Jolly, Becky <becky.jolly@dnr.iowa.gov>

Cedar Rapids WPCF

1 message

Nelson, Margaret A. <M.Nelson@cedar-rapids.org> Fri, Jun 5, 2026 at 8:05 AM
To: "brian.rath@dnr.iowa.gov" <brian.rath@dnr.iowa.gov>
Cc: "becky.jolly@dnr.iowa.gov" <becky.jolly@dnr.iowa.gov>, Doug Luzbetak <dluzbetak@hlwengineering.com>

Brian, attached are the revised Well Logs and Monitoring Well / Piezometer Construction documents for MW's 29, 30, 31, 32. Please let me and Doug know if you have any additional questions.

Thank you,

Margaret Nelson (she/they)
Environmental Compliance Program Manager
City of Cedar Rapids Water Pollution Control Facilities

7525 Bertram Road SE
Cedar Rapids, IA, 52403-7111
Office: (319) 286-5948
Cell: (319) 450-1856

CRWPCF_MW29-32_Survey-BoringLogs.pdf
867K

WPCF Process Improvements (Contract 2)
7525 Bertram Rd SE | Cedar Rapids, IA
Terracon Project No. 06257071

Terracon
3105 Capital Way, Ste 5
Cedar Falls, IA

Well Log No. MW29

Location: See Exploration Plan

Latitude: 41.9593° Longitude: -91.5600°

Top Casing Elev (Ft.): 736.4

Depth (Ft.)	Elevation: 734 (Ft.) +/-	Recovery (In.)	Field Test Results	Laboratory HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI	Percent Fines
0.5	Well log updated due to 0.5 feet of fill placed after initial well was set. 733.5						
	FILL - LEAN CLAY, trace sand, gray brown, dark brown	20	4-4-5-6 N=9				
		20	5-4-7-7 N=11				
		20	4-6-8-10 N=14				
		20	3-6-7-4 N=13				
9.5	724.5	18	3-4-5-8 N=9				
10.5	**LEAN CLAY (CL)**, trace sand and gravel, brown, gray 723.5	24	3-4-5-6 N=9				
	LEAN CLAY (CL), trace sand, brown	24	2-2-2-3 N=4				
14.5	719.5	24	2-3-3-4 N=6				
	LEAN CLAY (CL), trace sand, gray brown	24	2-4-4-5 N=8				
16.5	717.5	6	2-3-3-3 N=6				
	SANDY LEAN CLAY (CL), trace gravel, brown, gray	24	2-2-3-3 N=5	0.5 (HP)	17.7	31-15-16	56
18.5	715.5	24	1-3-4-6 N=7	1.0 (HP)			
	SANDY LEAN CLAY (CL), trace gravel, dark brown, brown, gray	24	4-7-8-8 N=15	3.5 (HP)			
20.5	713.5	24	4-6-8-10 N=14	3.5 (HP)	14.1	28-14-14	58
	SANDY LEAN CLAY (CL), trace gravel, brown, gray	26	4-5-7-10 N=12	3.5 (HP)			
24.5	709.5	24	5-6-9-10 N=15	3.0 (HP)			
	SANDY LEAN CLAY (CL), trace gravel, dark gray	24	4-5-7-8 N=12	3.75 (HP)			
34.5	699.5						
	Boring Terminated at 34.5 Feet						

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
▽ 24' observed while sampling

Drill Rig
603

Hammer Type
Automatic

Driller
SZ

Notes
Well log updated due to 0.5 feet of fill placed after initial well was set.

Advancement Method
4-1/4" Hollow Stem Auger

Abandonment Method
Boring completed as a permanent monitoring well.

Logged by
DCC

Well Started
07-22-2025

Well Completed
07-22-2025

MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: Cedar Rapids Water Pollution Control Permit No.: PPW25-0027

Well/Piezometer No.: MW-29 Date Started: 7/22/2025 Date Completed: 7/22/2025

Applicable Requirements[1]: ☐ 567 IAC 113 ☒ 567 IAC 115 ☐ Site Permit ☐ 567 IAC 114 ☐ 567 IAC 139 ☐ Other:

A. SURVEYED LOCATION[2] AND ELEVATION OF POINT

Elevations (MSL): Ground Surface: 734 ft Top of Protective Casing: 736.8

Top of Well Casing: 736.4

Site Coordinates: Northing: Easting:

World Coordinates: Latitude: 41.9593 Longitude: -91.5600

Elevation and Coordinate Systems: Decimal degrees

B. SOIL BORING INFORMATION

Certified Well Contractor Terracon

Address 2640 12th St SW City, State, Zip Code Cedar Rapids, IA 52404

Name of driller Scott Zeien Cert No. 5978

Drilling method Auger Drilling fluid none Bore hole diameter 8.25"

Soil sampling method Split-barrel Depth of boring 34.5'

C. MONITORING WELL INSTALLATION

Casing material: Schedule 40 PVC

Length of casing: 24.3' (includes stick up)

Casing diameter: 2"

Casing joint type: threaded

Casing/screen joint type: threaded

Screen material: Schedule 40PVC

Screen opening size: 0.010

Screen length: 10'

Depth of Well: 34.7' (includes stick up and bottom point)

Filter Pack: Gravel packed

Material: PW Gillibrand

Grain Size: 16/30

Quantity: 14'

Seal (minimum 3 ft. length above filter pack): Baroid Hole Plug

Material: Bentonite

Placement method: placed

Quantity: 5'

Backfill (if different from seal): Baroid Quik Grout

Material: Bentonite

Placement method: tremie

Quantity: 15.0'

Surface seal design:

Material of protective casing:

Material of grout between protective casing and well casing:

Protective cap: Stick up

Material: Steel

Vented?: ☒ Y ☐ N Locking?: ☒ Y ☐ N

Well cap: Torquer Locking Well Plug

Material: PVC with rubber gasket

Vented?: ☐ Y ☒ N

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

Water level 24' Stabilization time

Well development method hand bailed 6 well volumes

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 Dan G 9351 for Scott Zeien **Certification #** 5978 **Date** 11/4/25

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 Erik Day with the DNR's Water Supply Section at erik.day@dnr.iowa.gov. DNR prefers that the forms be completed and submitted electronically.

Well and Boring Logs

Elevations: ±0.01 ft. MSL

Depths: ±0.1 ft from Ground Surface

Top of protective casing (TOP)
Elevation C 736.8
Top of Well Casing (TOC)
Elevation B 736.4
Ground surface (GS)
Elevation A 734.0
Depth Use 0

Top of backfill
Base of concrete plug and bentonite grout
Elevation A-W 733.5
Depth W 0.5

Base of Protective Casing
Elevation C-A = 731.8
Depth PC-C-A = 2.2

Base of Backfill, Top of Seal
Elevation A-X = 718.5
Depth X 15.5

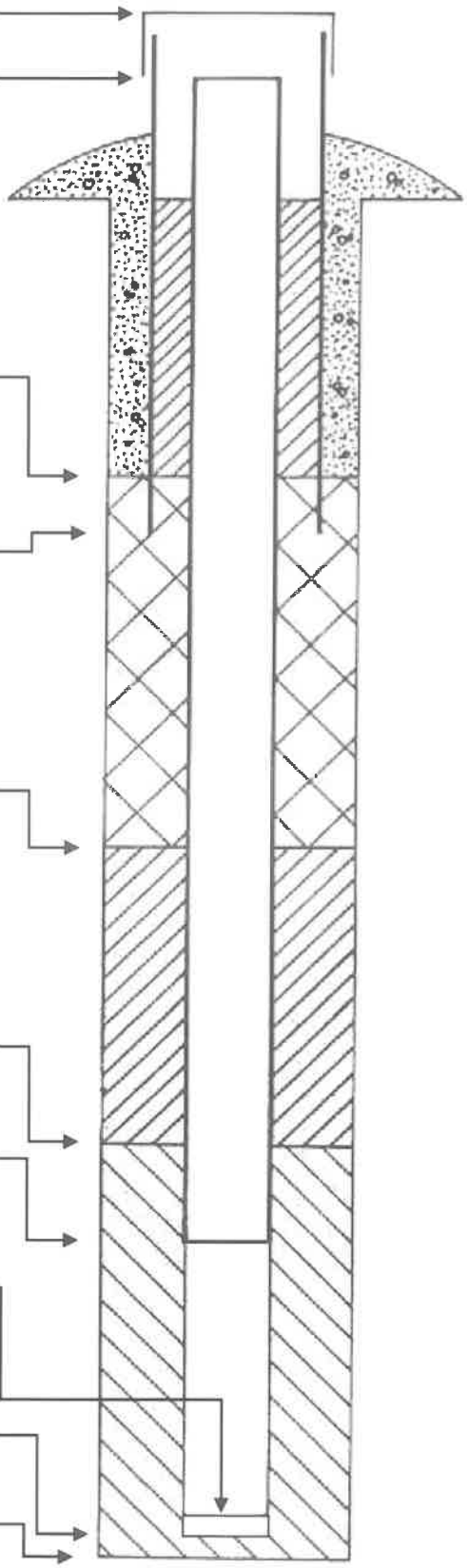
Top of Filter Pack, Base of Seal
Elevation A-Y = 713.5
Depth Y 20.5

Top of Screen (TOS)
Elevation B-TD-S-WP = 712.1
Depth A-TOS^{elev} = 21.9

Bottom of Screen (BOS)
Elevation B-TD-WP = 702.1
Depth A-BOS^{elev} = 31.9

Bottom of Well
Elevation 701.7
Depth 32.3

Bottom of Filter Pack
Elevation A-Z = 699.5
Depth Z 34.5



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: 5 S: 10
WP: .4 TD: 34.7

WPCF Process Improvements (Contract 2)
7525 Bertram Rd SE | Cedar Rapids, IA
Terracon Project No. 06257071

Terracon
3105 Capital Way, Ste 5
Cedar Falls, IA

Well Log No. MW30

Location: See Exploration Plan
Latitude: 41.9588° Longitude: -91.5608°
Depth (Ft.) Elevation: 730.8 (Ft.) +/-

Installation Details
Top Casing Elev (Ft.): 733.3

Depth (Ft.)	Description	Elevation	Water Level Observations	Sample Type	Recovery (In.)	Field Test Results	Laboratory HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI	Percent Fines
	Well log updated due to 4 feet of fill placed after initial well was set.									
4.0		726.8								
	FILL - LEAN CLAY, trace sand, dark brown, brown, gray				16	2-3-4-6 N=7				
7.0		723.8			18	4-6-4-3 N=10				
8.0	**FILL - POORLY GRADED SAND**, fine to coarse grained, brown	722.8			18	2-4-5-8 N=9				
	FILL - LEAN CLAY, trace sand, dark brown, brown, gray				20	4-6-6-7 N=12				
10.0		720.8			22	3-4-4-4 N=8	0.75 (HP)			
	FILL - SANDY LEAN CLAY, dark brown, brown, gray				20	2-4-4-6 N=8	1.75 (HP)			
12.0		718.8			24	3-4-6-7 N=10	2.5 (HP)			
	SANDY LEAN CLAY (CL), trace gravel, brown, gray				24	2-3-3-3 N=6	0.75 (HP)			
14.0		716.8			24	1-2-2-4 N=4	1.75 (HP)			
	LEAN CLAY (CL), trace sand, with sand seams, brown, gray				20	3-6-6-7 N=12				
16.0		714.8			20	2-5-5-6 N=10		5.9		
	LEAN CLAY (CL), trace sand, brown, gray		▽		20	4-4-5-4 N=9		24.3		4
23.0		707.8			18	3-3-3-3 N=6				
	POORLY GRADED SAND (SP), trace gravel and clay, fine to medium grained, brown				16	2-1-2-2 N=3				
26.0		704.8			0	1-1-1-1 N=2				
	POORLY GRADED SAND (SP), trace gravel and clay, fine to coarse grained, brown				20	1-17-28-25 N=45				
33.0		697.8								
	POORLY GRADED SAND WITH GRAVEL (SP), trace clay, fine to coarse grained, brown, gray									
36.0		694.8								
	Boring Terminated at 36 Feet									

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
▽ 26' observed while sampling

Drill Rig
603

Hammer Type
Automatic

Driller
SZ

Notes
Well log updated due to 4 feet of fill placed after initial well was set.

Advancement Method
4-1/4" Hollow Stem Auger

Abandonment Method
Boring completed as a permanent monitoring well.

Logged by
DCC

Well Started
07-21-2025

Well Completed
07-22-2025

MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: Cedar Rapids Water Pollution Control Permit No.: PPW25-0027

Well/Piezometer No.: MW-30 Date Started: 7/22/25 Date Completed: 7/22/25

Applicable Requirements[1]: ☐ 567 IAC 113 ☒ 567 IAC 115 ☐ Site Permit ☐ 567 IAC 114 ☐ 567 IAC 139 ☐ Other:

A. SURVEYED LOCATION[2] AND ELEVATION OF POINT

Elevations (MSL): Ground Surface: 730.8 Top of Protective Casing: 733.8

Top of Well Casing: 733.3

Site Coordinates: Northing: Easting:

World Coordinates: Latitude: 41.9593270 Longitude: -91.5599930

Elevation and Coordinate Systems: Decimal Degrees

B. SOIL BORING INFORMATION

Certified Well Contractor Terracon

Address 2640 12th St SW City, State, Zip Code Cedar Rapids, IA

Name of driller Scott Zeien Cert No. 5978

Drilling method Auger Drilling fluid none Bore hole diameter 8.25"

Soil sampling method Split-barrel Depth of boring 36'

C. MONITORING WELL INSTALLATION

Casing material: PVC Placement method: placed

Length of casing: 26.0' (includes stick up) Quantity: 3'

Casing diameter: 2" Backfill (if different from seal): Baroid Quik Grout

Casing joint type: threaded Material: Bentonite

Casing/screen joint type: threaded Placement method: tremie

Screen material: PVC Quantity: 18 (top 3.5' soil)

Screen opening size: 0.010 Surface seal design:

Screen length: 10' Material of protective casing:

Material of grout between

Depth of Well: 36.4' (includes stick up and bottom point) protective casing and well casing:

Filter Pack: Gravel packed Protective cap: Stick up

Material: PW Gillibrand Material: Steel

Grain Size: 16/30 Vented?: ☒ Y ☐ N Locking?: ☒ Y ☐ N

Quantity: 14.5' Well cap: Torquer Locking Well Plug

Seal (minimum 3 ft. length above filter pack): Bariod Hole Plug Material: PVC with rubber gasket

Material: Bentonite Vented?: ☐ Y ☒ N

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

Water level 26 Stabilization time

Well development method Hand bailed 6 well volumes on 7/25/25

Average depth of frost line

Fill placed around monitoring well after completion, see Terracon Well Log No. 30

[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 Dave Oy 9351 for Scott Zeien **Certification #** 5978 **Date** 11/4/25

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 Erik Day with the DNR's Water Supply Section at erik.day@dnr.iowa.gov. DNR prefers that the forms be completed and submitted electronically.

Well and Boring Logs

Elevations: ±0.01 ft. MSL

Depths: ±0.1 ft from Ground Surface

Top of protective casing (TOP)
Elevation C 733.8
Top of Well Casing (TOC)
Elevation B 733.3
Ground surface (GS)
Elevation A 730.8
Depth Use 0

Top of backfill
Base of concrete plug and bentonite grout
Elevation A-W 730.3
Depth W 0.5

Base of Protective Casing
Elevation C-A = 728.8
Depth PC-C-A = 2

Base of Backfill, Top of Seal
Elevation A-X = 712.3
Depth X 18.5

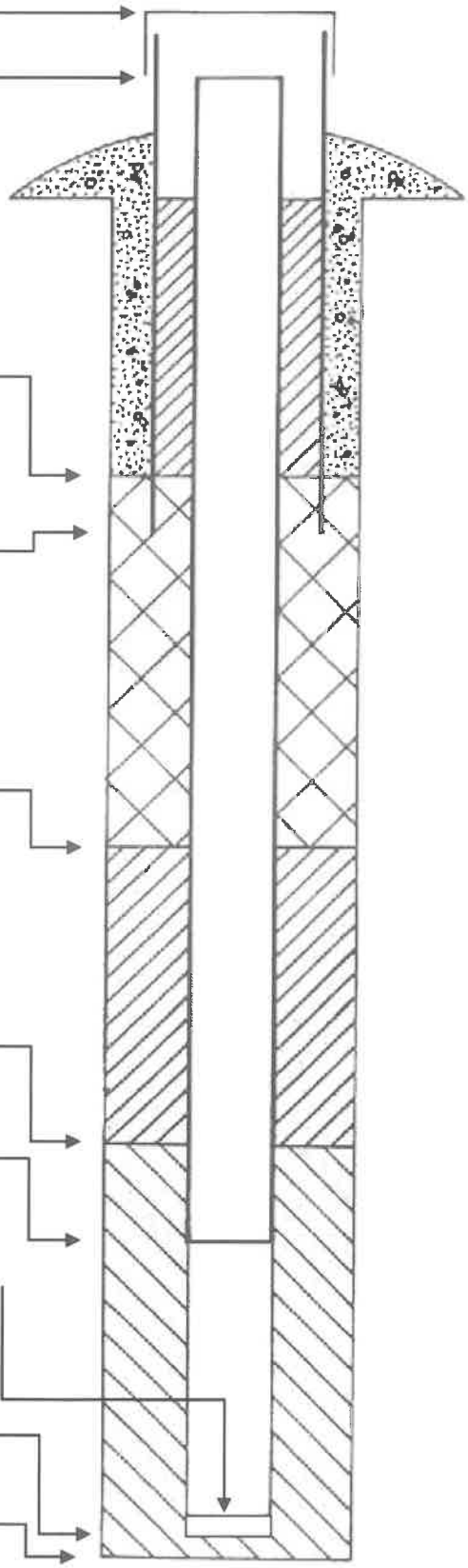
Top of Filter Pack, Base of Seal
Elevation A-Y = 709.3
Depth Y 21.5

Top of Screen (TOS)
Elevation B-TD-S-WP = 707.3
Depth A-TOS^{elev} = 23.5

Bottom of Screen (BOS)
Elevation B-TD-WP = 697.3
Depth A-BOS^{elev} = 33.5

Bottom of Well
Elevation 696.9
Depth 33.9

Bottom of Filter Pack
Elevation A-Z = 694.8
Depth Z 36



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: 5 S: 10
WP: .4 TD: 36.4

WPCF Process Improvements (Contract 2)
7525 Bertram Rd SE | Cedar Rapids, IA
Terracon Project No. 06257071

Terracon
3105 Capital Way, Ste 5
Cedar Falls, IA

Well Log No. MW31

Location: See Exploration Plan
Latitude: 41.9586° Longitude: -91.5601°
Depth (Ft.) Elevation: 731.9 (Ft.) +/-

Installation Details: Top Casing Elev (Ft.): 734.3

Depth (Ft.)	Description	Elevation	Recovery (In.)	Field Test Results	Laboratory HP (tsf)
3.5	Well log updated due to 3.5 feet of fill placed after initial well was set.	728.4			
9.5	**FILL - SANDY LEAN CLAY**, trace gravel, brown, gray	722.4	18	1-1-3-4 N=4	
			24	3-3-5-7 N=8	
			20	3-4-4-5 N=8	
15.5	**LEAN CLAY (CL)**, trace sand, brown, dark brown	716.4	20	3-5-5-6 N=10	3.0 (HP)
			20	5-7-7-8 N=14	3.0 (HP)
			20	3-5-5-6 N=10	1.75 (HP)
21.5	**LEAN CLAY (CL)**, trace sand, brown, gray	710.4	20	3-4-5-7 N=9	1.75 (HP)
			20	3-4-4-4 N=8	1.5 (HP)
			24	2-2-2-2 N=4	0.25 (HP)
23.5	**LEAN CLAY (CL)**, trace sand, with sand seams, brown, gray	708.4	20	2-2-2-3 N=4	0.75 (HP)
25.3	**LEAN CLAY (CL)**, trace sand and silt, gray	706.6	20	3-2-4-8 N=6	1.75 (HP)
27.5	**POORLY GRADED SAND (SP)**, trace gravel and clay, fine to medium grained, gray	704.4	24	5-7-8-7 N=15	
29.5	**POORLY GRADED SAND (SP)**, trace gravel and clay, fine to medium to fine to coarse grained, brown, gray	702.4	24	3-4-4-5 N=8	
35.5	**POORLY GRADED SAND (SP)**, trace gravel and clay, fine to coarse grained, gray	696.4	24	3-3-3-3 N=6	
			12	1-2-2-3 N=4	
			12	2-2-2-3 N=4	
	Boring Terminated at 35.5 Feet				

Water Level Observations: ▽ 27' observed while sampling

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes
Well log updated due to 3.5 feet of fill placed after initial well was set.

Advancement Method
4-1/4" Hollow Stem Auger

Abandonment Method
Boring completed as a permanent monitoring well.

Drill Rig
603

Hammer Type
Automatic

Driller
SZ

Logged by
DCC

Well Started
07-21-2025

Well Completed
07-21-2025

MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: Cedar Rapids Water Pollution Control Permit No.: PPW25-0027

Well/Piezometer No.: MW-31 Date Started: 7/21/25 Date Completed: 7/21/25

Applicable Requirements[1]: ☐ 567 IAC 113 ☒ 567 IAC 115 ☐ Site Permit ☐ 567 IAC 114 ☐ 567 IAC 139 ☐ Other:

A. SURVEYED LOCATION[2] AND ELEVATION OF POINT

Elevations (MSL): Ground Surface: 731.9 Top of Protective Casing: 735.0

Top of Well Casing: 734.3

Site Coordinates: Northing: Easting:

World Coordinates: Latitude: 41.9586 Longitude: -91.5601

Elevation and Coordinate Systems: Decimal degrees

B. SOIL BORING INFORMATION

Certified Well Contractor Terracon

Address 2640 12th St SW City, State, Zip Code Cedar Rapids, IA 52404

Name of driller Scott Zeien Cert No. 5978

Drilling method Auger Drilling fluid none Bore hole diameter 8.25"

Soil sampling method Split-barrel Depth of boring 35.5'

C. MONITORING WELL INSTALLATION

Casing material: PVC

Length of casing: 24.2' (includes stick up)

Casing diameter: 2"

Casing joint type: threaded

Casing/screen joint type: threaded

Screen material: PVC

Screen opening size: 0.010

Screen length: 10'

Depth of Well: 34.6' (includes stick up and bottom point)

Filter Pack: Gravel packed

Material: PW Gillibrand

Grain Size: 16/30

Quantity: 15.7'

Seal (minimum 3 ft. length above filter pack): Baroid Hole Plug

Material: Bentonite

Placement method: placed

Quantity: 3'

Backfill (if different from seal): Baroid Quik Grout

Material: Bentonite

Placement method: tremie

Quantity: 16.3' (top 3' soil)

Surface seal design:

Material of protective casing:

Material of grout between protective casing and well casing:

Protective cap: Stick up

Material: Steel

Vented?: ☒ Y ☐ N Locking?: ☒ Y ☐ N

Well cap: Torquer Locking Well Plug

Material: PVC with rubber gasket

Vented?: ☐ Y ☒ N

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

Water level 27 Stabilization time

Well development method Hand bailed 6 well volumes on 7/25/25

Average depth of frost line

Fill placed around monitoring well after completion, see Terracon Well Log No. 31

[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 Dan Ly 9351 for Scott Zeien **Certification #** 5978 **Date** 11/4/25

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 Erik Day with the DNR's Water Supply Section at erik.day@dnr.iowa.gov. DNR prefers that the forms be completed and submitted electronically.

Well and Boring Logs

Elevations: ±0.01 ft. MSL

Depths: ±0.1 ft from Ground Surface

Top of protective casing (TOP)
Elevation C 735.0
Top of Well Casing (TOC)
Elevation B 734.3
Ground surface (GS)
Elevation A 731.9
Depth Use 0

Top of backfill
Base of concrete plug and bentonite grout
Elevation A-W 731.4
Depth W 0.5

Base of Protective Casing
Elevation C-A = 730.0
Depth PC-C-A = 1.9

Base of Backfill, Top of Seal
Elevation A-X = 715.1
Depth X 16.8

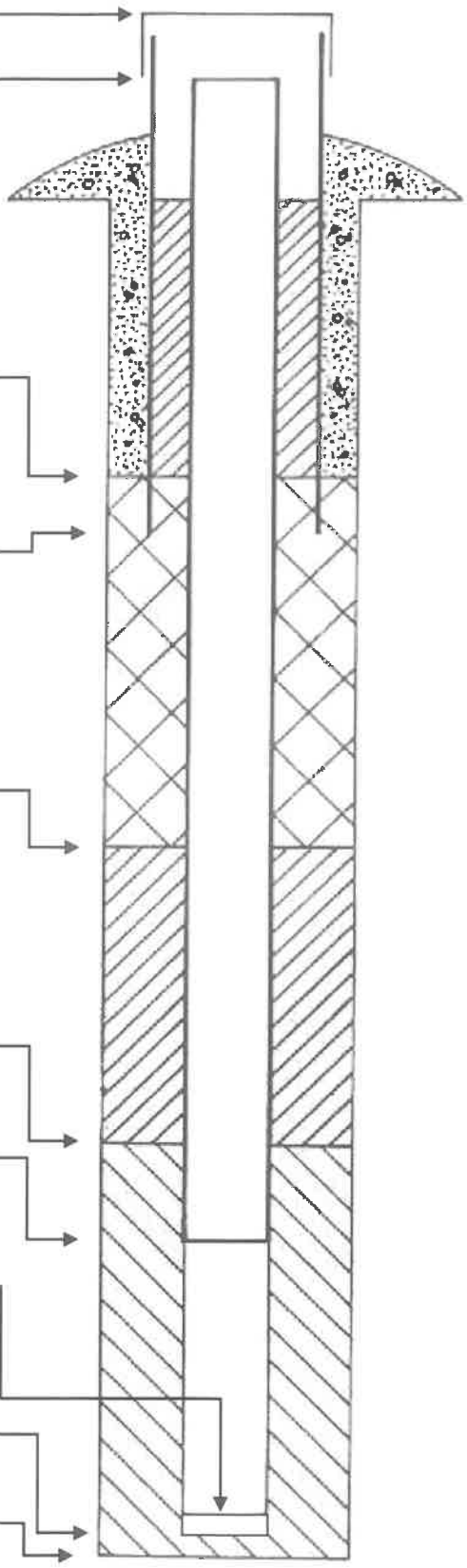
Top of Filter Pack, Base of Seal
Elevation A-Y = 712.1
Depth Y 19.8

Top of Screen (TOS)
Elevation B-TD-S-WP = 710.1
Depth A-TOS^{elev} = 21.8

Bottom of Screen (BOS)
Elevation B-TD-WP = 700.1
Depth A-BOS^{elev} = 31.8

Bottom of Well
Elevation 699.7
Depth 32.2

Bottom of Filter Pack
Elevation A-Z = 696.4
Depth Z 35.5



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: 5 S: 10
WP: .4 TD: 36

WPCF Process Improvements (Contract 2)
7525 Bertram Rd SE | Cedar Rapids, IA
Terracon Project No. 06257071

Terracon
3105 Capital Way, Ste 5
Cedar Falls, IA

Well Log No. MW32

Location: See Exploration Plan
Latitude: 41.9586° Longitude: -91.5597°
Depth (Ft.) Elevation: 731.7 (Ft.) +/-

Installation Details
Top Casing Elev (Ft.): 734.3

Depth (Ft.)	Description	Elevation	Recovery (In.)	Field Test Results	Laboratory HP (tsf)	Water Content (%)	Atterberg Limits LL-PL-PI	Percent Fines
	Well log updated due to 3.2 feet of fill placed after initial well was set.							
3.2		728.5						
	FILL - LEAN CLAY, trace sand, brown, dark brown		6	2-2-2-3 N=4				
5.2		726.5						
	FILL - LEAN CLAY, trace sand and gravel, dark brown, brown, gray		18	4-4-4-4 N=8				
			18	4-8-9-9 N=17				
9.2		722.5						
	LEAN CLAY (CL), trace sand, brown, dark brown		18	4-5-5-9 N=10				
12.2		719.5	20	6-6-6-7 N=12				
	SANDY LEAN CLAY (CL), trace gravel, dark brown		20	3-3-4-4 N=7	1.0 (HP)			
15.2		716.5						
	LEAN CLAY (CL), trace sand, brown gray		20	3-5-5-6 N=10	1.5 (HP)			
			22	3-4-4-5 N=8	1.5 (HP)			
			24	3-3-3-4 N=6	1.0 (HP)			
			24	2-3-3-4 N=6	1.75 (HP)			
23.2		708.5						
	POORLY GRADED SAND (SP), trace gravel and clay, fine to medium grained, gray		20	5-5-7-8 N=12		6.9		3
			24	3-6-6-7 N=12				
			24	5-5-5-6 N=10				
31.2		700.5	24	3-4-4-3 N=8				
	POORLY GRADED SAND (SP), trace gravel and clay, fine to coarse grained, gray		12	1-1-1-2 N=2				
35.2		696.5	14	1-1-1-2 N=2				
	Boring Terminated at 35.2 Feet							

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Water Level Observations
27' observed while sampling

Drill Rig
603

Hammer Type
Automatic

Driller
SZ

Notes
Well log updated due to 3.2 feet of fill placed after initial well was set.

Advancement Method
4-1/4" Hollow Stem Auger

Abandonment Method
Boring completed as a permanent monitoring well.

Logged by
DCC

Well Started
07-21-2025

Well Completed
07-21-2025

MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: Cedar Rapids Water Pollution Control Permit No.: PPW25-0027

Well/Piezometer No.: MW-32 Date Started: 7/21/25 Date Completed: 7/21/25

Applicable Requirements[1]: ☐ 567 IAC 113 ☒ 567 IAC 115 ☐ Site Permit ☐ 567 IAC 114 ☐ 567 IAC 139 ☐ Other:

A. SURVEYED LOCATION[2] AND ELEVATION OF POINT

Elevations (MSL): Ground Surface: 731.7 Top of Protective Casing: 734.8

Top of Well Casing: 734.3

Site Coordinates: Northing: Easting:

World Coordinates: Latitude: 41.9586 Longitude: -91.5597

Elevation and Coordinate Systems: Decimal degrees

B. SOIL BORING INFORMATION

Certified Well Contractor Terracon

Address 2640 12th St SW City, State, Zip Code Cedar Rapids, IA 52404

Name of driller Scott Zeien Cert No. 5978

Drilling method Auger Drilling fluid none Bore hole diameter 8.25"

Soil sampling method Split-barrel Depth of boring 35.2'

C. MONITORING WELL INSTALLATION

Casing material: PVC

Length of casing: 25.6' (includes stick up)

Casing diameter: 2"

Casing joint type: threaded

Casing/screen joint type: threaded

Screen material: PVC

Screen opening size: 0.010

Screen length: 10'

Depth of Well: 36.0' (includes stick up and bottom point)

Filter Pack: Gravel packed

Material: PW Gillibrand

Grain Size: 16/30

Quantity: 14'

Seal (minimum 3 ft. length above filter pack): Baroid Hole Plug

Material: Bentonite

Placement method: placed

Quantity: 2.7'

Backfill (if different from seal): Baroid Quik Grout

Material: Bentonite

Placement method: tremie

Quantity: 18' (top 2.7' soil)

Surface seal design:

Material of protective casing:

Material of grout between protective casing and well casing:

Protective cap:

Material: Steel

Vented?: ☒ Y ☐ N Locking?: ☒ Y ☐ N

Well cap: Torquer Locking Well Plug

Material: PVC with rubber gasket

Vented?: ☐ Y ☒ N

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

Water level 27' Stabilization time

Well development method Hand bailed 6 well volumes on 7/25/25

Average depth of frost line

Fill placed around monitoring well after completion, see Terracon Well Log No. 32

[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 Dan Day 9351 for Scott Zeien **Certification #** 5978 **Date** 11/4/25

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 Erik Day with the DNR's Water Supply Section at erik.day@dnr.iowa.gov. DNR prefers that the forms be completed and submitted electronically.

Well and Boring Logs

Elevations: ±0.01 ft. MSL

Depths: ±0.1 ft from Ground Surface

Top of protective casing (TOP)
Elevation C 734.8
Top of Well Casing (TOC)
Elevation B 734.3
Ground surface (GS)
Elevation A 731.7
Depth Use 0

Top of backfill
Base of concrete plug and bentonite grout
Elevation A-W 731.2
Depth W 0.5

Base of Protective Casing
Elevation C-A = 729.8
Depth PC-C-A = 1.9

Base of Backfill, Top of Seal
Elevation A-X = 713.2
Depth X 18.5

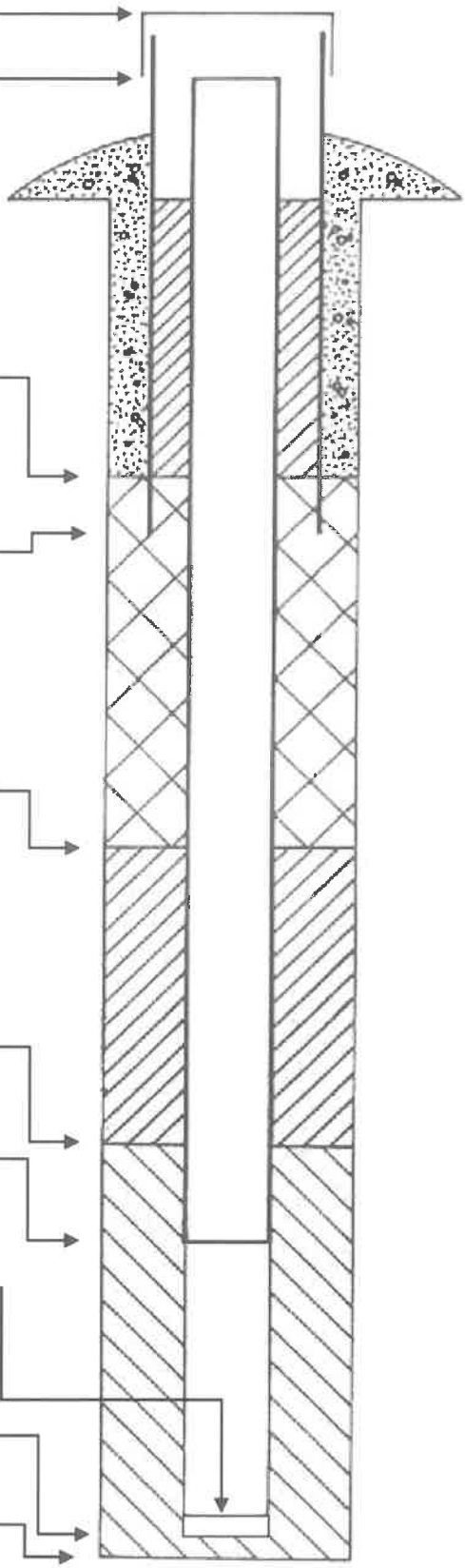
Top of Filter Pack, Base of Seal
Elevation A-Y = 710.5
Depth Y 21.2

Top of Screen (TOS)
Elevation B-TD-S-WP = 708.7
Depth A-TOS^{elev} = 23

Bottom of Screen (BOS)
Elevation B-TD-WP = 698.7
Depth A-BOS^{elev} = 33

Bottom of Well
Elevation 698.3
Depth 33.4

Bottom of Filter Pack
Elevation A-Z = 696.5
Depth Z 35.2



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: 5 S: 10
WP: .4 TD: 36