

Field Engineering, Inc.

WATER ANALYSIS

7608 119th Lane North - Champlin, Minnesota 55316

22 September 2020

Telephone: 763-427-0826
FED. ID # 411443773

Test #: 154028
Time: 11:00 AM
From: Kitchen tap
Date collected: 21 September 2020
Date in lab: 21 September 2020
Lab ID #: 20-10375 I20-236
Lic. #: E20

To: EDINA REALTY
1000 SUPERIOR BLVD #200
WAYZATA, MN 55391-1607
c/o Candi Stabeck / Sus Rodelius

RE: Water test at: 2855 Breezy Heights Rd; Woodland, MN

Field Engineering personnel in conjunction with Twin City Water Clinic drew and tested the water at the above address. The test results for the water drawn by Marvin J. Wenzel were as follows:

<u>Test</u>	<u>Maximum limit</u>	<u>Results</u>	<u>Remarks</u>
Coliform Bacteria - SM9222B	Absent	Absent	
Nitrate Nitrogen - SM4500	10 mg/L	less than 1.0 mg/L	

This water DOES meet state, conventional, FHA, VA, and U.S.P.H.S. guidelines for the tests listed above. Twin City Water Clinic is certified to perform these tests by the Minnesota Department of Health certificate #027-053-119 and Wisconsin Department of Agriculture certificate #105-10117. This report must not be reproduced, except in full, without the written approval from Twin City Water Clinic and Field Engineering, Inc.

Sincerely Yours,



Marvin Wenzel

Minnesota Pollution Control Agency

520 Lafayette Road North St. Paul, MN 55155-4194

Compliance Inspection Form Existing Subsurface Sewage Treatment Systems (SSTS)

Doc Type: Compliance and Enforcement

Inspection results based on Minnesota Pollution Control Agency (MPCA) requirements and attached forms -- additional local requirements may also apply.

Submit completed form to Local Unit of Government (LUG) and system owner within 15 days

For local tracking purposes:

System Status

System status on date (mm/dd/yyyy): 9/25/2020

[X] Compliant - Certificate of Compliance (Valid for 3 years from report date, unless shorter time frame outlined in Local Ordinance.)

[] Noncompliant - Notice of Noncompliance (See Upgrade Requirements on page 3.)

Reason(s) for noncompliance (check all applicable)

- [] Impact on Public Health (Compliance Component #1) - Imminent threat to public health and safety
[] Other Compliance Conditions (Compliance Component #3) - Imminent threat to public health and safety
[] Tank Integrity (Compliance Component #2) - Failing to protect groundwater
[] Other Compliance Conditions (Compliance Component #3) - Failing to protect groundwater
[] Soil Separation (Compliance Component #4) - Failing to protect groundwater
[] Operating permit/monitoring plan requirements (Compliance Component #5) - Noncompliant

Property Information

Parcel ID# or Sec/Twp/Range:

Property address: 2855 Breezy Heights Road, Woodland Reason for inspection: Sale

Property owner: Richard Salmela Owner's phone: 952-239-5562

Owner's representative: Representative phone:

Local regulatory authority: City of Woodland Regulatory authority phone:

Brief system description: 2 - 1000 gallon septic & 1000 gallon pump tank with and elevated SB2 Trench System

Comments or recommendations:

Certification

I hereby certify that all the necessary information has been gathered to determine the compliance status of this system. No determination of future system performance has been nor can be made due to unknown conditions during system construction, possible abuse of the system, inadequate maintenance, or future water usage.

Inspector name: Josh Swedlund Certification number: C1659

Business name: Sewer Services Inc. License number: 2502

Inspector signature: [Signature] Phone number: 952-873-3292

Necessary or Locally Required Attachments

- [X] Soil boring logs [X] System/As-built drawing [X] Forms per local ordinance
[] Other information (list):

Property address: 2855 Breezy Heights Road, Woodland

Inspector initials/Date: JS | 9/25/2020
(mm/dd/yyyy)

1. Impact on Public Health – Compliance component #1 of 5

Compliance criteria:

System discharges sewage to the ground surface.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
System discharges sewage to drain tile or surface waters.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
System causes sewage backup into dwelling or establishment.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Any "yes" answer above indicates the system is an imminent threat to public health and safety.

Comments/Explanation:

Verification method(s):

- Searched for surface outlet
- Searched for seeping in yard/backup in home
- Excessive ponding in soil system/D-boxes
- Homeowner testimony (See Comments/Explanation)
- "Black soil" above soil dispersal system
- System requires "emergency" pumping
- Performed dye test
- Unable to verify (See Comments/Explanation)
- Other methods not listed (See Comments/Explanation)

2. Tank Integrity – Compliance component #2 of 5

Compliance criteria:

System consists of a seepage pit, cesspool, drywell, or leaching pit. <i>Seepage pits meeting 7080.2550 may be compliant if allowed in local ordinance.</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Sewage tank(s) leak below their designed operating depth. If yes, which sewage tank(s) leaks:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Any "yes" answer above indicates the system is failing to protect groundwater.

Comments/Explanation:

Verification method(s):

- Probed tank(s) bottom
- Examined construction records
- Examined Tank Integrity Form (Attach)
- Observed liquid level below operating depth
- Examined empty (pumped) tanks(s)
- Probed outside tank(s) for "black soil"
- Unable to verify (See Comments/Explanation)
- Other methods not listed (See Comments/Explanation)

3. Other Compliance Conditions – Compliance component #3 of 5

- a. Maintenance hole covers are damaged, cracked, unsecured, or appear to be structurally unsound. Yes* No Unknown
- b. Other issues (electrical hazards, etc.) to immediately and adversely impact public health or safety. Yes* No Unknown
***System is an imminent threat to public health and safety.**

Explain:

- c. System is non-protective of ground water for other conditions as determined by inspector. Yes* No
***System is failing to protect groundwater.**

Explain:

Property address: 2855 Breezy Heights Road, Woodland

Inspector initials/Date: JS | 9/25/2020
(mm/dd/yyyy)

4. Soil Separation – Compliance component #4 of 5

Date of installation: 10/1/1998 Unknown
(mm/dd/yyyy)

Shoreland/Wellhead protection/Food beverage lodging? Yes No

Compliance criteria:

For systems built prior to April 1, 1996, and not located in Shoreland or Wellhead Protection Area or not serving a food, beverage or lodging establishment: Yes No

Drainfield has at least a two-foot vertical separation distance from periodically saturated soil or bedrock.

Non-performance systems built April 1, 1996, or later or for non-performance systems located in Shoreland or Wellhead Protection Areas or serving a food, beverage, or lodging establishment: Yes No

Drainfield has a three-foot vertical separation distance from periodically saturated soil or bedrock.*

"Experimental", "Other", or "Performance" systems built under pre-2008 Rules; Type IV or V systems built under 2008 Rules (7080, 2350 or 7080.2400 (Advanced Inspector License required) Yes No

Drainfield meets the designed vertical separation distance from periodically saturated soil or bedrock.

Any "no" answer above indicates the system is failing to protect groundwater.

Verification method(s):

Soil observation does not expire. Previous soil observations by two independent parties are sufficient, unless site conditions have been altered or local requirements differ.

- Conducted soil observation(s) (Attach boring logs)
- Two previous verifications (Attach boring logs)
- Not applicable (Holding tank(s), no drainfield)
- Unable to verify (See Comments/Explanation)
- Other (See Comments/Explanation)

Comments/Explanation:

Boring:
1-4" 10yr 2/2 loam
5-26" 10yr 4/4 sandy loam
27-63" 10yr 4/6 sand
No Redox

Indicate depths or elevations

A. Bottom of distribution media	24"
B. Periodically saturated soil/bedrock	63"+
C. System separation	39"+
D. Required compliance separation*	36"

*May be reduced up to 15 percent if allowed by Local Ordinance.

5. Operating Permit and Nitrogen BMP* – Compliance component #5 of 5 Not applicable

Is the system operated under an Operating Permit? Yes No If "yes", A below is required

Is the system required to employ a Nitrogen BMP? Yes No If "yes", B below is required

BMP = Best Management Practice(s) specified in the system design

If the answer to both questions is "no", this section does not need to be completed.

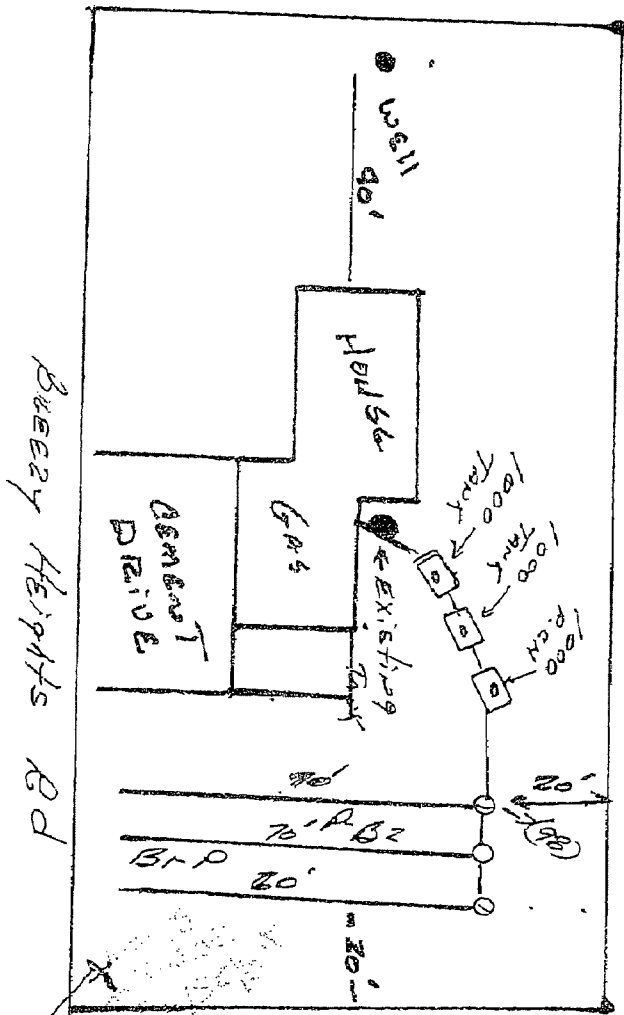
Compliance criteria

- a. Operating Permit number: _____
Have the Operating Permit requirements been met? Yes No
- b. Is the required nitrogen BMP in place and properly functioning? Yes No

Any "no" answer indicates Noncompliance.

Upgrade Requirements (Minn. Stat. § 115.55) An imminent threat to public health and safety (ITPHS) must be upgraded, replaced, or its use discontinued within ten months of receipt of this notice or within a shorter period if required by local ordinance. If the system is failing to protect ground water, the system must be upgraded, replaced, or its use discontinued within the time required by local ordinance. If an existing system is not failing as defined in law, and has at least two feet of design soil separation, then the system need not be upgraded, repaired, replaced, or its use discontinued, notwithstanding any local ordinance that is more strict. This provision does not apply to systems in shoreland areas, Wellhead Protection Areas, or those used in connection with food, beverage, and lodging establishments as defined in law.

2855 Bueezy Heights Rd - Goodman
 Replacement System - Original Tank (Cass-pool)
 450 GPD - 210 LF SBR2
 TOWER SEWER AT HOUSE (92)
 PUMP ELEVATION (92)



50' SEPARATION
 NEIGHBORS
 WELL

North
 →

LOGS OF SOIL BORINGS

Location or Project 2855 Breezy Heights Rd - Woodlawn

Borings made by SWEDLUND Date 9-23-98

Classification System: AASHO USDA-SCS Unified Other _____

Auger used (check two): Hand or Power; Flight or Bucket; Other _____

Depth, in feet	Boring Number <u>B1</u> Surface Elevation _____	Depth, in feet	Boring Number <u>B2</u> Surface Elevation _____
0	<u>MUNSEH 104R</u>	0	<u>MUNSEH 104R</u>
0 - 1	<u>0-24</u>	0 - 1	<u>0-24</u>
1 - 2	<u>SANDY-GRAVEL / LOAM 3/4</u>	1 - 2	<u>SANDY-GRAVEL / 3/4</u>
2 - 3	<u>24</u>	2 - 3	<u>24 5/8</u>
3 - 4	<u>SAND-GRAVEL / w/ CLAY FINDS</u>	3 - 4	<u>3/4 COURSE GRAVEL</u>
4 - 5	<u>5/8 - 6/3 MIXED</u>	4 - 5	<u>3/4 SANDY LOAM w/ CLAY FINDS 4/4</u>
5 - 6		5 - 6	
6 - 7		6 - 7	
7 - 8		7 - 8	
8 - 9		8 - 9	
9 - 10		9 - 10	

End of boring at 5 feet.

Standing water table:

- Present at _____ feet of depth, _____ hours after boring.
- Not present in boring hole.

Mottled Soil:

- Observed at NO feet of depth.
- Not present in boring hole.

End of boring at 5 feet.

Standing water table:

- Present at _____ feet of depth, _____ hours after boring.
- Not present in boring hole.

Mottled Soil:

- Observed at NO feet of depth.
- Not present in boring hole.

INDIVIDUAL SEWAGE TREATMENT SYSTEM WORKSHEET

- A. Estimated 450 FLOW
measured _____ x 1.5 = _____ gpd
- B. 2000 SEPTIC TANK VOLUME
_____ gallons

Number of Bedrooms	Type I	Type II	Type III	Type IV
2	300	225	180	60% of the values in Type I, II or III columns
3	450	300	218	
4	600	375	256	
5	750	450	294	
6	900	525	332	
7	1050	600	370	
8	1200	675	408	

- C. SOILS (Site evaluation data)
Depth to restricting layer = 5 FT 1/2 feet
- D. Maximum depth of system C - 3 ft = 2 feet
- E. Texture Sand L Percolation rate 6-7 MPI
- F. SSF 1.27 sq ft/gpd
- G. Slope 0 %

Number of Bedrooms	Minimum Liquid Capacity	Liquid capacity with garbage disposal	Liquid capacity with disposal unit inside
2 or less	750	1125	1500
3 or 4	1000	1500	2000
5 or 6	1500	2250	3000
7 or more	2000	3000	4000

Percolation Rate in Minutes per Inch (MPI)	Soil Texture	Square feet per gallon per day
Faster than 0.1 *	Coarse Sand	---
0.1 to 5	Sand	0.83
0.1 to 5	Fine Sand **	1.67
6 to 15	Sandy Loam	1.27
16 to 30	Loam	1.67
31 to 45	Silt Loam	2.00
46 to 60	Clay Loam	2.20
Slower than 60***	Clay	---

* Soil too coarse for sewage treatment. Use systems for rapidly permeable soils.
 ** Soil having 50% or more of fine sand plus very fine sand.
 *** Soil with too high a percentage of clay for installation of an inground standard system.

6 inches = 0% Reduction*
 12 inches = 20% Reduction
 18 inches = 34% Reduction
 24 inches = 40% Reduction
 * sizing for gravelless trench

TRENCH BOTTOM AREA

H. For trenches with 6 inches of rock below the pipe:
 $A \times F = \text{_____} = \text{_____}$ sq ft of bottom area

I. For trenches with 12 inches of rock below the pipe:
 $A \times F \times 0.8 = \text{_____} \times \text{_____} \times 0.8 = \text{_____}$ sq ft of bottom area

J. For trenches with 18 inches of rock below the pipe:
 $A \times F \times 0.66 = \text{_____} \times \text{_____} \times 0.66 = \text{_____}$ sq ft of bottom area

K. For trenches with 24 inches of rock below the pipe:
 $A \times F \times 0.6 = \text{_____} \times \text{_____} \times 0.6 = \text{_____}$ sq ft of bottom area

BED BOTTOM AREA

L. For seepage beds with 6 or 12 inches of rock below the pipe;
 $1.5 \times A \times F = 1.5 \times \text{_____} \times \text{_____} = \text{_____}$ sq ft of bottom area

- M. **ROCK VOLUME IN CU FT**
 Rock depth below distribution pipe plus 0.5 foot times bottom area:
 $M = \text{Rock depth} + 6 \text{ inches} \times \text{Area (H,I,J,L,K)}$
 $(\text{_____} + 0.5 \text{ ft}) \times \text{_____} = \text{_____}$ cu ft
- N. **ROCK VOLUME IN CU YDS**
 Volume in cu ft divided by 27
 $M \div 27 = \text{cu yds } \text{_____} \div 27 = \text{_____}$ cu yds
- O. **ROCK WEIGHT**
 Cubic yards times 1.4 = tons
 $N \times 1.4 = \text{tons } \text{_____} \times 1.4 = \text{_____}$ tons

SYSTEM LENGTH

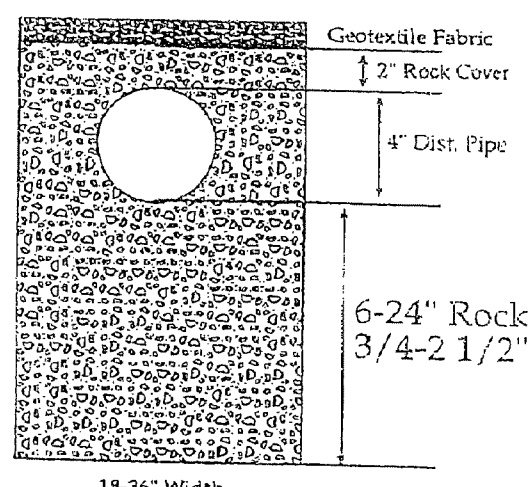
P. Select trench width = _____ ft

Q. Divide bottom area by trench width: (H, I, J, or K) ÷ P = lineal feet
 _____ ÷ _____ = _____ lineal feet

Q1. Gravelless Design
 $A \times F \div (3 \text{ for } 10" \text{ pipe, } 2 \text{ for } 8" \text{ pipe, width of the Chamber})$
 $450 \times 1.27 \div 3 = 190 \text{ feet } \text{210 LF}$

- R. **LAWN AREA**
 Select trench spacing, center to center = 6 feet
- S. Multiply trench spacing by lineal feet R x Q = sq ft of lawn area
6 x 210 = 1260 sq ft

- LAYOUT (Use other side)**
- Select an appropriate scale; one square = _____ feet.
 - Show pertinent property boundaries, right-of-way, easements.
 - Show location of house, garage, driveway, and all other improvements, existing or proposed
 - Show location and layout of sewage treatment system.
 - Show location of water supply well.
 - Dimension all set backs and separation distances.



SEE S.B. 2
 LAY-OUT