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To:	Geoff Strack, P.E. Waste Connections	From:	Brad Sullivan, P.E., Stantec
File:	227704387	Date:	January 7, 2023

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**Reference: SKB Rosemount Industrial Waste Facility 2022 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, Inc. owns and operates the SKB Rosemount Industrial Waste Facility (the Landfill or Facility herein), an industrial waste disposal facility operating under MPCA Solid Waste Permit SW-383, originally issued in January of 1992.

The site is located on a 236-acre parcel in Sections 19, 20 and 25 of Township 115 North, Range 18 West, in the City of Rosemount, Minnesota, which is in Dakota County. The site is located between Minnesota State Highway 55 (aka Courthouse Boulevard) and Dakota County Road 38, and is accessed via 13425 Courthouse Boulevard, Rosemount, MN 55068.

All industrial waste cells are permitted to accept CCR and operating records indicate that CCR Material is contained in Cells 1, 2, 3, and 6. See Figure 1 for a facility site plan.

## CCR Landfill Inspection (40 CFR § 257.84)

On October 24, 2022, Brad Sullivan, 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 for this annual reporting period;
- 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

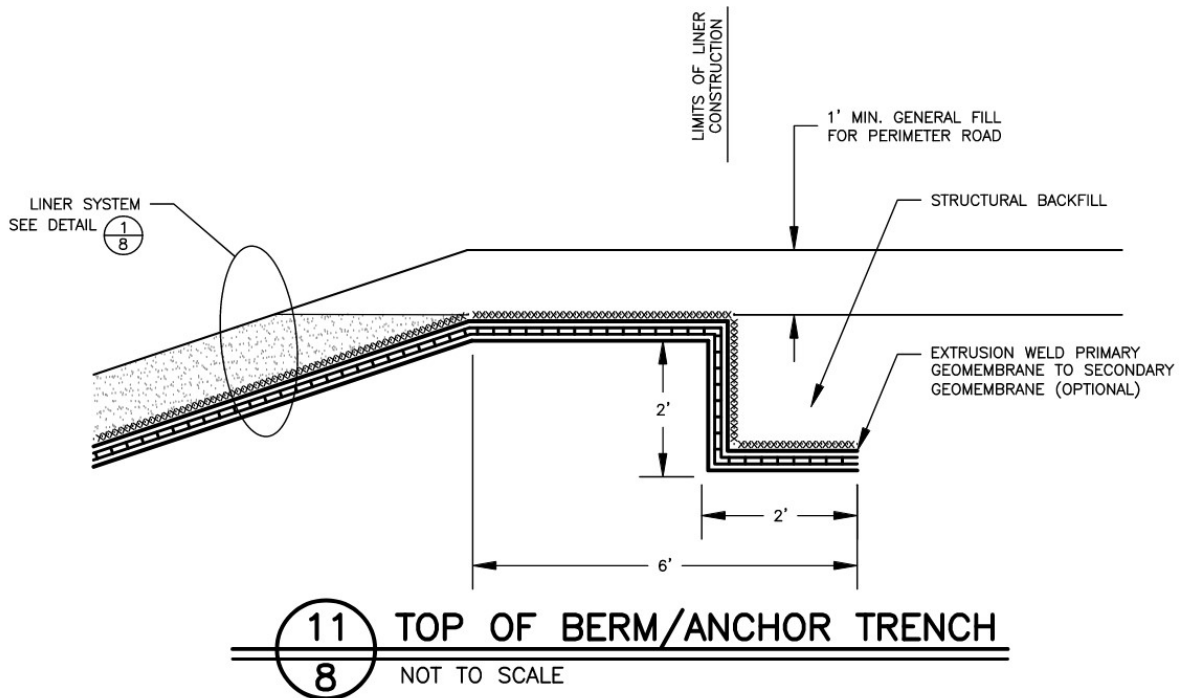
In general, most of the facility's landfill cell embankments were constructed using granular borrow material, which consisted of silty clay and clayey sand type soils. The fill was placed and compacted to 95% of Standard Proctor Dry Density in lift thicknesses ranging from 8 inches to 12 inches. The final subgrade surface was proof rolled prior to geosynthetics installation. The landfill lining systems varies from cell to cell, but all meet the requirements of CFR 257.70. A typical perimeter section from the 2021 Cell 6 Construction Drawings prepared by Tetra-Tech dated February 2021 is shown below.

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During the inspection, no signs of landfill cell embankment distress or waste slope instability were observed and no other structural or containment CCR landfill issues were noted. 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 of the landfill embankments and waste slopes were taken during the inspection. Figure 1 presents the photo locations, and Attachment 1 contains a photo log from the inspections.

### 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;*

Approximately 10.8 acres of Cell 6 were constructed during the summer of 2022. At the time of the inspection, the newly constructed Cell 6 area was complete, but awaiting operational approval and inactive. The portion of Cell 6 that was constructed in 2021 was actively receiving waste for disposal, including CCR throughout 2022.

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There were no other apparent changes to the embankment geometry of any other landfill cell when compared to the permit drawings or the past inspection reports other than the 2022 construction as noted above.

The annual aerial photogrammetry survey was performed on October 13, 2022, which the estimated in-place volume of total waste (including all accepted wastes) is based on. A comparison of the 2022 and 2021 aerial surveys confirm that the embankment and slope topography is substantially unchanged with no significant movement. The 2022 aerial 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 697,750 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*

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**

The SKB Rosemount Industrial Waste 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).

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### Conclusions and Recommendations

The SKB Rosemount 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 related to CCR operations identified during the inspection.

**Stantec Consulting Services Inc.**



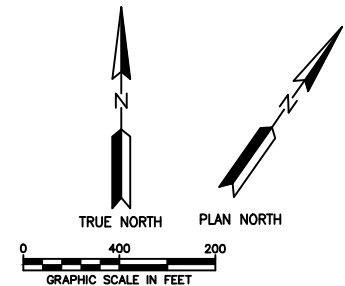
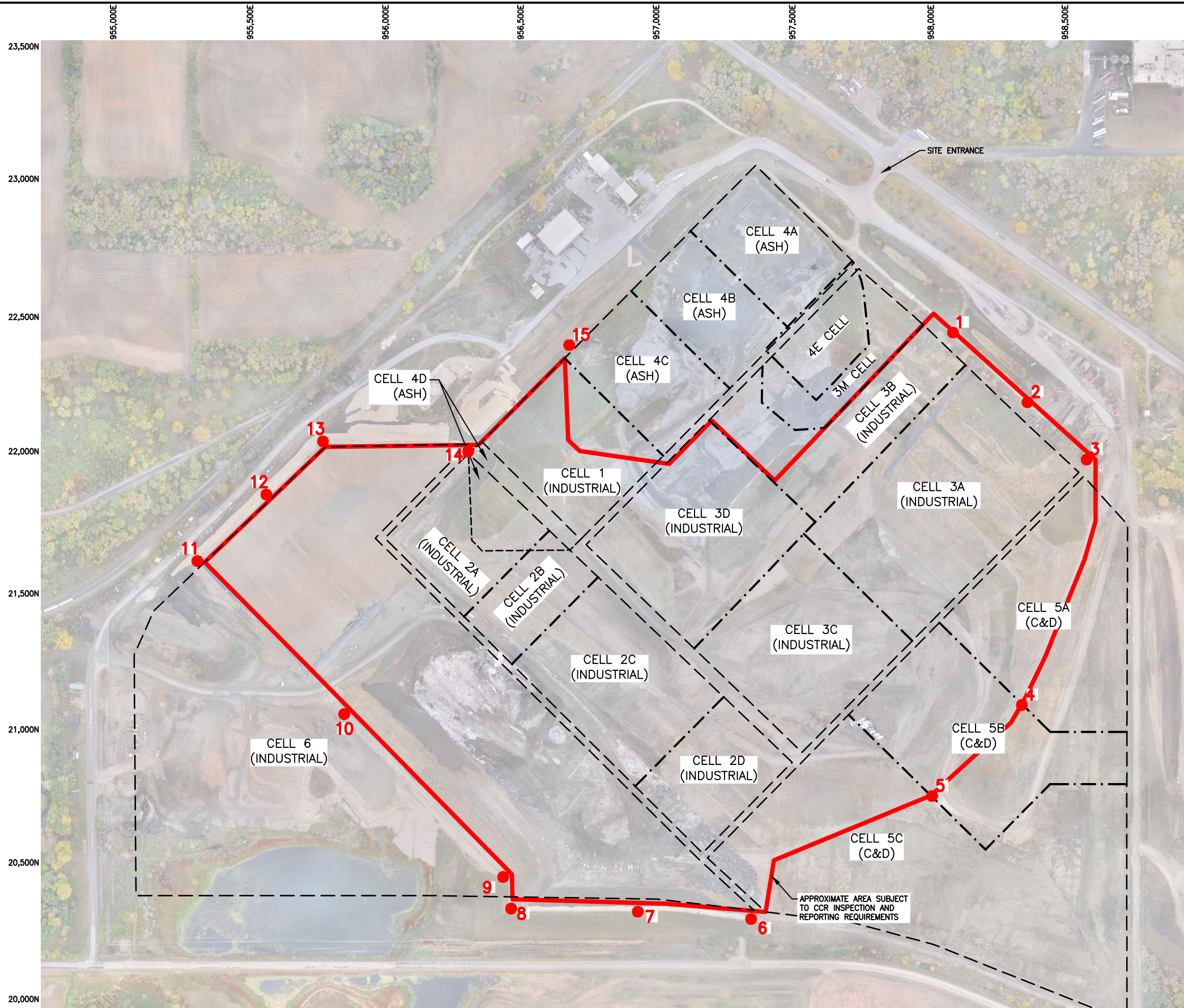
**Brad Sullivan, PE**  
Civil Engineer, Associate  
Cell: (603) 289-5257  
Brad.sullivan@stantec.com

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.



Brad Sullivan, P.E. # 56502  
January 7, 2023





LEGEND  
 ● PHOTO LOCATIONS

NOTE:  
 BASE MAPPING HAS BEEN UPDATED BY AERIAL SURVEY PROVIDED BY FIRMA TEK MAPPING COMPLETED ON OCTOBER 13, 2022.

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

SEAL

SUB CONSULTANT

PRIME CONSULTANT

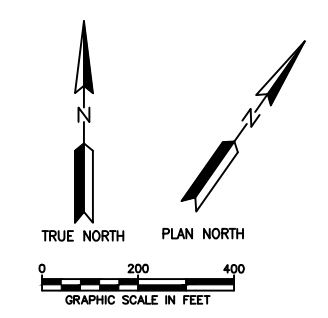
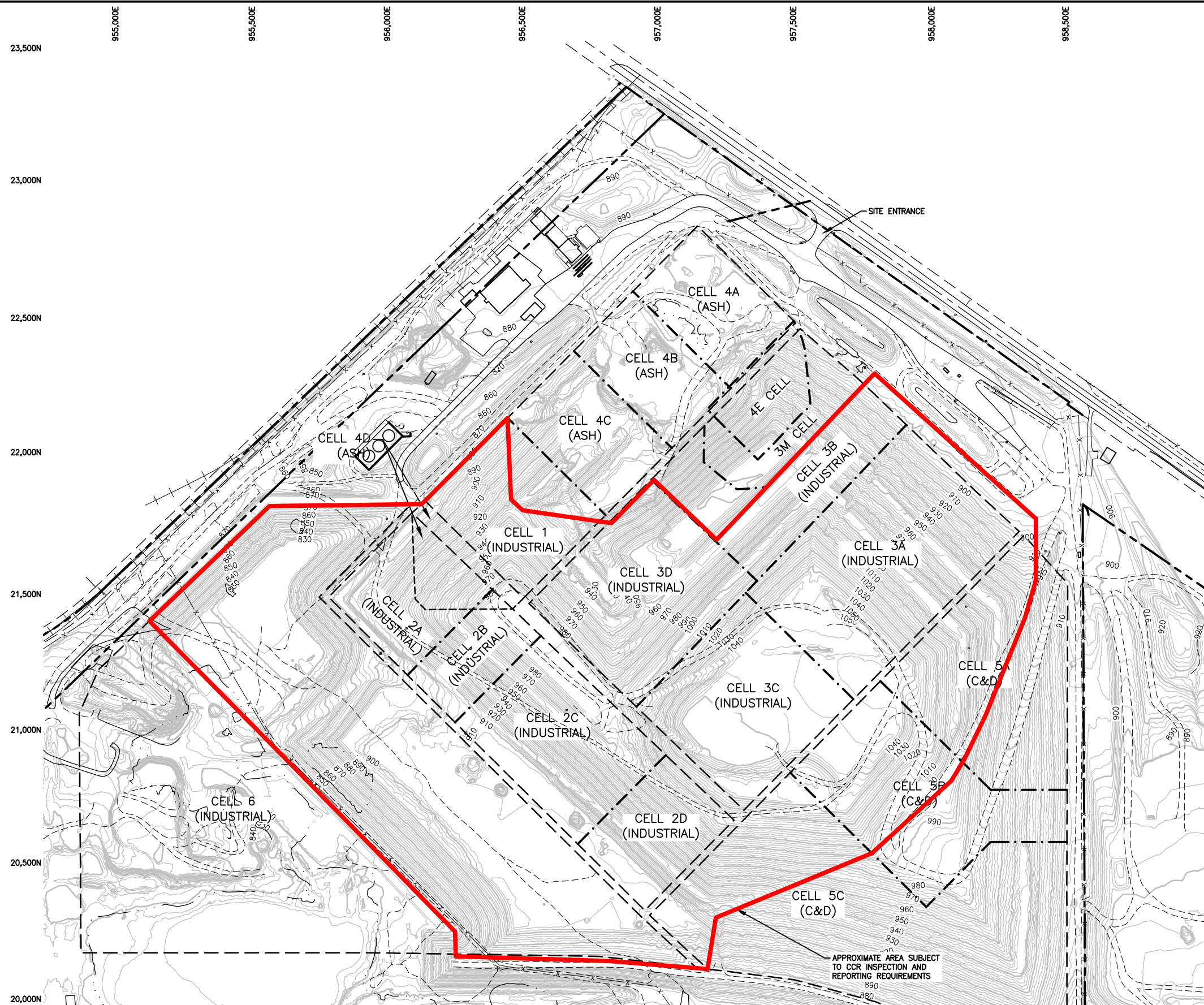
PROJECT TITLE  
 2022 CCR INSPECTION REPORT

SKB ROSEMOUNT LANDFILL  
 ROSEMOUNT, MINNESOTA

SHEET TITLE  
 PHOTO LOCATIONS

DWN BY JVB	CHK'D TJS	APP'D BWS	DWG DATE JAN. 2023
PROJECT NO. 227704387	SHEET NO. FIGURE 1	SCALE AS NOTED	REV NO. 0





NOTE:  
BASE MAPPING HAS BEEN UPDATED BY AERIAL  
SURVEY PROVIDED BY FIRMATEK MAPPING COMPLETED  
ON OCTOBER 13, 2022.

#	DESCRIPTION	XXX	XXX	XX/XX/XX
REV	REVISION DESCRIPTION	DWN	APP	REV DATE

SEAL

SUB CONSULTANT



PROJECT TITLE  
**2022 CCR INSPECTION REPORT**

SKB ROSEMOUNT LANDFILL  
ROSEMOUNT, MINNESOTA

SHEET TITLE			
<b>SITE MAP</b>			
DWN BY	CHK'D	APP'D	DWG DATE
JVB	TJS	BWS	JAN. 2023
SCALE			AS NOTED
PROJECT NO.	SHEET NO.	REV NO.	
227704387	FIGURE 2	0	



2022 Rosemount Landfill CCR Inspection



Location 1 – Looking Southeast, Cell 3A & 3B Waste Slope & Anchor Trench



Location 1 – Looking Northwest, Cell 3 Berm



2022 Rosemount Landfill CCR Inspection



Location 2 – Looking Northwest, Cell 3 Berm & Stormwater Pond



Location 2 – Looking Northwest, Cell 3 Anchor Trench and Waste Slope



2022 Rosemount Landfill CCR Inspection



Location 2 – Looking Southeast, Phase 3A Anchor Trench and Northeastern Waste Slope



Location 3 – Looking Northwest, Phase 3A Anchor Trench and Northeastern Waste Slope





Location 3 – Looking Southwest, Phase 3 East Corner at toe of Interior Access Road



Location 3 – Looking Southwest along Cell 3 Access road/Phase 3 Liner Limit





Location 4 – Looking Northeast, Phase 3 Liner Limit



Location 4 – Looking Southwest, Phase 3 Liner Limit



2022 Rosemount Landfill CCR Inspection



Location 5 – Looking Southwest, Phase 3 Liner Limit



Location 5 – Looking Northeast, Phase 3 Liner Limit



2022 Rosemount Landfill CCR Inspection



Location 6 – Cell 6D southeast corner, inner berm, looking west



Location 6 – Cell 6D, southeast corner, outer berm, looking west



2022 Rosemount Landfill CCR Inspection



Location 6 – Cell 6D, southeast corner, looking northwest



Location 7 – Cell 6D, midpoint of inner berm, looking east



2022 Rosemount Landfill CCR Inspection



Location 7 – Cell 6D, midpoint of outer berm, looking east



Location 7 – Cell 6D, midpoint of inner berm, looking west



2022 Rosemount Landfill CCR Inspection



Location 7 – Cell 6D, midpoint of outer berm, looking west



Location 8 – Cell 6D, southwest corner inner berm, looking east



2022 Rosemount Landfill CCR Inspection



Location 8 – Cell 6D, southwest corner outer berm, looking east



Location 8 – Cell 6D, southwest corner inner berm, looking west



2022 Rosemount Landfill CCR Inspection



Location 9 – Cell 6D, looking northwest



Location 9 – Cell 6D, looking south



2022 Rosemount Landfill CCR Inspection



Location 10 – Cell 6D southwest limit, looking southeast



Location 10 – Cell 6A southwestern limits, looking northwest



2022 Rosemount Landfill CCR Inspection



Location 11 – Cell 6A/6D western limits, looking southeast



Location 11 – Cell 6A northwestern top of berm, looking northeast



2022 Rosemount Landfill CCR Inspection



Location 11 – Cell 6A northwestern outer berm, looking northeast



Location 12 – Cell 6A midpoint of northwestern top of berm, looking northeast



2022 Rosemount Landfill CCR Inspection



Location 12 – Cell 6A midpoint of northwestern inner berm, looking southwest



Location 12 – Cell 6A midpoint of northwestern outer berm, looking southwest



2022 Rosemount Landfill CCR Inspection



Location 13 – Cell 6A northwestern top of berm, looking southwest



Location 13 – Cell 6A northern top of berm, looking northeast



2022 Rosemount Landfill CCR Inspection



Location 13 – Cell 6A northern outer berm, looking northeast



Location 14 – Cell 6A northern top of berm, looking southwest



2022 Rosemount Landfill CCR Inspection



Location 14 – Cell 6A northern outer berm, looking southwest



Location 14 – Cell 1 northwestern berm, looking northeast



2022 Rosemount Landfill CCR Inspection



Location 15 – Cell 1 Toe of Waste Slope, looking southwest



Location 15 – Cell 1 edge of cap, looking south