Technical Memo

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To: **Geoff Strack, SKB Environmental, Inc.**

From: Dave Parenteau, PE (MN), Wenck Associates, Inc.

Date: January 14, 2016

Subject: Annual Inspection SKB Rosemount Industrial Waste Facility - Report of CCR Landfill Inspection
Wenck Project # B3053-0032

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.

David M. Parenteau Jan 14, 2016
PE # 41243

Purpose

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

Background and Applicability

SKB Environmental, Inc. owns and operates the SKB Rosemount Industrial Waste Facility, 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 and Dakota County Road 38. The attached Figure 1 presents an overview of the site.

There are 6 permitted disposal cells in the Landfill. Past operating records indicate that CCR Material is contained in Cells 2 and 3.

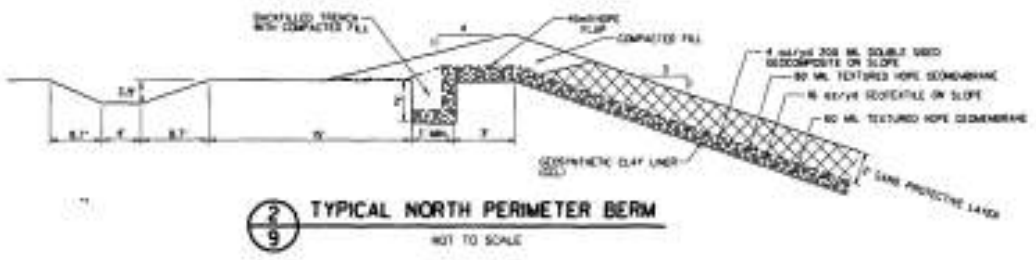
CCR Landfill Inspection (40 CFR § 257.84)

On December 28, 2015, Dave Parenteau conducted the on-site inspection the CCR Landfill. During the inspection the following activities were performed.

- Available information regarding status and condition of the CCR unit, including, but not limited to, files available in the operating record were reviewed. Past inspection reports were reviewed on site, and SKB Environmental, Inc. provided copies of cell construction documentation reports for review in preparing this report.

- The documentation reviewed covered the following topics
  - CCR unit design and construction information required by § 257.73(c)(1);
  - 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.
  - The results of inspections by a qualified person (contained below);
  - Results of previous annual inspections);

  In general, most landfill cell embankments were constructed using granular soils and placed as engineered fill, compacted to 95% of Standard Proctor Dry Density in lift thicknesses ranging from 8 inches to 12 inches. A typical perimeter section, taken from the Cell 3A Construction Documentation Report, prepared by Foth & Van Dyke in October, 2005 is shown below.



- A visual inspection of the CCR units to identify signs of distress or malfunction of the CCR unit and appurtenant structures; and

  There were no observed signs of distress or malfunction on either the CCR Impoundment or the CCR Landfill and their corresponding appurtenant structures.

  Photos taken during the inspection are provided in Attachment 1 and Figure 2 shows where the photos were 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;

There were no apparent changes from the geometry of the impoundment when compared to the permit drawings or the past construction documentation reports.

(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 455,000 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;
- Burrowing activity of varmints;

(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

SKB Environmental, Inc. will comply 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) by the January 18, 2016 deadline.

Conclusions and recommendations

The soils used for embankment construction have been granular in nature, and not subject to consolidation or softening with moisture. The cells are lined with a geomembrane ensuring that there is no leachate seeping through the embankment from the waste material. The landfill embankment crests are wide in width, have slopes no steeper than 3H:1V, and are relatively short in height, ranging from zero to approximately 20 feet in height. The slopes are well vegetated and the site is well run and maintained.

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.

Attachment 1

Photos

Photos of Coal Ash Inspection
SKB Industrial Waste Facility, Rosemount, MN
December 28, 2015

1. NW Outer Slope
   Bottom of Slope
   Facing NE

2. NW Outer Slope
   Middle of Slope
   Facing NE

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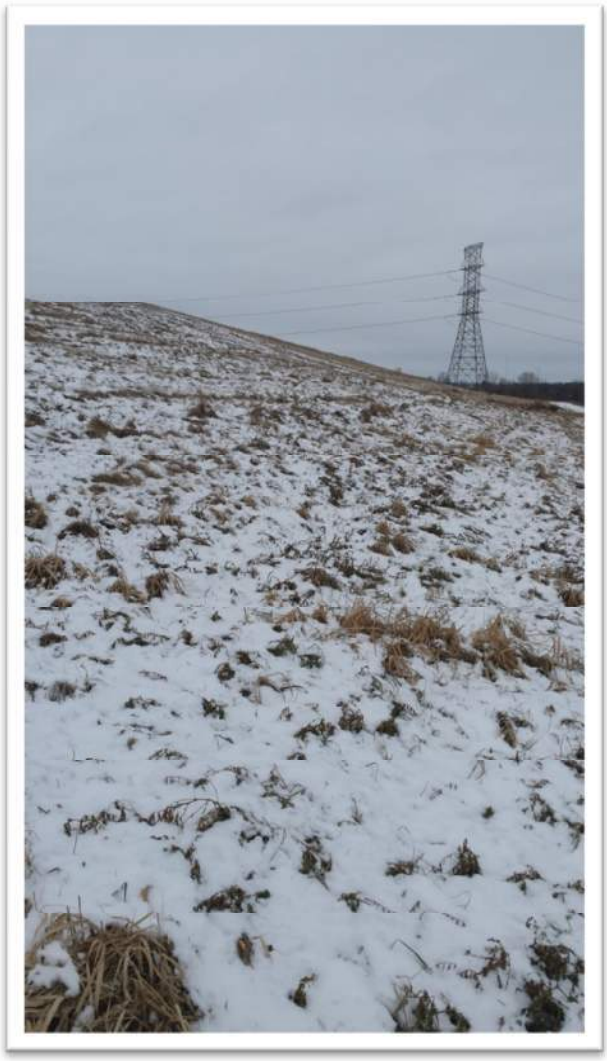
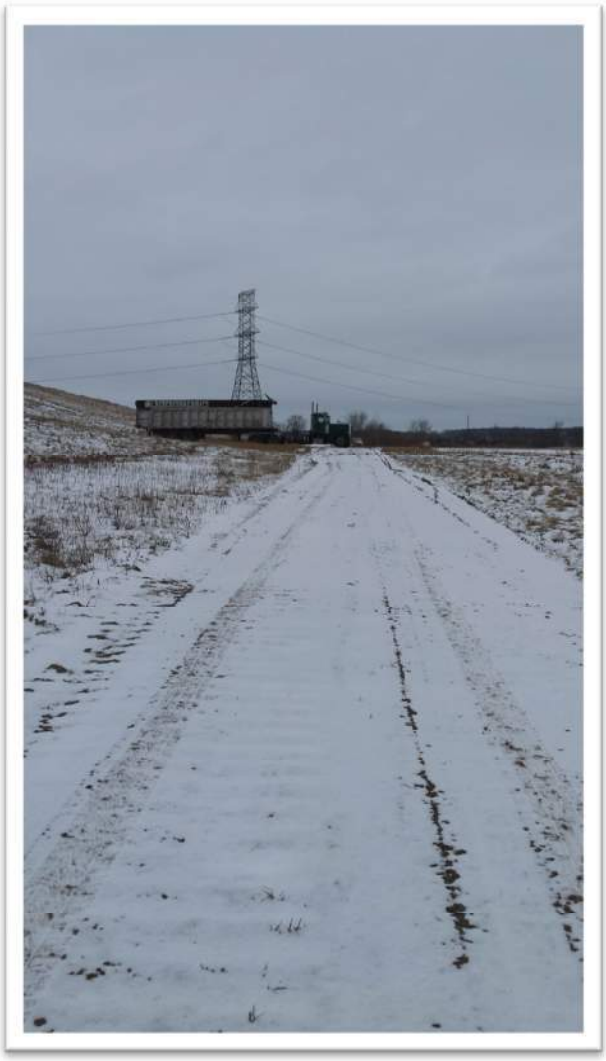
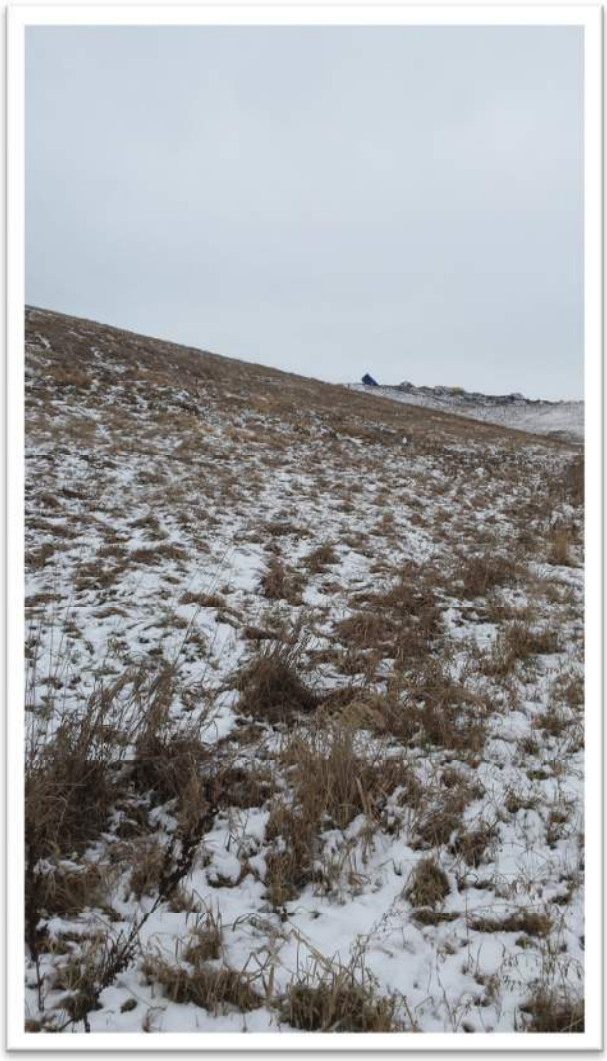
3. NW Outer Slope
Top of Slope
Facing NE



4. NW Outer Slope
Top of Slope
Facing SW

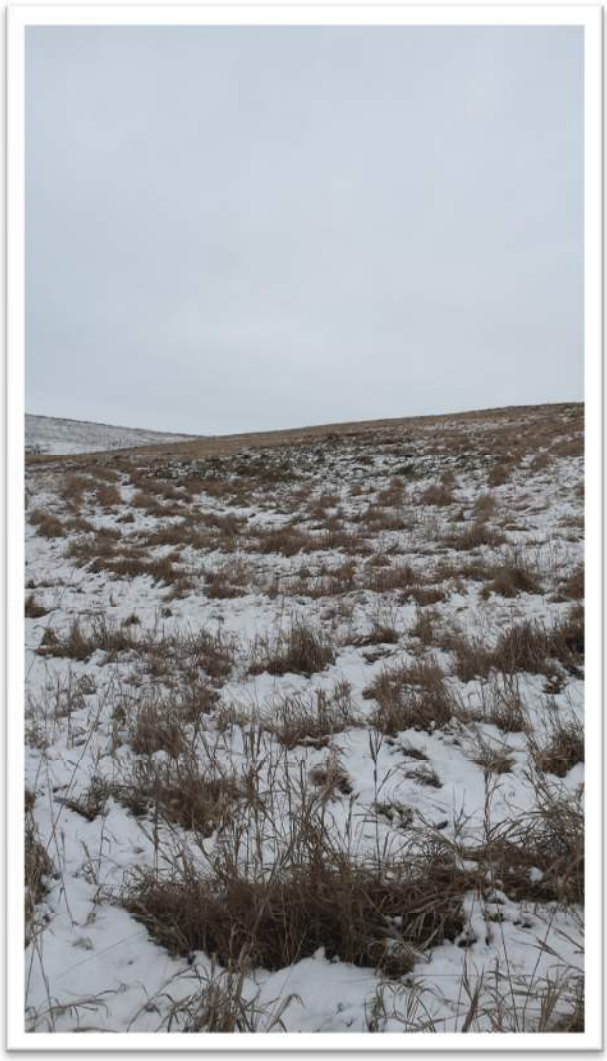


5. NW Outer Slope
   Middle of Slope
   Facing SW

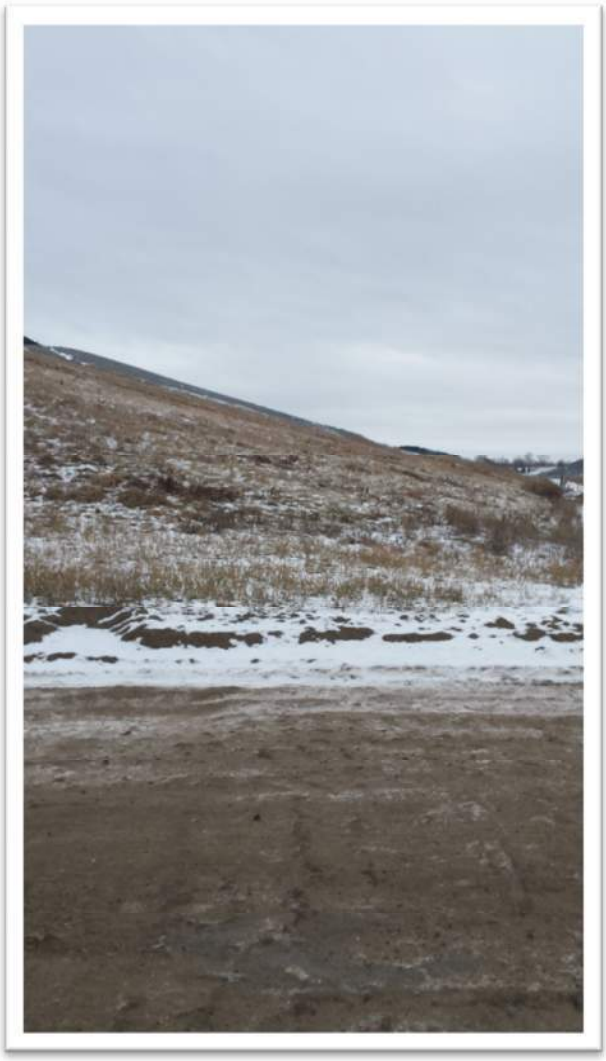


6. WSW Interior Slope
   Top of Slope
   Facing SE

7. WSW Interior Slope
   Middle of Slope
   Facing SE



8. WSW Interior Slope
   Bottom of Slope
   Facing SE



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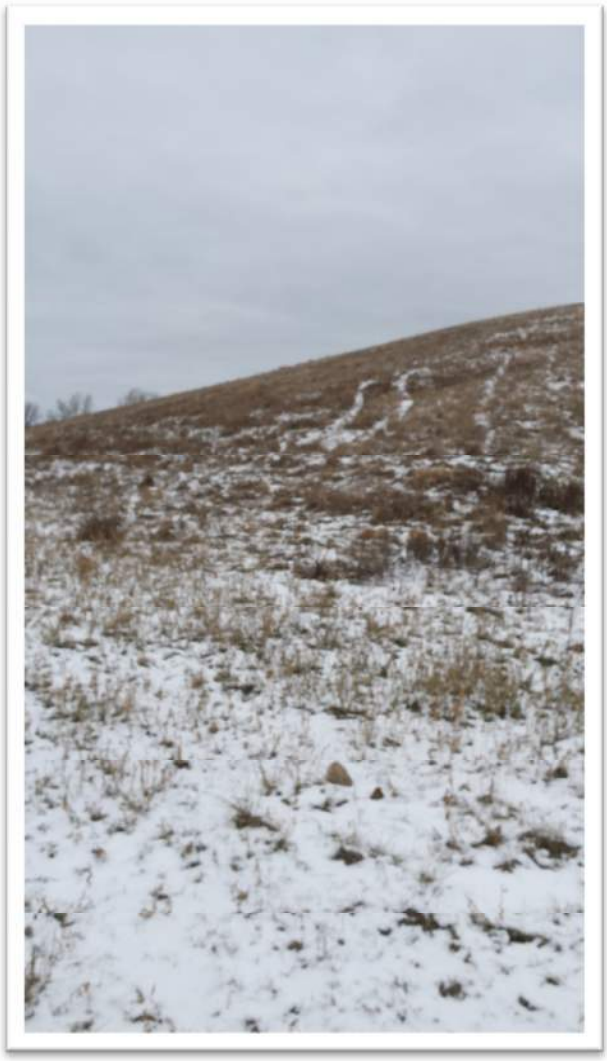
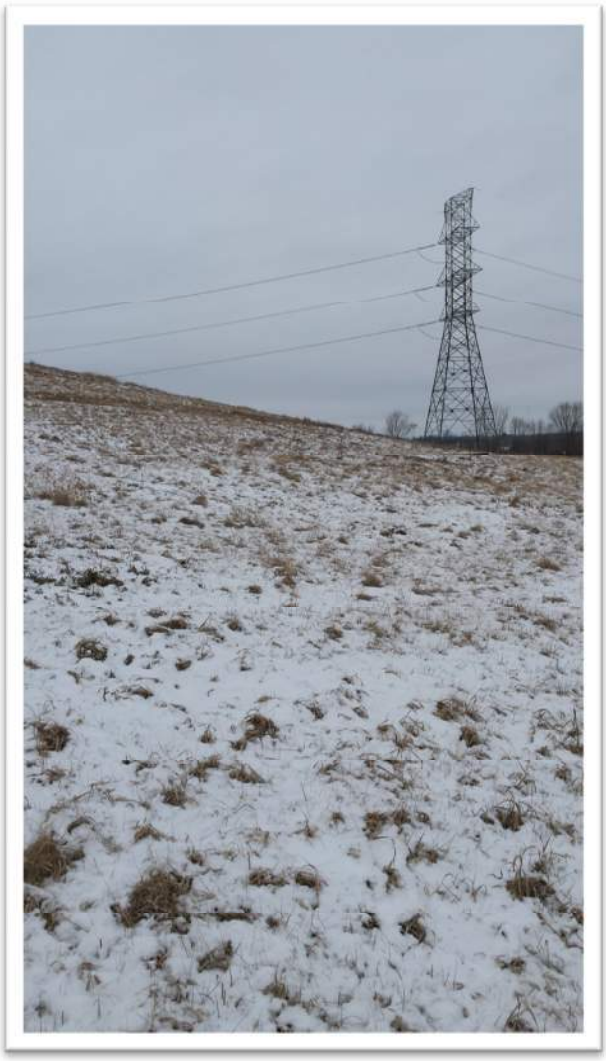
   Middle of Slope
   Facing NE



10. WSW Interior Slope
    Top of Slope
    Facing NW

11. WSW Interior Slope
Middle of Slope
Facing NW

12. WSW Interior Slope
Middle of Slope
Facing W



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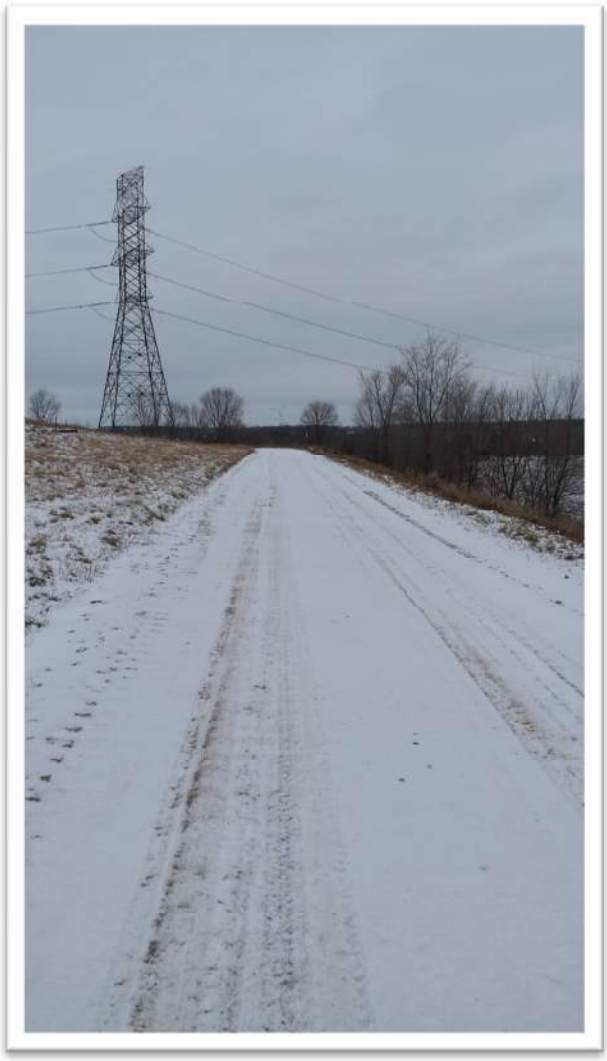
Top of Slope
Facing SW



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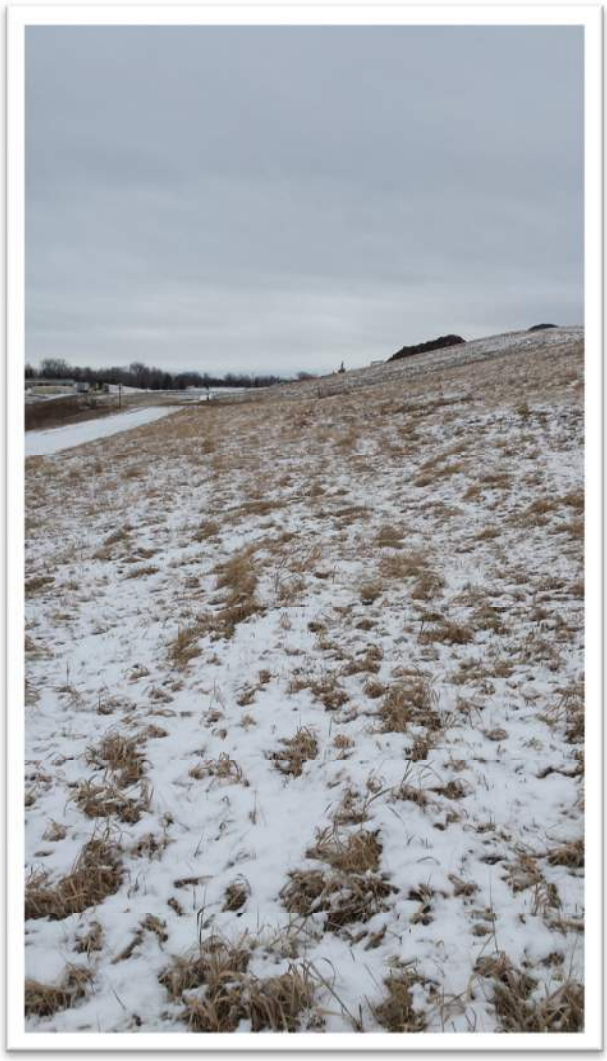
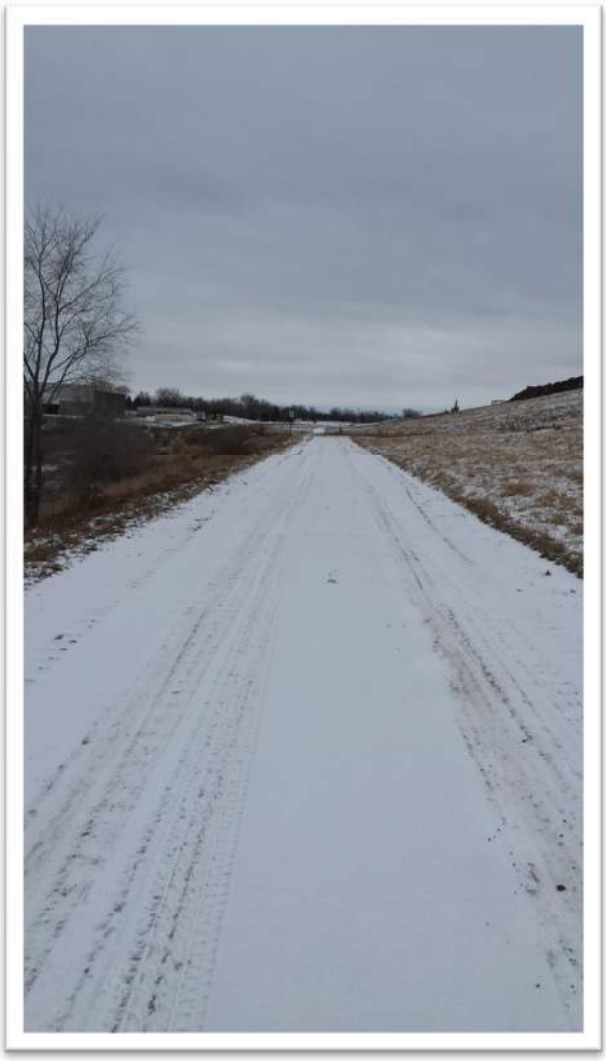
Middle of Slope
Facing SW

15. W Corner Outer Slope
Bottom of Slope
Facing SW

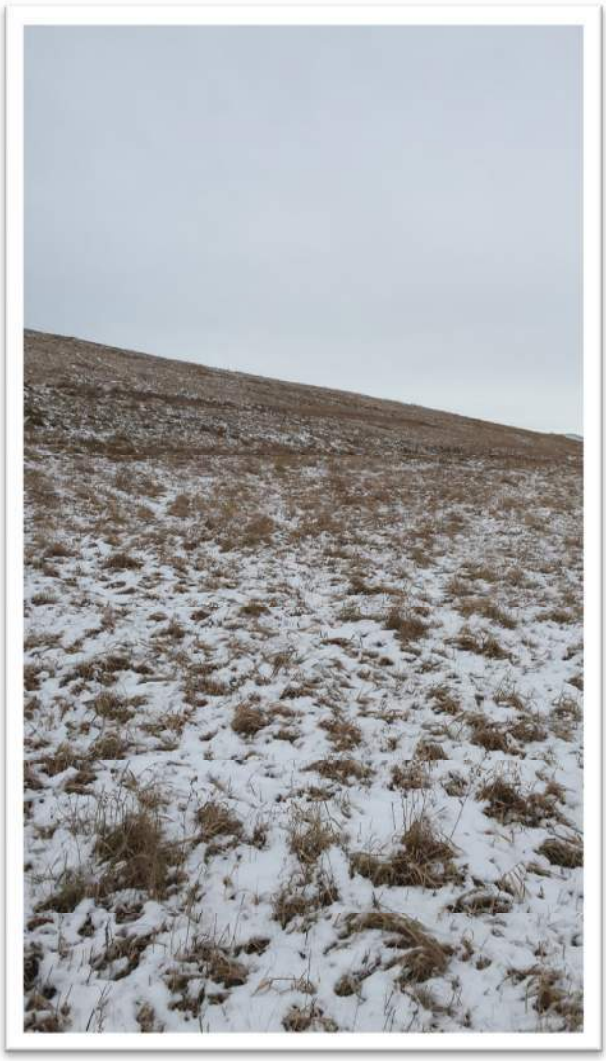


16. W Corner Outer Slope
Top of Slope
Facing NE



17. W Corner Outer Slope
Middle of Slope
Facing NE

18. W Corner Outer Slope
Bottom of Slope
Facing NE



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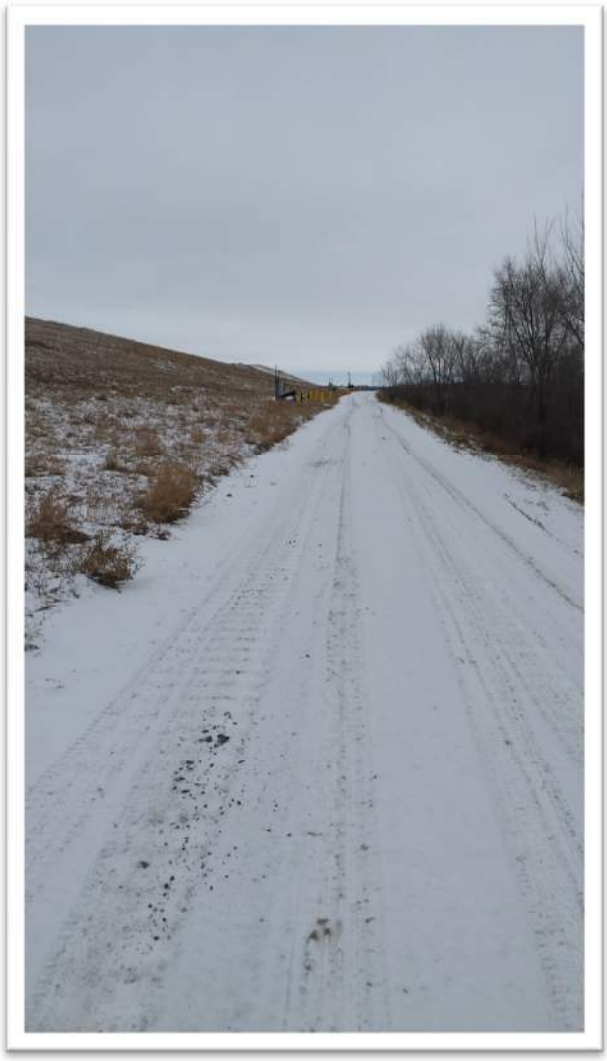
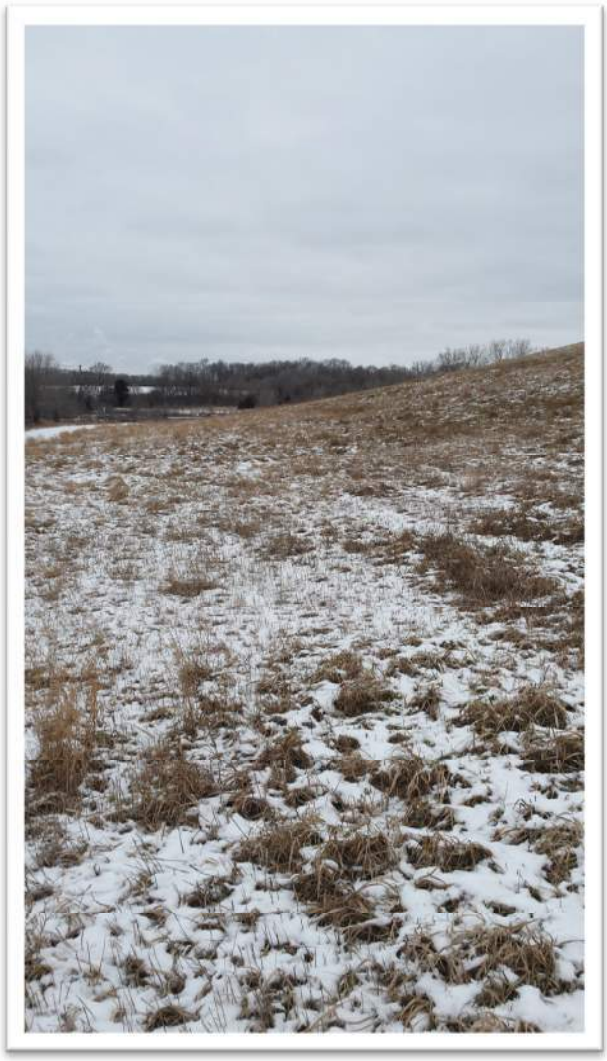
Top of Slope
Facing SE



20. SW Outer Slope
Middle of Slope
Facing SE

21. SW Outer Slope
Bottom of Slope
Facing SE



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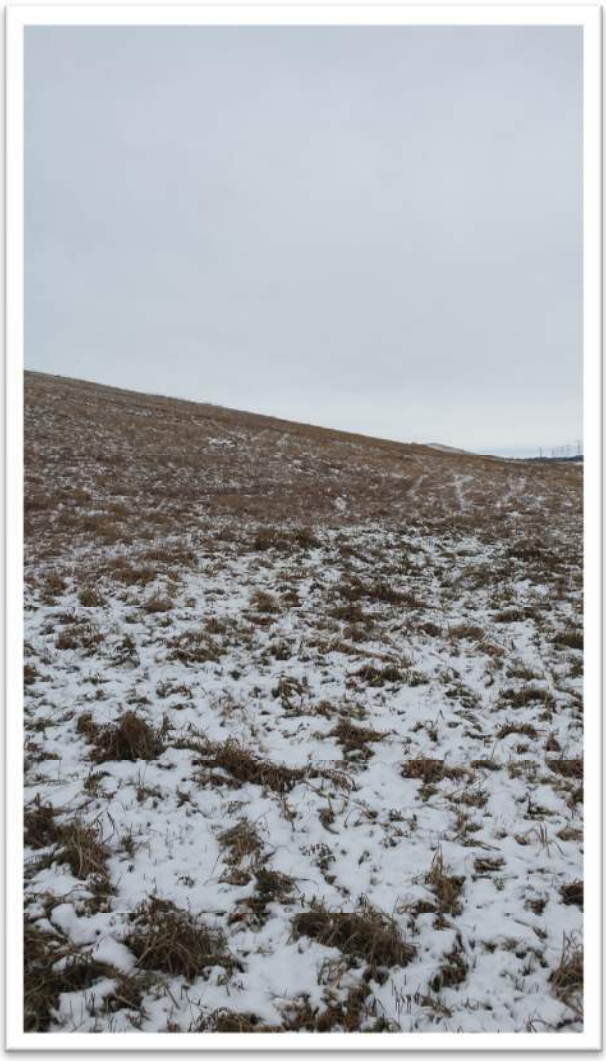
Top of Slope
Facing NW



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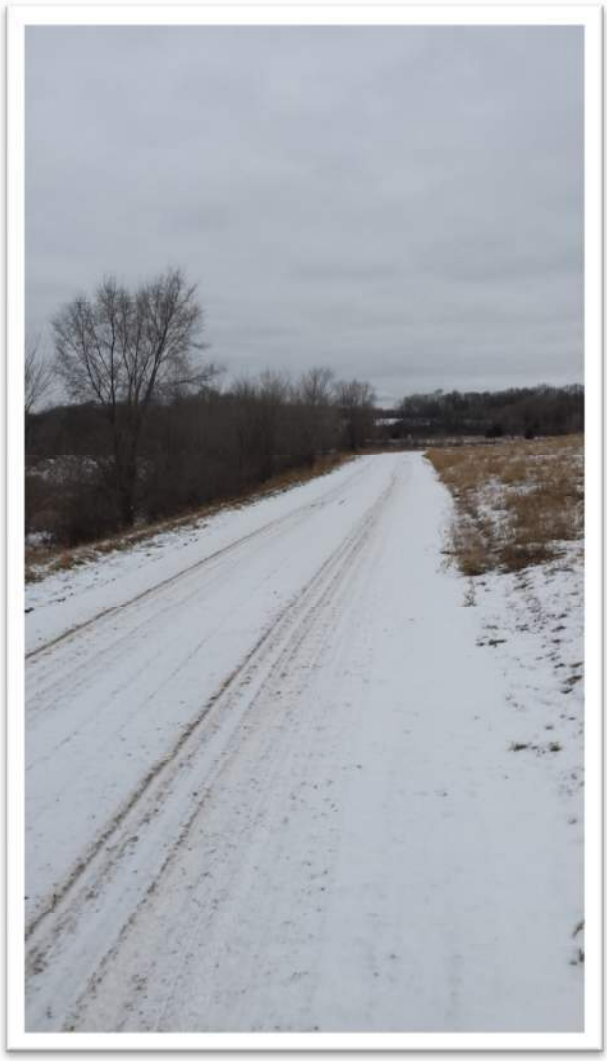
Top of Slope
Facing SE



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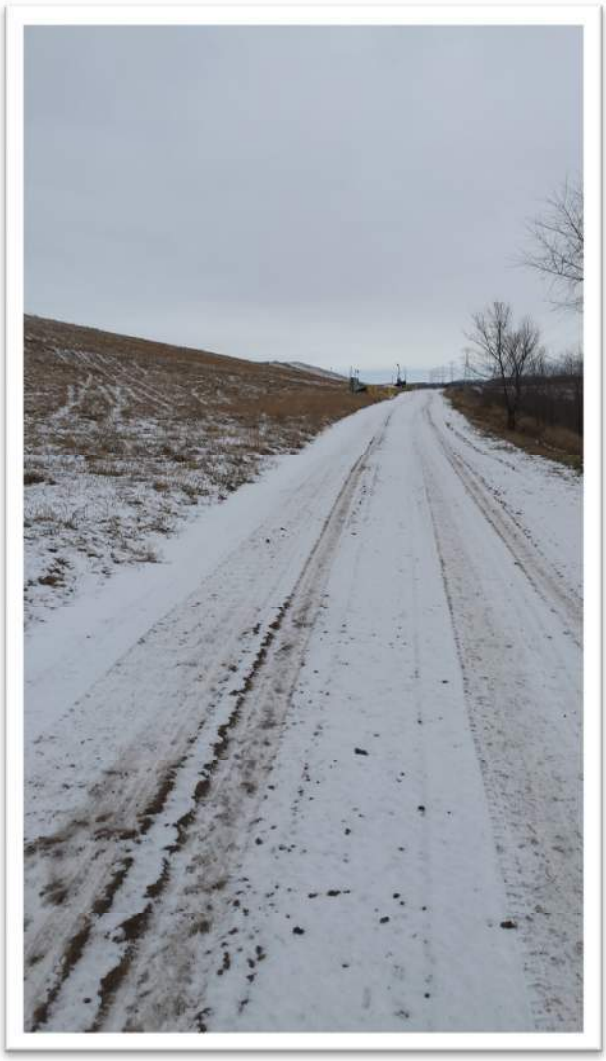
Middle of Slope
Facing NW

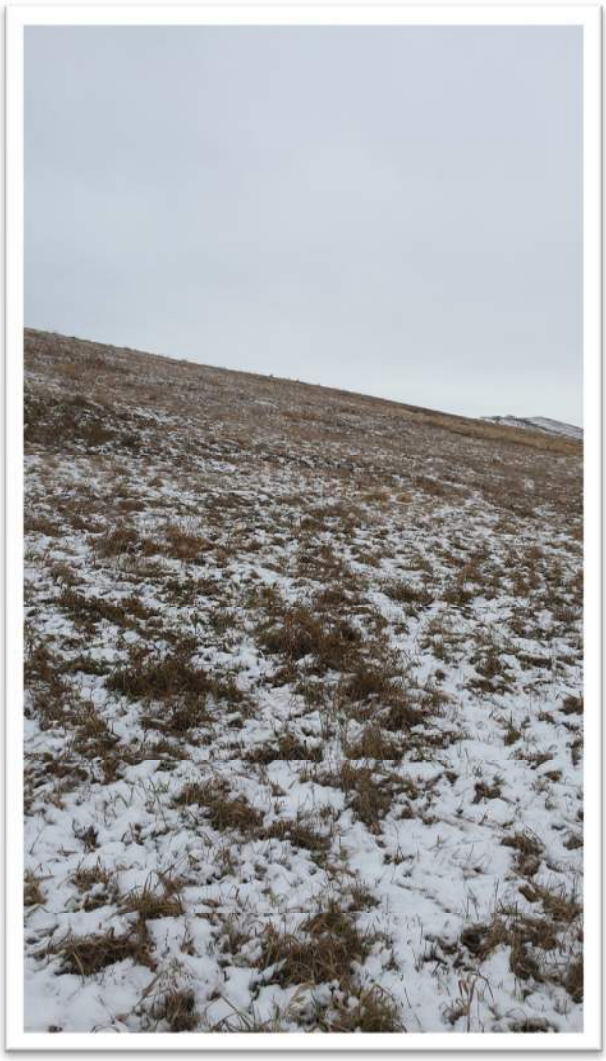


25. SW Outer Slope
Middle of Slope
Facing SE

26. SW Outer Slope
Bottom of Slope
Facing NW

27. SW Outer Slope
Bottom of Slope
Facing SE

28. SW Outer Slope
Top of Slope
Facing NW



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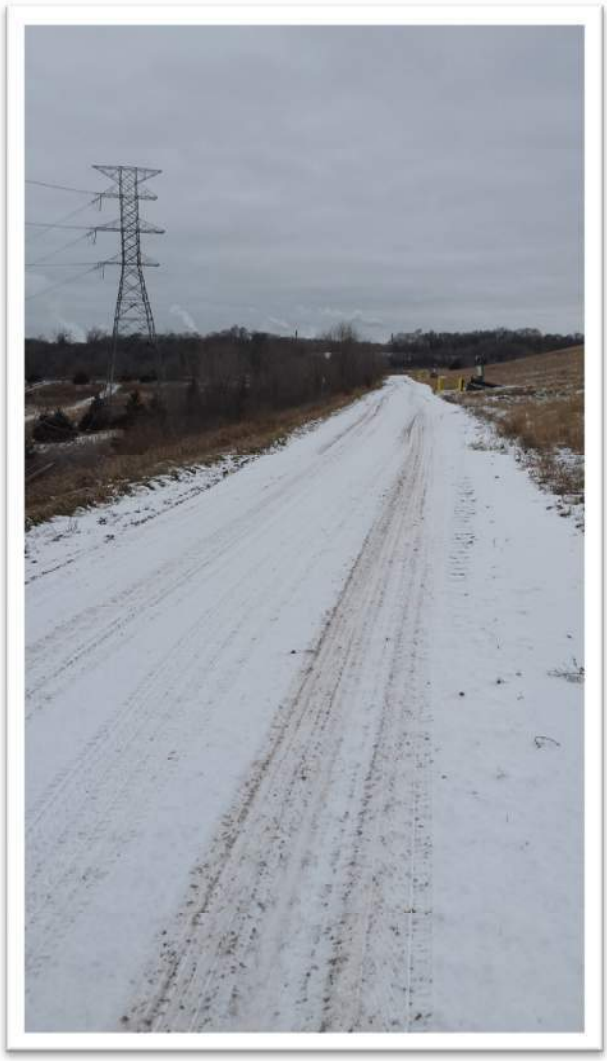
Top of Slope
Facing SE



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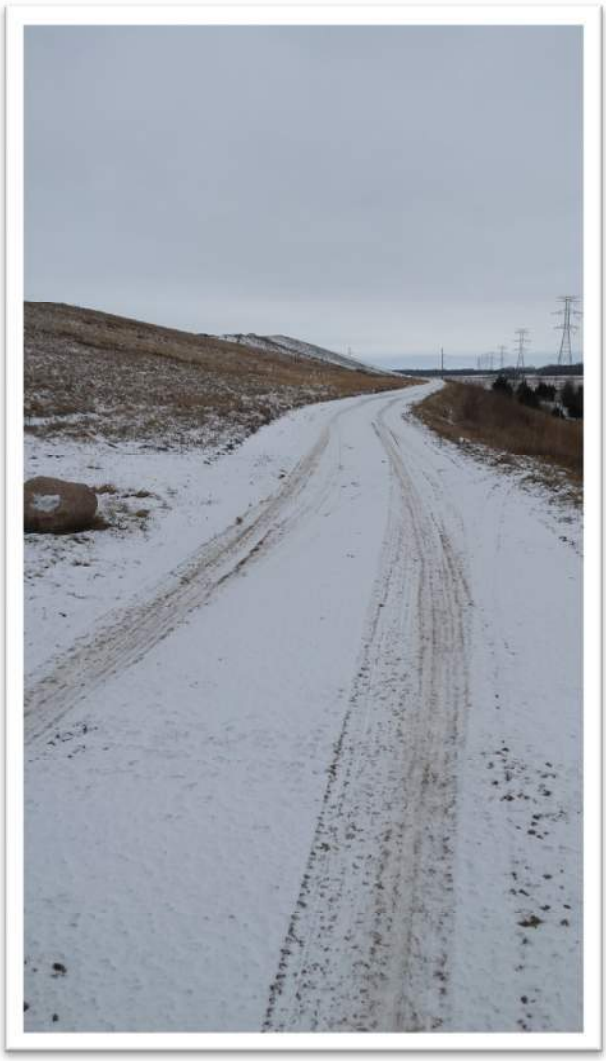
Middle of Slope
Facing NW



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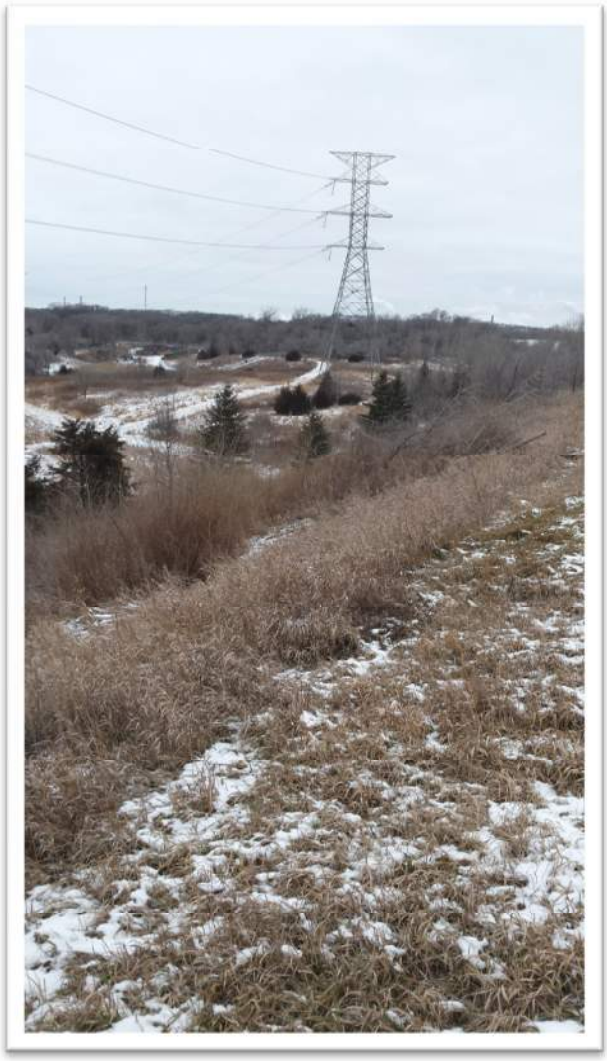
Middle of Slope
Facing SE



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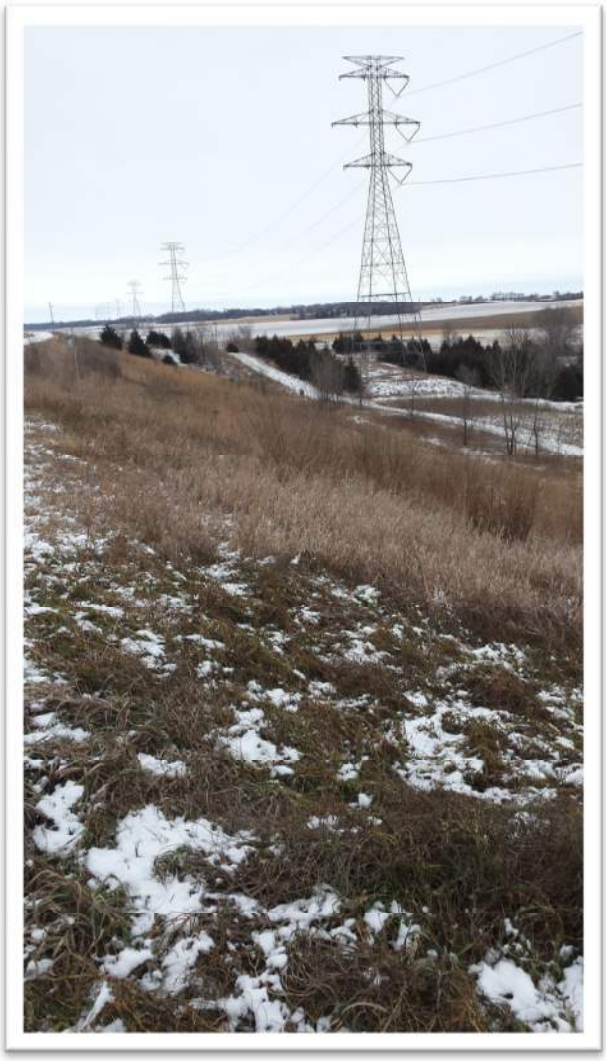
Bottom of Slope
Facing NW



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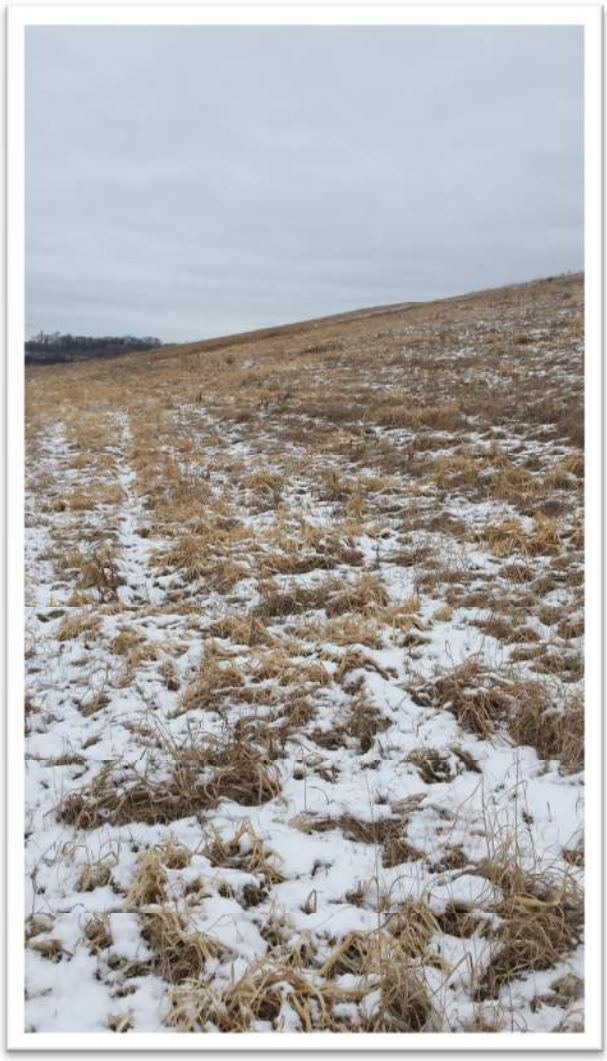
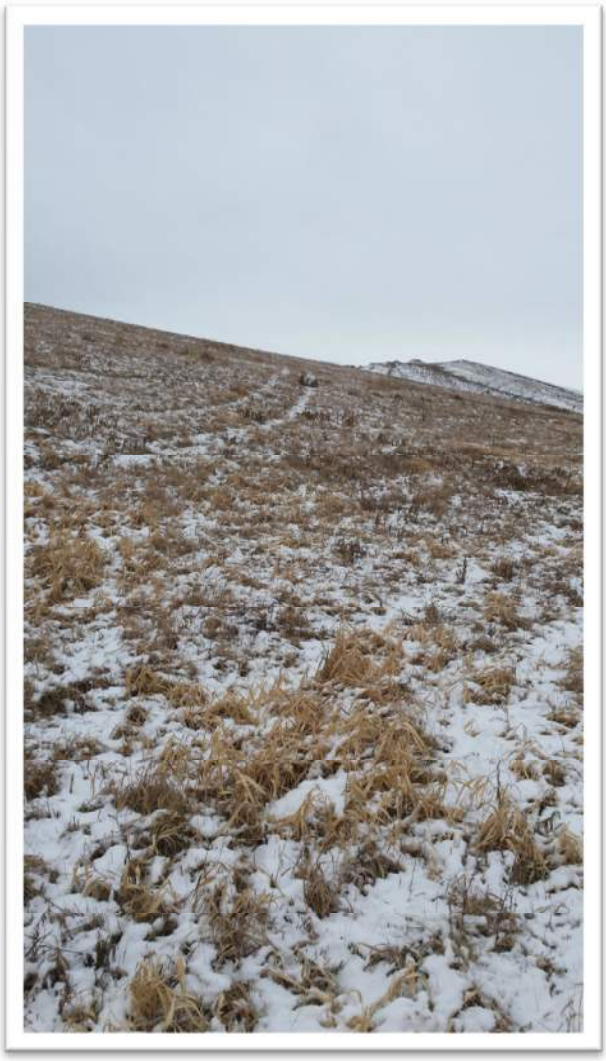
Bottom of Slope
Facing SE



34. SW Outer Slope
Top of Slope
Facing NW



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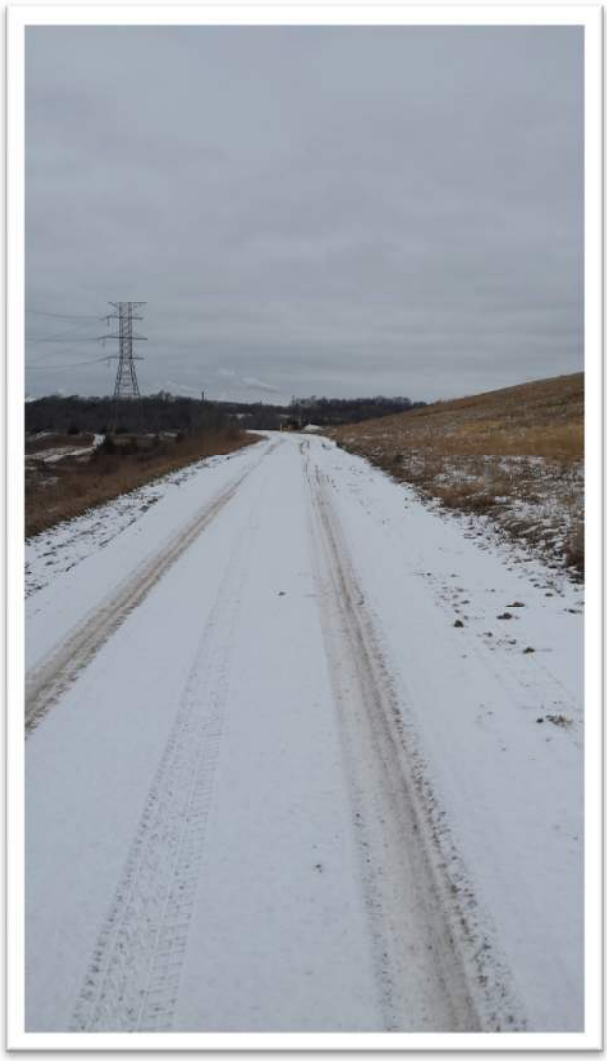
Top of Slope
Facing SE



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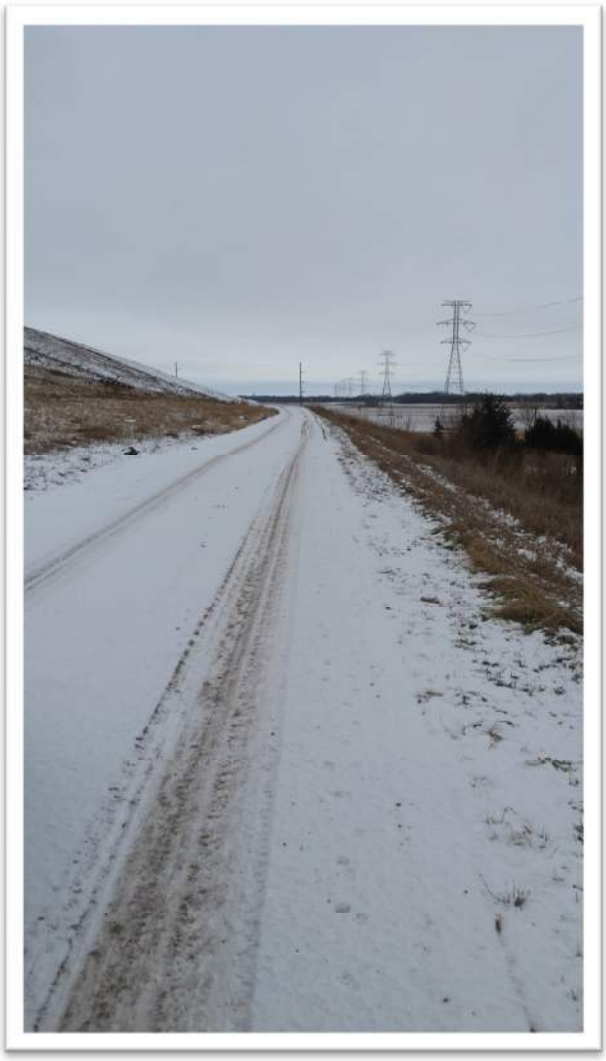
Middle of Slope
Facing NW



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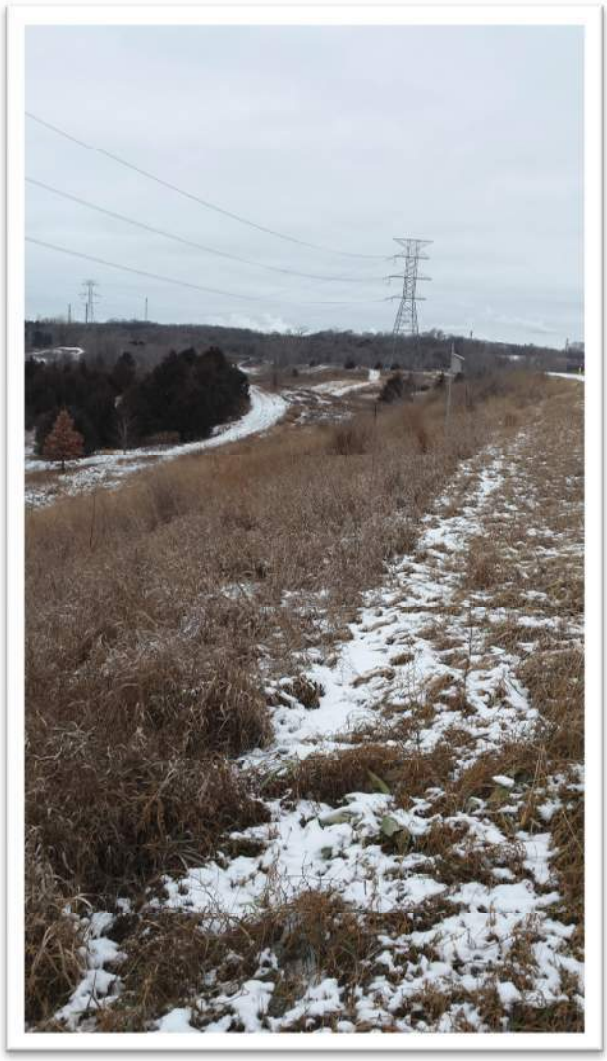
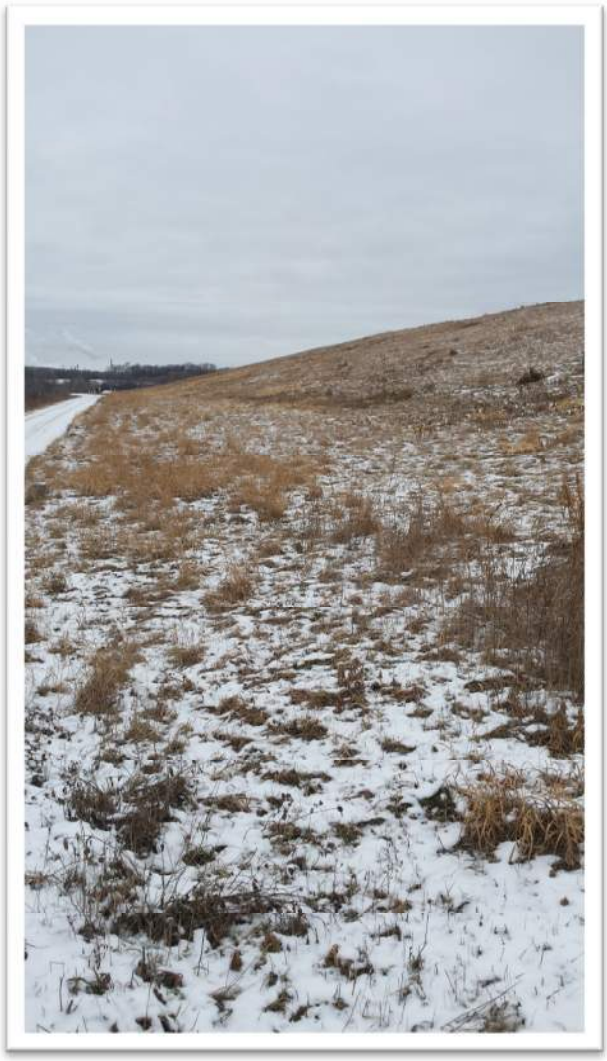
Middle of Slope
Facing SE



38. SW Outer Slope
Bottom of Slope
Facing NW

39. SW Outer Slope
Bottom of Slope
Facing SE



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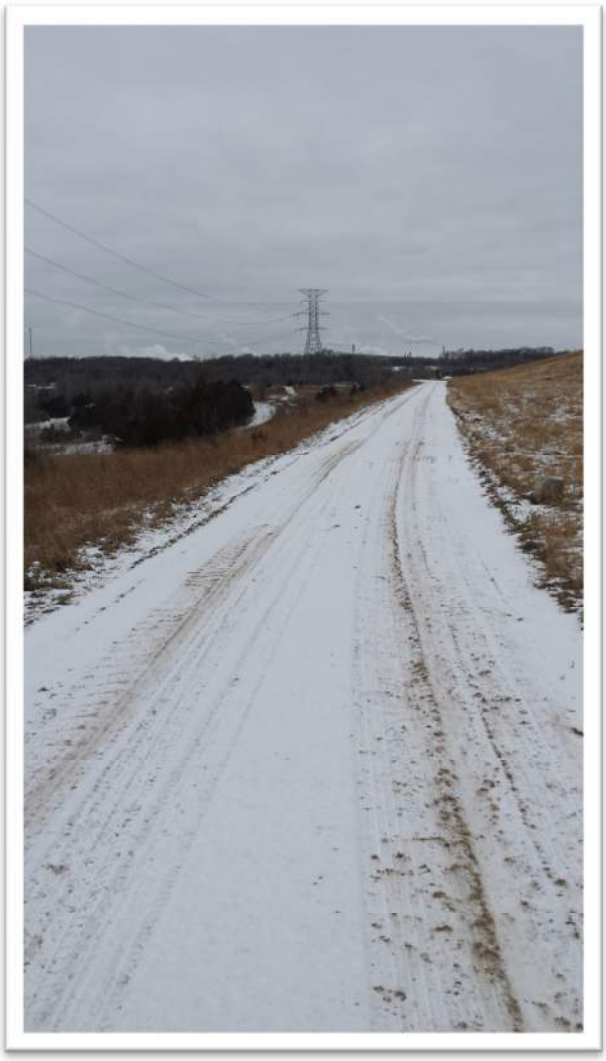
Top of Slope
Facing NW



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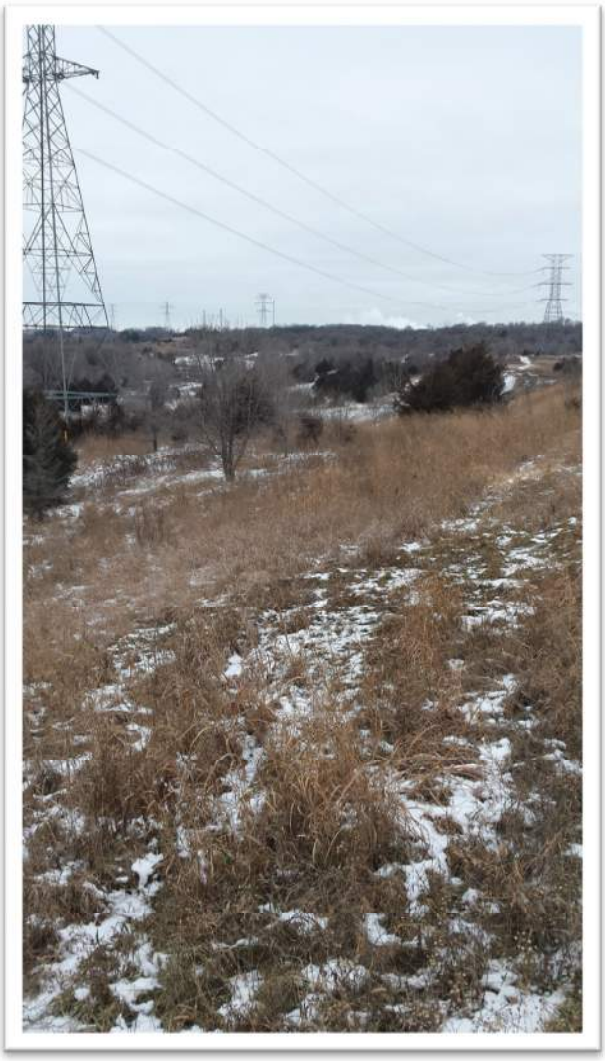
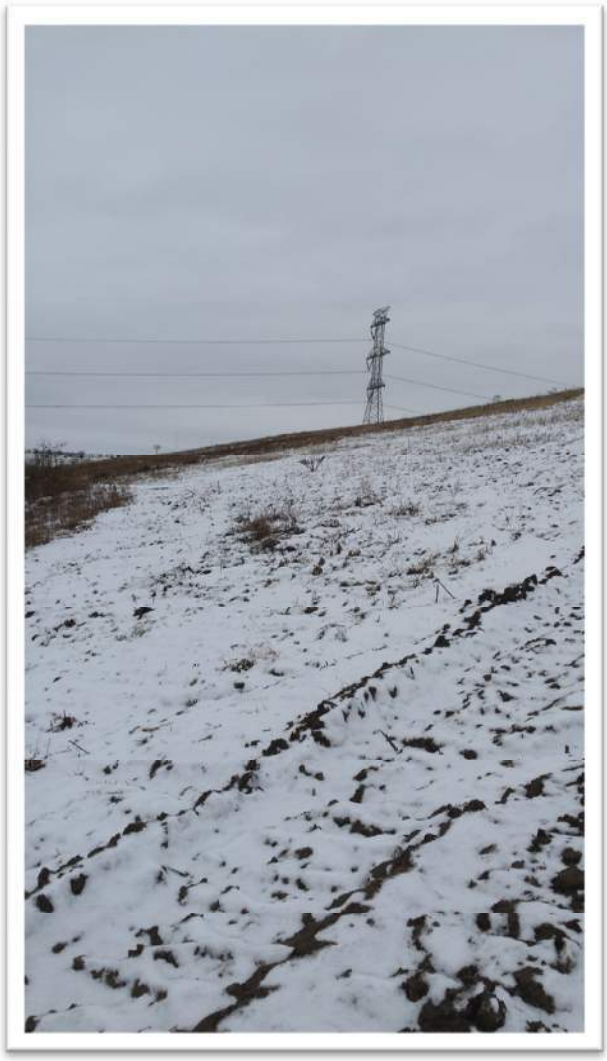
Middle of Slope
Facing NW



42. S Corner Outer Slope
Bottom of Slope
Facing NW

43. S Corner Outer Slope
Top of Slope
Facing NE



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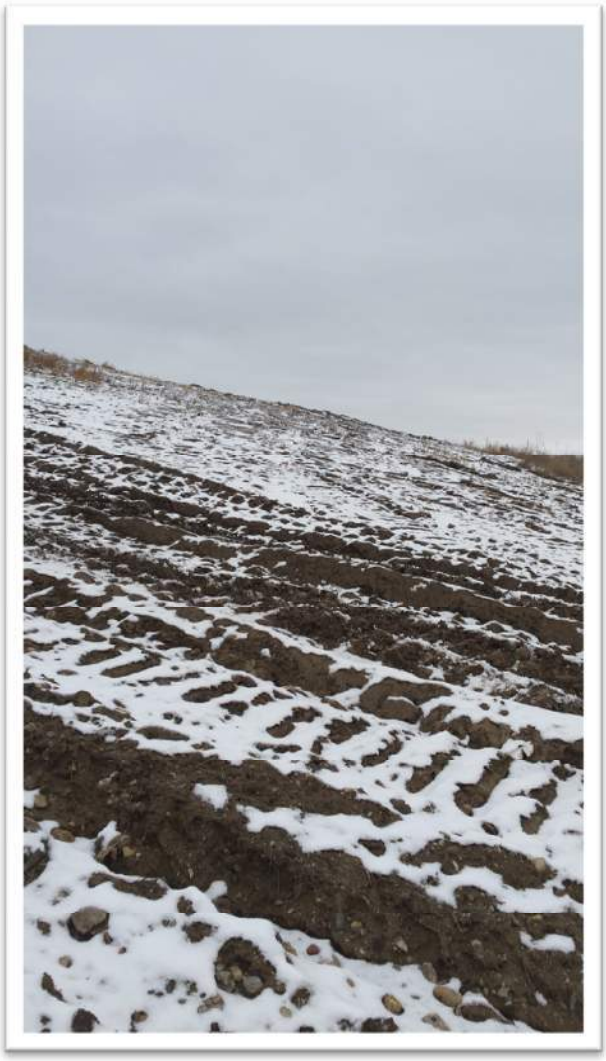
Top of Slope
Facing SW



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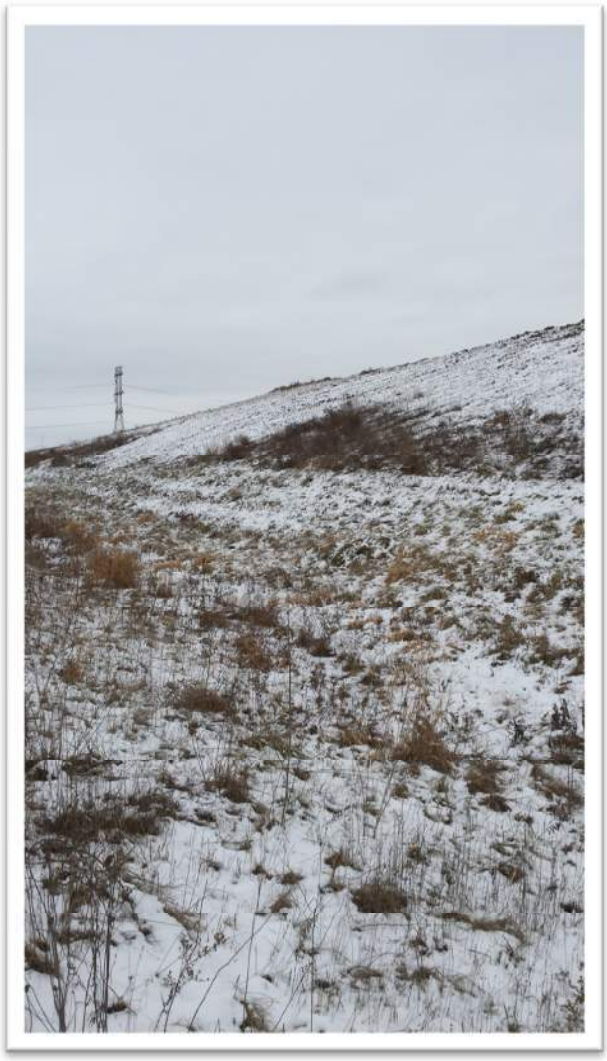
Top of Slope
Facing NE



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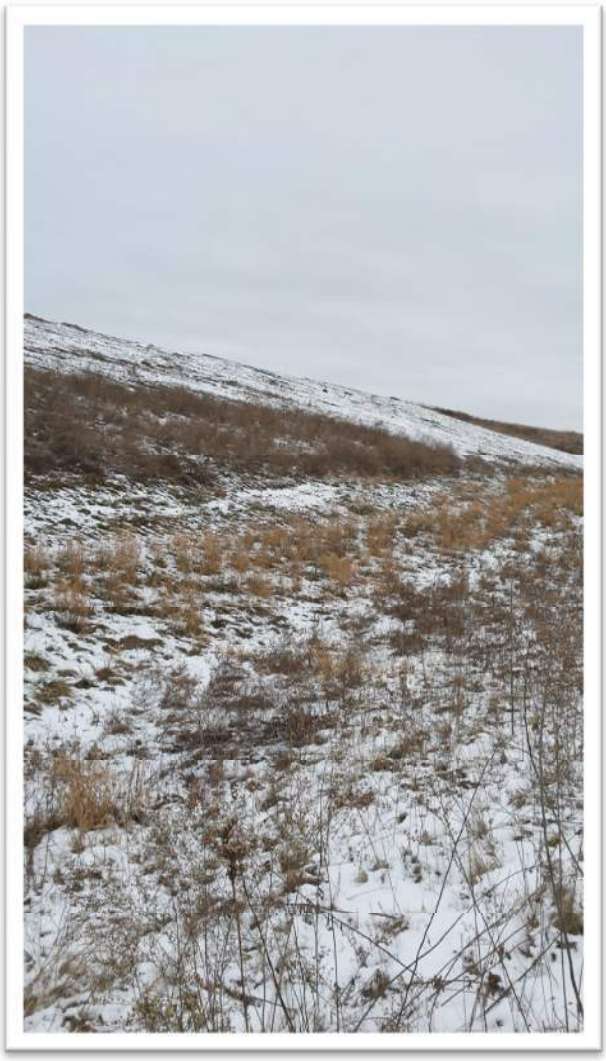
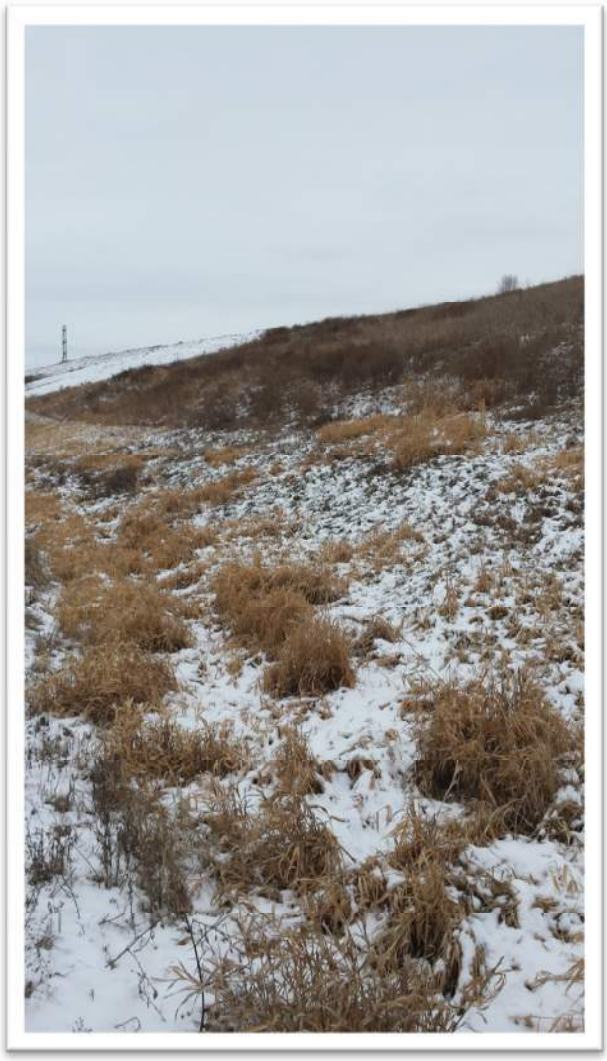
Top of Slope
Facing SW

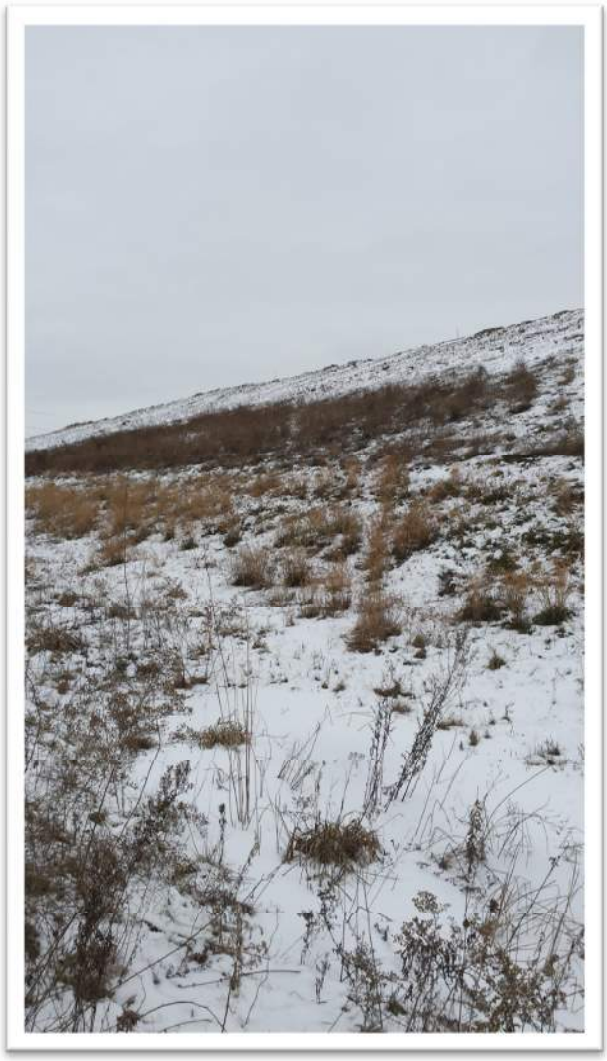


47. SE Outer Slope
Top of Slope
Facing NE

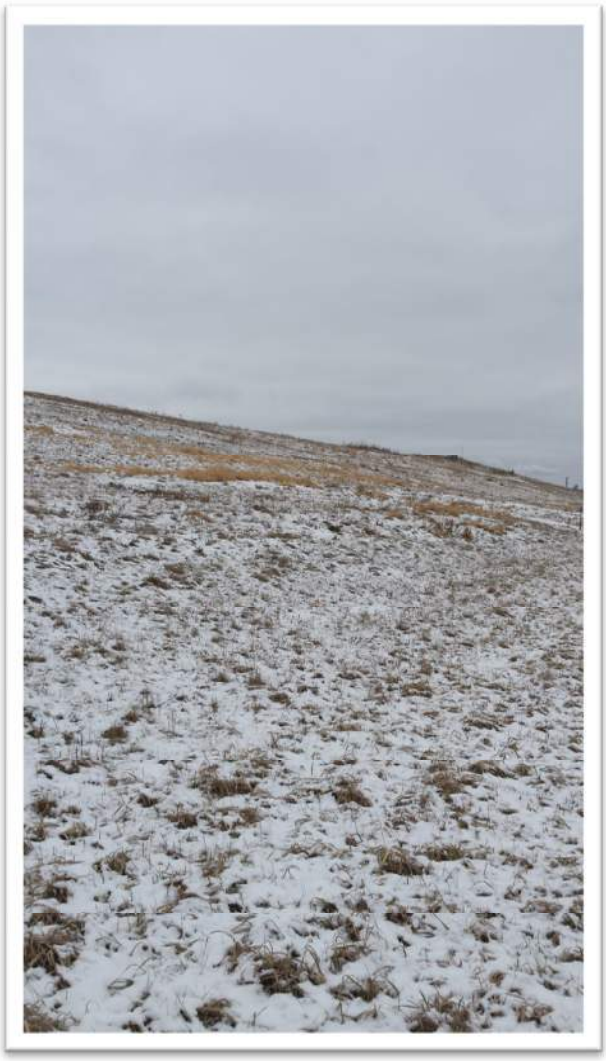


48. E Corner Outer Slope
Top of Slope
Facing SW

49. SE Outer Slope
Top of Slope
Facing NE



50. SE Outer Slope
Top of Slope
Facing SW



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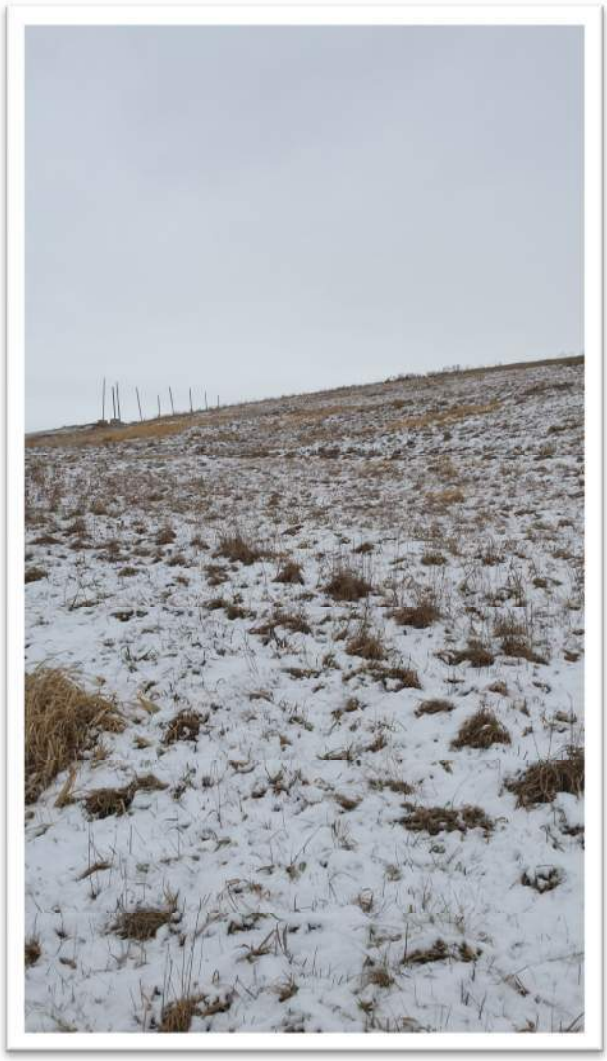
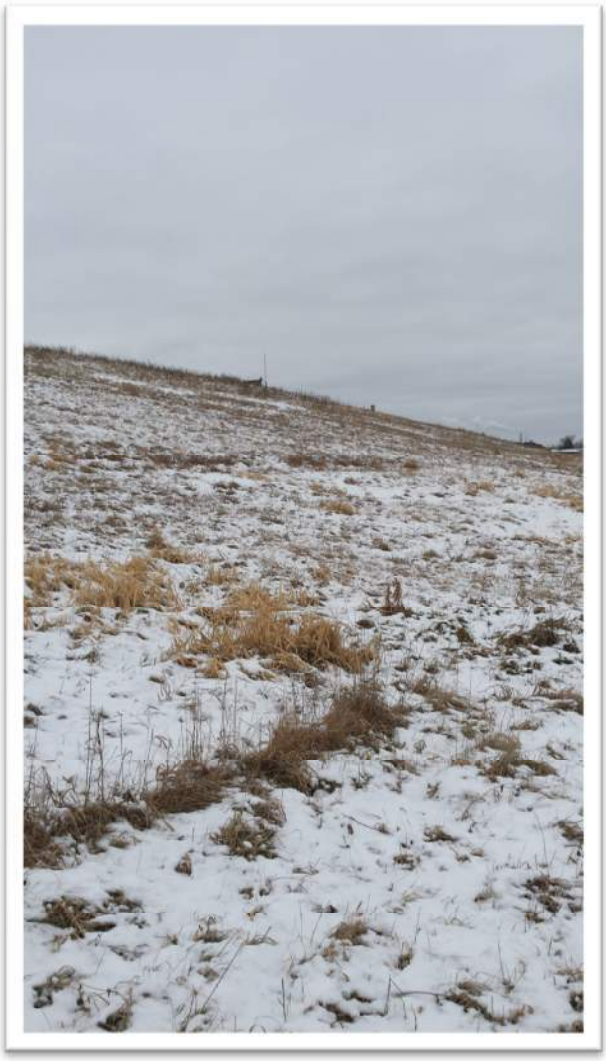
Top of Slope
Facing NW

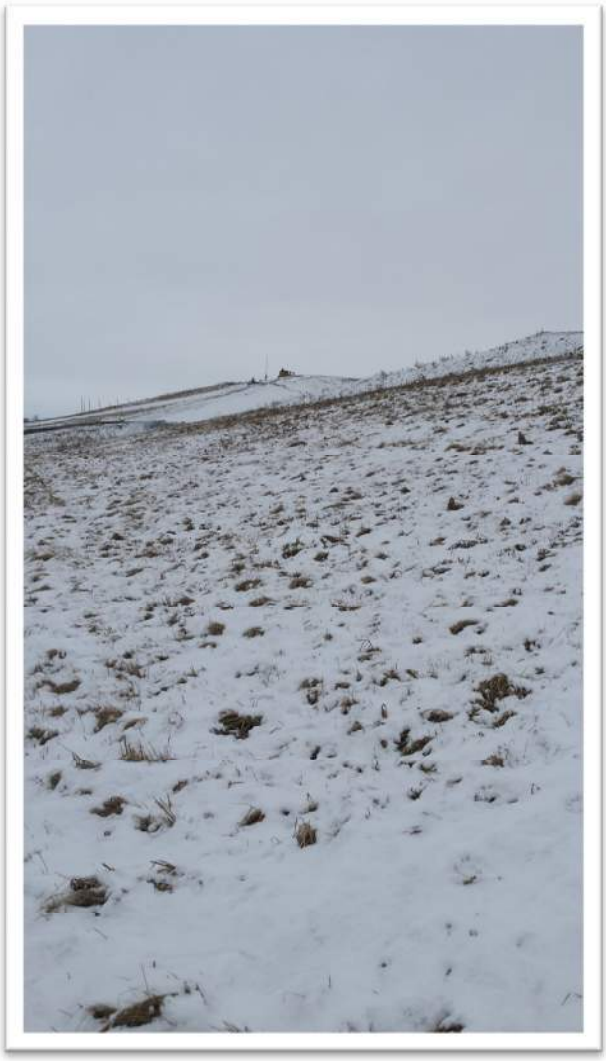


52. NE Outer Slope
Top of Slope
Facing SE



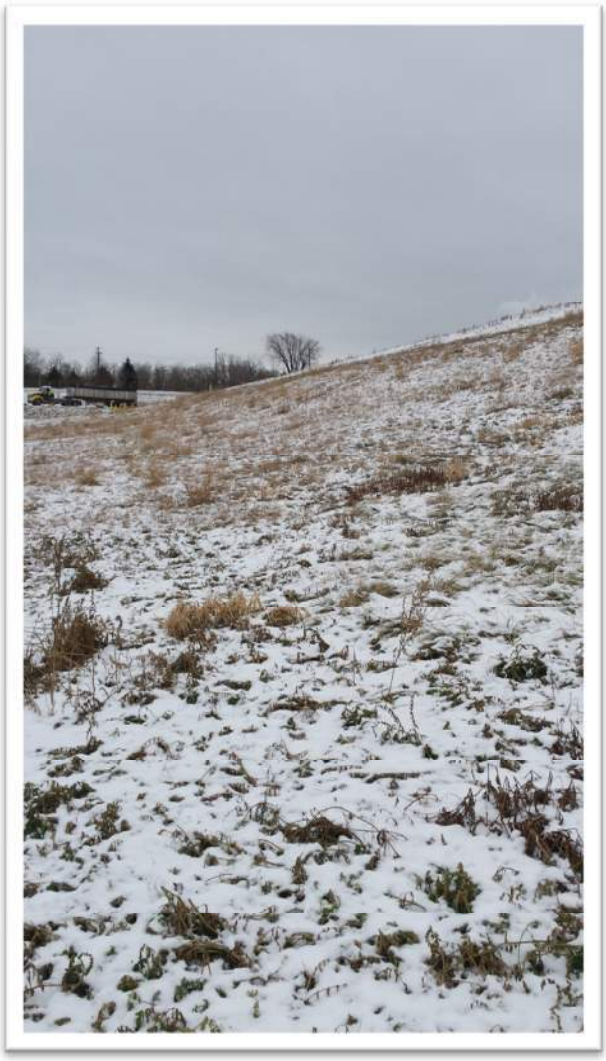
53. NE Outer Slope
Top of Slope
Facing NW

54. NE Outer Slope
Top of Slope
Facing SE

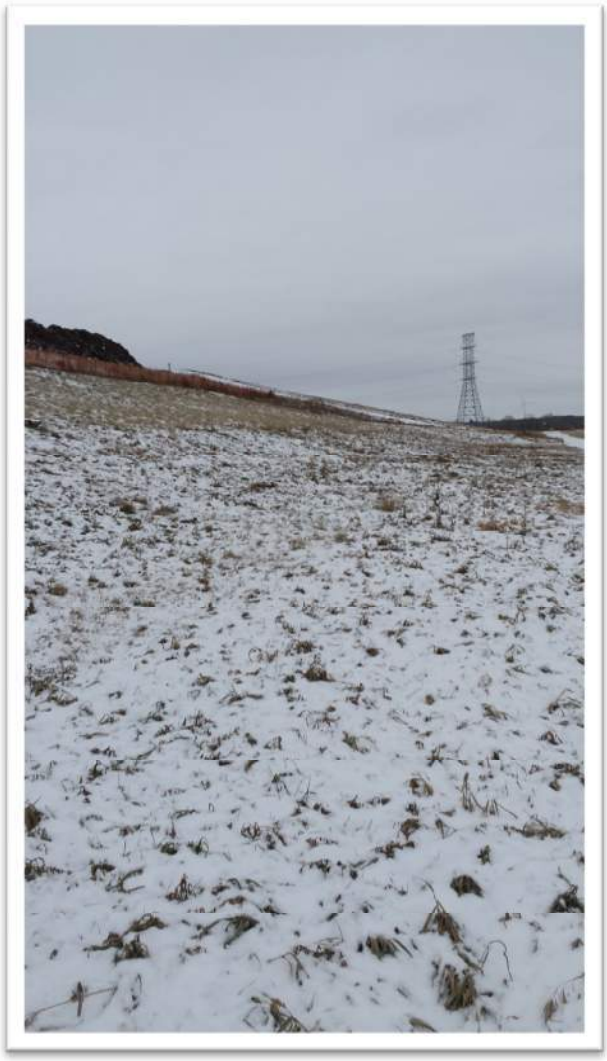


55. N Corner Outer Slope
Top of Slope
Facing SE

56. N Corner Outer Slope
Top of Slope
Facing SW

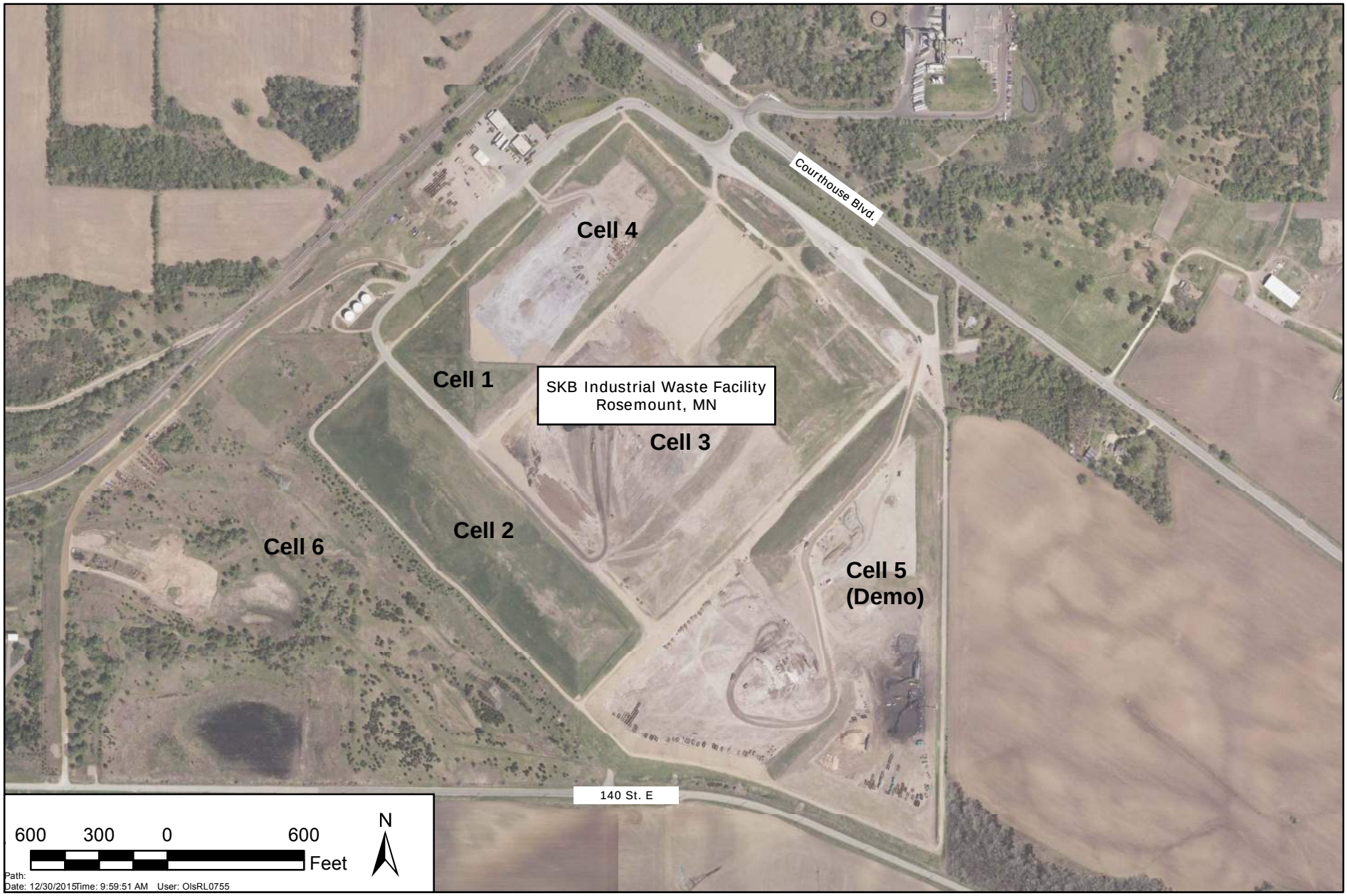


57. NW Outer Slope
Bottom of Slope
Facing NE



58. NW Outer Slope
Bottom of Slope
Facing SW

Figures



Coal Ash Inspection

SKB Industrial Waste Facility, Rosemount, MN

WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

DEC 2015

Figure 1

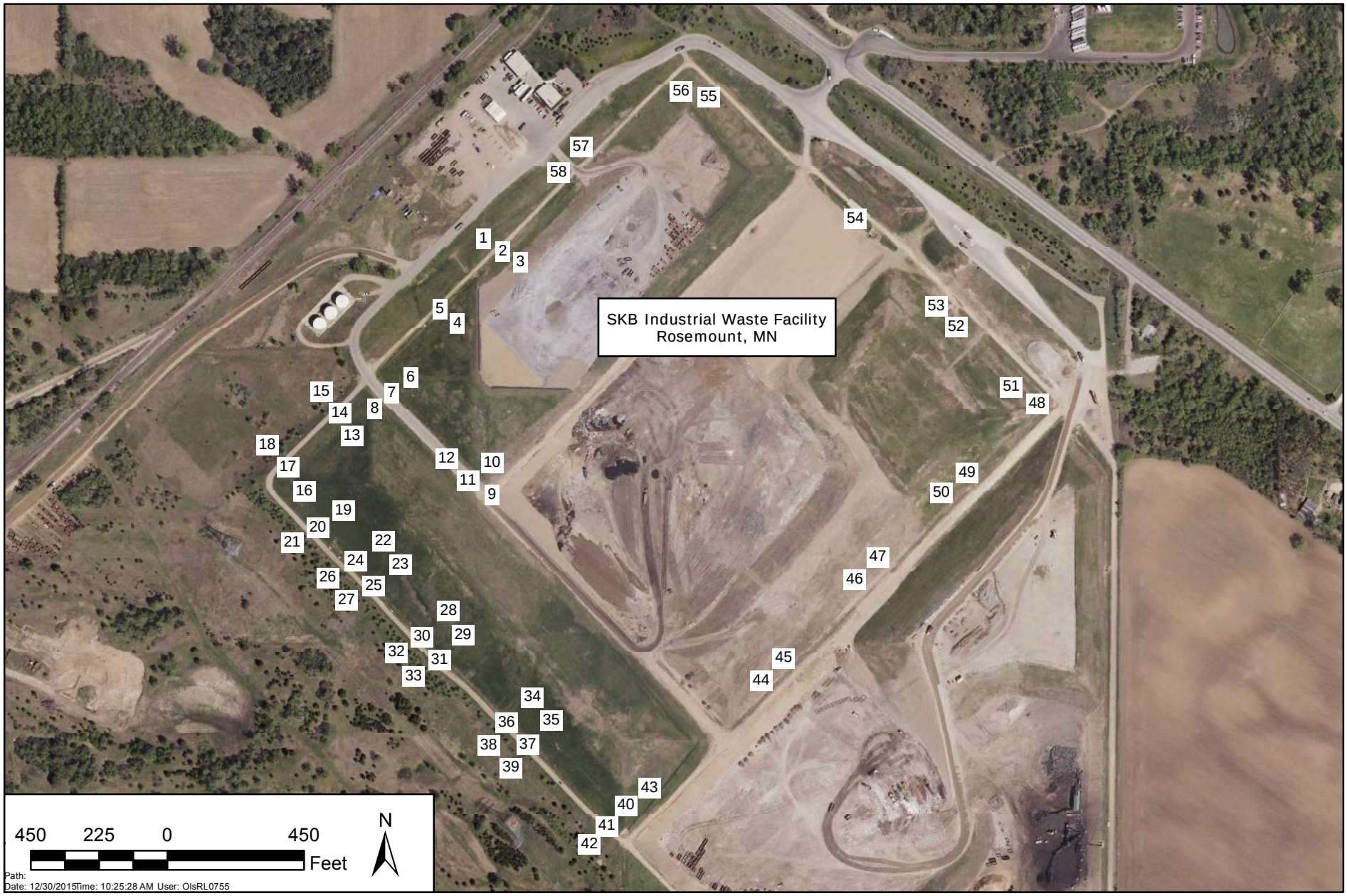


Photo Locations of Coal Ash Inspection

SKB Industrial Waste Facility, Rosemount, MN

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DEC 2015

Figure 2