

VA320000 - TROY DIRECTOR\320000-00-000 (ENG) - TROY\Engineering\Continental\Client Specific Data\CADD\2025-04-10-Srinison-Continental Groundwater Monitoring Network.dwg, 2026-08-03 11:01:22



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: _____ Permit No.: _____
Well/Piezometer No.: BMW-26-03 Date Started: 2026-05-08 Date Completed: 2026-05-10
Applicable Requirements¹: ☐ 567 IAC 113 ☐ 567 IAC 115 ☐ Site Permit
☐ 567 IAC 114 ☐ 567 IAC 139 ☐ Other: _____

A. SURVEYED LOCATION² AND ELEVATION OF POINT

Elevations (MSL): Ground Surface: 584.24 Top of Protective Casing: 587.03
Top of Well Casing: 586.33
Site Coordinates: Northing: 545,542.889 ft Easting: 2,409,989.605 ft
World Coordinates: Latitude: 41.4632628912 Longitude: -90.6916765382
Elevation and Coordinate Systems: State Plane Coordinate System - Iowa South ft

B. SOIL BORING INFORMATION

Certified Well Contractor Cascade Drilling, LP
Address 209 LeMieur St City, State, Zip Code Little Falls MN. 56345
Name of driller Paul Dickinson Cert No. 9361
Drilling method Sonic Drilling fluid _____ Bore hole diameter 6"
Soil sampling method _____ Depth of boring 121'

C. MONITORING WELL INSTALLATION

Casing material	Placement method: _____
Length of casing: <u>117'</u>	Quantity: _____
Casing diameter: <u>2"</u>	Backfill (if different from seal)
Casing joint type: <u>treaded and coupled</u>	Material: _____
Casing/screen joint type: <u>Thread and Coupled</u>	Placement method: _____
Screen material: <u>Stainless Steel</u>	Quantity: _____
Screen opening size: <u>10 slot</u>	Surface seal design
Screen length: <u>10'</u>	Material of protective casing: <u>Steel</u>
Depth of Well	Material of grout between
Filter Pack: <u>#40</u>	protective casing and well casing: <u>Cement Grout</u>
Material: <u>Red flint # 40</u>	Protective cap
Grain Size: _____	Material: <u>Steel</u>
Quantity: <u>6 Bags 50 pounds</u>	Vented?: ☒ Y ☐ N Locking?: ☒ Y ☐ N
Seal (minimum 3 ft. length above filter pack)	Well cap: _____
Material: <u>Bentonite Grout</u>	Material: <u>Stainless Steel</u>
	Vented?: ☒ Y ☐ N

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

Water level _____ Stabilization time _____
Well development method pumped and surged
Average depth of frost line _____

¹ Refer to the site's permit to determine applicable requirements. Note that some sites may only be regulated by their permit versus current landfill chapters. If the permit and rule are silent regarding applicable requirements, then 567 IAC Chapter 39 shall apply, which requires use of the Well Log (Well Record) Form, not this form. If the applicable requirements have been modified and approved by the DNR, then note under Other.

² The location does not need to be surveyed by a licensed surveyor. A handheld GPS reading accurate to +/- 30 feet is acceptable when an aerial photograph showing the location (pin) is included with this form. The site coordinates should be the same coordinate system currently used for survey control and mapping of the site.

DRILLER'S CERTIFICATION

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

Signature Paul Dickinson **Certification #** 9361 **Date** 5/10/2026

Note: Attach well log, boring log, and map showing new monitoring well/piezometer location in relation to existing wells or piezometers.

Complete one form for each well plugged and submit within 30 days to the local county agent, DNR project officer, and Daniel Watterson with the DNR's Water Supply Section at Daniel.Watterson@dnr.iowa.gov. DNR prefers that the forms be completed and submitted electronically.

Well Diagram

Elevations: ± 0.01 ft. MSL

Depths: ± 0.1 ft from Ground Surface

Top of protective casing (TOP) $\longrightarrow$

Elevation C 587.03

Top of Well Casing (TOC) $\longrightarrow$

Elevation B 586.33

Ground surface (GS)

Elevation A 584.24

Depth Use 0

Top of backfill

Base of concrete plug and bentonite grout

Elevation A-W 554.54

Depth W 29.7

Base of Protective Casing

Elevation C-PC = 554.54

Depth PC-(C-A) = 29.7

Base of Backfill, Top of Seal

Elevation A-X = 492.24

Depth X 92

Top of Filter Pack, Base of Seal

Elevation A-Y = 482.24

Depth Y 102

Top of Screen (TOS)

Elevation B-(TD-S-WP) = 476.74

Depth A-TOS^{elev} = 107.5

Bottom of Screen (BOS)

Elevation B-TD = 466.74

Depth A-BOS^{elev} = 97.5

Bottom of Well

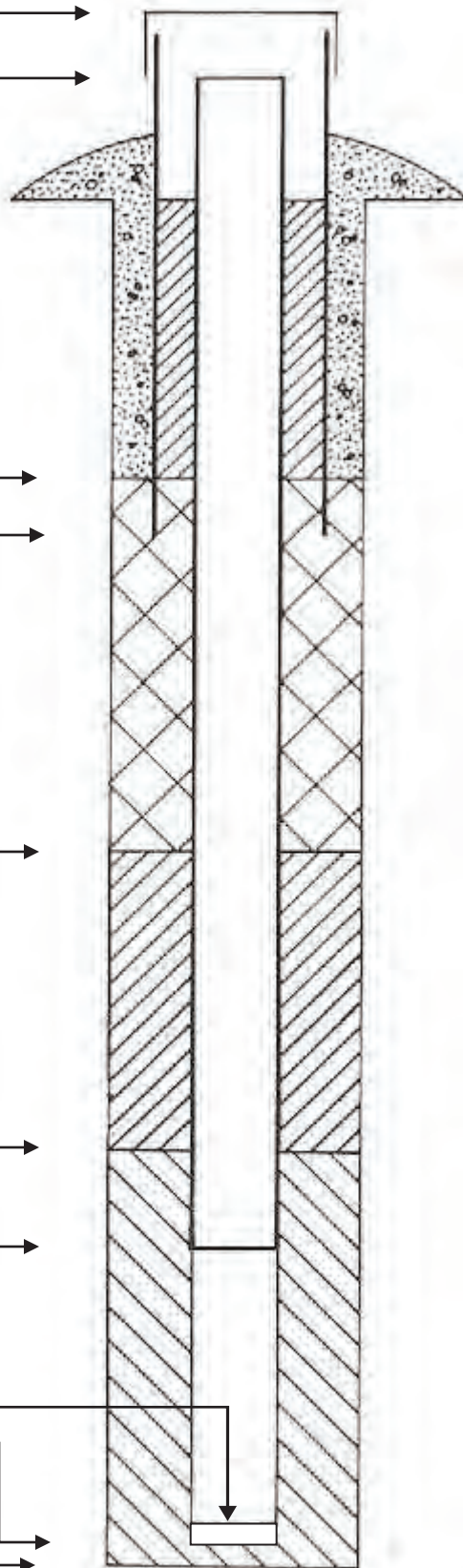
Elevation 466.74

Depth 117.5

Bottom of Filter Pack

Elevation A-Z =

Depth Z 116.9



Required Data:

- Elevations for A, B, and C shall be surveyed.
- Depths for W, X, Y, and Z shall be field measured following completion of each item.
- Lengths of the Protective Casing (PC), Screen (S), and Well Point (WP) shall be field measured prior to installation of each item.
- The total Depth (TD) from the Top of Well Casing to the Bottom of Well Point shall be field measured following installation.

PC: 32.49

S: 10

WP: 0

TD: 117.5

Well Casing Length TD-S-WP = 106.9

Backfill Thickness X-W = 62.3

Seal Thickness Y-X = 10

Filter Pack Thickness Z-Y = 15.5

MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: _____ Permit No.: _____
Well/Piezometer No.: BMW-26-02CR Date Started: 2026-05-10 Date Completed: 2026-05-11
Applicable Requirements¹: ☐ 567 IAC 113 ☐ 567 IAC 115 ☐ Site Permit
☐ 567 IAC 114 ☐ 567 IAC 139 ☐ Other: _____

A. SURVEYED LOCATION² AND ELEVATION OF POINT

Elevations (MSL): Ground Surface: 590.82 ft Top of Protective Casing: 593.18 ft
Top of Well Casing: 592.57 ft
Site Coordinates: Northing: 545875.478 ft Easting: 2409764.323 ft
World Coordinates: Latitude: 41.4641972230 Longitude: -90.6924614418
Elevation and Coordinate Systems: State Plane Coordinate System - Iowa South ft

B. SOIL BORING INFORMATION

Certified Well Contractor Cascade Drilling, LP
Address 209 LeMieur st City, State, Zip Code Little Falls MN. 56345.
Name of driller Paul Dickinson Cert No. 9361
Drilling method Sonic Drilling fluid _____ Bore hole diameter 6"
Soil sampling method _____ Depth of boring 121'

C. MONITORING WELL INSTALLATION

Casing material	Placement method: _____
Length of casing: <u>121'</u>	Quantity: _____
Casing diameter: <u>2"</u>	Backfill (if different from seal)
Casing joint type: <u>threaded and coupled</u>	Material: _____
Casing/screen joint type: <u>thread and Coupled</u>	Placement method: _____
Screen material: <u>Stainless Steel</u>	Quantity: _____
Screen opening size: <u>10 slot</u>	Surface seal design
Screen length: <u>5'</u>	Material of protective casing: <u>Steel</u>
Depth of Well	Material of grout between
Filter Pack: <u>110.8'</u>	protective casing and well casing: <u>Cement Grout</u>
Material: <u>sand red flint</u>	Protective cap
Grain Size: <u># 40</u>	Material: <u>Steel</u>
Quantity: <u>3 bags</u>	Vented?: ☒ Y ☐ N Locking?: ☒ Y ☐ N
Seal (minimum 3 ft. length above filter pack)	Well cap: _____
Material: <u>Bentonite Grout</u>	Material: <u>Stainless Steel</u>
	Vented?: ☒ Y ☒ N

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

Water level _____ Stabilization time _____
Well development method pump and surged
Average depth of frost line _____

¹ Refer to the site's permit to determine applicable requirements. Note that some sites may only be regulated by their permit versus current landfill chapters. If the permit and rule are silent regarding applicable requirements, then 567 IAC Chapter 39 shall apply, which requires use of the Well Log (Well Record) Form, not this form. If the applicable requirements have been modified and approved by the DNR, then note under Other.

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Signature Paul Dickinson **Certification #** 9361 **Date** 5/11/2026

Note: Attach well log, boring log, and map showing new monitoring well/piezometer location in relation to existing wells or piezometers.

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Well Diagram

Elevations: ± 0.01 ft. MSL

Depths: ± 0.1 ft from Ground Surface

Top of protective casing (TOP) $\longrightarrow$

Elevation C 593.18 ft

Top of Well Casing (TOC) $\longrightarrow$

Elevation B 592.57 ft

Ground surface (GS)

Elevation A 590.82 ft

Depth Use 0

Top of backfill

Base of concrete plug and bentonite grout

Elevation A-W 570.82

Depth W 20

Base of Protective Casing

Elevation C-PC = 570.82

Depth PC-(C-A) = 20

Base of Backfill, Top of Seal

Elevation A-X = 486.82

Depth X 104

Top of Filter Pack, Base of Seal

Elevation A-Y = 480.02

Depth Y 110.8

Top of Screen (TOS)

Elevation B-(TD-S-WP) = 475.32

Depth A-TOS^{elev} = 115.5

Bottom of Screen (BOS)

Elevation B-TD = 470.32

Depth A-BOS^{elev} = 120.5

Bottom of Well

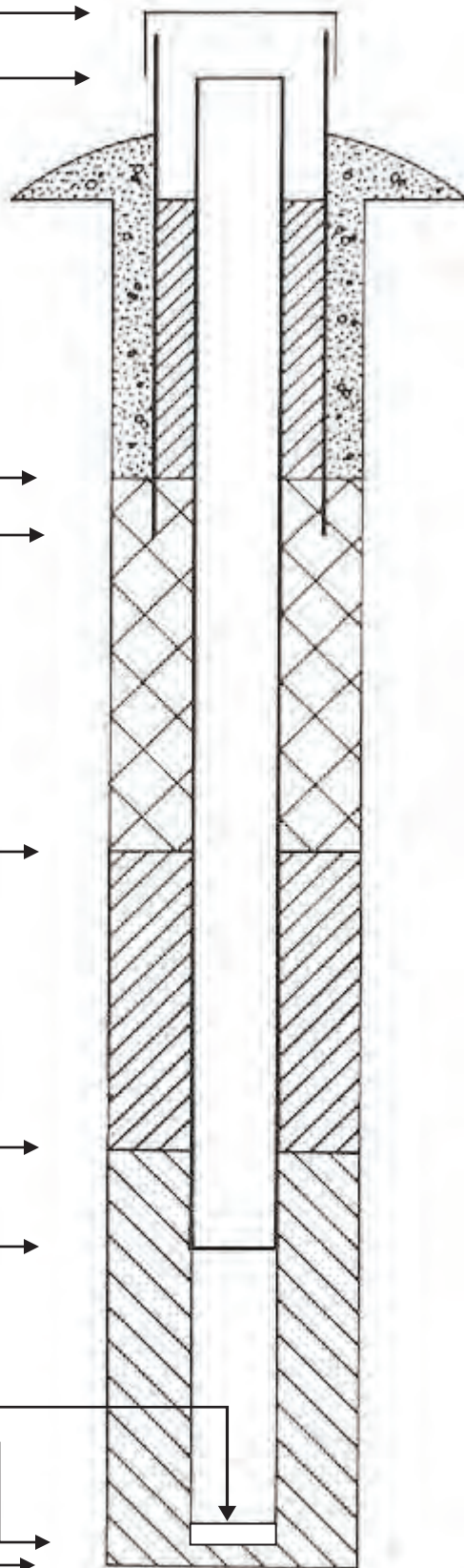
Elevation 470.32

Depth 120.5

Bottom of Filter Pack

Elevation A-Z = 471.32

Depth Z 121



Required Data:

- Elevations for A, B, and C shall be surveyed.
- Depths for W, X, Y, and Z shall be field measured following completion of each item.
- Lengths of the Protective Casing (PC), Screen (S), and Well Point (WP) shall be field measured prior to installation of each item.
- The total Depth (TD) from the Top of Well Casing to the Bottom of Well Point shall be field measured following installation.

PC: 22.36

S: 5

WP: 0.5

TD: 121

Well Casing Length TD-S-WP = 115.5

Backfill Thickness X-W = 84

Seal Thickness Y-X = 6.8

Filter Pack Thickness Z-Y = 10.7