

Technical Memo



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To: Geoff Strack, P.E., Waste Connections
From: Brad Sullivan, P.E., Wenck Associates, Inc.
Date: January 9, 2019
Subject: WCI Austin Landfill, LLC – 2018 Annual CCR Inspection
Wenck Project # B3053-0139

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.

A handwritten signature in black ink, appearing to read 'Brad Sullivan', is written over a horizontal line.

Bradley W Sullivan
PE # 56502

January 9, 2019

Purpose

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

Background and Applicability

WCI Austin Landfill, LLC owns and operates the WCI Austin Landfill, which is a Class III landfill facility that operates under MPCA Solid Waste Permit SW-514 that was originally issued in 1996. The facility is accessed via 52563 243rd St, Austin, MN, which is located off and State Highway 218, north of Austin, MN.

Landfill cells Phase 1 through 5 are currently permitted. Phase 1 is unlined and has not received any CCR material. Phase 2 is composite lined with a portion constructed as an overlay liner on Cell 1's southern slope. Construction of Phase 4 was completed in 2018 and is immediately north of Phase 3. Currently operations are split between the upper lifts of Phase 2 and 3 and the initial lower lifts of Phase 4. The site began receiving CCR material in June of 2015 and it has all been placed in the various Phases 2 through 4.

See Figure 1 which is a facility site plan.

CCR Landfill Inspection (40 CFR § 257.84)

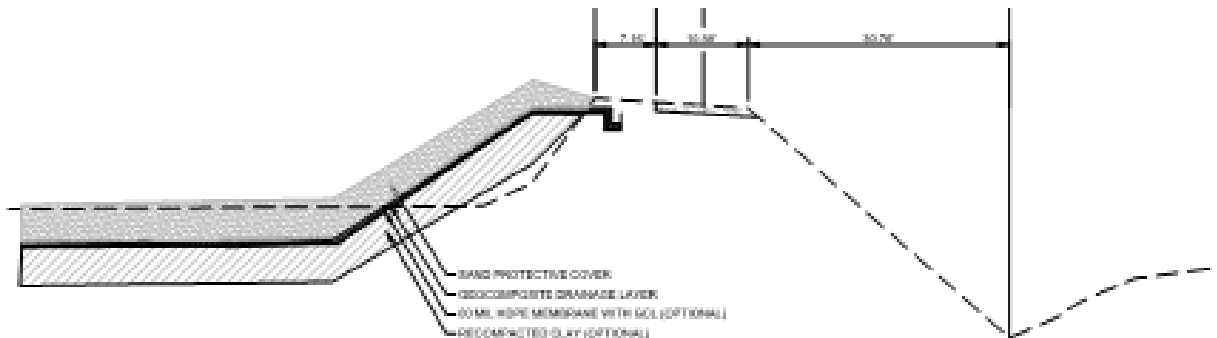
On November 6, 2018, Mr. Geoff Strack, P.E. of Waste Connections and Mr. Brad Sullivan, P.E., of Wenck and conducted the on-site inspection of the CCR landfill. As part of the inspection, the following operating and inspection records were reviewed:

- ▲ 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
- ▲ Previous periodic structural stability assessments required under § 257.73(d).

It should be noted that §257.74 does not apply as the site is not new, nor is it a lateral expansion of an existing impoundment/landfill, therefore this is not addressed.

Landfill Cell Design

In general, the facility's landfill cell embankments were constructed using on-site and imported borrow materials. A typical perimeter section, taken from the Cell 2, Phase 2 Construction Documentation Report, prepared by CRA in November, 2012 is shown below.



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;*

The Phase 4 landfill expansion construction was completed in MONTH 2018. The northern limit of the expansion is terminated with "rain flap" with the primary liner running out for future connection. The east and west embankments appeared per the Record Drawings.

There were no apparent changes to the embankment geometry of Cells 1, 2, 3, or 4 when compared to the permit drawings or the past inspection reports.

The annual aerial photogrammetry survey was performed on November 12, which the estimated in-place volume is based on. A comparison 2018 and 2017 aerial survey confirm that the embankment and slope topography is substantially unchanged with no significant movement. The 2018 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 51,900 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.

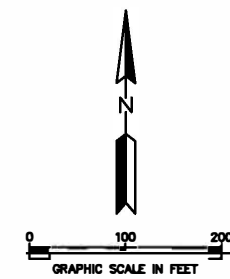
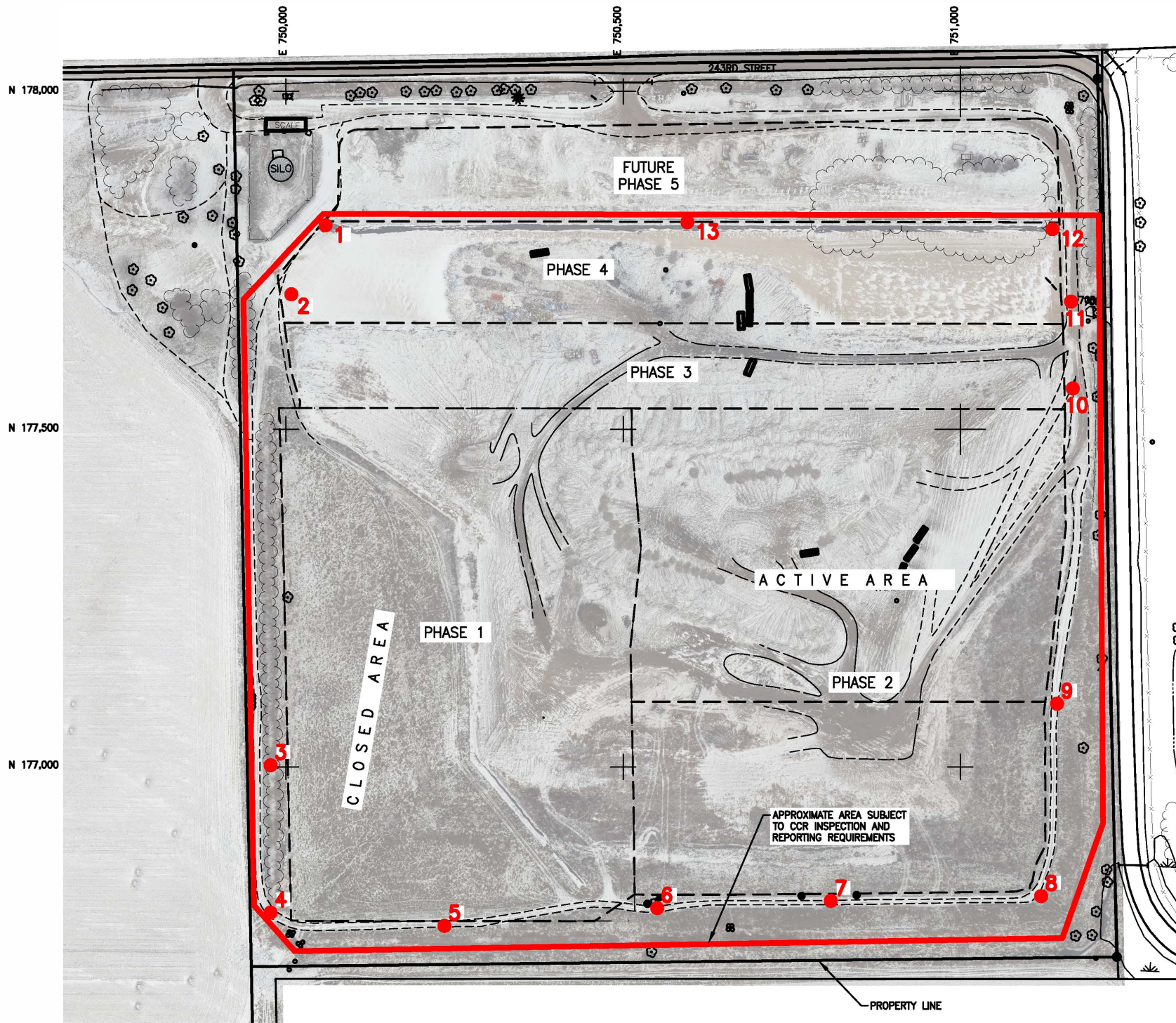
Notification Requirements

The WCI Austin 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

The WCI Austin Landfill facility has been constructed in 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 that were identified during the inspection.



LEGEND
 ● PHOTO LOCATIONS

NOTE:
 BASE MAPPING HAS BEEN UPDATED BY AERIAL SURVEY PROVIDED BY CONTINENTAL MAPPING COMPLETED ON NOVEMBER 14, 2018.

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

SEAL

SUB CONSULTANT

PRIME CONSULTANT

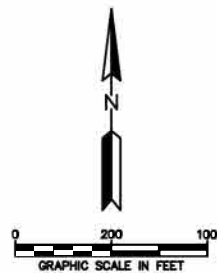
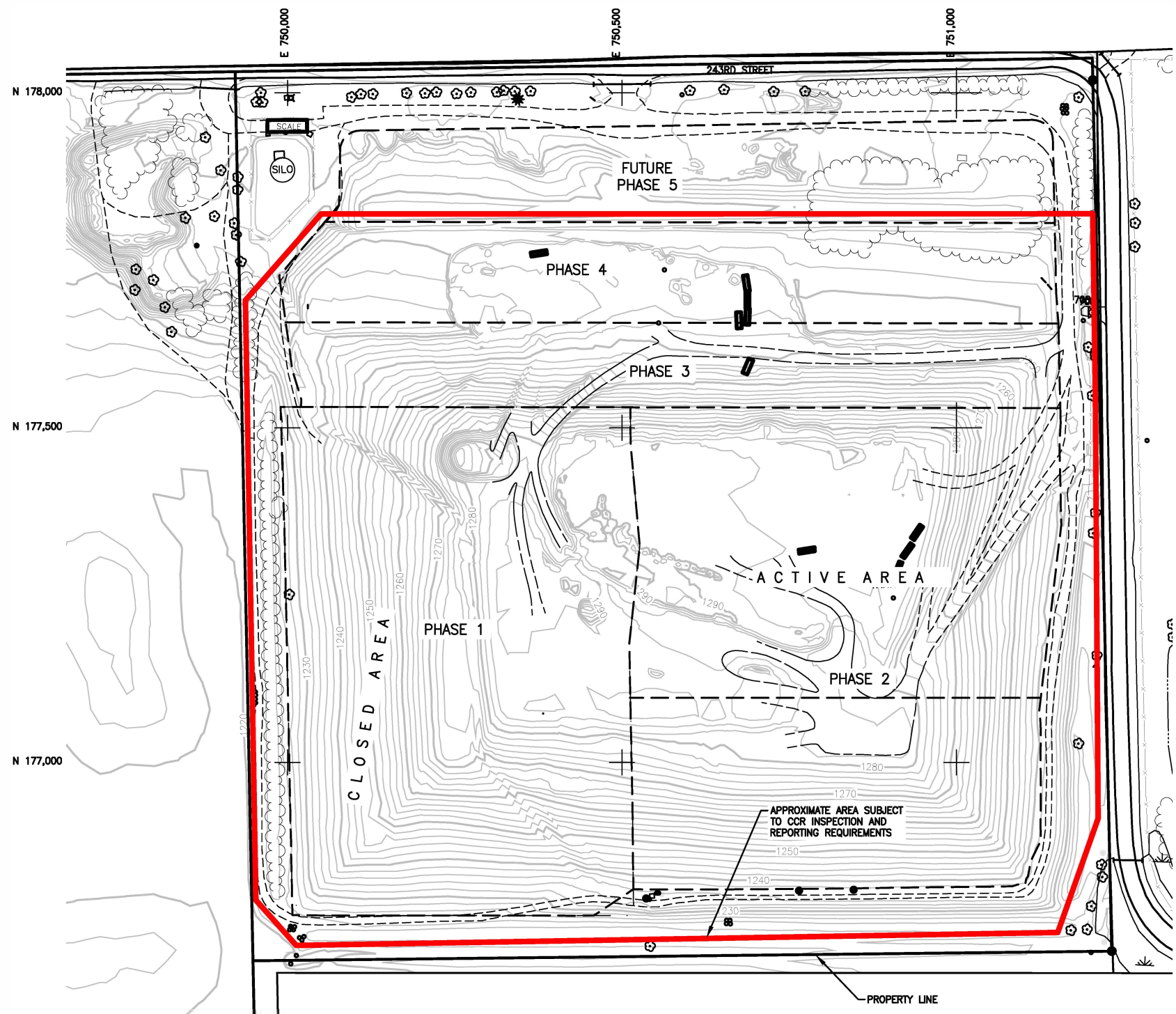
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1800 PIONEER CREEK CENTER 763-479-4242
 MAPLE PLAIN, MINNESOTA 763-749-4200

PROJECT TITLE
2018 CCR INSPECTION REPORT

WCI AUSTIN LANDFILL, LLC
 AUSTIN, MINNESOTA

SHEET TITLE				
PHOTO LOCATIONS				
DWN BY	CHK'D	APP'D	DWG DATE	JAN. 2019
JVB	DMP	DMP	SCALE	AS NOTED
PROJECT NO.	SHEET NO.	REV NO.		
3053-0139	FIGURE 1	0		



NOTE:
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1800 PIONEER CREEK CENTER 763-479-4242
 MAPLE PLAIN, MINNESOTA 763-749-4200

PROJECT TITLE
 2018 CCR INSPECTION REPORT

SKB (AUSTIN) ENVIRONMENTAL, LLC
 AUSTIN, MINNESOTA

SHEET TITLE			
SITE MAP			
DWN BY	CHK'D	APP'D	DWG DATE
JVB	DMP	DMP	JAN. 2018
PROJECT NO.		SCALE	
3053-0139		AS NOTED	
SHEET NO.		REV NO.	
FIGURE 2		0	

WCI Austin Landfill
2018 Site Inspection Report Photo List
Inspection Date: 11/6/2018

Photo #	Photo Location	View Direction	Description
1	1	East	Phase 4 Northern Rain Flap
2	1	Southeast	New Phase 4 Cell & Phase 3 Waste Slope
3	1	Southwest	Looking Southwest, Phase 4 Anchor Trench
4	2	Northeast	Phase 4 Anchor Trench
5	2	South	Phase 3/1 Western Perimeter
6	2	East	Phase 4/3 Connection & Phase 3 Northern Interior Slope
7	3	South	Toe of Phase 1 Western Slope
8	3	North	Toe of Phase 1 Western Slope
9	4	North	Toe of Phase 1 Western Slope
10	4	East	Toe of Phase 1 Southern Slope
11	5	West	Toe of Phase 1 Southern Slope
12	5	East	Toe of Phase 1 Southern Slope
13	6	West	Phase 1 Southern Slope
14	6	West	Phase 1/2 Overlay Liner & Southern Slope
15	6	East	Phase 2 Southern Slope
16	6	East	Phase 2 Southern Berm
17	7	West	Phase 2 Southern Perimeter Road and Slope
18	7	West	Phase 2 Southern Berm
19	7	East	Phase 2 Southern Perimeter Road and Slope
20	7	East	Phase 2 Southern Berm
21	8	West	Phase 2 Southern Perimeter Road and Slope
22	8	West	Phase 2 Southern Berm
23	8	North	Phase 2 Eastern Slope
24	8	North	Phase Eastern Berm
25	9	South	Phase 2 Eastern Perimeter Road & Slope
26	9	North	Phase 2 Eastern Perimeter Road & Slope
27	9	South	Phase 2 Eastern Berm
28	9	North	Phase 2 Eastern Berm
29	10	North	Eastern Perimeter Road
30	10	South	Phase 2 Eastern Slope and Interior Access Road Entrance
31	11	West	Phase 3/4 Connection, Phase 3 Northern Interior Waste Slope
32	11	North	Phase 4 Eastern Anchor Trench
33	12	South	Phase 4 Eastern Anchor Trench & Phase 3 Eastern Waste Slope
34	12	West	Phase 4 Northern Rain Flap
35	13	East	Phase 4 Northern Rain Flap
36	13	West	Phase 4 Northern Rain Flap

2018 Lansing Landfill CCR Inspection



Photo 1: Location 1 – Looking East, Phase 4 Northern Rain Flap



Photo 2: Location 1 – Looking Southeast, New Phase 4 Cell & Phase 3 Waste Slope

2018 Lansing Landfill CCR Inspection



Photo 3: Location 1 – Looking Southwest, Phase 4 Anchor Trench



Photo 4: Location 2 – Looking Northeast, Phase 4 Anchor Trench

2018 Lansing Landfill CCR Inspection



Photo 5: Location 2 – Looking South, Phase 3/1 Western Perimeter



Photo 6: Location 2 – Looking East, Phase 4/3 Connection & Phase 3 Northern Interior Slope

2018 Lansing Landfill CCR Inspection



Photo 7: Location 3 – Looking South, Toe of Phase 1 Western Slope



Photo 8: Location 3 – Looking North, Toe of Phase 1 Western Slope

2018 Lansing Landfill CCR Inspection



Photo 9: Location 4 – Looking North, Toe of Phase 1 Western Slope



Photo 10: Location 4 – Looking East, Toe of Phase 1 Southern Slope

2018 Lansing Landfill CCR Inspection



Photo 11: Location 5 – Looking West, Toe of Phase 1 Southern Slope



Photo 12: Location 5 – Looking East, Toe of Phase 1 Southern Slope

2018 Lansing Landfill CCR Inspection



Photo 13: Location 6 – Looking West, Phase 1 Southern Slope



Photo 14: Location 6 – Looking West, Phase 1/2 Overlay Liner & Southern Slope

2018 Lansing Landfill CCR Inspection



Photo 15: Location 6 – Looking East, Phase 2 Southern Slope



Photo 16: Location 6 – Looking East, Phase 2 Southern Berm

2018 Lansing Landfill CCR Inspection



Photo 17: Location 7 – Looking West, Phase 2 Southern Perimeter Road and Slope



Photo 18: Location 7 – Looking West, Phase 2 Southern Berm

2018 Lansing Landfill CCR Inspection



Photo 19: Location 7 – Looking East, Phase 2 Southern Perimeter Road and Slope



Photo 20: Location 7 – Looking East, Phase 2 Southern Berm

2018 Lansing Landfill CCR Inspection



Photo 21: Location 8 – Looking West, Phase 2 Southern Perimeter Road and Slope



Photo 22: Location 8 – Looking West, Phase 2 Southern Berm

2018 Lansing Landfill CCR Inspection



Photo 23: Location 8 – Looking North, Phase 2 Eastern Slope



Photo 24: Location 8 – Looking North, Phase Eastern Berm

2018 Lansing Landfill CCR Inspection



Photo 25: Location 9 – Looking South, Phase 2 Eastern Perimeter Road & Slope



Photo 26: Location 9 – Looking North, Phase 2 Eastern Perimeter Road & Slope

2018 Lansing Landfill CCR Inspection



Photo 27: Location 9 – Looking South, Phase 2 Eastern Berm



Photo 28: Location 9 – Looking North, Phase 2 Eastern Berm

2018 Lansing Landfill CCR Inspection



Photo 29: Location 10 – Looking North, Eastern Perimeter Road



Photo 30: Location 10 – Looking South, Phase 2 Eastern Slope and Interior Access Road Entrance

2018 Lansing Landfill CCR Inspection



Photo 31: Location 11 – Looking West, Phase 3/4 Connection, Phase 3 Norther Interior Waste Slope



Photo 32: Location 11 – Looking North, Phase 4 Eastern Anchor Trench

2018 Lansing Landfill CCR Inspection



Photo 33: Location 12 – Looking South, Phase 4 Eastern Anchor Trench & Phase 3 Eastern Waste Slope



Location 12 – Looking West, Phase 4 Northern Rain Flap

2018 Lansing Landfill CCR Inspection



Photo 35: Location 13 – Looking East, Phase 4 Northern Rain Flap



Location 13 – Looking West, Phase 4 Northern Rain Flap