Lincoln-Lancaster County Health Department
Environmental Public Health Division (402) 441-8027
3131 O Street Lincoln, Nebraska 68510-1514

ON-SITE WASTE WATER SYSTEM
CONSTRUCTION - INSTALLATION PERMIT
No. HS002342

System Type: Standard

Situs: No Site Address Specified

Issued: 12/14/2021

Expires: 12/14/2022

Description: NEALRENE ACRES FIRST ADDITION, BLOCK 3, Lot 1

Owner: LUDWIG, KYLE & GRABAU, KATHERINE
10400 WEEKS DR
LINCOLN, NE 68516

Patricia D. Lopez

Patricia D. Lopez, RN, MSN, Health Director

Dear Applicant:

The above document is your permit to construct a new On-site Waste Water System at the location listed. Please contact this office once the sytem is complete in order to schedule a final inspection before use.

Patricia D. Lopez

Patricia D. Lopez, RN, MSN
Health Director

LUDWIG, KYLE & GRABAU, KATHERINE
10400 WEEKS DR
LINCOLN, NE 68516

Lincoln-Lancaster County Health Department
Environmental Public Health Division
3140 N Street • Lincoln NE 68510-1514
Phone: 402-441-8643

A

Permit Number 1S002342

Onsite Wastewater Treatment System Permit Application

Include Form B and C. Submit correct fee with this Application

☑ Septic System ☐ Lagoon ☐ Other (Refer to Form C)

PLEASE PRINT OR TYPE

A. Onsite System Location

Address* 10400 Weeks Dr City Lincoln, NE Zip 68516
(no rural route)

Legal Description Nealrene Acers 33 09 07 First Addition Block 3 Lot 1
1/4 1/4 Section Township Range Subdivison Addition Block Lot

PID 16 - 33 - 100 - 008 - 000 *Approx. Address (If to be determined)

B. Owner

Name Kyle + Grabau Katherine Ludwig Signature
Address 10400 Weeks Dr City/State/Zip Lincoln, Ne 68516
Home Phone Work Phone 402-805-9790

C. Certified Installer

Name: Trevor McDonald Signature
Address 2234 Holdrege St City/State/Zip Lincoln Ne 68503
Work Phone 402 - 770 - 9397

D. Engineer

☐ **Check and complete if engineer designed system** P.E. License Number:

Designer Name Firm Work Phone

E. This system will serve a

☑ Residential Dwelling Number of Bedrooms 4 Whirlpool Bathtub? ☐ Yes ☑ No Total Acres 1.64
Garbage Grinder? ☑ Yes ☐ No

☐ Commercial Establishment/Other Facility Specify Design flow in gallons per day 500

Type of Wastewater ☒ Domestic ☐ Non-Domestic

DO NOT WRITE BELOW THIS LINE

Approval Process

1. Health Department
Site visits 12/21 ??
Comments
Date rec'd 12/14/21
Date frwd 12/14/21
ACTION ☑ Approved ☐ Disapproved
Signature

2. Supt. Bldg. Insp. or Village Clerk
Comments
Date rec'd
Date frwd
ACTION ☐ Approved ☐ Disapproved
Signature

3. City or County Engineer
Comments
Date rec'd
Date frwd
ACTION ☐ Approved ☐ Disapproved
Signature

Installation Final Written Approval
By
Date 11/8/22

Business Office Use Only
Date Received 12/9/21 Amount Paid 450.00
Received By Cash/Check No. 1462

White - Health Department Yellow - Engineer Pink - Building & Safety

Lincoln-Lancaster County Health Department
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Exhibit 5

Permit Number: HS002342

Onsite Wastewater Treatment System

Inspection Sheet

Date 11/8/22 Legal Description _____
¼ ¼ Section/Township/Range

Onsite System Location

Address (no rural route) 10400 Weeks City _____

Owner _____ Address _____

Mark One: ☒ Dwelling ☐ Non-dwelling New system replacing existing

☐ New System ☐ Alteration [☐ Tank Only ☐ Trench Only] ☐ Lateral Only

☐ Temporary modification (Describe problem causing discharge and reason for temporary modification): _____

_____

Drainfield Absorption System:

☑ Lateral ☐ Bed ☐ Non-standard (engineer-designed and NDEQ approved) ☐ Holding Tank ☐ Trench

Total square feet of drainfield 1,035 Sq. Ft. Tank Size 1,500 gals

Total length of laterals 230' Type of Distribution: ☐ Chamber ☐ Perforated Pipe ☐ Other (describe) E2 flow

No. of Absorption Laterals 2 Width 4.5 factory No. of Drop Boxes _____ Distribution Box 1

Leveling Method Used Lasers

Setbacks (Check the Boxes Below if the Required Setback has been Satisfied):

Distance From	Private Well	Public Well	Surface Water	Ground water	Pressure Water Lines	Property Lines
Tank (ft)	50 ☑	500 ☑	50 ☑	NA ☑	10 ☑	5 ☑
Field (ft)	100 ☑	500 ☑	50 ☑	4 ☑	25 ☑	5 ☑

Geographical Coordinates to 6 Decimals: System installed in 2021 – file clean-up/update and final sign-off

Tank _____

Lateral #1 _____ Lateral #3 _____

Lateral #2 _____ Lateral #4 _____

Comments:

Inspections prior to Final Approval Initial _____ Date 11/8

Follow-Up _____ Date _____

Follow-Up _____ Date _____

Installation Final Written Approval By Darcy Thiele

Date 11/8/22

Field Note Drawing (See Reverse Side):

Updated 4/15

Lincoln-Lancaster County Health Department (LLCHD)
Environmental Public Health Division
3131 "O" Street • Lincoln, NE 68510-1514
Phone: 402-441-8643

B

Permit Number: 1500342

Onsite Wastewater Treatment System
Soil Evaluation Report

PLEASE PRINT OR TYPE

Onsite System Location

Address 10400 Weeks Dr (no rural route) City Lincoln NE, Zip 68516

Owner Kyle Ludwig Address 10400 Weeks Dr

Date of Tests 12-7 to 12-8 Weather: Precipitation Ø Temperature 44

Percolation Test Data Table

A.	B.	C. D. E. F. Saturation/Swelling Time				G. H. I. J. K. Water Level Drop Last 30 mins of 4 hr or last 10 mins of 1 hr					L. M. N. Results		
		Start		End		Start			End				
Hole No.	Hole Depth(in)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Initial Water Lev (in.)	Date (Mo/Da)	Time (Hr/Min)	Elapsed Time Interval	Water Level Drop(in)	Percolation Rates (Min/in = mpi)
1	36	12-7	1:00	12-8	1:00	12-8	1:00	6	12-8	1:30	30	1	30
2	"	"	"	"	"	"	.01	6	"	1:31	"	1 1/2	20
3	"	"	"	"	"	"	.02	6	"	1:32	"	1 1/2	30
4	"	"	"	"	"	"	.03	6	"	1:33	"	1	20
								6					
								6					
								6					
								6					

Person Conducting Percolation Test

Name: Trevor McDonald
Phone: 402-770-9397
Address 2234 Holdrege St
Lincoln, NE 68503

Sum of Percolation Rates: 100
Average of Rates: 25
Rate Used for Calculation: 20-30

Soil type (NRCS Maps/Other)
Groundwater Depth over 7 ft

DO NOT WRITE BELOW THIS LINE

Reviewing Action

Comments (Soil type, groundwater, floodplain, etc.)

Signature of Reviewing Official Date

CONDUCTING A PERCOLATION TEST

READ THOROUGHLY

DIAGRAM OF PERCOLATION TEST PROCEDURE

Natural Ground Level

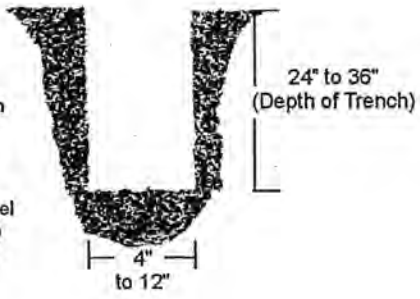
I. Number, Size and Location of Test Holes

A. Dig six or more holes spaced evenly over proposed drainfield.

B. Scratch smeared areas on the bottom 12" of hole.

C. Remove loose material from hole.

D. Add 2" layer of clean gravel in hole. Gravel (1/4"-3/4") may be placed in a nylon mesh bag so it can be used again.



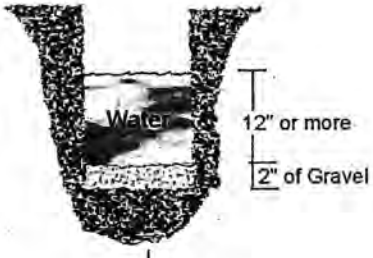
II. Saturation/Swelling of Soil

A. Fill hole with at least 12" of clear water.

B. **MAINTAIN THIS WATER LEVEL FOR 4 HOURS.**

C. Record on Form B, Columns A to F

D. **Must wait 24 hours before beginning Step III.**



24 Hours Later

III. Water Level Drop Measurement (Refer to instructions 4a, b or c)

A. Adjust water level to 6".

B. Measure from fixed reference point (nail) to water, or use a percometer.

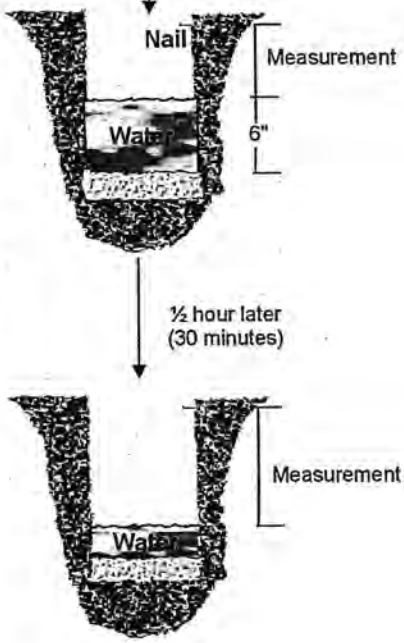
C. Record measurement and time on scratch paper.

D. 30 min. later re-measure and record time.

E. After each measurement, refill to 6" above gravel.

F. Continue for 4 hours taking readings evey 30 min. (Refer to 4b for exception)

G. Last 30 min. reading is used in filing out Form B. Record in Column G through M.



IV. The Department will calculate Percolation Rates.

Instructions

1. Percolation test holes. Percolation tests should be made in 6 or more separate holes spaced uniformly over proposed drainfield. Dig or bore holes 4 to 12" in diameter to the depth of the bottom of drainfield trench. (If sides of hole collapse, a slotted PVC plastic pipe and gravel pack may be needed to support the sides of the hole.) Do not dig holes in soil that is above the plastic limit or where frost is within 12" from the bottom of hole.
2. Preparation of test hole. Scratch any smeared areas on the bottom 12" of hole with nails driven into a 1x2" board to provide a natural soil interface for water to percolate. Remove all loose soil from bottom of hole. Add 2" of clean gravel to protect the bottom from scouring when water is put into hole.
3. Saturation and swelling of the soil. Fill holes with clear water to a depth fo 12" or more above gravel and maintain this water level at least 4 hours (add water as necessary). Do not remove water from holes. Holes should be covered with boards during the 20 hrs. wait before the test begins. Soils with slow permeability or containing greater than 30% clay will require several days saturation for thorough swelling in a dry season. The accuracy of the percolation test depends on thorough saturation and swelling of soil. Sandy soil containing no clay does not swell. The percolation test may proceed immediately if the 12" of water seeps away in 10 min. or less after filling holes twice. Proceed to Step 4c.
4. Measure percolation rate. Measurements must be made 24 hrs after starting saturation/swelling procedure described above. Record results on the front of this form and the Department will complete the calculations.

   a. If water remains in hole after the saturation/ swelling period, adjust depth to 6" above gravel. From a fixed point, measure the drop in water level over a 30 min. period to nearest 1/8". This drop is used to calculate percolation rate.

   b. If no water remains in hole after the saturation/ swelling period, add 6" of clear water above gravel. From a fixed point, measure the drop in water level to nearest 1/8" at 30 min. intervals for 4 hrs. Refill to the 6" level above gravel after each measurement. The drop that occurs during the last 30 min. of the 4 hrs. is used to calculate the percolation rate (when 3 consecutive percolation rates vary by no more than 10%, the test can stop before the end of 4 hr. period).

   c. In sandy soils, or other soils in which t he first 6" of water seeps away in less than 30 min., allow 10 min. between measurements and run the test for 1 hr. The drop that occurs during the last 10 min. of 1 hour is used to calculate the percolation rate. If 6" of water seeps away in less than 10 min., use a stopwatch.
5. Record test results on the front of this form. The average of the percolation rates calculated for all holes in 30 (10) min. will usually be the rate used to size the drainfield. Exceptions are the use of the slowest percolation rate when rates vary more than 20 mpi between holes or when other soil evaluation indicates a problem.

LLCHD reserves the right to witness or perform percolation tests and to required additional soil or groundwater information.

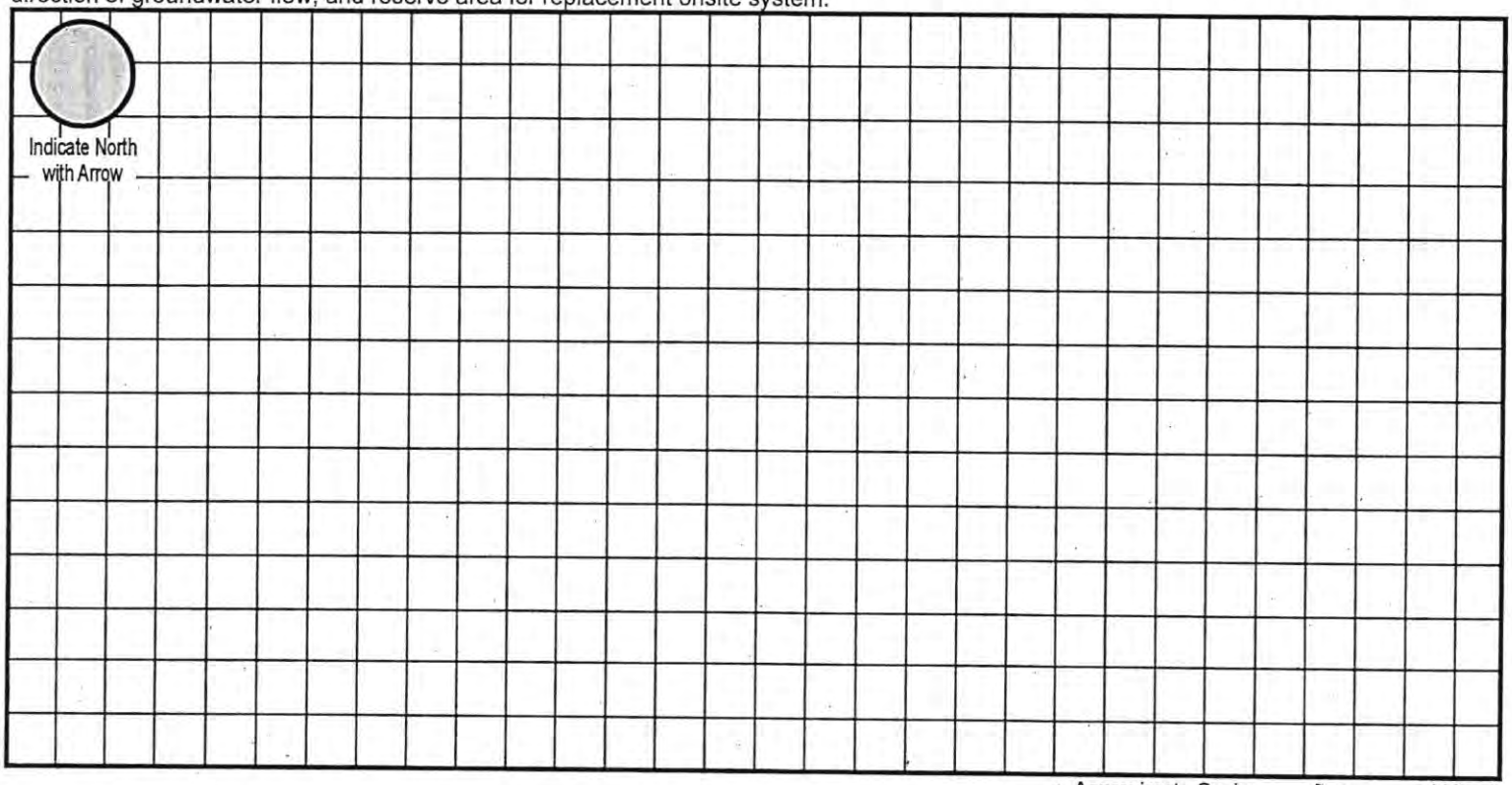
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C

Permit Number HS002342

Onsite Wastewater Treatment System
Preliminary Plan Specification

Draw a plot plan showing onsite system sewer lines, tank, drop or distribution boxes, drainfields, percolation test holes, well, residence, direction of groundwater flow, and reserve area for replacement onsite system.



Approximate Scale: ____ft. = ____grid line/s

A. Onsite System Location

Address (no rural route) 10400 Weeks City _____ NE, Zip _____

B. Proposed Septic Tank/s

Septic Tank Cap. 1,500 gals Tank Material: ☐ Concrete ☐ Plastic ☐ Other _____ ☐ Lagoon (Max. Seepage 1/8"/day)

C. Reserve Area for Replacement Onsite System

☐ Drainfield Absorption Area (percolation test required) ☐ Lagoon 230 linear ft. of lateral

D. Drainfield Absorption System

Percolation Rate 20-30 (min/inch = mpi) No. of Bedrooms ~~4~~ 3 bd. sizing as a 4 Soil Type _____ Land Slope _____ %

☐ Trench ☐ Bed ☐ Non-standard (engineer-designed and NDEQ approved) Total square feet of drainfield _____ Sq. Ft.

Total length of laterals 230' Type of Distribution: ☐ Perforated Pipe ☐ Half-Round ☐ Chambers ☒ Other EZ flow

No. of Absorption Trenches _____ Width _____ No. of Drop Boxes _____ Distribution Box _____

No. of Absorption Beds _____ Width _____ No. of Distribution Lines per Bed _____

Installer Trevor McDonald Date: 12/8/21

Updated 2/18