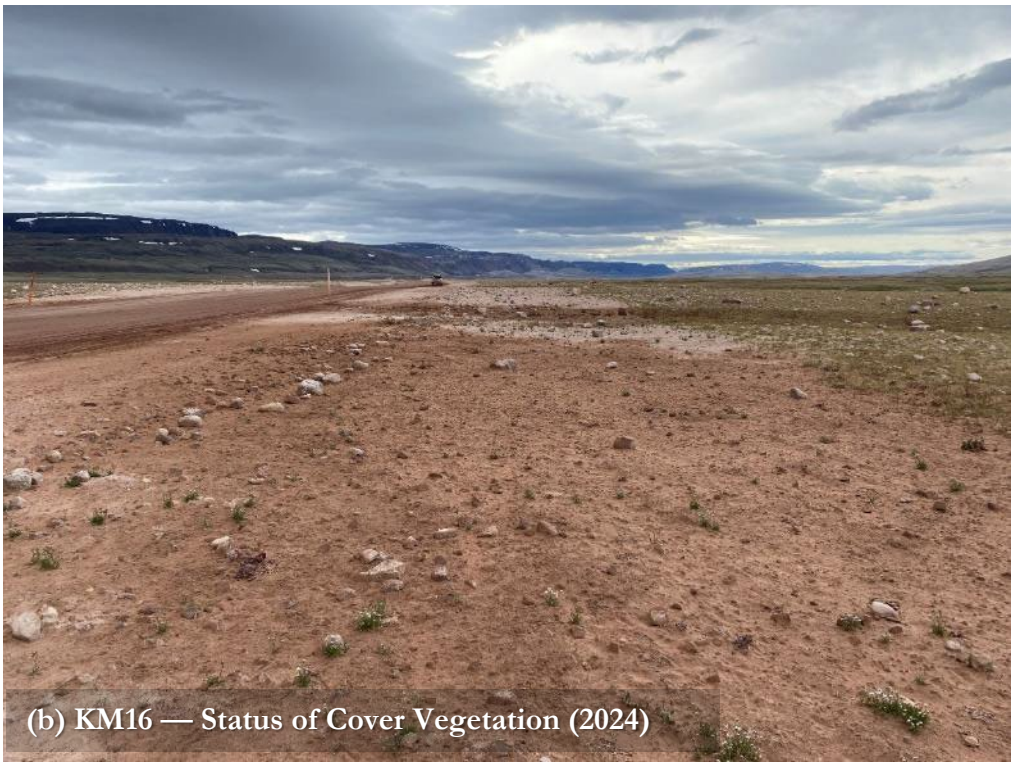


Photo 21. KM16 — 2024 Status of Cover Vegetation (a-b).

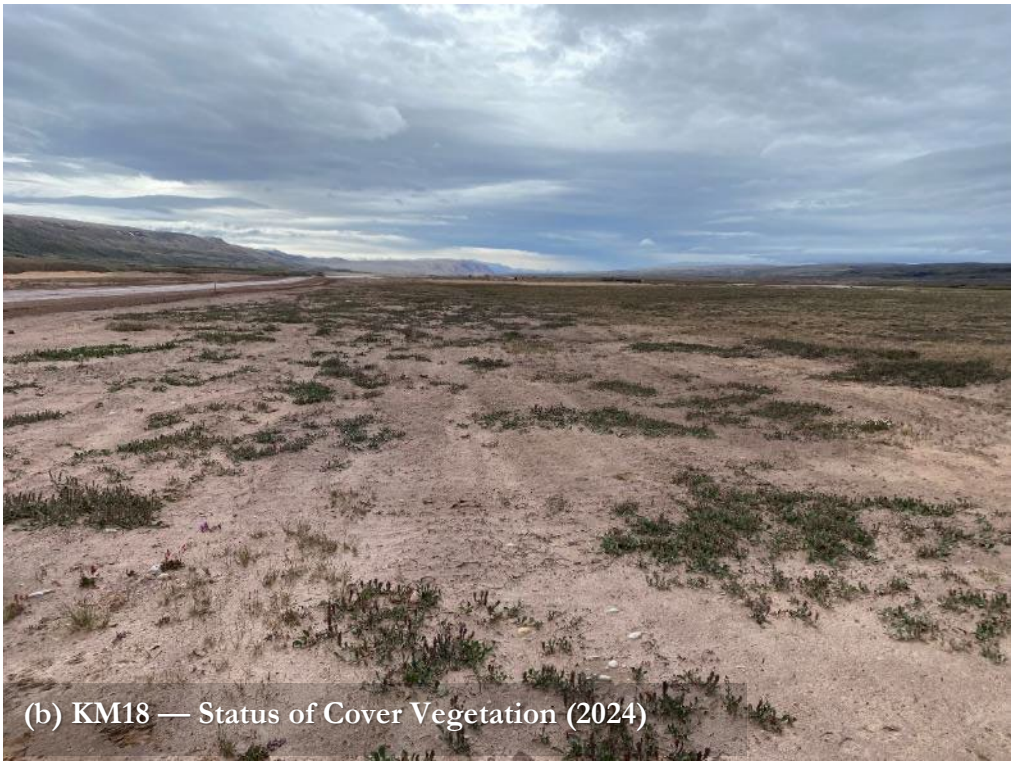


Photo 22. KM18 — 2024 Status of Cover Vegetation (a-b).

(a) KM52 — Status of Cover Vegetation (2024)

(b) KM52 — Status of Cover Vegetation (2024)

Photo 23. KM52 — 2024 Status of Cover Vegetation (a-b).

Photo 24. KM16 — 2025 Status of Cover Vegetation (a-b).