Dey, Asit (CC)

From: [redacted]
Sent: October-06-20 3:36 PM
To: Huculak, Cristal (CC) [redacted]; Burland Ross, Siobhan (CC) [redacted]
Cc: [redacted]
Subject: Canadian Kraft Paper, The Pas, MB - Landfill Leachate Leak Repair Plan

Afternoon,

Siobhan, I have included you on this email as per Cory Grahams automatic email reply.

AECOM has provided a repair plan to address the leachate leak from cell 2B of the landfill. Below is a summary of the repair plan and what is currently in place to contain the leachate. I have attached the engineered drawings of the plan for your reference.

Background/Current Containment:
Since the initial reporting of the landfill leachate leak, the leachate has been contained inside a constructed containment berm. The collected leachate is being removed via a vacuum truck and disposed of into the emergency spill pond. Leachate has also been pumped back into cell 2B from inside the containment basin on a couple of occasions. The containment basin is being monitored regularly by CKP personnel. We have noticed a reduction in the amount of leachate collecting in the containment basin since the initial construction and expect the leachate volumes to continue to lessen as the ground freezes. AECOM performed a site visit on September 3, 2020. During this site visit the edge of the bottom landfill liner was exposed at the toe of the east berm of cell 2B. Leachate was observed flowing over the top of the bottom liner indicating that the leak is originating somewhere on the horizontal section of liner that runs over top of the east berm of cell 2B. From these observations the repair plan below was formulated.

AECOM Repair Plan – Cell 2B East Berm Toe Drain: This involves the installation of a perforated pipe along the east toe of the temporary berm to collect leachate seeping over the HDPE liner and direct it to a sump at the southeast corner of Cell 2B. This will capture and contain the leaking leachate from cell 2B. The collection trench and toe berm will be lined with a geosynthetic clay liner which would overlap the end of the HDPE liner to provide a continuous seal and contain the leachate as it flows into the perforated pipe and then into the collection sump. The drain trench would be backfilled with clear stone to allow free drainage and the trench covered with geotextile to prevent clogging of the drain. The east slope of the berm could also be covered with a low permeability fill, 60 mil textured HDPE liner, or geosynthetic clay liner anchored at the top of the berm by burial in a shallow trench. Figures 1 and 2 provide a conceptual layout of a toe drain system over the area of observed leakage plus a buffer to north and south. This option is less dependent on weather conditions and does not require welding of HDPE and could be undertaken in October/November on short notice by local forces under the direction of a supervisor provided by a geosynthetics supplier (Titan Environmental). Regular inspection of the berm, along with regular pump out of the sump will occur once repairs are complete.

CKP plans to proceed with the repair plan provided by AECOM and the work is being planned for the week of November 2-6. Due to the short timeline required for planning the repair work, Manitoba Conservation and Climate's approval for the repair plan is requested by October 9, 2020.

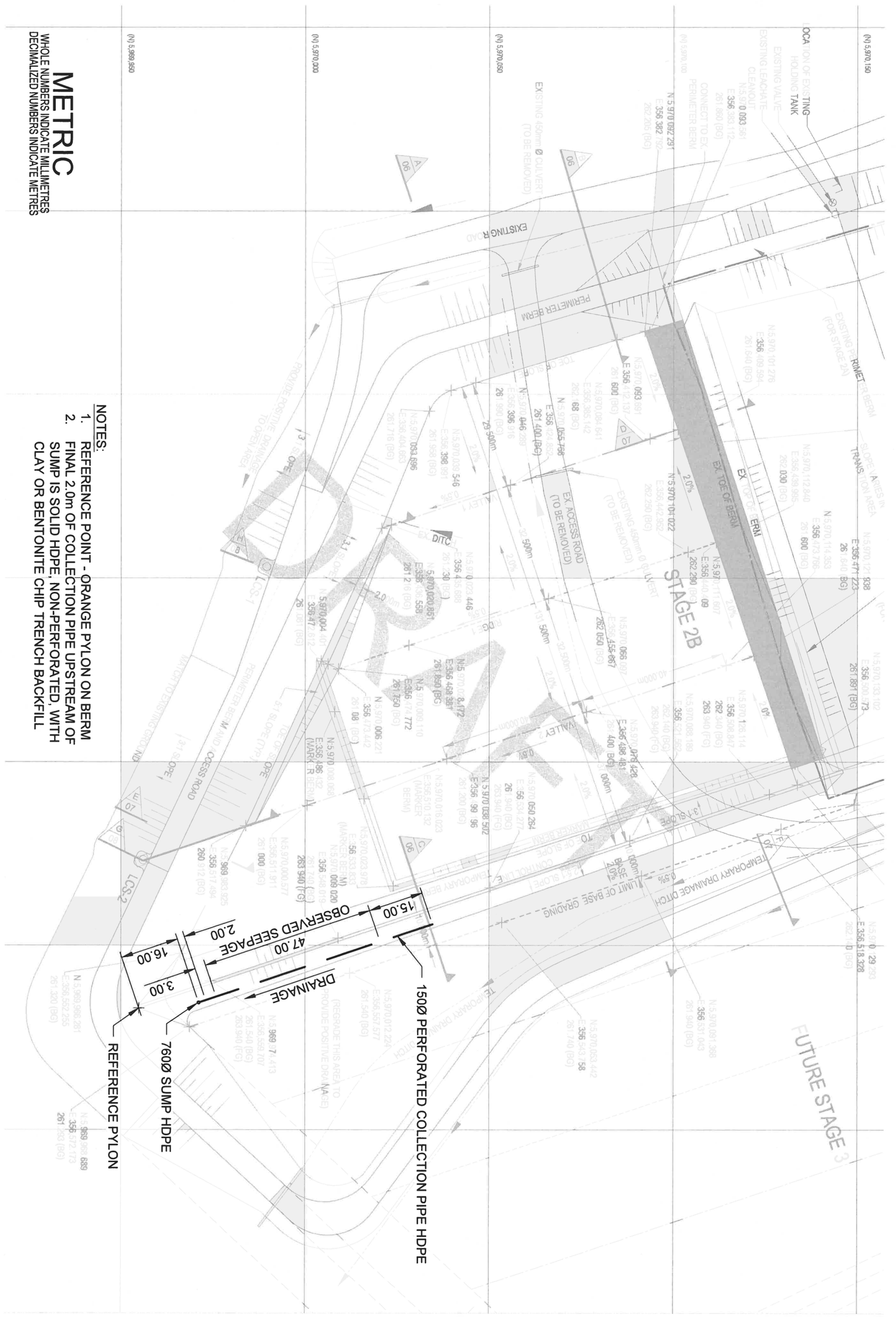
Please contact me if there are any questions or concerns.

Thanks,

[redacted]

Last saved by: COOPERKL(2020-10-01) Last Plotted: 2020-10-01
Filename: L:\LEGACY\CAWPG1FP001\DATA\PROJECTS\60220213\000-CADD\040 CADD-BIM WIP\20-SHEETS\60220213-FIG-00-C-1001.DWG

Project Management Initials: Designer: ____ Checked: ____ Approved: ____ ANSI B 279.4mm x 431.8mm



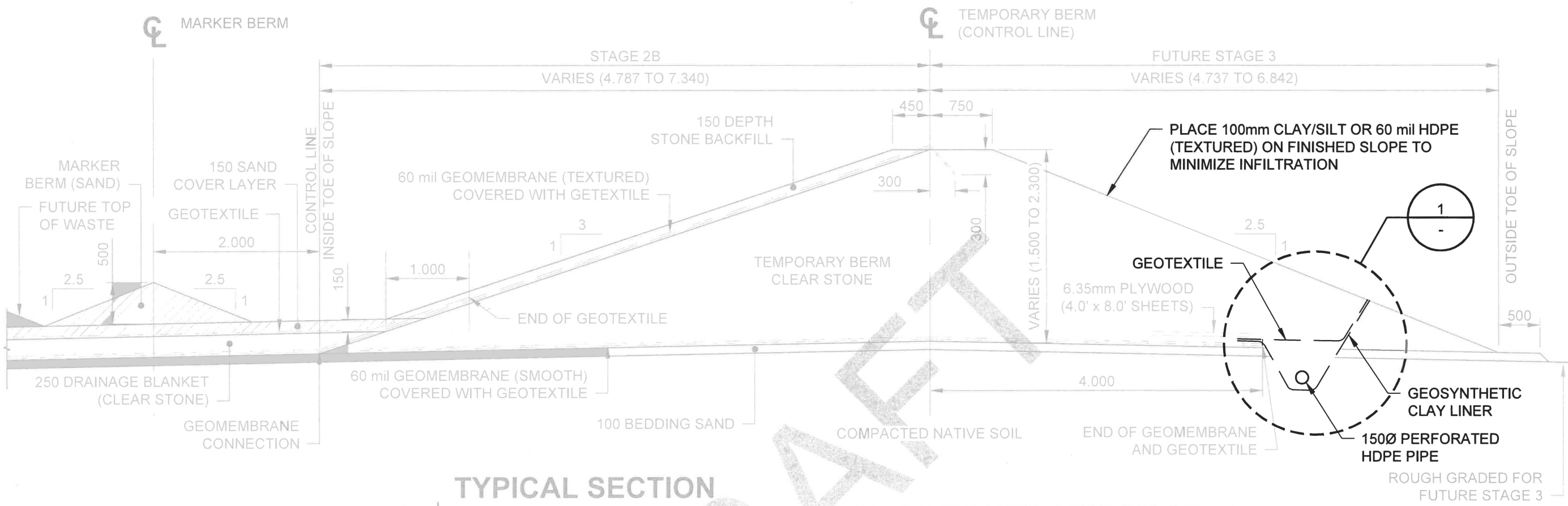
CANADIAN KRAFT PAPER INDUSTRIES
CONCEPTUAL LAYOUT
TEMPORARY BERM TOE DRAIN
Project No.: 60641133 Date: 2020-09-30

PLAN VIEW

Source: (Project No. 60220213
Drawing No. S2B-G-03)

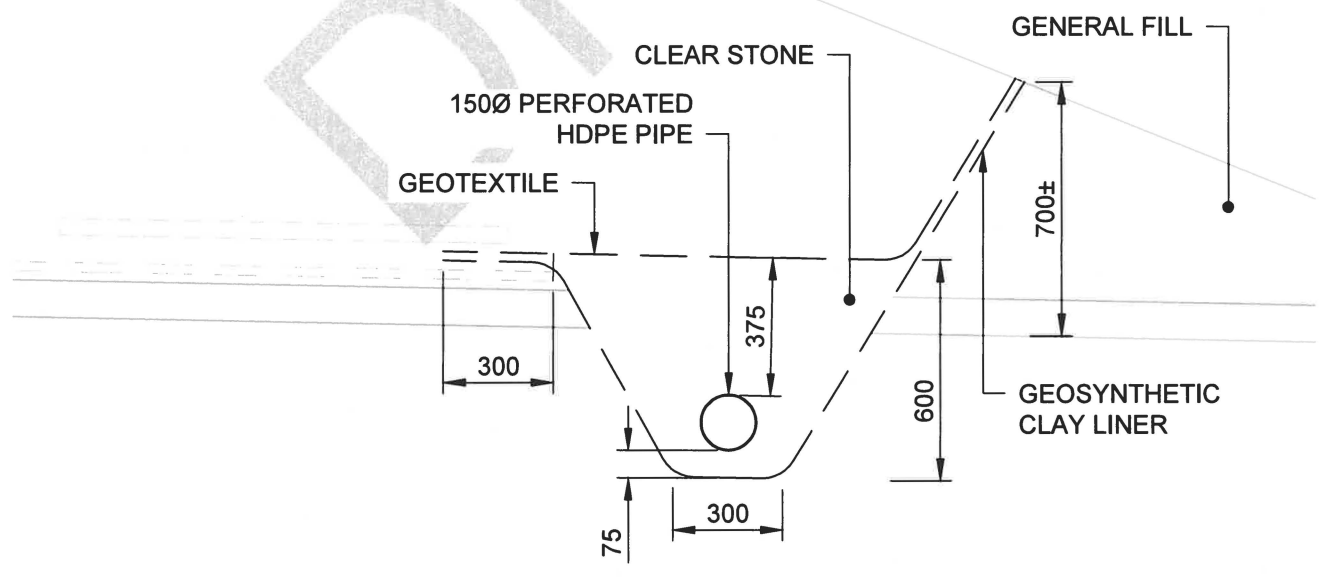
AECOM

Figure: 1



C | TYPICAL SECTION TEMPORARY BERM ALONG EAST BOUNDARY OF STAGE 2B

Scale 1:50



NOTE:
PLACE 12mm BENONITE POWDER OVER HDPE LINER UNDER GEOSYNTHETIC CLAY LINER

1 | TOE DRAIN DETAIL

Scale 1:20

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

Project Management Initials: ____ Designer: ____ Checked: ____ Approved: ____ ANSI B 279.4mm x 431.8mm

Last saved by: COOPERKL(2020-09-30) Last Plotted: 2020-09-30
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AECOM

Figure: 2

SECTION VIEW

Source: (Project No. 60220213
Drawing No. S2B-G-06)

CANADIAN KRAFT PAPER INDUSTRIES
CONCEPTUAL LAYOUT
TEMPORARY BERM TOE DRAIN
Project No.: 60641133 Date: 2020-09-30