

**APPENDIX B STANDARD FORMS FOR SUBMISSION OF  
SOILS/ENGINEERING DATA**

COUNTY/MUNICIPALITY \_\_\_\_\_

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

Form 1—General Information

1. Type of Permit Needed (Check applicable categories):  
 New Construction  Alteration/No Expansion or Change of Use  
 Alteration/Expansion or Change in Use  
 Alteration/Malfunctioning System  
 Deviation from Standards  Repairs to Existing System
2. Location of Project:  
Municipality \_\_\_\_\_ Block No. \_\_\_\_ Lot No. \_\_\_\_  
Street Address \_\_\_\_\_ Zip \_\_\_\_\_
3. Name of Applicant (print): \_\_\_\_\_
4. Applicant's  
Present Address: \_\_\_\_\_
5. Applicant's Phone Number: \_\_\_\_\_
6. Type Of Facility:  
 Residential  
 Commercial/Institutional  
Specify Type of Establishment: \_\_\_\_\_
7. Type of Wastes to be Discharged:  
 Sanitary Sewage  
 Industrial Wastes  
 Other—Specify Type \_\_\_\_\_
8. Other Approvals/Certification/Waivers/Exemptions (Attach to Application):  
 Pinelands Commission  
 U.S. Army Corps of Engineers  
 NJDEP—Bureau of Flood Plain Management  
 Other—Specify: \_\_\_\_\_
9. I hereby certify that the information furnished on Form 1 of this application is true. I am aware that false swearing is a crime in this State and subject to prosecution.  
Signature of Applicant \_\_\_\_\_ Date \_\_\_\_\_

FOR AGENCY USE ONLY

- Application Denied—Reason for Denial/Citation of Rules Violated: \_\_\_\_\_  
 Application Approved  
 Application Approved Subject to Approval by NJDEP  
Date of Action \_\_\_\_\_ Signature of Authorized Agent \_\_\_\_\_  
Name and Title \_\_\_\_\_

COUNTY/MUNICIPALITY \_\_\_\_\_

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

Form 2a—General Site Evaluation Data Lot \_\_\_\_ Block \_\_\_\_

1. Name of Site Evaluator (print): \_\_\_\_\_
2. Business Address of \_\_\_\_\_

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- Site Evaluator: \_\_\_\_\_
3. Business Phone Number of Site Evaluator: \_\_\_\_\_
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 Ground Surface \_\_\_\_\_  
Method of Identification \_\_\_\_\_  
c) Suitability of Disturbed Ground  
\_ Unsuitable: 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 Top 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 \_\_\_\_\_  
Signature of Professional Engineer \_\_\_\_\_ License # \_\_\_\_\_

COUNTY/MUNICIPALITY \_\_\_\_\_

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

Form 2b—Soil Log and Interpretation Lot \_\_\_\_ Block \_\_\_\_

1. Log Number \_\_ Method (Check One): \_ Profile Pit \_ Boring
2. Soil Log  
Depth (inches)  
Top-Bottom  
Munsel Color Name and Symbol; Estimated Textural Class; Estimated Volume % Coarse Fragment, If Present; Structure; Moist or Dry Consistence; Mottling—Abundance, Size and Contrast, If Present
3. Ground Water Observations:  
\_ Seepage—Indicate Depth \_\_\_\_\_  
\_ Pit/Boring Flooded—Depth after \_ Hours \_\_\_\_
4. Soil Limiting Zones (Check Appropriate Categories):

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- Fractured Rock Substratum—Depth to Top \_\_\_\_\_
  - Massive Rock Substratum—Depth to Top \_\_\_\_\_
  - Excessively Coarse Horizon—Depth Top to Bottom \_\_\_\_\_
  - Excessively Coarse Substratum—Depth to Top \_\_\_\_\_
  - Hydraulically Restrictive Horizon—Depth Top to Bottom \_\_\_\_\_
  - Hydraulically Restrictive Substratum—Depth to Top \_\_\_\_\_
  - Perched Zone of Saturation—Depth Top to Bottom \_\_\_\_\_
  - Regional Zone of Saturation—Depth to Top \_\_\_\_\_
5. Soil Suitability Classification:
6. I hereby certify that the information furnished on Form 2b of this application 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 Site Evaluator \_\_\_\_\_ Date \_\_\_\_\_
- Signature of Professional Engineer \_\_\_\_\_ License # \_\_\_\_\_

COUNTY/MUNICIPALITY \_\_\_\_\_  
 APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 3a. Soil Permeability Data Lot \_\_\_\_\_ Block \_\_\_\_\_

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 replicate on a separate line.

Type of Test	Test (number)	Replicate (letter)	Depth (inches)	Result*

\* 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 result in minutes per inch. For basin flooding test report result as positive if basin drains completely within 24 hours after second filing, negative otherwise.

2. Design Permeability/Percolation Rate: Specify Test Number \_\_\_\_\_
- Average of Test Replicates
  - Single Replicate
  - Slowest of Replicates

Type of Limiting Zone Identified	Test Number

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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
- Form 3f—Piezometer Test Data—Number of Sheets
- Form 3g—Basin Flooding Test Data—Number of Sheets

5. I hereby certify that the information furnished on Form 3a 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 \_\_\_\_\_  
 Signature of Professional Engineer \_\_\_\_\_ License # \_\_\_\_\_

Form 3b. Tube Permeameter Test Data

1. Test Number      Replicate (Letter)      Date Collected
2. Material Tested:  Fill  Test in Native Soil—Indicate Depth
3. Type of Sample:  Undisturbed  Disturbed
4. Sample Dimensions: Inside Radius of Sample Tube, R, in cm      Length of Sample, L, in inches
5. Bulk Density Determination (Disturbed Samples Only):  
 Sample Weight (Wt. Tube Containing Sample—Wt. of Empty Tube), grams             
 Sample Volume (L x 2.54cm./inch x 3.14R<sup>2</sup>), cc             
 Bulk Density (Sample Wt./Sample Volume), grams/cc
6. Standpipe Used:  No  Yes —Indicate Internal Radius, cm
7. Height of Water Level Above Rim of Test Basin, in inches:  
 At the Beginning of Each Test Interval, H<sub>1</sub>             
 At the End of Each Test Interval, H<sub>2</sub>
8. Rate of Water Level Drop (Add additional lines if needed):

Time, Start of Test Interval, t <sub>1</sub>	Time, End of Test, Interval t <sub>2</sub>	Length of Test Interval, t, minutes

9. Calculation of Permeability:  
 $K, (\text{in/hr}) = 60 \text{ min/hr} \times r^2/R^2 \times L(\text{in})/T(\text{min}) \times \ln(H_1/H_2)$   
 $= 60 \text{ min/hr} \times \_ / \_ \times \_ / \_$   
 $\times \ln(\_ / \_) = \_$

10. Defects in the Sample (Check appropriate items):
- None  Cracks  Worm Channels
  - Root Channels  Soil/Tube Contact
  - Large Gravel  Large Roots
  - Dry Soil  Smearing  Compaction
  - Other—Specify \_\_\_\_\_

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11. I hereby certify that the information furnished on Form 3b of this application 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 Site Evaluator \_\_\_\_\_ Date \_\_\_\_\_  
Signature of Professional Engineer \_\_\_\_\_ License # \_\_\_\_\_

Form 3c. Soil Permeability Class Rating Data

1. Test Number \_\_\_\_\_ Replicate (Letter) \_\_\_\_\_
2. Sample Depth\_Soil Pit/Boring Number\_Date Collected \_\_\_\_\_
3. Coarse Fragment Content:  
Total Weight of Sample, W.T., grams \_\_\_\_\_  
Weight of Material Retained on 2mm sieve, W.C.F., grams \_\_\_\_\_  
Wt. % Coarse Fragment (W.C.F./W.T. x 100): \_\_\_\_\_
4. Oven Dry Weight (24 hrs., 105°C) of 40 Gram Air Dry Sample, grams, Wt \_\_\_\_\_
5. Hydrometer Calibration, R<sub>c</sub> \_\_\_\_\_
6. Hydrometer Reading—40 seconds, grams, R<sub>1</sub> \_\_\_\_\_  
Temperature of Suspension, °F \_\_\_\_\_
7. Corrected Hydrometer Reading, grams, R<sub>1</sub>' \_\_\_\_\_
8. Hydrometer Reading—2 hours, grams, R<sub>2</sub> \_\_\_\_\_  
Temperature of Suspension, °F \_\_\_\_\_
9. Corrected Hydrometer Reading, grams, R<sub>2</sub>' \_\_\_\_\_
10. % sand = (Wt. - R<sub>1</sub>')/Wt. x 100 = ( \_\_\_\_\_ - \_\_\_\_\_ ) / \_\_\_\_\_ x 100 = \_\_\_\_\_
11. % clay = R<sub>2</sub>'/Wt. x 100 = \_\_\_\_\_ / \_\_\_\_\_ x 100 = \_\_\_\_\_
12. Sieve Analysis:
  - a. Oven Dry Wt. (2 hrs., 105°C) Total Sand Fraction (Soil Retained in 0.047 mm Sieve), grams \_\_\_\_\_
  - b. Wt. of Fine Plus Very Fine Sand Fraction (Sand Passing 0.25 mm Sieve), grams \_\_\_\_\_
  - c. % Fine Plus Very Fine Sand (b/a) \_\_\_\_\_
13. Soil Morphology (Natural Soil Samples Only):  
Structure of Soil Horizon Tested \_\_\_\_\_  
Consistence of Soil Horizon Tested: Dry \_\_\_\_\_ Moist \_\_\_\_\_
14. Soil Permeability Class Rating (Based upon average textural analysis of this replicate and other replicate samples) \_\_\_\_\_
15. I hereby certify that the information furnished on Form 3c of this application 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 Site Evaluator \_\_\_\_\_ Date \_\_\_\_\_  
Signature of Professional Engineer \_\_\_\_\_ License # \_\_\_\_\_

Form 3d. Percolation Test Data

1. Test Number \_\_\_\_\_ Replicate (Letter) \_\_\_\_\_ Date Tested \_\_\_\_\_
2. Depth \_\_\_\_\_
3. Pre-soak: \_\_\_\_\_  
\_\_\_\_\_ Sandy Textured Soil Only, Shortened Pre-soak—Indicate Time Required for 12 Inches of Water to Drain After Second Filling, Minutes \_\_\_\_\_  
\_\_\_\_\_ Four Hour Pre-soak Completed—Indicate Result:  
\_\_\_\_\_ Test Hole Drained Within 16 to 24 Hours After Pre-soak  
\_\_\_\_\_ Test Hole Did Not Drain Within 24 Hours After Pre-soak
4. Rate of Fall Data:
  - a. Time Interval Selected, Minutes \_\_\_\_\_

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- b. Record the Drop in Water Level During Each Time Interval to the Nearest 1/10th-Inch On the Lines Below:

Depth of Water, Start of Interval (inches)	Depth of Water, End of Interval (inches)	Drop in Water Level(Inches)

5. Percolation Rate:  
 a. Time, minutes, Required for a Six-inch Drop in Water Level \_\_  
 b. Percolation Rate =  $a/6 = \_ / 6 = \_ \text{ min/in}$
6. I hereby certify that the information furnished on Form 3d of this application 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 Site Evaluator \_\_\_\_\_ Date \_\_\_\_\_  
 Signature of Professional Engineer \_\_\_\_\_ License # \_\_\_\_\_

Form 3e. Piezometer Test Data

1. Test Number \_\_ Reference Soil Log \_\_ Date Tested \_\_  
 2. Diameter of Soil Auger, in. \_\_ Depth of Test Hole, in. \_\_  
 Inside Radius of Pipe, R, in. \_\_\_\_\_  
 3. Depth to Apparent Static Water Level, in. \_\_\_\_\_  
 4. Measure and Record:

Water Depth, Start of Interval inches, $d_1$	Time at Start of Interval	Water Depth, End of Interval inches, $d_1$	Time at End of Interval	Length of Interval, min, t

5. Depth to Water Level After 24 Hour Stabilization Period,  $D_{static}$  in. \_\_  
 6. Value of A-parameter \_\_\_\_\_  
 7. Calculation of Permeability:  
 $K, \text{ in/hr} = [ (3.14R^2)/(A \times t) ] \times [ \ln(d_1 - D_{stat}/d_2 - D_{stat}) ] \times 60 \text{ min/hr} =$   
 $[ (3.14 \_ ) / ( \_ \times \_ ) ] \times [ \ln( \_ - \_ / \_ - \_ ) ] \times 60 \text{ min/hr} = \_$
8. I hereby certify that the information furnished on Form 3e of this application 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.

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Signature of Site Evaluator \_\_\_\_\_ Date \_\_\_\_\_  
 Signature of Professional Engineer \_\_\_\_\_ License # \_\_\_\_\_

Form 3f. Pit-Bailing Test Data

1. Test Number \_\_\_ Reference Soil Log \_\_\_ Date Tested \_\_\_
2. Using the reference level established, measure and record the following:
  - Depth to Bottom of Pit, ft,  $D_{pit}$  \_\_\_\_\_
  - Depth to Water Level after 2 hr. Stabilization Period, ft,  $D_{water}$  \_\_\_\_\_
  - Depth to Impermeable Stratum, ft,  $D_{stratum}$  \_\_\_\_\_ (If depth is unknown assume it to be 1.5 times the depth of the pit.)
  - Height of Water Level Above Impermeable Stratum, ft,  $H$  \_\_\_\_\_ ( $H = D_{stratum} - D_{water}$ )
  - Length of Time Interval,  $T$ , in minutes \_\_\_\_\_
3. At the interval chosen, record the following data in the table below:
  - Time of Measurement,  $t_n$ , minutes
  - Depth of Water Level Below Reference Level,  $d_n$ , inches
  - Water Surface Dimensions, ft:  $l, w$
4. Calculate the following values and enter in the table below:
  - Water Surface Area,  $ft^2$ ,  $A_n$
  - Water level Rise  $h_{rise}$  (Subtract current value of  $d_n$  from previous value)
  - Ave. Water Surface Area,  $ft^2$ ,  $A_{av}$  (Take average of  $A_n$  and previous  $A_n$ )
  - Ave. Height of Water Level Above Impermeable Stratum, ft,  $h$  (Take ave. of  $d_n$  and previous value of  $d_n$ , convert to ft., and subtract from  $D_{stratum}$ )
  - Permeability, in/hr,  $K_a$  (Calculate using formula):  $K_a = [h_{rise}/T] \times [A_{av} / 2.27 (H^2 - h^2)] \times 60 \text{ min/hr}$

$t_n$	$d_n$ (in.)	$l, w$ (ft)	$A_n$ (ft <sup>2</sup> )	$h_{rise}$ (in)	$A_{av}$ (ft <sup>2</sup> )	$H$ (ft)	$K_a$
$t_0$				XXXX	XXXX	XXXX	XXXX
$T_1$							
$T_2$							
$T_3$							
$T_4$							
$T_0$				XXXX	XXXX	XXXX	XXXX
$T_1$							
$T_2$							
$T_3$							
$T_4$							
$T_0$				XXXX	XXXX	XXXX	XXXX
$T_1$							
$T_2$							
$T_3$							
$T_4$							

5. Record the Following Data:
  - Final Depth of Pit,  $D_{pits}$  ft \_\_\_\_\_
  - Depth to Impermeable Stratum, ft,  $D_{stratum}$  \_\_\_\_\_ (If no impermeable stratum is encountered assume  $D_{stratum} = D_{pit}$ )
  - Height of Standpipe Above Reference Level, ft,  $h_{pipe}$  \_\_\_\_\_

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—Depth to Water Level after 24 hr. Stabilization Period, ft,  $D_{\text{water}}$  \_\_\_ (Take measurement from top of standpipe. Subtract  $h_{\text{pipe}}$ )

—Height of Static Water Level Above Impermeable Stratum, ft,  $H$  \_\_\_ ( $H = D_{\text{stratum}} - D_{\text{water}}$ )

—Average Height of Water Level Above Impermeable Stratum, ft,  $h$  \_\_\_ (Take average of  $d_n$  from beginning and end of last time interval recorded in section 4, convert this to ft., subtract from  $D_{\text{stratum}}$ )

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

$$K = [h_{\text{rise}}/t] \times [A_{\text{av}}/2.27(H^2 - h^2)] \times 60 \text{ min/hr} = [ \_ / \_ ] \times [ \_ / 2.27 ( \_ - \_ ) ] \times 60 \text{ min/hr} = \_$$

7. I hereby certify that the information furnished on Form 3f of this application 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 Site Evaluator \_\_\_\_\_ Date \_\_\_\_\_

Signature of Professional Engineer \_\_\_\_\_ License # \_\_\_\_\_

Form 3g, Basin Flooding Test Data

1. Test Number \_\_\_ Reference Soil Log \_\_\_ Date Tested \_\_\_

2. Depth of Pit, ft \_\_\_\_\_

3. Area of Pit,  $\text{ft}^2$  \_\_\_\_\_

4. Description of Rock Substratum Within Test Zone:

Type of Rock \_\_\_\_\_

Name of Formation \_\_\_\_\_

Average Fracture Spacing \_\_\_\_\_

Type of Fractures (Check Appropriate Category):

\_\_\_ Open (Wide), Clean—Width of Openings, mm \_\_\_\_\_

\_\_\_ Open (Wide), Infilled with Fines—Width of Openings, mm \_\_\_\_\_

\_\_\_ Tight (Closed)

Orientation of Fractures:

\_\_\_ Horizontal (Parallel to Pit Bottom) Or Nearly So

\_\_\_ Inclined

\_\_\_ Vertical (Parallel to Sides of Pit) Or Nearly So

Hardness of Rock:

\_\_\_ Rippable with Hand Tools

\_\_\_ Not Rippable with Hand Tools, Rippable by Machine

\_\_\_ Not Rippable by Machine, Explosives Used

5. Time of First Basin Flooding \_\_\_\_\_

Volume of Water Added, Gal. \_\_\_\_\_

6. Result of First Basin Flooding:

\_\_\_ Basin Drained within 24 Hrs.—Indicate Time \_\_\_\_\_

\_\_\_ Basin Not Drained within 24 Hrs.

7. Time of Second Basin Flooding \_\_\_\_\_

Volume of Water Added, Gal. \_\_\_\_\_

8. Result of Second Basin Flooding:

\_\_\_ Basin Drained within 24 Hrs.—Indicate Time \_\_\_\_\_

\_\_\_ Basin Not Drained within 24 Hrs.

9. I hereby certify that the information furnished on Form 3g of this application 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 Site Evaluator \_\_\_\_\_ Date \_\_\_\_\_

Signature of Professional Engineer \_\_\_\_\_ License # \_\_\_\_\_

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Form 4. General Design Data

1. Volume of Sanitary Sewage, gal. \_\_\_\_\_  
\_ Residential: No. of Dwelling Units \_ Total No. of Bedrooms \_  
\_ 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 daily flow, and maximum recorded daily 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: \_\_\_\_\_
3. System Components:
  - a) Grease Trap Capacity, gals \_\_\_\_\_  
Show Calculation Used: \_\_\_\_\_
  - b) Septic Tank Capacities, gals: \_ First (Single) Compartment \_ Second Compartment \_  
Third Compartment \_
  - c) Effluent Distribution  
Method: \_ Gravity Flow \_ Gravity Dosing \_ Pressure Dosing  
Dosing Device: \_ Pump \_ Siphon
  - d) Dosing Tank Capacities, gals: Total Capacity \_ Dose Volume \_ Reserve Capacity \_\_\_\_\_
  - e) Laterals: Number \_ Total Length \_ Pipe Size \_ Spacing \_
  - f) Connecting Pipe: Size \_ Length \_
  - g) Manifold: Size \_ Length \_
  - h) Disposal Field: Type of Installation \_\_\_\_\_  
Design Permeability (Percolation Rate) \_\_\_\_\_  
Trenches: Width \_ Total Length \_ Bed: Area \_
  - i) Seepage Pits: Design Percolation Rate \_\_\_\_\_  
Number of Pits \_ Total Percolating Area Provided \_
4. Attachments (Check items included):  
\_ General Plan of System Showing Location of All System Components  
\_ X-Sections of Each System Component Including Grease Trap, Septic Tank, Dosing Tank, Disposal Field, Seepage Pits and Interceptor Drains  
\_ Pump Performance Curve  
\_ Other—Specify \_\_\_\_\_
5. I hereby certify that the information furnished on Form 4 of this application (and 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 Professional Engineer \_\_\_\_\_ Date \_\_\_\_\_

Form 5. Design of Pressure Dosing System

1. Configuration of Distribution Network:  
Type of Manifold: \_ End \_ Central  
Distribution Laterals: Number \_ Length, ft \_ Spacing, ft \_  
Hole Diameter, ins \_ Hole Spacing, ins \_  
Diameter of Laterals, ins \_
2. Lateral Discharge Rate:  
Design Pressure Head at Supply End of Laterals, Hp, ft \_  
Hole Discharge Rate, Q, gpm \_

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- Number of Holes per Lateral, n \_  
Lateral Discharge Rate, (Q x n) gpm \_
3. Manifold Length, ft \_ Manifold Diameter, ins \_
4. System Discharge Rate, gpm \_
5. Dose Volume:  
Design Volume of Sewage, gal/day \_  
Design Permeability, in/hr \_ or Percolation Rate, min/in \_  
Internal Volume of Distribution Network \_  
Dose Volume \_
- 6a. Pump Selection:  
Diameter of Delivery Pipe \_ Length of Delivery Pipe \_  
Friction Loss in Delivery Pipe, Hf, ft \_  
Elevation of Dosing Tank Low Water Level \_  
Elevation of Lateral Invert \_  
Elevation Head, He, ft \_  
Total Operating Head, Ht (Hp + Hf + He), ft \_  
Pump Model \_ Rated Horsepower \_  
Pump Discharge Rate at Total Operating Head, gpm \_
- 6b. Siphon Elevation:  
Diameter of Delivery Pipe \_ Length of Delivery Pipe \_  
Friction Loss in Delivery Pipe, Hf, ft \_  
Velocity Head, Hv, ft \_  
Total Operating Head, Ht (Hp + Hf + Hv), ft \_  
Elevation of Lateral Invert \_  
Elevation of Siphon Invert \_
7. I hereby certify that the information furnished on Form 4 of this application (and 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 Professional Engineer \_\_\_\_\_ Date \_\_\_\_\_