Bajwa, Mehak

From: Chris Visser <chris.visser@wasteconnections.com>
Sent: September 25, 2024 9:59 AM
To: Dey, Asit
Cc: Derek Dreger (WSP) ; Angela Fidler-Kliewer (Trek); Laurel Hoffarth; Barry Blue; Scurrah, Fiona; Cowan, Amanda; Alves, Alexandre; Mackin, Amna; Bajwa, Mehak
Subject: Prairie Green IWMF: Search Facility Geomembrane Results
Attachments: LTR 25-09-2024 Prairie Green IWMF Search Facility Pad -Mob 1_0_Final_AFK 1000-043-27-signed.pdf; L240034 - PRAIRIE GREEN.pdf

Good morning Ash,

Please find attached the test results and construction quality assurance certification for the section geomembrane completed for the Prairie Green Landfill Search Facility.

If you should have any questions, please do to not hesitate to contact us.

Regards,

Chris Visser, P.Eng.
Canadian Region Engineering Manager

C: 647-539-5923 | F: 905-532-7576
Waste Connections of Canada | Unit 600 | 6220 Hwy 7 | Woodbridge | ON | L4H 4G3

TREK GEOTECHNICAL Quality Engineering | Valued Relationships

September 25, 2024 Our File No. 1000-043-27

Derek Dreger, P.Eng., PMP, FEC
WSP Canada Inc.
1600 Buffalo Place,
Winnipeg, MB
R3T 6B8

RE: CQA Summary Letter for
IWMF Search Facility Pad Construction – Mob 1

This letter summarizes the Quality Assurance (QA) inspections and testing services associated with CQA Geosynthetic installing of the Search Facility Pad – Mob 1. The area constructed is about 1.2 Ha of a total of 2.7 HA of pad to be constructed and comprises the building area in the South section of the pad.

Deployment of the HDPE liner over the GCL and sand layer subgrade consisted of panels P1 to P23, respectively. The arrangement and designation of the various panels for the HDPE liner are presented on Drawing 1 attached.

The seams were welded using a double hot wedge fusion welder. Some seams required repairs based on field test results and the reconstructed seams were made using a hand-held extrusion welding apparatus. Fusion and extrusion seams were subjected to non-destructive and destructive testing. All non-destructive testing completed on both fusion and extrusion seaming comply with project specifications. Destructive test samples of panel fusion welded seams were taken at an average of approximately one for every 144 m of fusion seam length.

A total of twelve fusion destructive tests (DSF designation) and eleven extrusion tests (DSX designation) were conducted of the HDPE liner. Seven fusion destructive tests failed, and each failed test was traced along the fusion seam activity log to obtain one passing destructive before and after the failed destructive. The failed sections of seams were subsequently extrusion welded and non-destructively tested with the vacuum box. All extrusion destructive tests completed comply with project specifications.

The information and findings of this report were based on the tests, measurements, and observations made by TREK during construction and are only applicable to those elements. Based on the results of the field monitoring, observations, inspections and testing, the IWMF Search Facility Pad – Mob 1 was constructed in accordance with the project specifications and to current accepted industry standards.

Sincerely,

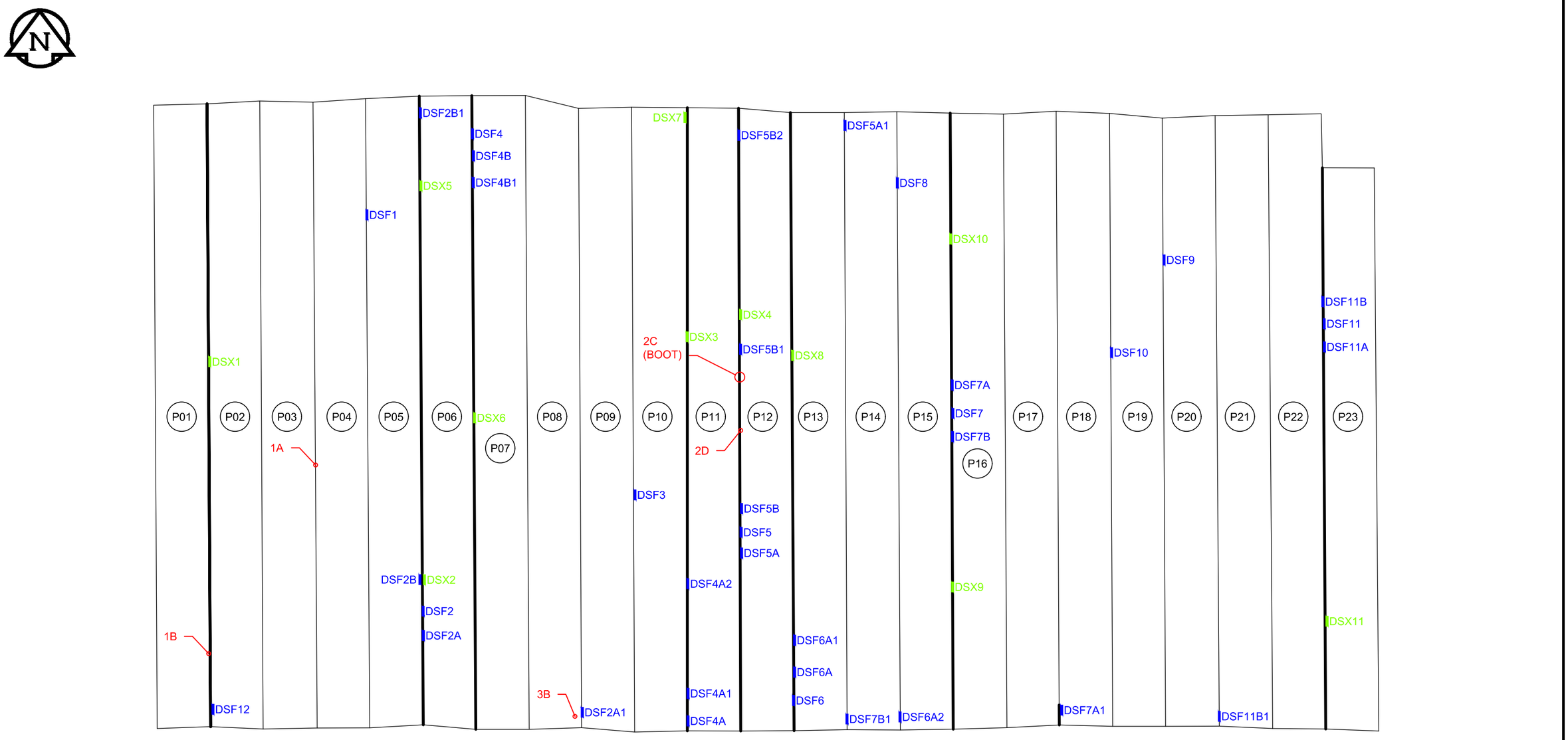
TREK Geotechnical Inc.
Per:

[redacted]

Angela Fidler-Kliewer, C.Tech.
Manager of Lab and Field Services

[redacted]

Nelson John Ferreira, Ph.D., P. Eng.
Geotechnical Engineer, Principal



0 5 10 15 20 25 m
SCALE = 1 : 500 (279 mm x 432 mm)

4C — UNIQUE DEFECT IDENTIFICATION NUMBER

DSF12 (6U) — FUSION DESTRUCTIVE LOCATION AND DESIGNATION

DSX1 — EXTRUSION DESTRUCTIVE DESIGNATION

FUSION SEAM

EXTRUSION SEAM RECONSTRUCTION

P01 — PANEL DESIGNATION NUMBER

NOTES:

1. PANEL LOCATIONS ARE BASED ON SURVEY COMPLETED BY TREK GEOTECHNICAL.
2. THE DRAWING IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING LETTER.

Figure 01
Geomembrane Panel Layout
MOB 1

PANEL PLACEMENT LOG

Project Name: Prairie Green Search Pad **Product Type:** 60mil HDPE

DATE	PANEL NUMBER	ROLL NUMBER	LENGTH	WIDTH	COMMENTS
DD/MM/YY			☐ FEET / METERS ✓		
18/9/24	P1	76009	79.40	6.80	
18/9/24	P2	76009	79.50	6.80	
18/9/24	P3	122819	79.90	6.80	
18/9/24	P4	122819	79.90	6.80	
19/9/24	P5	76016	80.40	6.80	
19/9/24	P6	76016	80.90	6.80	
19/9/24	P7	76010	80.60	6.80	
19/9/24	P8	76010	81.80	6.80	
19/9/24	P9	76006	79.80	6.80	
19/9/24	P10	76006	80.00	6.80	
20/9/24	P11	76014	79.50	6.80	
20/9/24	P12	76014	79.40	6.80	
20/9/24	P13	122273	78.30	6.80	
20/9/24	P14	122273	80.00	6.80	
20/9/24	P15	76005	78.80	6.80	
20/9/24	P16	76005	78.80	6.80	
20/9/24	P17	121861	78.60	6.80	
20/9/24	P18	121861	78.80	6.80	
20/9/24	P19	122284	78.50	6.80	
20/9/24	P20	122284	77.70	6.80	
20/9/24	P21	122279	78.20	6.80	
20/9/24	P22	122279	78.10	6.80	
20/9/24	P23	122272	72.10	6.80	

WEDGE SEAM LOG

Project Name: PRAIRIE GREEN - SEARCH PAD **Product Type:** 60mil HDPE Smooth

NOTE: ALL AIR TESTING MUST MAINTAIN A CONSISTENT READING FOR A MINIMUM OF 5 MINUTES.

SEAM LOG							AIR TEST INFORMATION				
BETWEEN PANELS	WELD DATE	TIME OF DAY		TECHNICIAN	WEDGE #	SEAM LENGTH	TEST DATE	START PSI	FINISH PSI	TEST RESULTS	QC TECHNICIAN
	DD/MM/YY	AM	PM			☐ FT/M ☑	DD/MM/YY				
P1/2	18/9/24	10:47		BB	43	78.2	20/9/24	56	53	PASS	JP
P2/3	19/9/24	9:36		CN	39	79.3	20/9/24	56	54	PASS	JP
P3/4	18/9/24	10:59		TC	7	80	20/9/24	53	52	PASS	JP
P4/5	19/9/24	10:10		TC	7	79.7	20/9/24	49	48	PASS	JP
P5/6	19/9/24	10:39		CN	39	79.9	20/9/24	54	53	PASS	JP
P6/7	19/9/24	10:50		BB	43	80	21/9/24	53	50	PASS	JP
P7/8	19/9/24	11:21		TC	7	80	21/9/24	59	58	PASS	JP
P8/9	19/9/24		2:06	CN	39	78.8	21/9/24	60	59	PASS	JP
P9/10	19/9/24		2:19	TC	7	79.3	21/9/24	60	60	PASS	JP
P10/11	20/9/24	11:10		DP	29	79.5	22/9/24	59	58	PASS	JP
P11/12	20/9/24	11:34		CN	39	34.4	22/9/24	54	52	PASS	JP
P11/12B	20/9/24	11:52		CN	39	45	22/9/24	58	57	PASS	JP
P12/13	20/9/24	11:54		DP	29	78.3	22/9/24	59	58	PASS	JP
P13/14	20/9/24		1:48	CN	39	78.3	22/9/24	60	59	PASS	JP
P14/15	20/9/24		2:11	DP	29	78.7	22/9/24	61	60	PASS	JP
P15/16	20/9/24		2:30	CN	39	78.7	22/9/24	58	58	PASS	JP
P16/17	20/9/24		3:05	DP	29	78.6	22/9/24	61	60	PASS	JP
P17/18	20/9/24		3:29	CN	39	78.8	22/9/24	59	58	PASS	JP
P18/19	20/9/24		5:36	CN	39	78.1	22/9/24	59	57	PASS	JP
P19/20	20/9/24		5:50	DP	29	77.7	22/9/24	59	59	PASS	JP
P20/21	20/9/24		6:16	CN	39	77.7	22/9/24	58	56	PASS	JP
P21/22	20/9/24		6:31	DP	29	78.1	22/9/24	58	56	PASS	JP
P22/23	20/9/24		6:58	CN	39	72.1	22/9/24	57	55	PASS	JP