uma

January 29, 2003

Project No.: 0171-120-01-08
File: CAM-4, 3.6

Elizabeth Copland, Vice Chair
Nunavut Impact Review Board
P.O. Box 2397
Cambridge Bay, NU X0B 0C0

PC	J-P
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CEO	
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Dear Ms. Copland:

RE: Reference NIRB Screening No. 01DN003 for the Clean Up of CAM-4, Pelly Bay DEW Line Site

UMA Engineering Ltd. is submitting the proposed amendments to the October 2000 submission to the Nunavut Impact Review Board (NIRB) for the clean up of the CAM-4, Pelly Bay DEW Line Site. The proposed amendments are being submitted on behalf of Defence Construction Canada and the Department of National Defence.

The first amendment to the 2000 NIRB submission is that there will not be a landfill constructed on-site for the disposal of PCB amended painted materials. Materials containing PCB concentrations in excess of 50 parts per million (ppm) are being containerized and placed in a Temporary PCB Storage Area, as per the Canadian Environmental Protection Act Storage of PCB Material Regulations (SOR/92-507). The containerized materials will then be transported according to the Transportation of Dangerous Goods Regulations to a licenced southern disposal facility for destruction.

The second amendment to the October 2000 NIRB submission is the relocation of the landfarm. The original location shown in the 2000 submission was discarded because of wet ground conditions and intermittent surface water drainage through the location. The new area proposed for the landfarm is located approximately 400 metres southwest of the Hangar Area (Figure 01). The proposed footprint of the landfarm remains as 1.7 hectares.

The proposed new landfarm location is along a ridge of bouldery till approximately 20 metres higher than the elevation of Barrow Lake (Figure 02). Natural surface water drainage from the proposed landfarm area is radially to the east, north and northwest. The nearest aquatic receiving environment to the landfarm is a perennial creek located approximately 120 metres from the northwest edge of the landfarm. The creek drains into Barrow Lake approximately 450 metres to the north of the landfarm. A small body of water is also located approximately 170 metres south and upgradient of the proposed landfarm area. Based on a review of aerial photography and a ground reconnaissance, this body of water does not receive any surface water runoff from the landfarm area and drains intermittently to the northwest into the adjacent creek.

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030129NWBSPEL Amend Documents-ILAE

The construction of the landfarm includes:

- Ground preparation;
- Construction and maintenance of roadways required to support the landfarm operation;
- Construction of perimeter berms and a runoff collection ditch;
- Placement, stockpiling, processing and treatment of hydrocarbon contaminated soil;
- Management of surface runoff; and
- Closure and removal of all equipment and materials following confirmatory sampling.

A 0.3 metre thick leveling course of gravel will be placed across the base of the treatment area prior to construction of the perimeter berms, as shown on Figure 03. The berm height will be 1.0 and 1.5 metres in the southwest and northwest (downgradient) portions of the landfarm, respectively (Figure 04). Due to the shortage of suitable fine-grained soils for berm construction in the area, and because of the proximity of the creek and potential aquatic receptors to the proposed landfarm area, a geomembrane liner will be incorporated into the down-gradient berms. The liner will be keyed into underlying low-permeability soils, and any surface water runoff from within the treatment area will be directed towards a sump at the northwest corner of the treatment area. The northwest end of the landfarm has been designed to have sufficient storage capacity to contain spring freshet or precipitation events that may occur during the operation of the landfarm. Water may be used for moisture conditioning of the soil throughout the treatment season. All excess water and water collection in the perimeter collection system will be tested prior to discharge in accordance with the environmental protection measures detailed in the original application. Upon closure, the treated soil within the landfarm will be consolidated in a portion of the landfarm and covered with clean fill, and the area graded to prevent ponding.

We trust sufficient information has been provided on the proposed amendments. If you have any questions or comments, please do not hesitate to contact the undersigned at 403-270-9220.

Sincerely,

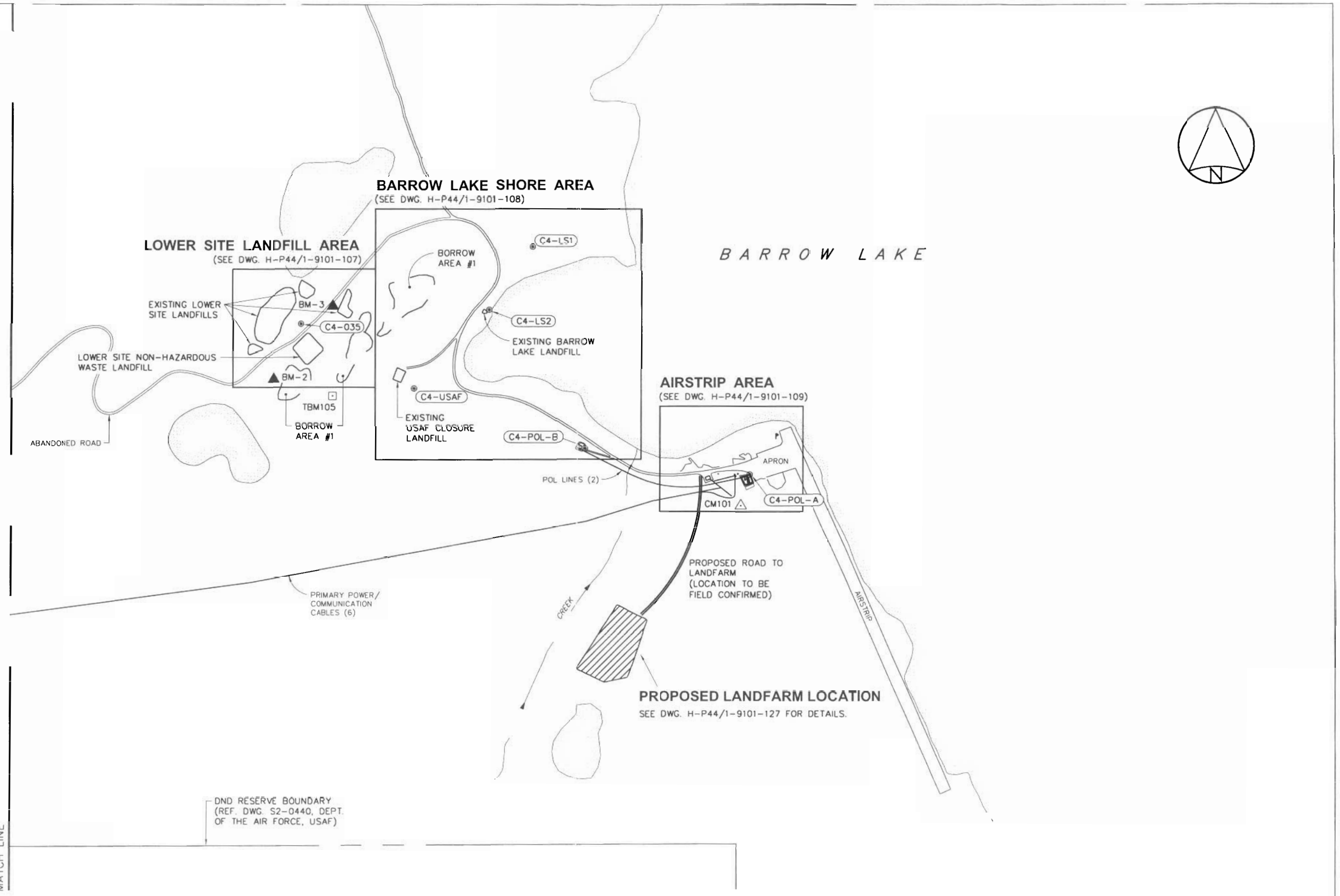
UMA ENGINEERING LTD.

Eva Schulz, P.Ag.
Environmental Scientist
eschulz@umagroup.com

EMS:

Encl. Design Drawings

cc: Scott Hamilton, Defence Construction Canada
Jim Wall, Nunavut Water Board (File No.: NWB5PEL0104)
Carl McLean, INAC - Land Administration (File No.: N2000X0057)



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National Defence / Defense nationale

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DEPARTMENT OF NATIONAL DEFENCE
DEW LINE CLEANUP

TITLE:	CAM-4 (PELLY BAY) - SITE PLAN		
JOB No.	0171-120-13-01	DATE:	JANUARY 2003
SCALE:	1 : 10000	DWG No.	FIG 01
CHECKED	KMS		

Plot Scale: 1 : 1 PS
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DIESEL FUEL TANKS
BARROW LAKE
TRANSFORMER/ BEACON LIGHT AND SUPPORT FRAME
POL PUMPHOUSE
CONTAINMENT BERM
HEATED VEHICLE STORAGE
POL LINES (2)
CONTAIN-MENT BERM
DIESEL FUEL TANKS
PRIMARY POWER/ COMMUNICATION CABLES TO STATION AREA
420m
PROPOSED ROAD TO LANDFARM
(LOCATION TO BE FIELD CONFIRMED)
STREAM
120m
SUMP
PROPOSED LANDFARM
BERM
170m
21 000 N
20 000 N
19 900N
19 800N
19 700N
19 600N
19 500N
19 200E
19 300E
19 400E
19 500E
19 600E
19 700E
19 800E
19 900E
20 000E
501
502
503
504
505

0 100 200m

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DEW LINE CLEANUP

TITLE: CAM-4 (PELLY BAY) - PROPOSED LANDFARM SITE PLAN	
JOB No. 0171-120-13-01	DATE: JANUARY 2003
SCALE: 1 : 4000	DWG. No. FIG 02
CHECKED: KMS	

Plot Scale: 1 : 1 PS
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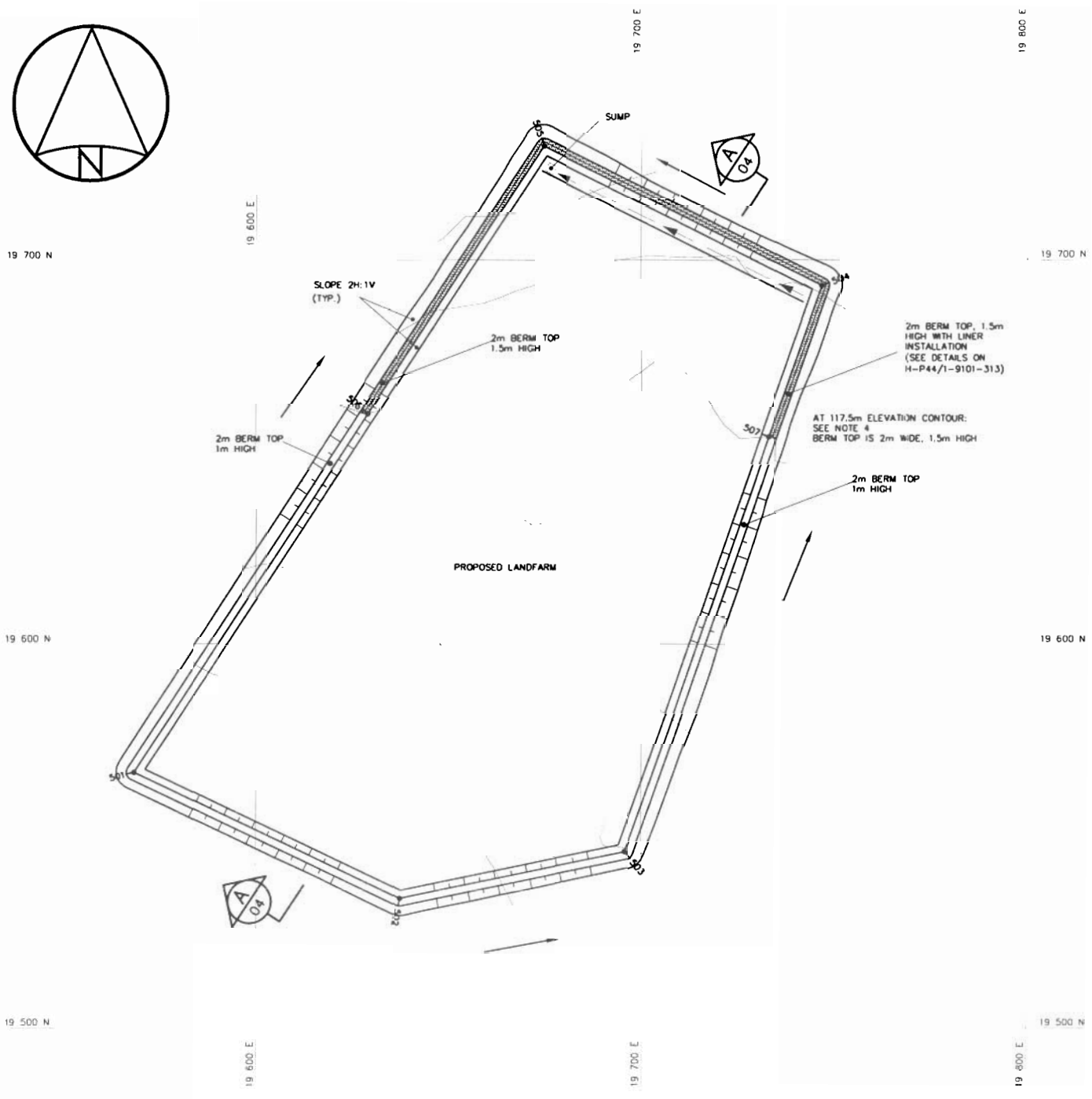

COORDINATE POINTS LANDFARM			
NO.	NORTHING	EASTING	ELEV.
501	19 568.3	19 566.7	122.5
502	19 637.5	19 533.7	122.5
503	19 695.8	19 545.9	120.8
504	19 746.8	19 693.4	118.4
505	19 674.6	19 729.6	116.7
506	19 746.8	19 693.4	119.3
507	19 674.6	19 729.6	119.3

0 10 20m

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NATIONAL DEFENCE
DEW LINE CLEANUP

TITLE:	CAM-4 (PELLY BAY) – PROPOSED LANDFARM PLAN		
JOB No.	0171-120-13-01	DATE:	JANUARY 2003
SCALE:	1 : 1500	DWG. No.	FIG 03
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Plot Scale: 1 : 1 PS
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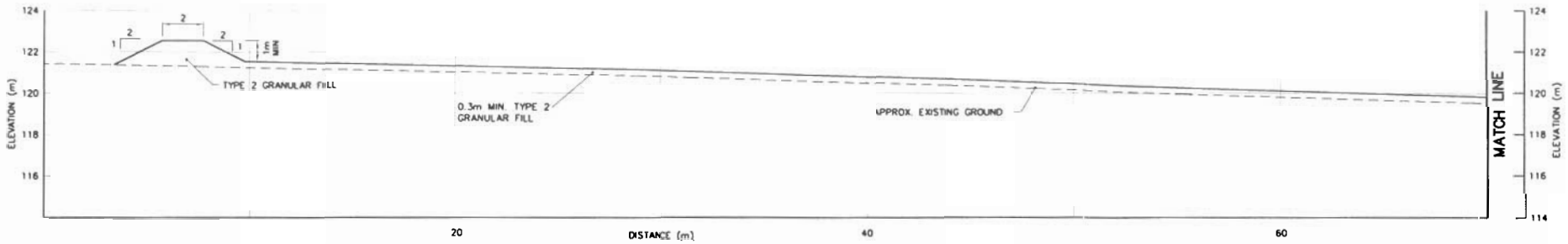
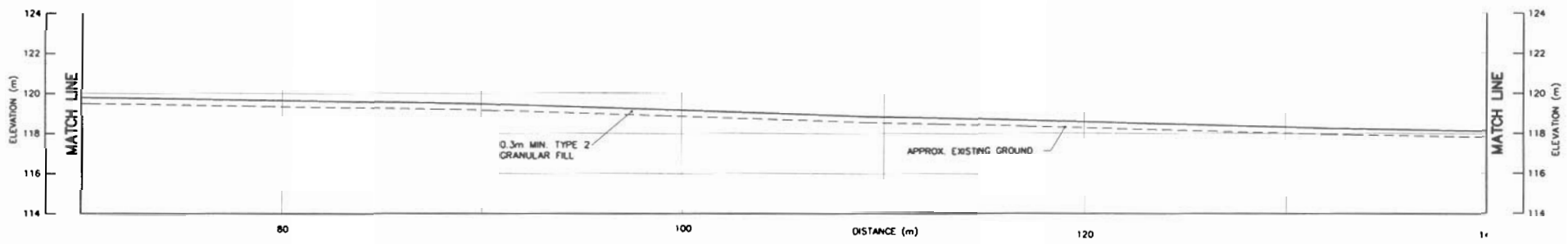
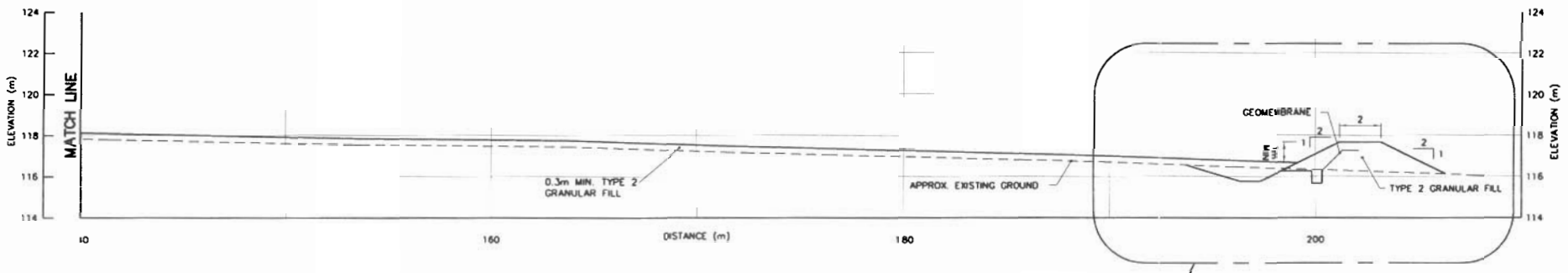
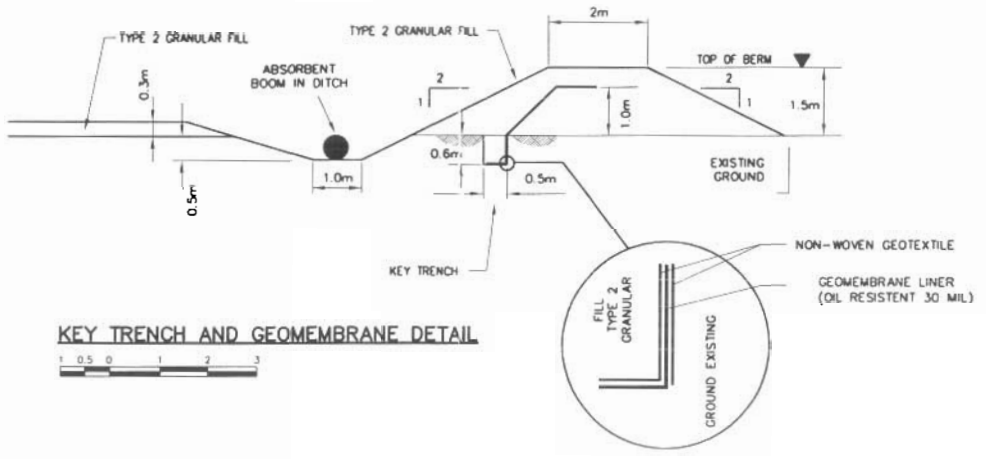






SECTION A 03



KEY TRENCH AND GEOMEMBRANE DETAIL

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DEW LINE CLEANUP

TITLE:	CAM-4 – PROPOSED LANDFARM CROSS SECTION		
JOB No.	0171-120-13-01	DATE:	JANUARY 2003
SCALE:	1 : 300	DWG. No	FIG 04
CHECKED:	KMS		

Plot Scale: 1 : : 1 PS
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