

COUNTY/MUNICIPALITY Mercer/Hopewell Twp.

**APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM**

FORM 1 - GENERAL INFORMATION

1. **Type of Permit Needed** (Check application categories)

a. New Construction b. Alteration/No Expansion or Change of use
 c. Alteration/Expansion or Change in Use d. Alteration/Malfunctioning System
 e. Repair (in-kind replacement) Malfunctioning System
 f. Repair (in-kind replacement) System not malfunctioning
 g. Deviation from Standards h. Repairs to Existing System

2. **Location of Project:**

Municipality Hopewell Twp. Block No. 29 Lot No. 5
Street Address 339 Lambertville-Hopewell Rd. Zip

3. **Name of Applicant (print):** Rudolph Geurds

4. **Applicant's Present Address:** 131 W. Franklin Ave., Pennington, NJ 08534

5. **Applicant's Phone Number:** 609-498-5221

6. **Type of Facility:**

Residential Commercial/Institutional

Specify Type of Establishment: _____

7. **Type of Wastes to be Discharged:**

Sanitary Sewage

Industrial Waste

Other - Specify Type: _____

8. **If d. or e. above are checked, indicate the type of malfunction and its cause (check all that apply):**

Contamination of nearby wells or surface water bodies by sanitary sewage or effluent,
 Ponding or breakout of sanitary sewage or effluent onto the surface of the ground,
 Seepage of sanitary sewage or effluent onto portions of building below ground,
 Back-up of sanitary sewage into the building served, which is not caused by a physical blockage of the internal plumbing,
 Any manner of leakage observed from components that are not designed to emit sanitary sewage or effluent,
 Direct discharges to ground water (no zone of treatment)

Describe the cause of the malfunction:

9. **Please expand on Question #1, above, by checking if any of the following apply):**

A privy, outhouse, latrine or pit toilet is present, a system must be installed,
 A system must be upgraded as part of a real property transfer,
 A cesspool has been identified during a real property transfer and a conforming system must be installed,
 A malfunctioning cesspool has been identified and a conforming system must be installed.

10. **Other Approvals/Certification/Waivers/Exemptions (Attach to Application)**

Pinelands Commission
 U.S. Army Corps of Engineers
 N.J.D.E.P. - Bureau of Flood Plain Management
 Other - Specify: _____

11. I hereby certify that the information furnished on Form I of this application is true. I am aware that false swearing is a crime in this State and subject to prosecution.

Signature of Applicant

FOR AGENCY USE ONLY

Application Denied - Reason for Denial/Citation of Rules Violated: _____
 Application Approved Application Approved Subject to Approval by N.J.D.E.P.
Date of Action _____ Signature of Authorized Agent _____
Name and Title _____

8/3/22

COUNTY/MUNICIPALITY Mercer/Hopewell Twp. Block 29, Lot 5

APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

FORM 2A - GENERAL SITE EVALUATION DATA

1. Name of Site Evaluator (print): John Luyber
2. Business Address of Site Evaluator: 19 Hopkins Rd.
New Egydnt. NJ 08533
3. Business Phone Number of Site Evaluator: 732-690-4643
4. Special Site Limitations Identified (Check appropriate Categories)
 Flood Plains Bedrock Outcrops Wetlands Excessively Stony
 Disturbed Ground Sink Holes Sand Dunes Steep Slopes
 Other - Specify
5. Soil logs - Enter on form 2b - Use one sheet for each soil log.
6. Considerations Relating to Disturbed Ground:
 - a) Type of Disturbance (check appropriate categories)
 Filled Area Excavated Area Re-graded Area Subsurface Drains
 Other-Specify
 - b) Pre-existing Natural Ground Surface
Elevation Relative to Existing Grade Surface _____
 - c) Suitability of Disturbed Ground
 Unusable: Objects Subject to Disintegration or Change in Volume
 Excessively Coarse
 Proctor Test performed - % Standard Proctor Density =
7. Hydraulic Head Test:
 - a) Hydraulically Restrictive Horizon: Depth to Bottom
 - b) Piezometer A: Depth to Bottom Depth of Water Level(24 hrs)
 - c) Piezometer B: Depth to Bottom Depth of Water Level(24 hrs)
 - d) Witnessed by _____ Signature _____ Date _____
8. Attachments (Check items included):
 Site Plan
 Key Map Showing location of Site On U.S.G.S. Quadrangle or Other Accurate Map
 Key Map Showing Location of Site on U.S.D.A. Soil Survey Map
 Other - Specify
9. I hereby certify that the information furnished on Form 2A of this application (and the attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 *et seq.*) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Soil Evaluator _____ Date 8/3/22

Signature of Professional Engineer _____ License # 34675

COUNTY/MUNICIPALITY Mercer/Hopewell Twp.

APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR

Block 29

AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Lot 5

FORM 2B - SOIL LOG AND INTERPRETATION:

1. Log Number SL-1 Method (Check one): Profile pit Boring

2. Soil Log SL-1 Performed 5/31/22

Munsell Color Name and Symbol; Estimated Text Class; Estimated Volume %
Depth (Inches) Coarse Fragments, If Present; Structure; Moist or Dry Consistence; Mottling
Top to bottom Abundance, Size and Contrast, If Present

0 - 12" 10YR 3/3 Dark brown silt loam topsoil

12 - 36" 5YR 4/3 Reddish brown clay loam, subangular blocky, moist, friable, 10% gravel.

36 - 90" Non-soil, fractured red shale. Gravel to stone in size with 10% loam fillings.

Common medium distinct mottles of 10YR 7/1 (light gray) at 36".

> 90" Refusal Groundwater entry at 70"

3. **Ground Water Observations:**

Seepage - Indicate Depth 70"

Pit/Boring Flooded - Depth after 24 Hours 50"

4. **Soil Limiting Zones (Check Appropriate Categories)**

Fractured Rock Substratum - Depth to Top 36"

Massive Rock Substratum - Depth to Top 90"

Excessively Coarse Horizon - Depth Top to Bottom _____

Excessively Coarse Substratum - Depth Top to Bottom _____

Hydraulically Restrictive Horizon - Depth Top to Bottom _____

Hydraulically Restrictive Substratum - Depth to Top _____

Perched Zone of Saturation - Depth to Top _____

Regional Zone of saturation - Depth to Top 36"

5. **Soil Suitability Classification: IIWrScSr**

6. I hereby certify that the information furnished on form 2B of this application is true and accurate. I am aware that the falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A *et seq.*) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator _____

Date 8/3/22

Signature of Professional Engineer _____

License # 34675

COUNTY/MUNICIPALITY Mercer/Hopewell Twp.

APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR

Block 29

AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Lot 5

FORM 2B - SOIL LOG AND INTERPRETATION:

1. Log Number SL-2 Method (Check one): Profile pit Boring

2. Soil Log SL-2 Performed 5/31/22

Depth (Inches) Munsell Color Name and Symbol; Estimated Text Class; Estimated Volume %
Top to bottom Coarse Fragments, If Present; Structure; Moist or Dry Consistence; Mottling
Abundance, Size and Contrast, If Present

0 - 12" 10YR 3/3 Dark brown silt loam topsoil
12 - 36" 5YR 4/3 Reddish brown clay loam, subangular blocky, moist, friable, 10% gravel.
36 - 72" Non-soil, fractured red shale. Gravel to stone in size with 10% loam fillings.
Common medium distinct mottles of 10YR 7/1 (light gray) at 36".
> 72" Refusal Groundwater entry at 60"

3. **Ground Water Observations:**

Seepage - Indicate Depth 60"
 Pit/Boring Flooded - Depth after _____ Hours _____

4. **Soil Limiting Zones (Check Appropriate Categories)**

Fractured Rock Substratum - Depth to Top 36"
 Massive Rock Substratum - Depth to Top 72"
 Excessively Coarse Horizon - Depth Top to Bottom _____
 Excessively Coarse Substratum - Depth Top to Bottom _____
 Hydraulically Restrictive Horizon - Depth Top to Bottom _____
 Hydraulically Restrictive Substratum - Depth to Top _____
 Perched Zone of Saturation - Depth to Top _____
 Regional Zone of saturation - Depth to Top 36"

5. **Soil Suitability Classification:** IWRSCSR

6. I hereby certify that the information furnished on form 2B of this application is true and accurate.
I am aware that the falsification of data is a violation of the Water Pollution Control Act
(N.J.S.A. 58:10A *et seq.*) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator _____ Date 8/3/22

Signature of Professional Engineer _____ License # 34675

COUNTY/MUNICIPALITY Mercer/Hopewell Twp.

APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR

Block 29

AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Lot 5

FORM 2B - SOIL LOG AND INTERPRETATION:

1. Log Number SL-3 Method (Check one): Profile pit Boring

2. Soil Log SL-3 Performed 5/31/22

Depth (Inches) Munsell Color Name and Symbol; Estimated Text Class; Estimated Volume %
Top to bottom Coarse Fragments, If Present; Structure; Moist or Dry Consistence; Mottling
Abundance, Size and Contrast, If Present

0 - 12" 10YR 3/3 Dark brown silt loam topsoil

12 - 36" 5YR 4/3 Reddish brown clay loam, subangular blocky moist, friable, 10% gravel.

36 - 84" Non-soil, fractured red shale. Gravel to stone in size with 10% loam fillings.

Common medium distinct mottles of 10YR 7/1 (light gray) at 36".

> 84" Refusal Groundwater entry at 50"

3. **Ground Water Observations:**

Seepage - Indicate Depth 50"

Pit/Boring Flooded - Depth after _____ Hours _____

4. **Soil Limiting Zones (Check Appropriate Categories)**

Fractured Rock Substratum - Depth to Top 36"

Massive Rock Substratum - Depth to Top 84"

Excessively Coarse Horizon - Depth Top to Bottom _____

Excessively Coarse Substratum - Depth Top to Bottom _____

Hydraulically Restrictive Horizon - Depth Top to Bottom _____

Hydraulically Restrictive Substratum - Depth to Top _____

Perched Zone of Saturation - Depth to Top _____

Regional Zone of saturation - Depth to Top 36"

5. **Soil Suitability Classification: IIWrScSr**

6. I hereby certify that the information furnished on form 2B of this application is true and accurate.

I am aware that the falsification of data is a violation of the Water Pollution Control Act
(N.J.S.A. 58:10A *et seq.*) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator _____ Date 8/3/22

Signature of Professional Engineer _____ License # 34675

COUNTY/MUNICIPALITY Mercer/Hopewell Twp. Block 29, Lot 5

**APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
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FORM 3A - SOIL PERMEABILITY DATA

Assign a number for each test and a letter for each test replicate. Show test data and calculations on Form 3b, 3c, 3d, 3e, 3f, or 3g. Use one sheet for each separate test or test replicate.

1. Summary of Data- Enter data for each test on a separate line.

Type of Test	Test (number)	Replicate (letter)	Depth (inches)	Results*
Pit-bail	PB-1 in SL-1		90"	10.5 in/hr

*For tube permeameter, pit-bailing and piezometer tests report results in inches per hour. For Soil permeability class rating give soil permeability class number. For percolation test report results in minutes per inch. For basin flood test report results as positive if basin drains completely within 24 hours after second filling, negative otherwise.

2. Design Permeability/Percolation Rate: Specify Test Number

Average of Test Replicates Single Replicate Slowest of Replicates

3. Type of Limiting Zone Identified **Test Number**

4. Attachments (Check items included):

- Form 3b - Tube Permeameter Test Data- Number of Sheets _____
- Form 3c - Soil Permeability Class Rating Test Data - Number of Sheets _____
- Form 3d - Percolation Test Data - Number of Sheets _____
- Form 3e - Pit-bailing Test Data - Number of Sheets 2 _____
- Form 3f - Piezometer Test Data - Number of Sheets _____
- Form 3g - Basin Flood Test Data - Number of Sheets _____

5. I hereby certify that the information furnished on Form 3A of this application (and the attachments hereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 *et seq.*) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Soil Evaluator _____ Date 8/3/22

Signature of Professional Engineer _____ License # 34675

County/ Municipality Mercer/Hopewell Twp.

Block: 29

Lot: 5

**Application for Permit to Construct/Alter/Repair
An Individual Subsurface Sewage Disposal System**

Form 3f. Pit Bailing Test Data:

1. Test PB PB-1 Soil Log # SL SL-1 Date Tested 5/31/22

2. Record the following in feet:

Depth to bottom of Pit, Dpit : 7.50

Depth to water after 24 hr. stabilization period, Dwater : 4.17

Depth to impermeable Stratum, (if unknown use 1.5 times depth of pit) Dstratum : 7.50

Height of water level above impermeable stratum (Dstratum - Dwater), H : 3.33

3. Record the following data in the table below:

Time measurement in minutes, tn :

Depth to water level below reference point in inches dn :

Water surface dimensions in feet, l & w :

4. Calculate the following values and enter in the table below:

Water surface area in square feet, An :

Water level rise in inches, hrise :

Average water surface area in square feet, Aav :

Average height of water level above impermeable stratum, h :

Permeability in inches per hour, Ka :

Time elapsed tn	Depth to water dn	Length l	Width w	Area An	Water Rise hrise	Average Area Aav	Height of Water h	Permeability Ka
0	90.00	0.00	0.00	0.00				
15	(Interval Time)							
15	85.00	3.50	3.00	10.50	5.00	5.25	0.21	4.2
15								
30	80.00	3.83	3.00	11.50	5.00	11.00	0.63	9.0
15								
45	75.00	4.17	3.00	12.50	5.00	12.00	1.04	10.5
Total Rise During Test =					15.00	inches		

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Block: 29

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**Application for Permit to Construct/Alter/Repair
An Individual Subsurface Sewage Disposal System**

Form 3f. Pit Bailing Test Data - Continued from previous page

Pit Bail # PB-1

5. Record the following data:

Final Depth of Pit in feet, Dpit : 7.50

Depth to impermeable stratum in feet, Dstratum : 7.50

Height of standpipe above reference level in feet, hpipe : 0

Depth of water after 24 hour stabilization period in feet, Dwater : 4.17

Height of static water level above imperm. stratum in feet, H : 3.33

Average height of water level above imperm. stratum in feet, h : 1.04

6. Re-calculation of K using data from section 5 above and from final time interval of section 4 :

$$K = (hrise/t) \times Aav/(2.27x(H2 - h2)) \times 60 \text{ min/hr} = \underline{10.5} \text{ inches/hour}$$

where:

5 = hrise

12.00 = Aav

3.33 = H

1.04 = h

15 = t

7. I hereby certify that the information furnished on Form 3f of this application is true and accurate.

I am aware that falsification of this data is a violation of the Water Pollution Control Act
(N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator

8/3/22

Date

Signature of Professional Engineer

34675

License #

COUNTY/MUNICIPALITY Mercer/Hopewell Twp. _____ Block 29 _____, Lot 5 _____

**APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM**

FORM 4 - GENERAL DESIGN DATA _____

1. **Volume of Sanitary Sewage, gal** 950
 Residential: No. of Dwelling Units 1 Total No. of Bdrm. 6
Commercial/Institutional - Indicate type of establishment and show method of calculation. If estimate is based on water meter data, indicate source of data, frequency of readings, average flow, and maximum recorded reading.
2. **Alterations or Repairs**
a) Reason for Alteration or Repair (check appropriate categories):
 Expansion or Change in Use Upgrade Existing Facilities
 Correct Malfunctioning System Other-Specify _____
- b) Describe Nature of Alteration or Repairs: New septic tank, pump tank and disposal bed
3. **System Components:**
a) Grease Trap Capacity, gals
Show Calculation Used:
b) Septic Tank Capacity, gals: First(Single) Compartment 1,340
 Second Compartment 660 Third Compartment _____
c) Effluent Distribution
Method: Gravity Flow Gravity Dosing Pressure Dosing
d) Dosing Tank Capacities, gals: Total Capacity 2,000 Dose Volume 238
Reserve Capacity 1,030
e) Laterals: Number 18 Total Length 432' Pipe Size 1" Spacing 3.5'
f) Connecting Pipe: Size 3" Length 48'
g) Manifold: Size 3" Length 28'
h) Disposal Field: Type of Installation MSR
Design Permeability (Percolation Rate) 6 - 20 in/hr
Trenches: Width _____ Total Length _____ Bed Area 32' x 50' = 1,600 sf
i) Seepage Pits: Design Percolation Rate _____
Number of Pits _____ Total Percolating Area Provided _____