



Commonwealth of Massachusetts
 City/Town of MERRIMACK
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

JOB FILE
MEER-0028

DEP has provided this form for use by on-site professionals and local Boards of Health. Other forms may be used, but the information must be substantially the same as provided here. Before using this form, check with your local Board of Health to determine the form they use.

A. Facility Information

1. Facility Information
 Owner Name: THULE (DOLL)
 Street Address: 107 BIRCHDALE ROAD
 City/Town: HALE MOUNTAIN State: CA Zip Code: 94019
 HAYES ENGINEERING, INC.
 603 SALEM STREET
 WAKEFIELD, MA 01880
 TEL: (617) 250-2300
 FAX: (617) 250-7596

B. Site Information

1. (Check one) New Construction Upgrade Repair
 2. Published Soil Survey available? Yes No If yes: Year Published: 1981 Publication Scale: 1:15,000 Soil Map Unit: Wrb
 Soil Name: Woodbridge Fine Sandy loam Soil Limitations: _____

3. Surficial Geological Report available? Yes No If yes: Year Published: _____ Publication Scale: _____ Map Unit: _____

Geologic Material: _____ Landform: _____

4. Flood Rate Insurance Map:
 Above the 500 year flood boundary? Yes No Within the 100 year flood boundary? Yes No
 Within the 500 year flood boundary? Yes No Within a Velocity Zone? Yes No

5. Wetland Area: National Wetland Inventory Map
 Wetlands Conservancy Program Map
 Map Unit: _____ Name: _____

6. Current Water Resource Conditions (USGS)
 Range: Above Normal Normal Below Normal
 Month/Year: _____

7. Other references reviewed: _____



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D. Determination of High Groundwater Elevation

1. Method used: Depth observed standing water in observation hole
 Depth weeping from side of observation hole
 Depth to soil redoximorphic features (mottles)
 Groundwater adjustment (USGS methodology)
2. Index Well Number _____ Reading Date _____ Index Well Level _____
 Adjustment Factor _____ Adjusted Groundwater Level _____
- | | | | |
|---------------------|----------------------|----------------------|----------------------|
| A. <u>98</u> inches | B. <u>108</u> inches | A. <u>100</u> inches | B. <u>110</u> inches |
| A. <u>88</u> inches | B. <u>92</u> inches | A. <u>96</u> inches | B. <u>67</u> inches |
| A. <u>92</u> inches | B. <u>92</u> inches | A. <u>90</u> inches | B. <u>98</u> inches |
| A. _____ inches | B. _____ inches | A. _____ inches | B. _____ inches |

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material
- a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? Yes No
- b. If yes, at what depth was it observed? Upper boundary: _____ inches Lower boundary: _____ inches

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator: Rogers Date: Dec 14 2009
 GORDON ROBERTSON SE 2074 NOV. 1994
 Typed or Printed Name of Soil Evaluator/License Number Date of Soil Evaluator Exam
 Name of Board of Health Witness: Debrah Ketchen Board of Health: MELLENDA

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.



Commonwealth of Massachusetts
 City/Town of MEERINAC
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C. On-Site Review (Cont.)

Deep Observation Hole Number: T-1 12-14-09 Sunny 39°
Date Time Weather

1. Location

Ground Elevation at Surface of Hole _____
 Location (Identify on Plan) 114 Beech Hill Road

2. Land Use: Woods

(e.g. woodland, agricultural field, vacant lot, etc.)
 Vegetation: Maple, pine, oak Landform: _____ Surface Stones: Few Slope (%): A/S

3. Distances from: Open Water Body _____

Drainage Way _____ Possible Wet Area _____
feet feet
 Property Line _____ Drinking Water Well _____ Other _____
feet feet feet

4. Parent Material: Clay till

Unsuitable Materials Present: Yes No
 If Yes: Disturbed Soil Fill Material ImperVIOUS Layer(s) Weathered/Fractured Rock Bedrock

5. Groundwater Observed: Yes No

If Yes: Depth Weeping from Pit 88 Depth Standing Water in Hole 98
 Estimated Depth to High Groundwater: _____
inches elevation



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 City/Town of MEZRIAM
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Deep Observation Hole Number: T.1

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0 - 6	Ap	10YR 3/3				Fs1	0	0%	gv	mf	
6 - 12	B ₀	10YR 4/6				Fs1	0	0%	gr	mf	
12 - 35	D ₁	10YR 5/6				ls	0	0%	m	mf	
35 - 72	C ₂	10YR 5/4				grls	20	0%	m	mf	
72 - 102	C ₃	2.5Y 5/3	72	10YR 6/8 5Y 7/1	20	sl	10	10/0%	blc	mf	

Additional Notes



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C. On-Site Review (Cont.)

Deep Observation Hole Number: T-2 12-14-09

1. Location _____ Date _____ Time _____ Weather Sunny 39°

Ground Elevation at Surfaces of Hole _____
 Location (Identify on Plan) 114 BARE Hill Rd.

2. Land Use: Woods (e.g. woodland, agricultural field, vacant lot, etc.)
 Surface Stones Few Slope (%) A/B
 Vegetation Maple, pine, oak

3. Distances from: Open Water Body _____ Landform _____
 Property Line _____ feet _____ Drainage Way _____ feet _____ Surface _____
 Drinking Water Well _____ feet _____ Possible Wet Area _____ feet _____
 Other _____ feet _____ Position on landscape (attach sheet)

4. Parent Material: Chicard till Unsuitable Materials Present: Yes No
 If Yes: Disturbed Soil Fill Material Impervious Layer(s) Weathered/Fractured Rock Bedrock

5. Groundwater Observed: Yes No
 If Yes: Depth Weeping from Pit 72 Depth Standing Water in Hole 108
 Estimated Depth to High Groundwater: _____ inches _____ elevation



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Deep Observation Hole Number: 7.2

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-8	Ap	10YR 2/3				fs/	0	0%	gr	mf	
8-16	Bw	10YR 2/6				fs/	0	0%	gr	mf	
16-72	C ₁	10YR 5/4				ls	0	0%	m	mvf	
72-112	C ₂	2.5Y 5/3	72"	10YR 6/5 5Y 7/1	5	sl	10	10/0%	m	mf	

Additional Notes



Commonwealth of Massachusetts
 City/Town of Melrose
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C. On-Site Review (Cont.)

Deep Observation Hole Number: T-3 12-14-09

1. Location _____ Date _____ Time _____ Weather Sunny 39°

Ground Elevation at Surface of Hole _____

Location (Identify on Plan) 114 Bare Hill Rd.

2. Land Use: Woods

(e.g. woodland, agricultural field, vacant lot, etc.)
 Vegetation Maple, Pine, Oak

Surface Storages Few

Slope (%) B

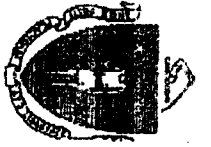
3. Distances from: Open Water Body _____ Landform _____ Possible Wet Area _____
 Property Line _____ feet _____ Drinking Water Well _____ feet _____ Other _____ feet _____
 Position on Landscape (attach sheet) _____

4. Parent Material: Glacial Till

If Yes: Disturbed Soil Fill Material ImperVIOUS Layer(s) Weathered/Fractured Rock Bedrock
 Unsuitable Materials Present: Yes No

5. Groundwater Observed: Yes No

If Yes: Depth Weeping from Pit 76 Depth Standing Water in Hole 100
 Estimated Depth to High Groundwater: _____ inches _____ elevation



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 City/Town of *MARLBOROUGH*
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Deep Observation Hole Number: 73

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-8	Ap	10YR 3/3				Si	0	0%	gr	mf	
8-16	Bd	10YR 4/6				Si	0	0%	gr	mf	
16-76	C ₁	10YR 5/4	40"	10YR 3/6		ls	10	0%	m	mf	
76-108	C ₂	2.5Y 5/3				sl	5	10%	ble	mf	

Additional Notes



Commonwealth of Massachusetts
 City/Town of NEELAND
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Cont.)

Deep Observation Hole Number: 7-4

Date: 12-14-09

Time: _____

Weather: Sunny 39°

1. Location

Ground Elevation at Surface of Hole _____

Location (Identify on Plan) 114 Bare Hill Rd

2. Land Use: Woods

(e.g. woodland, agricultural field, vacant lot, etc.)
Maple, Pine, Oak
 Vegetation

Landform _____

Surface Stones Few

Slope (%) B

Position on Landscape (attach sheet)

3. Distances from: Open Water Body _____ feet

Drainage Way _____ feet

Possible Wet Area _____ feet

Property Line _____ feet

Drinking Water Well _____ feet

Other _____ feet

4. Parent Material: Clayed till

Unsuitable Materials Present: Yes No

If Yes: Disturbed Soil

Fill Material

Impervious Layer(s)

Weathered/Fractured Rock

Bedrock

5. Groundwater Observed: Yes No

If Yes: Depth Weeping from pit 67

Depth Standing Water in Hole 110

Estimated Depth to High Groundwater: _____

Inches _____

Elevation _____



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Deep Observation Hole Number: TY

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (nodules)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0 - 8	Ap	10YR 3/3				fs1	0	0%	gr	mf	
8 - 16	Bw	10YR 4/6				fs1	0	0%	gr	mf	
16 - 72	C1	10YR 5/4	48	10YR 2/6 5Y 7/1	20	gr 1fs	10	5/0%	m	anuf	
72 - 120	C2	2.5Y 5/3				sl	0	5/0%	blc	mf	

Additional Notes



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Use this sheet for field diagrams:

