

James Creek Land Treatment Unit Remediation 2021

LTU - Remediation Plan

Client – Government of Northwest Territories

Prime Contractor – Gwich'in Development Corporation

Civil Contractor – McCarthy Services

Accommodations – LJs Contracting (James Creek Maintenance Camp Accommodations)

Purpose

To treat 2700 m³ of soil in LTU 1 by adding fertilizer and mixing insitu using an Allu Bucket. Fertilizer is MAP (Monoammonium Phosphate, Fertilizer Number 12:55:00) and is to be incorporated at a rate of 500 mg/kg or about 0.8 Kg per cubic meter of soil

Methodology

- McCarthy to provide excavator/allu bucket/operator (Operator is John Francis)
- McCarthy to provide site personnel; Supervisor (John Francis (Fort Mcpherson) day to day onsite, Bob Dreaver in Inuvik). Labourer, Shane Blakeney from Inuvik
- McCarthy to provide appropriate PPE for site personnel
- QA/QC by GDC/Sanayut Engineering

The area of the Land Treatment Unit (LTU1) is about 63 m x 43 m = 2709 m² (see attached sketch)

When the soil was last turned soil was left more or less uniform thickness of about 1 m but is in windrows.

So:

- LTU 1 will have about 2700 m³ of soil (at 1 m depth) and thus require about 2500 kg of MAP. Each square meter should receive 1 kg of MAP (I've rounded from 0.8 to 1)
- A five gallon bucket would hold 20 L of MAP which would weigh 24 kg which would be enough for 24 m², an area of 5 m by 5m(rounded), (15 feet by 15 feet).

The attached sketch has demarcated six rows, labelled Row 1 thru 6; each row is about 11 m by 43 m.

For ease of reference, let's divide each row into four sections of about 10 m by 10 m (rounded). So, Row 1 will have Sections A thru D (A being on the south edge) and we can therefore reference them as Row 1 Section A and so on. There are therefore a total of 24 sections at 10 m by 10 m each.

Each section will require 100 kg of MAP, this is 4 (four) five gallon buckets.

Step 1 – lay out a grid of 10 m by 10 sections in accordance with the sketch and grid labelling described above. Use spray paint or stakes to mark the edges appropriately.

Step 2 – apply 100 kg (4 five gallon buckets) of map to a 10 m by 10 m section

Step 3 – Allu section taking care to seek even mixing and not to damage underlying liner

Step 4 – repeat for the remaining 23 sections.

Daily reporting should be pictures at beginning of day and end of day showing area worked and reporting of number of five gallon buckets of MAP applied.

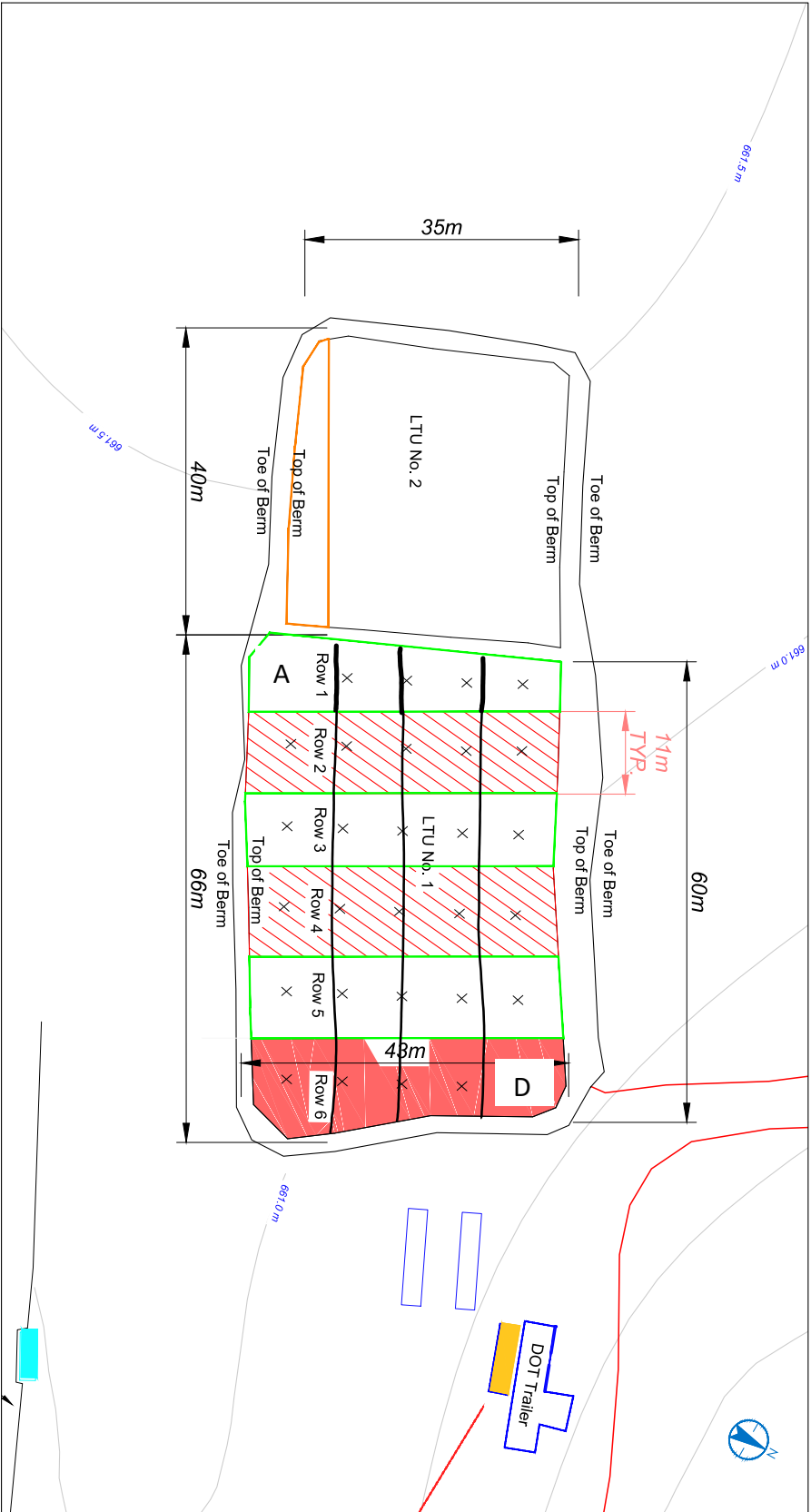
Schedule

- Equipment and material was mobilized to site on Monday August 30th
- The crew will travel to site on Tuesday August 31st for an initial site inspection and grid layout
- Soil mixing will commence late in the day on the 31st or on Wednesday September 1st
- We estimate that LTU 1 soil will be complete in 6 to 12 days, however the schedule will be better estimated after the first couple of days of work in order to ascertain actual progress.

Contingencies

- Inclement weather (rain) will delay the schedule because the fertilizer will be difficult to spread when wet – the budget allows for this and the schedule will be adjusted accordingly
- McCarthy has mobilized a bucket screen (Skeleton bucket) to site as well that may be utilized if the Allu bucket should become inoperable

James Creek LTU Sketch



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Approximate Soil Sample Locations X
Interpreted Shallow Groundwater Contour (in AMSL)

Water Tank
Septic Tank
Assumed Pre-existing Material

Client/Project
DEPARTMENT OF TRANSPORTATION/GWT
JAMES CREEK HIGHWAY CAMP - CONTAMINATION TESTING

September 2016
14493037



APPENDIX L

Contract Specification

OBJECTIVE

To treatment contaminated soils at James Creek LTU.

PROCEDURES

Contractor will procure and deliver MAP. Contractor will apply MAP and mixing soils.

Again contractor will remix the soils.

Hasegawa or designate will inspect the treatment procedure of soils and will collect samples for Lab analysis.

After getting lab analysis report, contractor will prepare report and will submit to department of infrastructure.

SCHEDULING

Staring date August 20, 2021 to completion date August 22, 2022.

ACCEPTANCE CRITERIA

To be acceptable, this Work shall be performed as per agreement.

MEASUREMENT AND PAYMENT

Measurement and payment will be as per contract.