
To: Geoff Strack, P.E.
Waste Connections

From: Kyle Morberg, P.E.
Stantec Consulting Services, Inc.

File: 227704387

Date: January 7, 2025

Reference: SKB Environmental Cloquet Landfill, dba Shamrock Landfill, Inc. 2024 Annual CCR Inspection Report

Purpose

This memorandum fulfills the requirements of 40 CFR § 257.84 Inspection Requirements for coal combustion residue (CCR) Surface Landfills, Part b, regarding an annual inspection by a qualified professional engineer.

Background and Applicability

SKB Environmental Cloquet Landfill Inc., f/n/a Shamrock Landfill, Inc. owns and operates the Shamrock Environmental Landfill which is a secure landfill permitted to accept industrial waste, including CCR waste. The facility is located at Section 25, Township 49 North, Range 17 West, Carlton County with a street address of 761 MN Highway 45 in Cloquet, Minnesota. The Facility is operated under the MPCA Solid Waste Permit SW-399. Currently, 29.3 acres of lined landfill are constructed. Most recently, a portion of Phase 7 (Phase 7B-2) was constructed in 2024. All constructed phases, Phase 1 through 7B-2, are permitted to accept CCR. Filling operations in 2024 were primarily in Phases 5, 6, and 7, although Phases 1 through 4 remained operational and received some waste.

Refer to Figures 1 and 2 for the photo locations and current existing conditions plans, respectively.

CCR Landfill Inspection (40 CFR § 257.84)

On October 14, 2024, Kyle Morberg, PE of Stantec conducted the on-site inspection of the CCR Landfill. As part of the inspection, the following operating and inspection records were reviewed:

- Review of weekly visual CCR inspections performed by landfill operators;
- Previous annual inspections performed by a licensed professional engineer;
- CCR unit design and construction information required by §257.73(c)(1) and §257.74(c)(1); and
- Previous periodic structural stability assessments required under § 257.73(d).

Landfill Cell Design

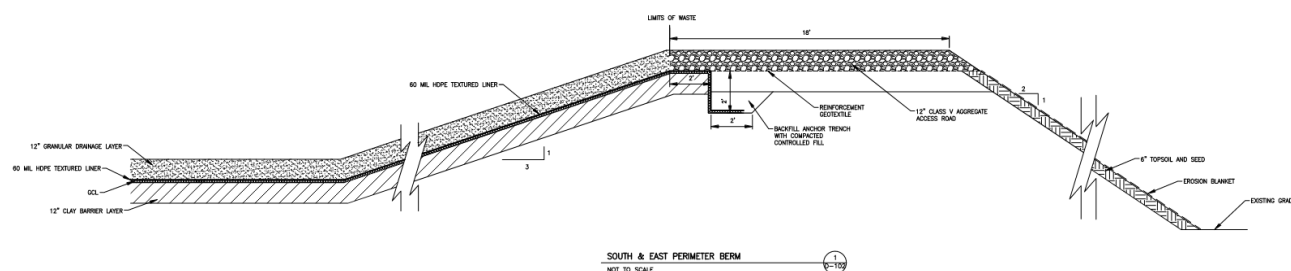
Most of the facility's landfill cell embankments were constructed using on-site borrow material, which consisted of silty clay and clayey sand type soils. The fill was placed and compacted to 95% of Standard Proctor Dry Density in lift thicknesses ranging from 8 inches to 12 inches. The final subgrade surface was proof rolled prior to geosynthetics installation. A typical perimeter section taken from the Phase 7 Construction Documentation Report prepared by Stantec in September 2022 is shown below.

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Typical Landfill Berm Detail

During the inspection, no signs of landfill cell embankment distress, no signs of waste slope instability, or other CCR landfill issues were observed. The landfill embankments and interim covered slopes were generally in good condition with a well-established vegetation cover and no signs of significant erosion.

Photos were taken during the inspection. Figure 1 presents the photo locations, and Attachment 1 contains a photo log and the photos taken.

CCR Landfill Inspection Report

40 CFR § 257.84, Subpart b.2 requires the following topics in italics be addressed within this report. The requirements are shown in italics with the response immediately afterwards for each item.

- (i) *Any changes in geometry of the impounding structure since the previous annual inspection;*

Other than the construction of Phase 7B-2, there were no apparent changes to the embankment geometry of Phases 1 through 7B-2 when compared to the permit drawings or the past inspection reports. The annual aerial photogrammetry survey was performed on October 8, 2024, which the estimated in-place volume of total waste (including all accepted wastes) is based on. A comparison 2024 and 2023 aerial survey confirm that the embankment and slope topography is substantially unchanged with no significant movement. The Existing Conditions Plan with the 2024 topographic survey is included as Figure 2.

- (ii) *The approximate volume of CCR contained in the unit at the time of the inspection;*

The approximate volume of CCR material contained in the landfill at the time of the inspection is 75,243 cubic yards.

- (iii) *Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit and appurtenant structures; and*

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None of the following were observed that could indicate structural weakness;

- Signs of slumping or rotational movement;
- Lateral or vertical distortion of the embankment crest;
- Seepage on the outboard slope; or
- Borrowing or damage due to vectors.

(iv) Any other change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection.

There were no changes noted that may could potentially affect the stability or operation of the impoundment. Observations were consistent with those noted in that report.

Notification Requirements

Shamrock Landfill is in compliance with the recordkeeping requirements specified in § 257.105(g), the notification requirements specified in § 257.106(g), and the internet requirements specified in § 257.107(g).

Conclusions and Recommendations

All recommendations presented in the previous inspection report were implemented.

The SKB Environmental Cloquet Landfill facility has been constructed and operated in accordance with the facility permit and the CCR regulations. No embankment or waste slope stability issues were observed during the visual inspection.

40 CFR § 257.83, Subpart b.5 and 40 CFR § 257.84, Subpart b.5 each require that if a deficiency or release is identified during an inspection, the owner or operator must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken.

There were no deficiencies or releases identified during the inspection that require remedy as soon as possible.

Stantec Consulting Services Inc.



Kyle Morberg, PE

Environmental Engineer

Cell: (218) 591-0790

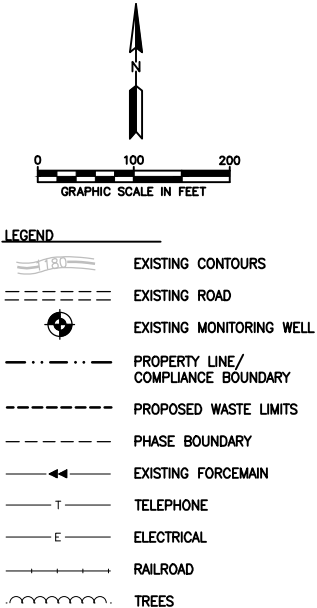
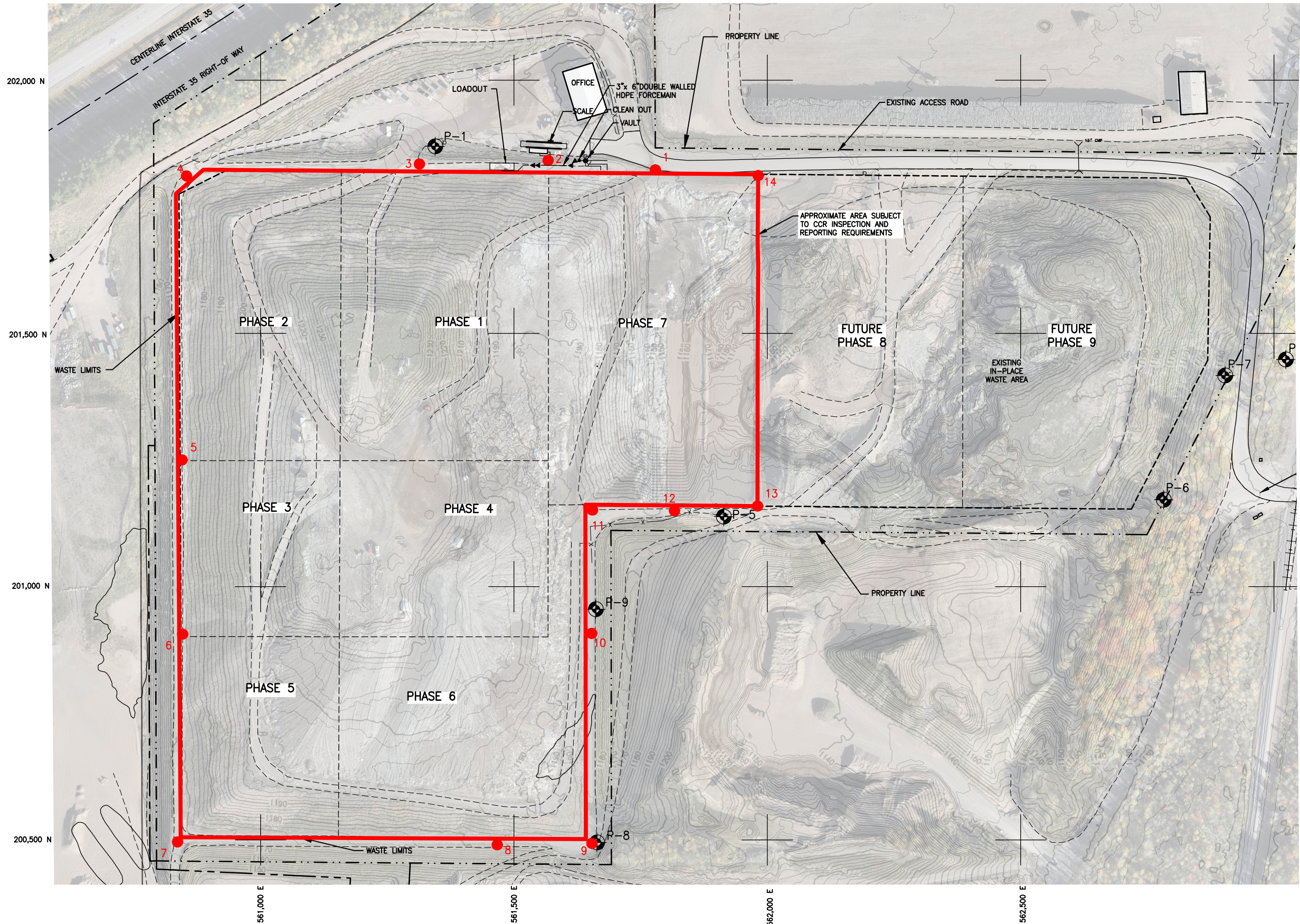
Kyle.morberg@stantec.com

I hereby certify that this engineering document was prepared by me or under my direct supervision and that I am a duly registered Professional Engineer under the laws of the State of Minnesota.



Kyle Morberg, P.E. # 60444

January 7, 2025



- NOTES:
- 1. COORDINATES ARE BASED ON CARLTON COUNTY COORDINATE SYSTEM.
 - 2. BASE MAPPING HAS BEEN UPDATED BY AERIAL SURVEY PROVIDED BY FIRMATEK MAPPING COMPLETED ON OCTOBER 17, 2023.

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

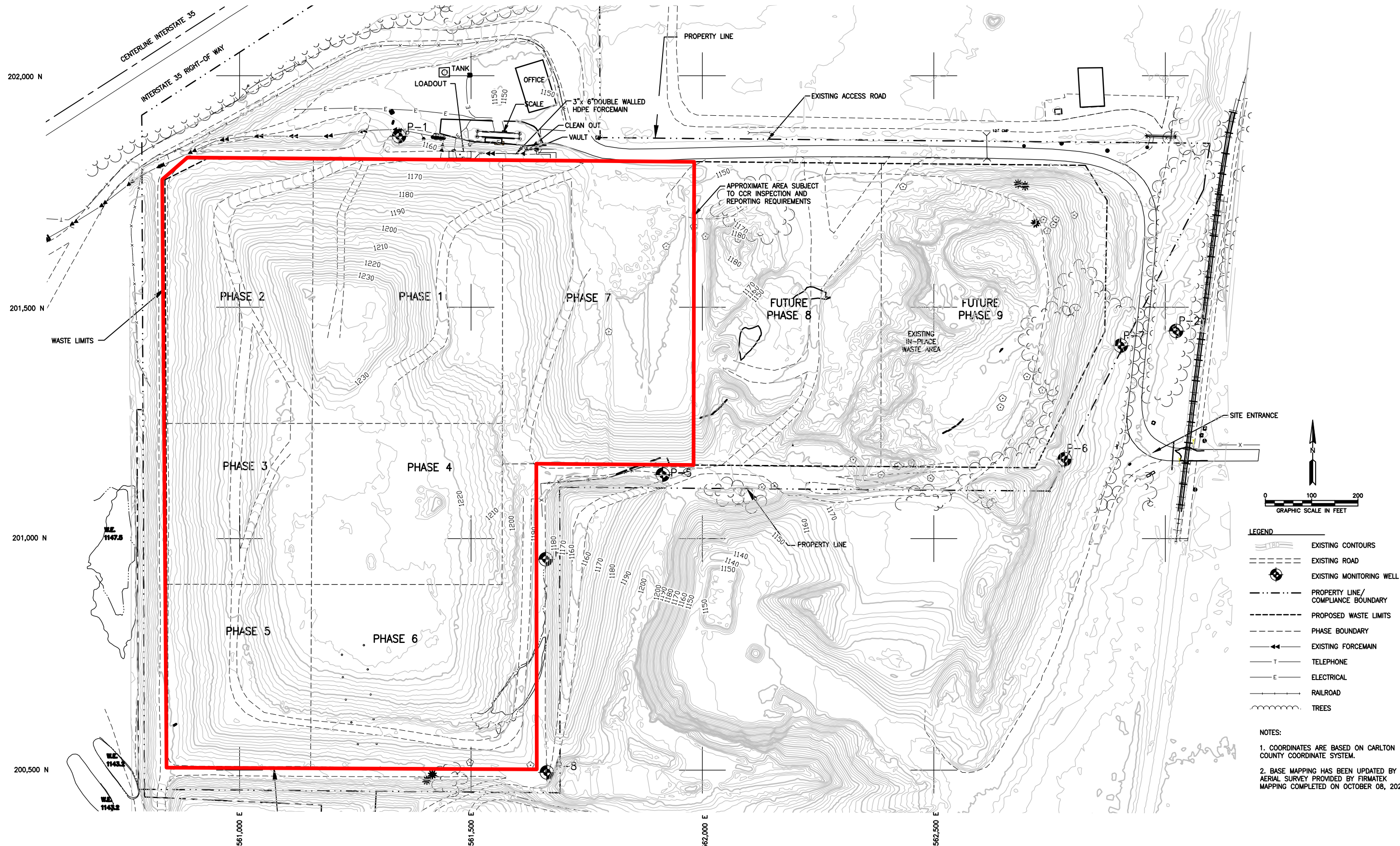
SEAL

SUB CONSULTANT

PRIME CONSULTANT

PROJECT TITLE	2024 CCR INSPECTION REPORT
SKB ENVIRONMENTAL CLOQUET LANDFILL, INC.	f/n/a SHAMROCK LANDFILL, INC.
CLOQUET, MINNESOTA	

SHEET TITLE				PHOTO LOCATIONS			
DWN BY	CHK'D	APP'D	DWG DATE	JAN. 2025			
JVB	KM	BS	SCALE	AS NOTED			
PROJECT NO.	SHEET NO.		FIGURE 1		REV NO.		
227704387					0		



REV	REVISION DESCRIPTION	DWN	APP	REV DATE

SEAL

SUB CONSULTANT

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**Stantec**



PROJECT TITLE
2024 CCR INSPECTION REPORT



SKB ENVIRONMENTAL CLOQUET LANDFILL, INC.
f/n/a SHAMROCK LANDFILL, INC.



CLOQUET, MINNESOTA

SHEET TITLE			
SITE MAP			
DWN BY	CHK'D	APP'D	DWG DATE
JVB	KM	BS	JAN. 2025
PROJECT NO.		SCALE	
227704387		AS NOTED	
SHEET NO.		REV NO.	
FIGURE 2		0	



Client:	SKB Environmental	Project:	2024 CCR
Site Name:	Cloquet Landfill	Site Location:	Cloquet, MN
Photograph ID: 1			
Photo Location: Location 1			
Direction: West			
Survey Date: 10/14/2024			
Comments:			
Photograph ID: 2			
Photo Location: Location 2			
Direction: East			
Survey Date: 10/14/2024			
Comments:			



Client:	SKB Environmental	Project:	2024 CCR
Site Name:	Cloquet Landfill	Site Location:	Cloquet, MN
Photograph ID: 3			
Photo Location: Location 2			
Direction: West			
Survey Date: 10/14/2024			
Comments:			
Photograph ID: 4			
Photo Location: Location 3			
Direction: West			
Survey Date: 10/14/2024			
Comments:			


Client:	SKB Environmental	Project:	2024 CCR
Site Name:	Cloquet Landfill	Site Location:	Cloquet, MN
Photograph ID: 5			
Photo Location: Location 4			
Direction: East			
Survey Date: 10/14/2024			
Comments:			
Photograph ID: 6			
Photo Location: Location 4			
Direction: South			
Survey Date: 10/14/2024			
Comments:			



Client:	SKB Environmental	Project:	2024 CCR
Site Name:	Cloquet Landfill	Site Location:	Cloquet, MN
Photograph ID: 7			
Photo Location: Location 5			
Direction: South			
Survey Date: 10/14/2024			
Comments:			
Photograph ID: 8			
Photo Location: Location 6			
Direction: North			
Survey Date: 10/14/2024			
Comments:			


Client:	SKB Environmental	Project:	2024 CCR
Site Name:	Cloquet Landfill	Site Location:	Cloquet, MN
Photograph ID: 9			
Photo Location: Location 7			
Direction: North			
Survey Date: 10/14/2024			
Comments:			
Photograph ID: 10			
Photo Location: Location 7			
Direction: East			
Survey Date: 10/14/2024			
Comments:			

Client:	SKB Environmental	Project:	2024 CCR
Site Name:	Cloquet Landfill	Site Location:	Cloquet, MN
Photograph ID: 11			
Photo Location: Location 8			
Direction: East			
Survey Date: 10/14/2024			
Comments:			
Photograph ID: 12			
Photo Location: Location 9			
Direction: West			
Survey Date: 10/14/2024			
Comments:			

Client:	SKB Environmental	Project:	2024 CCR
Site Name:	Cloquet Landfill	Site Location:	Cloquet, MN
Photograph ID: 13			
Photo Location: Location 9			
Direction: North			
Survey Date: 10/14/2024			
Comments:			
Photograph ID: 14			
Photo Location: Location 10			
Direction: North			
Survey Date: 10/14/2024			
Comments:			

Client:	SKB Environmental	Project:	2024 CCR
Site Name:	Cloquet Landfill	Site Location:	Cloquet, MN
Photograph ID: 15			
Photo Location: Location 11			
Direction: South			
Survey Date: 10/14/2024			
Comments:			
Photograph ID: 16			
Photo Location: Location 12			
Direction: North			
Survey Date: 10/14/2024			
Comments:			

Client:	SKB Environmental	Project:	2024 CCR
Site Name:	Cloquet Landfill	Site Location:	Cloquet, MN
Photograph ID: 17			
Photo Location: Location 13			
Direction: North			
Survey Date: 10/14/2024			
Comments:			
Photograph ID: 18			
Photo Location: Location 13			
Direction: West			
Survey Date: 10/14/2024			
Comments:			

Client:	SKB Environmental	Project:	2024 CCR
Site Name:	Cloquet Landfill	Site Location:	Cloquet, MN
Photograph ID: 19			
Photo Location: Location 14			
Direction: South			
Survey Date: 10/14/2024			
Comments:			