

To: Nina Booker  
Environmental Engineer Sr.,  
IDNR Land Quality Bureau  
502 E. 9<sup>th</sup> St  
Des Moines, IA 50319

From: Stantec Consulting Services Inc.  
Cory Anderson – Project Manager  
Phone: (763) 479-5185

File: 227702549

Date: September 10, 2025

**We Are Transmitting Via**

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☐ Samples ☐ Specifications ☐ Copy of Letter ☐ Change Order  
☒ Other

*Copies Date Description*

|   |           |  |
|---|-----------|--|
| 1 | Sept 2025 | IDNR Form 542-1277 for Installation of MW-11R at Central Disposal Landfill |
|   |           |  |
|   |           |  |

**Transmitted as Indicated Below**

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**Remarks**

Hi Nina,

On behalf of Central Disposal Systems, Inc., please find enclosed, the IDNR form 542-1277 for the installation of new monitoring well MW-11R at the Central Disposal Landfill. MW-11R was installed to replace MW-11 which was concurrently sealed/plugged.

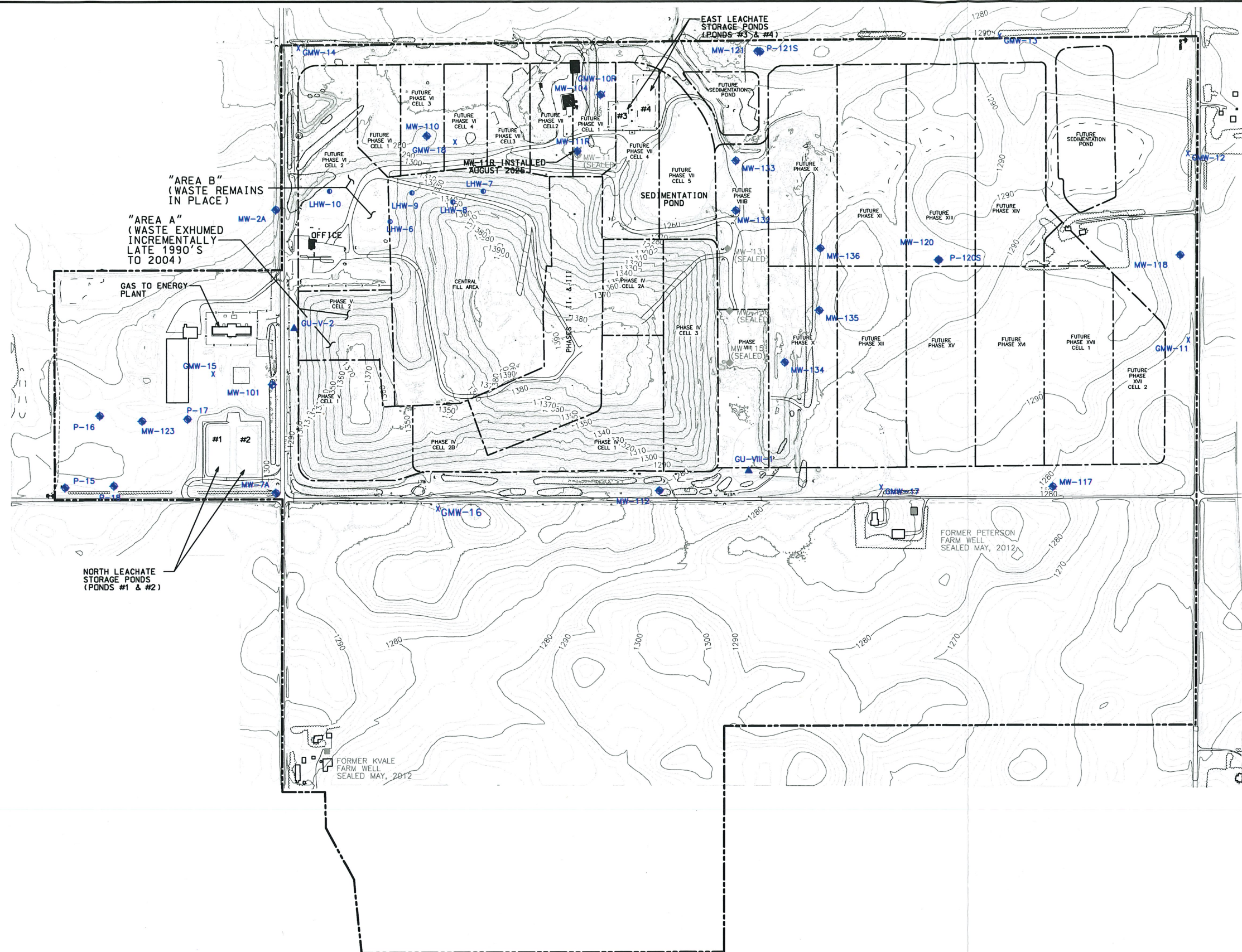
If you have any questions please feel free to give me a call or send me a message at [cory.anderson2@stantec.com](mailto:cory.anderson2@stantec.com)

Thanks!  
-Cory

**RECEIVED**

**SEP 18 2025**





PROPERTY LINE INFORMATION OBTAINED FROM  
CDS, INC.

|     |                      |     |     |          |
|-----|----------------------|-----|-----|----------|
|     |                      |     |     |          |
|     |                      |     |     |          |
|     |                      |     |     |          |
|     |                      |     |     |          |
|     |                      |     |     |          |
|     |                      |     |     |          |
| REV | REVISION DESCRIPTION | DWN | APP | REV DATE |



|             |           |         |
|-------------|-----------|---------|
| PROJECT NO. | SHEET NO. | REV NO. |
| 227702549   | FIGURE 1  | 0       |



# MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name Central Disposal Landfill Permit No. 95-SDP-01-72  
Well or Piezometer No. MW-11R Dates Started 8/12/2025 Date Completed 8/13/2025

## A. SURVEYED LOCATION AND ELEVATION OF POINT (+0.5 ft.)

Specify corner of site SE (Future Phase VII Cell 1) Distance and direction along boundary 221 ft North  
Distance and direction from boundary to surface monitoring well 508 ft West  
Elevation (+0.01 ft. MSL) 1276.454  
Ground Surface 1276.454 Top of protective casing 1279.984  
Top of well casing 1279.526 Benchmark elevation N/A  
Benchmark description N/A

## B. SOIL BORING INFORMATION

Construction Company Name Midwestern Drilling LLC  
Address 1260 20th St NW City, State, Zip Code Holloway, MN 56249  
Name of driller Tucker Belgum  
Drilling method 4 1/4" HSA Drilling fluid NA Bore Hole diameter 8"  
Soil sampling method Macro Core Depth of boring 75'

## C. MONITORING WELL INSTALLATION

|  |  |
|--|--|
| Casing material <u>Schedule 40 PVC</u>                   | Placement method <u>Tremie Pipe</u>  |
| Length of casing <u>62'</u>                              | Volume <u>1.05 cf (60'-57' BTOC)</u>   |
| Outside casing diameter <u>2.375" (standard sch. 40)</u> | Backfill (if different from seal): _____   |
| Inside casing diameter <u>2.047" (standard sch. 40)</u>  | Material <u>High-Solids Bentonite Grout</u>  |
| Casing joint type <u>Threaded</u>                        | Placement method <u>Tremie</u>   |
| Casing/screen joint type <u>Threaded</u>                 | Volume <u>18.85 cf (57'-3' bgs)</u>  |
| Screen material <u>2" Schedule 40 PVC</u>                | Surface seal design: _____   |
| Screen opening size <u>0.010"</u>                        | Material of protective casing: <u>Steel</u>  |
|  | Material of grout between protective casing and well casing: <u>Concrete</u>   |
| Screen length <u>10'</u>                                 | Protective cap: _____  |
| Depth of Well <u>72'</u>                                 | Material <u>Aluminum</u>   |
| Filter Pack: _____                                       | Vented?: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| Material <u>Red Flint Sand</u>                           | Well cap: <u>J-Plug</u>  |
| Grain Size <u>#40</u>                                    | Material <u>PVC</u>  |
| Volume <u>4.54 cf (73' - 60' BTOC)</u>                   | Vented?: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N  |
| Seal (minimum 3 ft. length above filter pack): _____     |  |
| Material <u>Bentonite Pellets</u>                        |  |

## D. GROUNDWATER MEASUREMENT (+0.01 foot below top of inner well casing)

Water level 50.11 ft Stabilization time 1 hour  
Well development method Pump & Surge. Well to be developed further by groundwater sampling vendor.  
Average depth of frost line 2.5'

## DRILLER'S CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate, and complete.

Signature Tucker Belgum Certification # 11270 Date 8/27/2025

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9<sup>th</sup> St, Des Moines, IA 50319.

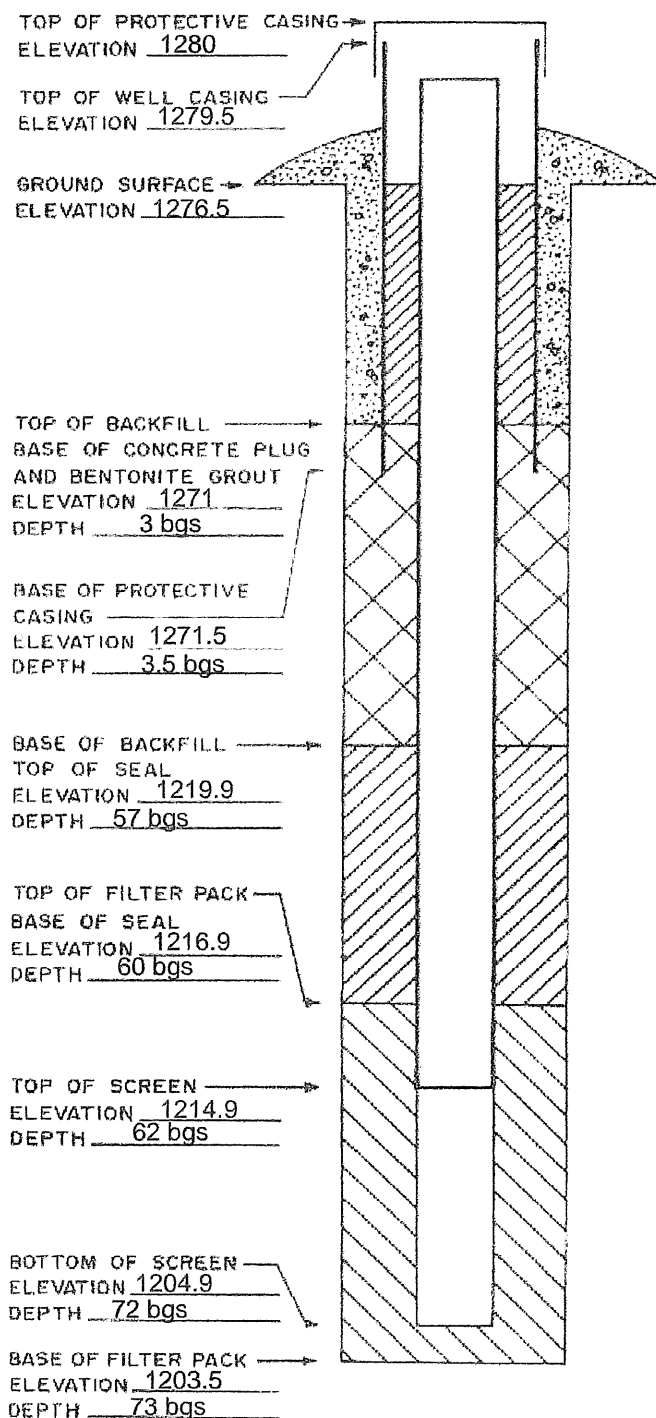
Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-537-4051, [nina.booker@dnr.iowa.gov](mailto:nina.booker@dnr.iowa.gov)

ELEVATIONS:  $\pm 0.01$  FT. MSL

DEPTHS:  $\pm 0.1$  FT. FROM  
GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG

( SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL )



Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9<sup>th</sup> St, Des Moines, IA 50319.

Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-537-4051, [nina.booker@dnr.iowa.gov](mailto:nina.booker@dnr.iowa.gov)

06/2021 cmc

DNR Form 542-1277

|  |  |  |                     |   |
|--|--|--|---------------------|---|
| <b>Stantec</b>   |  | <b>MW-11R</b><br><b>SUBSURFACE LOG</b>         | <b>Page: 1 of 2</b> |   |
| <b>Project Name:</b> Central Disposal Environmental Monitoring |  | <b>Project Location:</b> Lake Mills, IA        |                     | <b>Surface Elevation:</b> 1,276.5 ft / MSL                                |
| <b>Project Number:</b> 227702549                               |  | <b>Boring Location:</b> 8433534.0 / 5029487.0  |                     | <b>Start Date:</b> 08-12-25 <b>Finish Date:</b> 08-13-25                  |
| <b>Client:</b> Central Disposal Systems, Inc.                  |  | <b>Coordinate System:</b> NAD83 / UTM zone 15N |                     |   |
| <b>Contractor:</b> Midwestern Drilling                         |  | <b>Field Technician:</b> NE                    |                     | <b>Water 1:</b> 47.8 ft / 08-13-2025 <b>Water 2:</b> 48.0 ft / 08-14-2025 |
| <b>Drill Rig:</b> Geoprobe                                     |  | <b>Reviewed By:</b> CDK                        |                     | <b>Depth Total / Rock:</b> 73.0 ft  |
| <b>Hammer:</b>   |  | <b>Approved By:</b> CDK                        |                     | <b>Inclined from Horiz.:</b> 90° <b>Azimuth:</b> N/A                      |
| <b>Drilling Method:</b> HSA                                    |  |  |                     |   |

| DEPTH<br>(Ft) | ELEVATION<br>(Ft) | STRATA<br>PLOT | LITHOLOGY DESCRIPTION<br>(USCS)  | SOIL: | DEPTH (Ft)  | REC.<br>(Ft) | BLOWS/PSI | INSTRUMENT | OTHER TESTS/<br>REMARKS   |
|---------------|-------------------|----------------|--|-------|-------------|--------------|-----------|------------|---|
|               |                   |                |  | ROCK: | RUN (Ft)    |              | RQD (%)   |            |   |
| 1             | 1276.0            |                | SILT (OL), some organics, trace fine sand, dark brown, (TOPSOIL).              | AU    | 0.0 - 5.0   |              |           | Concrete   |   |
| 2             |                   |                | SILT (ML), trace fine sand, dark brown to brown, dry to moist.                 |       |             |              |           |            |   |
| 7             | 1269.3            |                | LEAN CLAY (CL), trace fine sand, trace gravel, dark gray to gray, dry, (TILL). | DP1   | 5.0 - 10.0  | 5.0          |           |            |   |
| 10            |                   |                |  |       |             |              |           |            |   |
| 13            |                   |                |  | AU    | 10.0 - 15.0 |              |           |            |   |
| 15            |                   |                |  |       |             |              |           |            |   |
| 18            |                   |                |  | DP2   | 15.0 - 20.0 | 2.5          |           |            | 10.0 - 20.0 ft: Iron-oxide staining - evidencing weathered Till.  |
| 20            |                   |                |  |       |             |              |           |            |   |
| 23            |                   |                |  | AU    | 20.0 - 25.0 |              |           |            | 15.0 - 20.0 ft: Rock obstructing macrocore barrel - 50% recovery for DP2 sample.  |
| 25            |                   |                |  |       |             |              |           |            | 20.0 - 25.0 ft: Macrocore barrel noted to be wet in DP3 sample. Water bearing sandier seam believed to be present in 20-25' interval. |
| 28            |                   |                |  |       |             |              |           |            |   |
| 30            |                   |                |  |       |             |              |           |            |   |
| 32            |                   |                |  |       |             |              |           |            |   |
| 35            |                   |                |  |       |             |              |           |            |   |
| 38            |                   |                |  |       |             |              |           |            |   |
| 40            |                   |                |  |       |             |              |           |            |   |
| 42            |                   |                |  |       |             |              |           |            |   |
| 45            |                   |                |  |       |             |              |           |            |   |
| 48            |                   |                |  |       |             |              |           |            |   |
| 50            |                   |                |  |       |             |              |           |            |   |
| 52            |                   |                |  |       |             |              |           |            |   |
| 55            |                   |                |  |       |             |              |           |            |   |
| 58            |                   |                |  |       |             |              |           |            |   |
| 60            |                   |                |  |       |             |              |           |            |   |
| 62            |                   |                |  |       |             |              |           |            |   |
| 65            |                   |                |  |       |             |              |           |            |   |
| 68            |                   |                |  |       |             |              |           |            |   |
| 70            |                   |                |  |       |             |              |           |            |   |
| 72            |                   |                |  |       |             |              |           |            |   |
| 73            |                   |                |  |       |             |              |           |            |   |

| Stantec   |                | Boring: MW-11R                         |  | SUBSURFACE LOG                      |             | Page: 2 of 2          |           |                |   |
|---|----------------|--|--|-------------------------------------|-------------|-----------------------|-----------|----------------|---|
| Project Name: Central Disposal Environmental Monitoring |                | Project Location: Lake Mills, IA       |  | Surface Elevation: 1,276.5 ft / MSL |             |                       |           |                |   |
| Project Number: 227702549                               |                | Boring Location: 8433534.0 / 5029487.0 |  | Start Date: 08-12-25                |             | Finish Date: 08-13-25 |           |                |   |
| DEPTH (Ft)  | ELEVATION (Ft) | STRATA PLOT                            | LITHOLOGY DESCRIPTION (USCS)   | SOIL:                               | DEPTH (Ft)  | REC. (Ft)             | BLOWS/PSI | INSTRUMENT     | OTHER TESTS/REMARKS   |
|   |                |  |  | ROCK:                               | RUN (Ft)    |                       | RQD (%)   |                |   |
| 38  |                |  | CLAYEY SAND (SC), fine to medium sand, little gravel, subangular, gray, wet, (TILL). | DP4                                 | 35.0 - 40.0 | 5.0                   |           | Bentonite Seal | 45.0 - 50.0 ft: Cobbles/ coarse gravel present in DP 5 sample.              |
| 39  |                |  |  |                                     |             |                       |           |                |   |
| 40  |                |  |  |                                     |             |                       |           |                |   |
| 41  |                |  |  |                                     |             |                       |           |                |   |
| 42  |                |  |  | AU                                  | 40.0 - 45.0 |                       |           |                |   |
| 43  |                |  |  |                                     |             |                       |           |                |   |
| 44  |                |  |  |                                     |             |                       |           |                |   |
| 45  |                |  |  |                                     |             |                       |           |                |   |
| 46  |                |  |  |                                     |             |                       |           |                |   |
| 47  |                |  |  | DP5                                 | 45.0 - 50.0 | 5.0                   |           |                |   |
| 48  |                |  |  |                                     |             |                       |           |                |   |
| 49  |                |  |  |                                     |             |                       |           |                |   |
| 50  |                |  |  |                                     |             |                       |           |                |   |
| 51  |                |  |  |                                     |             |                       |           |                |   |
| 52  |                |  |  | AU                                  | 50.0 - 55.0 |                       |           |                |   |
| 53  |                |  |  |                                     |             |                       |           |                |   |
| 54  |                |  |  |                                     |             |                       |           |                |   |
| 55  |                |  |  |                                     |             |                       |           |                |   |
| 56  |                |  |  |                                     |             |                       |           |                |   |
| 57  |                |  |  | DP6                                 | 55.0 - 60.0 | 5.0                   |           |                |   |
| 58  |                |  |  |                                     |             |                       |           |                |   |
| 59  |                |  |  |                                     |             |                       |           |                |   |
| 60  |                |  |  |                                     |             |                       |           |                |   |
| 61  |                |  |  |                                     |             |                       |           |                |   |
| 62  |                |  |  | AU                                  | 60.0 - 65.0 |                       |           |                |   |
| 63  |                |  |  |                                     |             |                       |           |                |   |
| 64  |                |  |  |                                     |             |                       |           |                |   |
| 65  |                |  |  |                                     |             |                       |           |                |   |
| 66  | 1209.9         |  |  |                                     |             |                       |           |                |   |
| 67  |                |  | LEAN CLAY (CL), trace fine sand, trace gravel, dark gray to gray, dry, (TILL).       | DP7                                 | 65.0 - 70.0 | 5.0                   |           | Filter Pack    | 67.5 - 71.6 ft: "Monitorable Zone" was observed from 1204.9-1209.0 ft. MSL. |
| 68  |                |  |  |                                     |             |                       |           |                |   |
| 69  |                |  |  |                                     |             |                       |           |                |   |
| 70  |                |  |  |                                     |             |                       |           |                |   |
| 71  | 1204.9         |  |  | DP8                                 | 70.0 - 73.0 | 3.0                   |           |                |   |
| 72  | 1203.5         |  |  |                                     |             |                       |           |                |   |
| 73  |                |  |  |                                     |             |                       |           |                |   |
| 74  |                |  | Bottom of Hole at 73.0 Ft.   |                                     |             |                       |           |                |   |
| 75  |                |  | Reason for Termination: Target depth.  |                                     |             |                       |           |                |   |
| 76  |                |  | Abandonment: Completed as well. Refer to description.                                |                                     |             |                       |           |                |   |
| 77  |                |  |  |                                     |             |                       |           |                |   |
| 78  |                |  |  |                                     |             |                       |           |                |   |
| 79  |                |  |  |                                     |             |                       |           |                |   |

Stantec US Standard 2024. Log - US Geotech Soil Rock. Borehole (1). 09/05/25