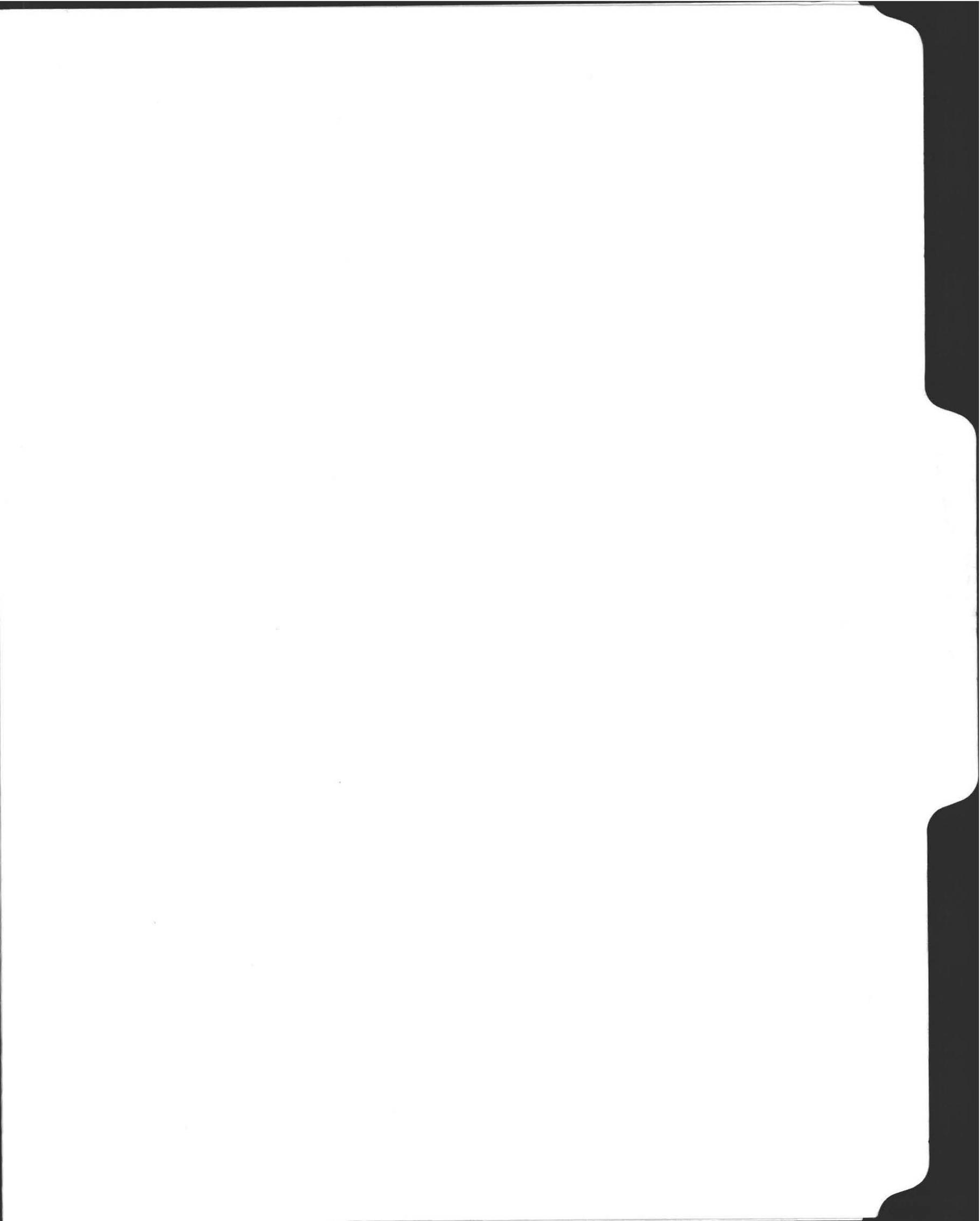


<sup>116</sup>  
136 Shutesbury Rd.



Snell  
116  
136 Shutesbury Road

FORM 1 - APPLICATION FOR DSCP

No. 05-19

Fee \$275.00

COMMONWEALTH OF MASSACHUSETTS  
Board of Health, Amherst, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

Application for a Permit to Construct (x) Repair ( ) Upgrade ( ) Abandon ( ) -  Complete System  Individual Components

Location <u>136 Shutesbury Road</u>	Owner's Name <u>Ron &amp; Karen Snell</u>
Map/Parcel#	Address <u>4 Campbell Ct, Amherst</u>
Lot#	Telephone# <u>413-549-0495</u>
Installer's Name <u>John Hondrogen (Builder)</u>	Designer's Name <u>Robert Leet</u>
Address <u>14 Cadwell Street, Pelham</u>	Address <u>P.O.B.881 Wendell MA 01379</u>
Telephone# <u>413-253-7310</u>	Telephone# <u>978/544-8000</u>

Type of Building: sf Lot Size 2.28 Acres  
Dwelling - No. of Bedrooms 4 Garbage grinder ( )  NO GRINDER ALLOWED  
Other - Type of Building \_\_\_\_\_ No. of persons \_\_\_\_\_ Showers ( ), Cafeteria ( )  
Other Fixtures \_\_\_\_\_

Design Flow (min. required) 330 gpd Calculated design flow 440 gpd Design flow provided 467 gpd  
Plan: Date 9/09/05 Number of sheets 1 Revision Date \_\_\_\_\_  
Title Snell / On-Site Subsurface Sewage Disposal System / Plans & Specifications

Description of Soil(s) loamy sand  
Soil Evaluator Form No. DEP 11 Name of Soil Evaluator Robert Leet Date of Evaluation 5/3/05

DESCRIPTION OF REPAIRS OR ALTERATIONS \_\_\_\_\_  
\_\_\_\_\_

The undersigned agrees to install the above described Individual Sewage Disposal System in accordance with the provisions of TITLE 5 and further agrees not to place the system in operation until a Certificate of Compliance has been issued by the Board of Health.

Signed [Signature] Date \_\_\_\_\_

Inspections \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DEP APPROVED FORM 5/96

FORM 3 - CERTIFICATE OF COMPLIANCE

No. 05-19

Fee \_\_\_\_\_

COMMONWEALTH OF MASSACHUSETTS  
Board of Health, Amherst, MA.

CERTIFICATE OF COMPLIANCE

Description of Work:  Individual Component(s)  Complete System

The undersigned hereby certify that the Sewage Disposal System: Constructed ( ), Repaired ( ), Upgraded ( ), Abandoned ( )

by: \_\_\_\_\_

at 116 Shutesbury Road

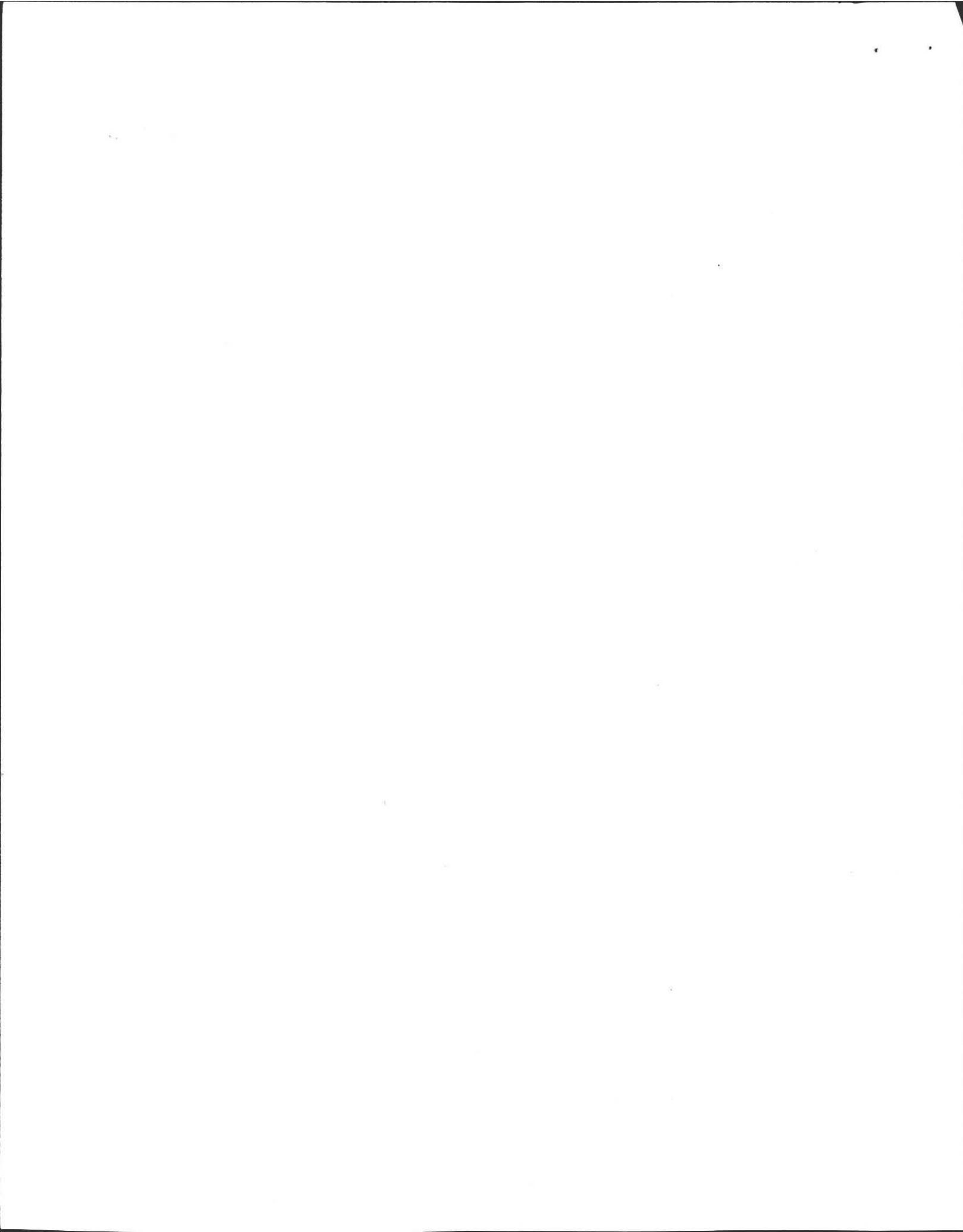
has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. 05-19 dated \_\_\_\_\_ Approved Design Flow \_\_\_\_\_ (gpd)

Installer [Signature]

Designer: \_\_\_\_\_ Inspector \_\_\_\_\_ Date \_\_\_\_\_

The issuance of this permit shall not be construed as a guarantee that the system will function as designed.

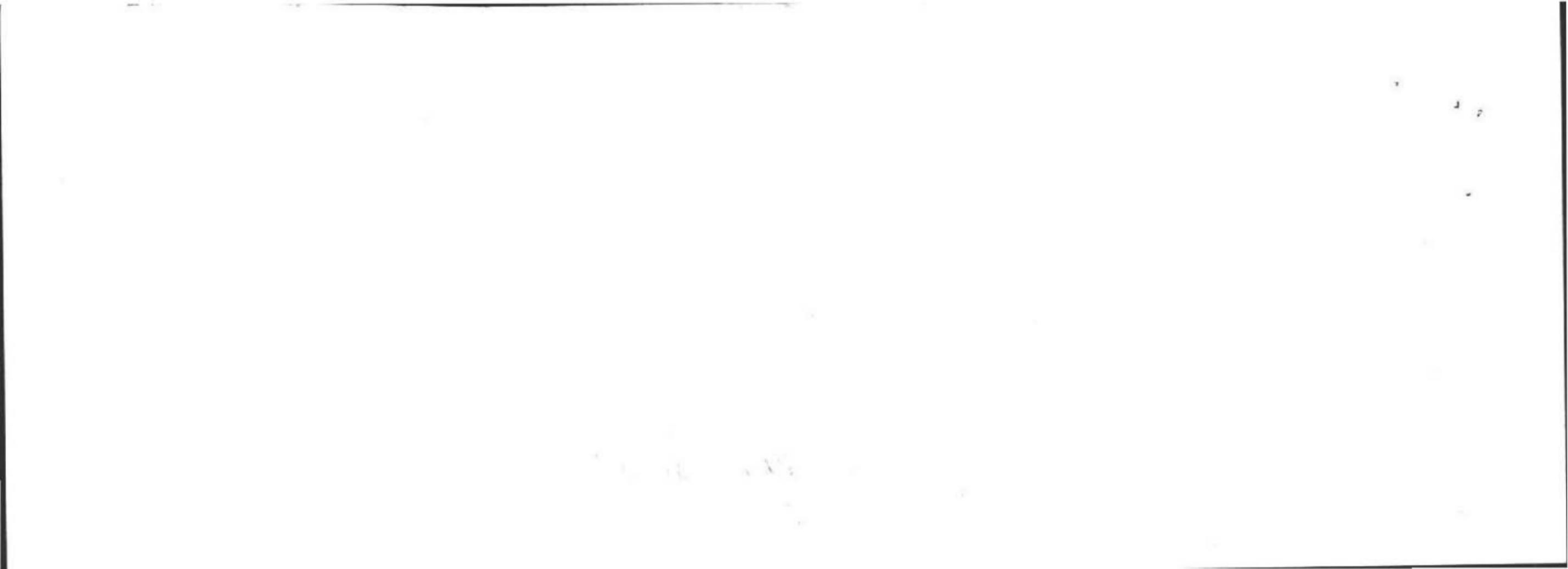
DEP APPROVED FORM 5/96



The payment enclosed is for the inspection of the perc test (done about 1 1/2 weeks ago) and the design review. This is for lot 15 on Shutesbury Road (the address is either 116 or 136 Shutesbury Rd.).

5/23 need map & parcel, if owner does not have it direct them to Assessor's office.

6/7/05 136 Shutesbury per Ron Snell.  
10/11/05 incorrect address, actually 116 Shutesbury Rd.



Snell  
116  
136 Shutesbury Road

FORM 1 - APPLICATION FOR DSCP

No. 05-19

Fee \$175.00

COMMONWEALTH OF MASSACHUSETTS  
Board of Health, Amherst, MA.

APPLICATION FOR DISPOSAL SYSTEM CONSTRUCTION PERMIT

Application for a Permit to Construct ( ) Repair ( ) Upgrade ( ) Abandon ( ) -  Complete System  Individual Components

Location <u>136 Shutesbury Road</u>	Owner's Name <u>Ron &amp; Karen Snell</u>
Map/Parcel#	Address <u>4 Campbell Ct, Amherst</u>
Lot#	Telephone# <u>413-549-0495</u>
Installer's Name <u>John Hondrogen</u>	Designer's Name <u>Robert Leet</u>
Address <u>14 Cadwell Street, Pelham</u>	Address <u>P.O.B.881 Wendell MA 01379</u>
Telephone# <u>413-253-7310</u>	Telephone# <u>978/544-8000</u>

Type of Building: sf Lot Size 2.28 Acres  
Dwelling - No. of Bedrooms 4 Garbage grinder ( )  NO GRINDER ALLOWED  
Other - Type of Building \_\_\_\_\_ No. of persons \_\_\_\_\_ Showers ( ) \_\_\_\_\_ Cafeteria ( )  
Other Fixtures \_\_\_\_\_

Design Flow (min. required) 330 gpd Calculated design flow 440 gpd Design flow provided 467 gpd  
Plan Date 9/09/05 Number of sheets 1 Revision Date \_\_\_\_\_  
Title Snell / On-Site Subsurface Sewage Disposal System / Plans & Specifications

Description of Soil(s) loamy sand  
Soil Evaluator Form No. DEP 11 Name of Soil Evaluator Robert Leet Date of Evaluation 5/3/05

DESCRIPTION OF REPAIRS OR ALTERATIONS

The undersigned agrees to install the above described Individual Sewage Disposal System in accordance with the provisions of TITLE 5 and further agrees not to place the system in operation until a Certificate of Compliance has been issued by the Board of Health.

Signed [Signature] Karen Snell Date 10/20/05

Inspections

DEP APPROVED FORM 5/96

FORM 3 - CERTIFICATE OF COMPLIANCE

No. 05-19

Fee \_\_\_\_\_

COMMONWEALTH OF MASSACHUSETTS  
Board of Health, Amherst, MA.

CERTIFICATE OF COMPLIANCE

Description of Work:  Individual Component(s)  Complete System

The undersigned hereby certify that the Sewage Disposal System: Constructed ( ), Repaired ( ), Upgraded ( ), Abandoned ( )

by: \_\_\_\_\_  
at 116 Shutesbury Road  
has been installed in accordance with the provisions of 310 CMR 15.00 (Title 5) and the approved design plans/as-built plans relating to application No. 05-19 dated \_\_\_\_\_ Approved Design Flow \_\_\_\_\_ (gpd)

Installer [Signature]  
Designer: \_\_\_\_\_ Inspector \_\_\_\_\_ Date \_\_\_\_\_

The issuance of this permit shall not be construed as a guarantee that the system will function as designed.

DEP APPROVED FORM 5/96

FORM 2 - DSCP

No. 05-19

Fee \_\_\_\_\_

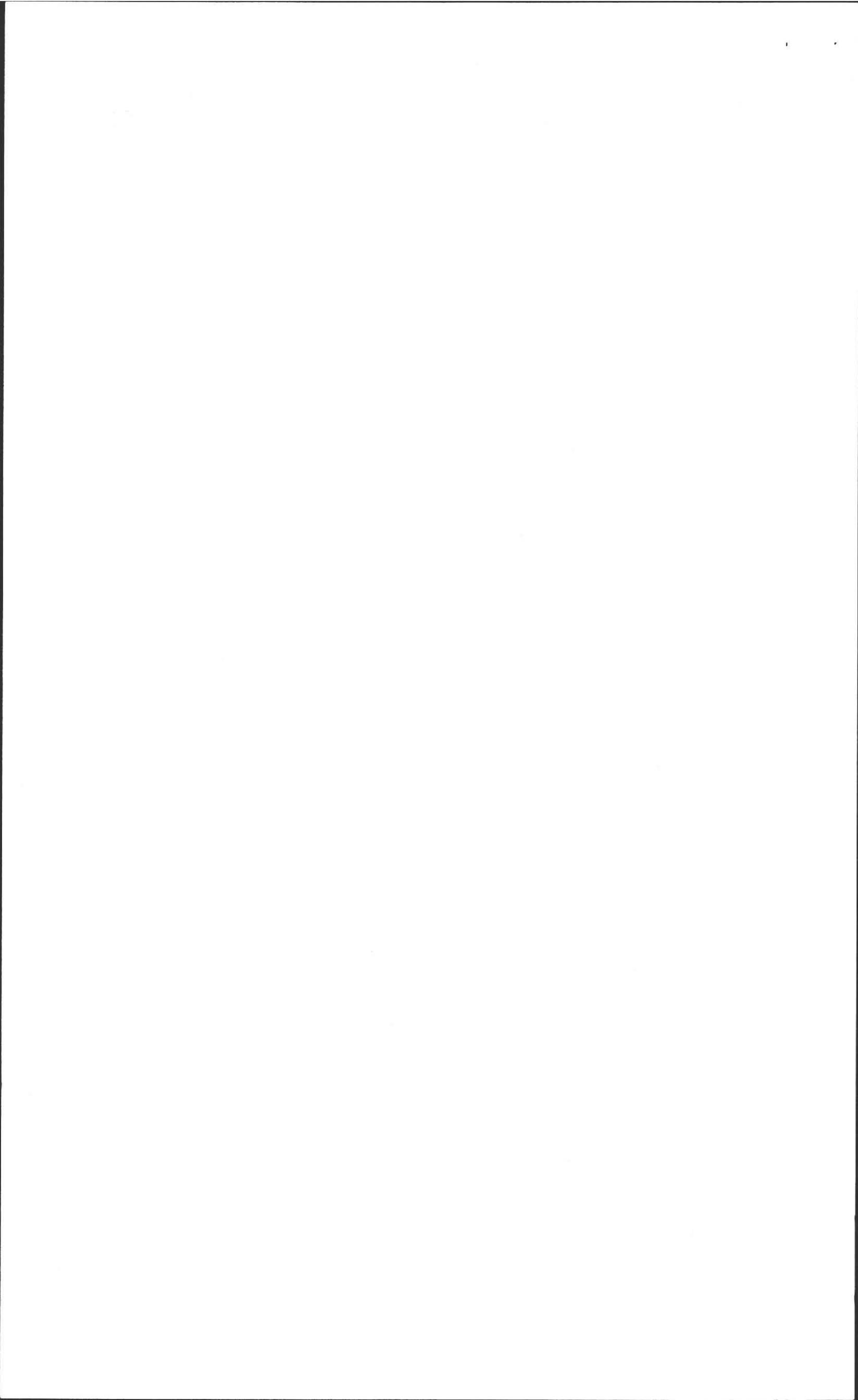
COMMONWEALTH OF MASSACHUSETTS  
Board of Health, Amherst, MA.

DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permission is hereby granted to: Construct ( ) Repair ( ) Upgrade ( ) Abandon ( ) an individual sewage disposal system at 116 Shutesbury Road as described in the application for Disposal System Construction Permit No. 05-19 dated 10/20/05 (Revised) Rec-10-11-05

Provided: Construction shall be completed within three years of the date of this permit. All local conditions must be met.

DEP APPROVED FORM 5/96 Date 10/20/05 Board of Health [Signature]



Snell  
136 Shutesbury Road

**FORM 11 - SOIL EVALUATOR FORM**  
**Page 1**

No. \_\_\_\_\_

Date 5/3/05

Commonwealth of Massachusetts  
Amherst, Massachusetts

**Soil Suitability Assessment for On-site Sewage Disposal**

Performed By: Robert Leet

Witnessed By: Dave Zarozinski

Location Address of <u>116</u> Lot # <u>436 Shutesbury Road</u> <u>Amherst MA</u>	Owner's Name, Address, and Telephone # <u>Ron Snell</u> <u>4 Campbell Ct, Amherst, MA</u> <u>413-549-0495</u>
---	--

New Construction  Repair

Office Review

Published Soil Survey Available: No  Yes

Year Published \_\_\_\_\_ Publication Scale \_\_\_\_\_ Soil Map Unit \_\_\_\_\_  
Drainage Class \_\_\_\_\_ Soil Limitations \_\_\_\_\_

Surficial Geologic Report Available: No  Yes

Year Published \_\_\_\_\_ Publication Scale \_\_\_\_\_  
Geologic Material (Map Unit) \_\_\_\_\_  
Landform \_\_\_\_\_

Flood Insurance Rate Map:

Above 500 year flood boundary No  Yes   
Within 500 year flood boundary No  Yes   
Within 100 year flood boundary No  Yes

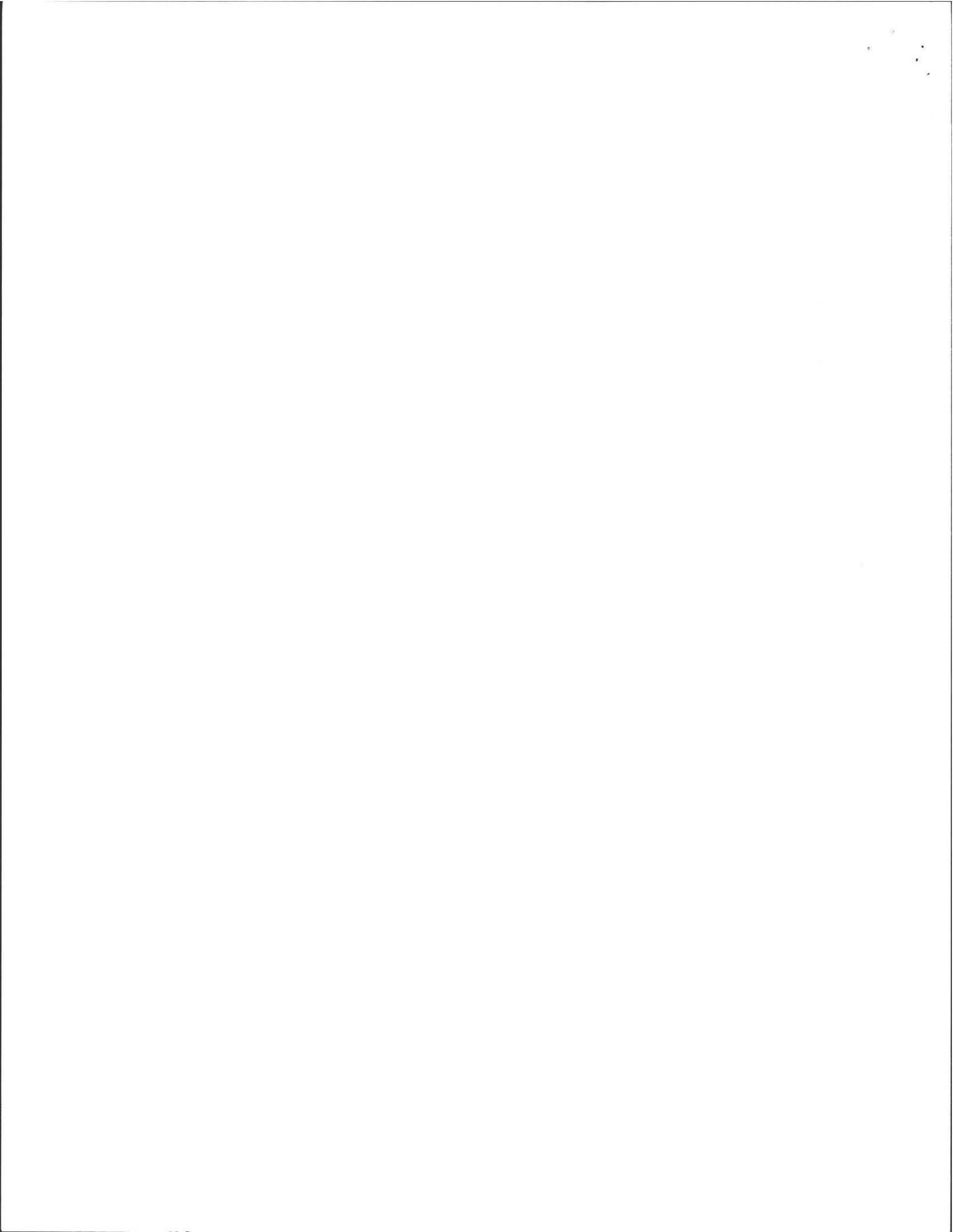
Wetland Area:

National Wetland Inventory Map (map unit) \_\_\_\_\_  
Wetlands Conservancy Program Map (map unit) \_\_\_\_\_

Current Water Resource Conditions (USGS): Month \_\_\_\_\_

Range: Above Normal  Normal  Below Normal

Other References Reviewed: \_\_\_\_\_



**On-site Review**

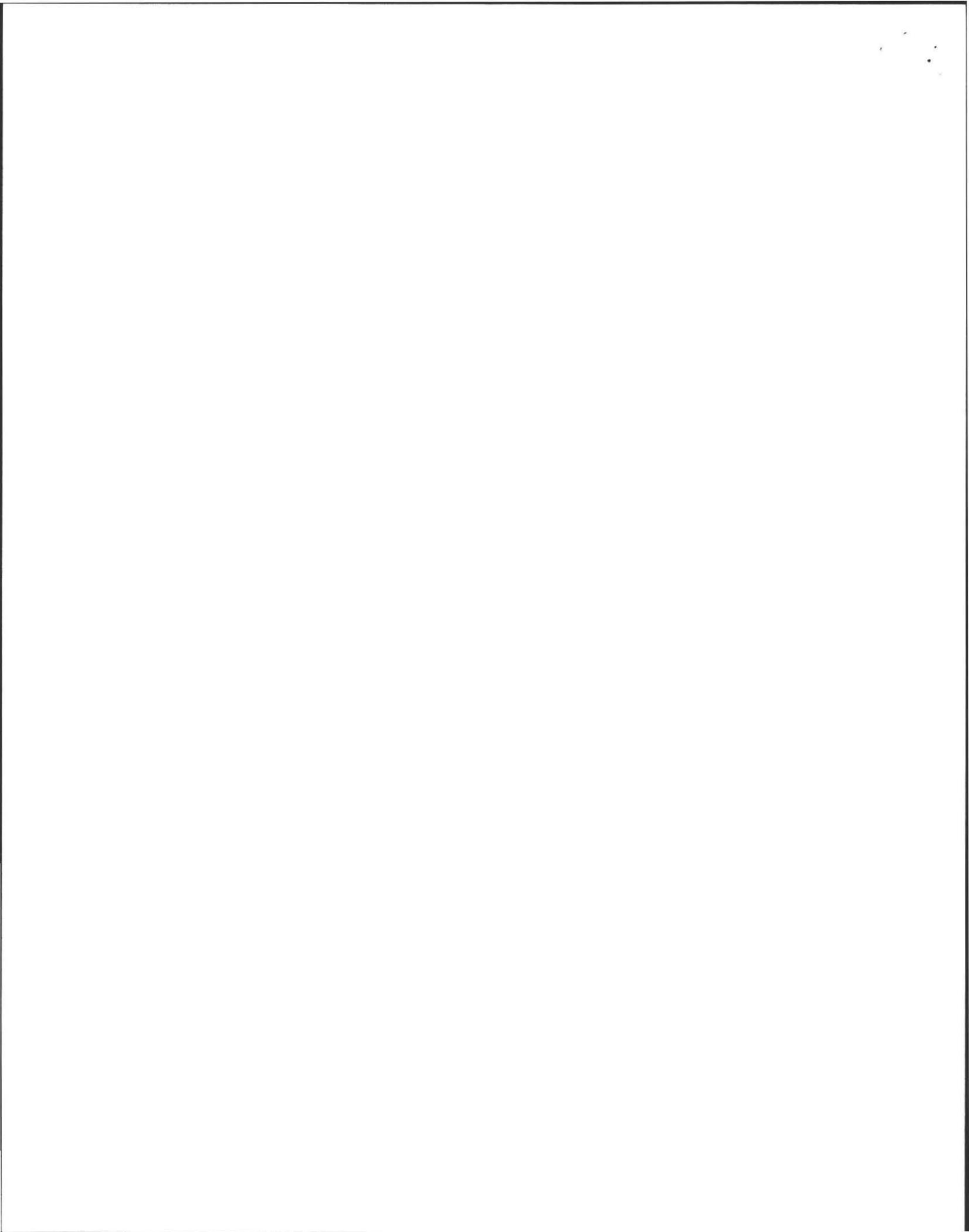
Deep Hole Number 1 Date: 5/3/05 Time: 9:00 am Weather cloudy, 50's  
 Location (identify on site plan) see plan  
 Land Use woods Slope (%) 11-20 Surface Stones few  
 Vegetation mixed forest  
 Landform terrace  
 Position on landscape (sketch on the back) see plan  
 Distances from:  
 Open Water Body > 100 feet Drainage way > 100 feet  
 Possible Wet Area > 100 feet Property Line 35 feet  
 Drinking Water Well > 100 feet Other n/a

<b>DEEP OBSERVATION HOLE LOG</b>					
Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-4	A	O/LUFF	10 YR 2/2		
4-18	Bw	LS	10 YR 4/6		FEW STONES
18-120	C	LS	2.5 Y 5/4	2.5 Y 6/6 @44"	FEW STONES

Parent Material (geologic) Schist Depth to Bedrock: 120

Depth to Groundwater: Standing Water in the Hole: no Weeping from Pit Face: no

Estimated Seasonal High Ground Water: 44"

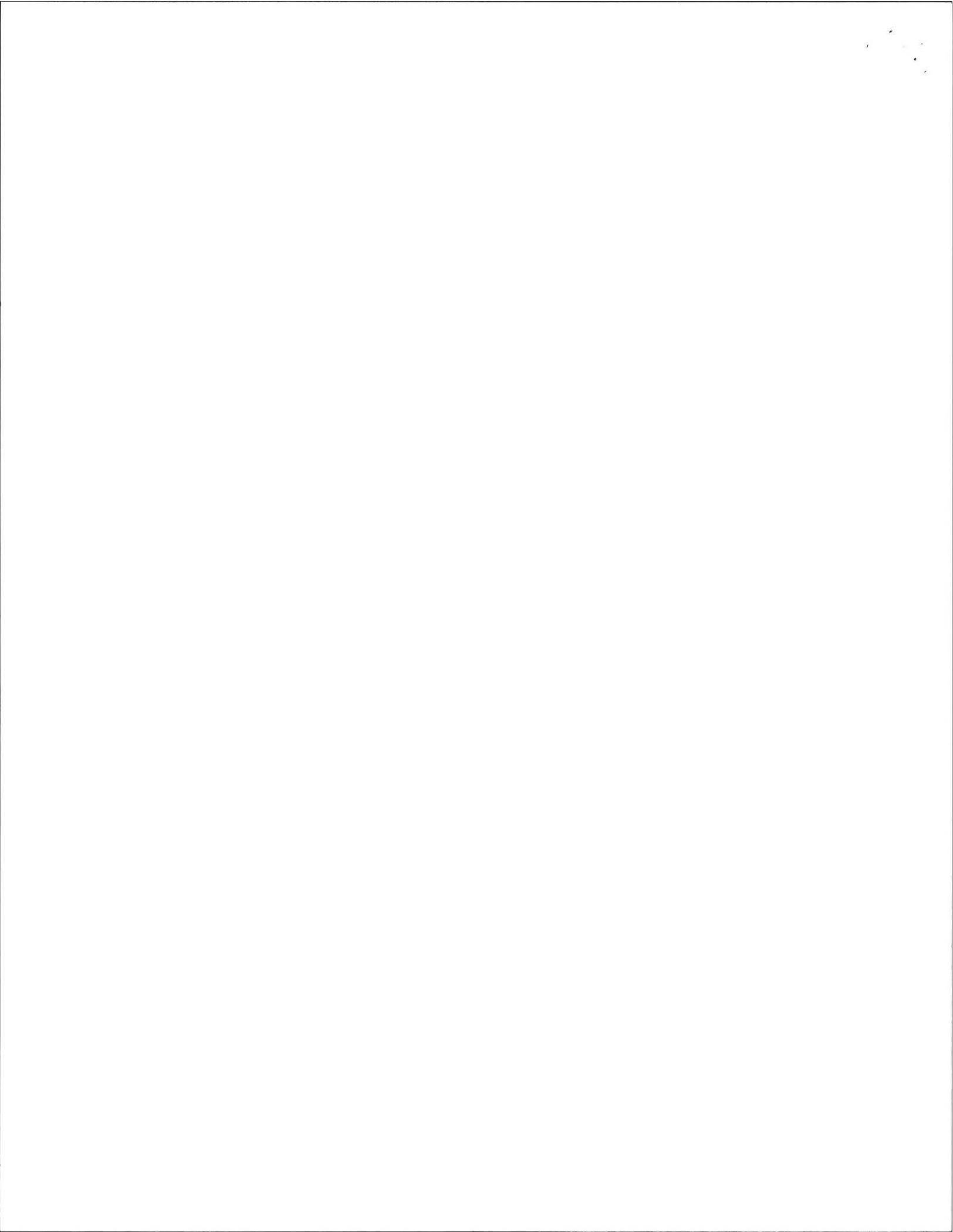


***On-site Review***

Deep Hole Number 2 Date: 5/3/05 Time: 9:00 am Weather cloudy, 50's  
 Location (identify on site plan) see plan  
 Land Use woods Slope (%) 11-20 Surface Stones few  
 Vegetation mixed forest  
 Landform terrace  
 Position on landscape (sketch on the back) see plan  
 Distances from:  
 Open Water Body > 100 feet Drainage way > 100 feet  
 Possible Wet Area > 100 feet Property Line 35 feet  
 Drinking Water Well > 100 feet Other n/a

DEEP OBSERVATION HOLE LOG					
Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-4	A	O/LUFF	10 YR 2/2		
4-20	Bw	LS	10 YR 4/6		FEW STONES
18-120	C	LS	2.5 Y 5/4	2.5 Y 6/6 @47"	FEW STONES

Parent Material (geologic) Schist Depth to Bedrock: 100  
Depth to Groundwater: Standing Water in the Hole: no Weeping from Pit Face: no  
 Estimated Seasonal High Ground Water: 47"



**Determination for Seasonal High Water Table**

**Method Used:**

- Depth observed standing in observation hole ..... inches
- Depth weeping from side of observation hole ..... inches
- Depth to soil mottles 47 inches
- Ground water adjustment ..... feet

Index Well Number ..... Reading Date ..... Index well level .....  
Adjustment factor ..... Adjusted ground water level .....

**Depth of Naturally Occurring Pervious Material**

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

If not, what is the depth of naturally occurring pervious material? \_\_\_\_\_

**Certification**

I certify that on 6/95 (date) I have passed the examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017.

Signature \_\_\_\_\_ Date 9/10/05



# COMMONWEALTH OF MASSACHUSETTS

Amherst, Massachusetts

Percolation Test		
Date: 5/3/05		Time: 9:00 am
Observation Hole #	1	2
Depth of Perc	36	38
Start Pre-soak	9:20	10:10
End Pre-soak	9:35	10:25
Time at 12"	9:35	10:25
Time at 9"		10:48
Time at 6"		11:23
Time (9"-6")		35
Rate Min./Inch	< 2*	12

Site Passed  Site Failed

Performed By: Robert Leet

Witnessed By: Dave Zarozinski

Comments: \*Could not maintain water in perc.hole for 15.minutes with 25 gallons water.

10

Commonwealth of Massachusetts  
Town of \_\_\_\_\_**Soil Suitability Assessment : On-Site Sewage Disposal**Performed By: Bob Lee's <sup>Whetstone</sup> Eng. Date: 5/3/05  
Witnessed By: David TarnishLocation Address of:  
Lot #Land

Owner's Name:

Ron Snell

Address of:

Telephone:

136 Shutesbury RdNew Construction  Repair **Office Review**Published Soil Survey Available? No  Yes   
Year Published \_\_\_\_\_ Publication Scale \_\_\_\_\_ Soil Map Unit \_\_\_\_\_  
Drainage Class \_\_\_\_\_ Soil Limitations \_\_\_\_\_Surficial Geologic Report Available? No  Yes   
Year Published \_\_\_\_\_ Publication Scale \_\_\_\_\_  
Geologic Material (map unit) \_\_\_\_\_  
Landform \_\_\_\_\_Flood Insurance Rate Map:  
Above 500 year flood boundary? No  Yes   
Within 500 year flood boundary? No  Yes   
Within 100 year flood boundary? No  Yes Wetland Area:  
National Wetland Inventory Map (map unit) \_\_\_\_\_  
Wetlands Conservancy Program Map (map unit) \_\_\_\_\_Current Water Resource Conditions (USGS): month \_\_\_\_\_  
Range: Above Normal  Normal  Below Normal 

Other Reference Reviewed:

Per # 1542 Perc # 175  
OK # 7147 Plans # 100  
# 275. RST**Determination: Seasonal High Water Table****Methods Used:**

- Depth observed standing in observation hole \_\_\_\_\_ inches  
 Depth weeping from side of observation hole \_\_\_\_\_ inches  
 Depth to soil mottles \_\_\_\_\_ inches  
 Ground water adjustment \_\_\_\_\_ feet

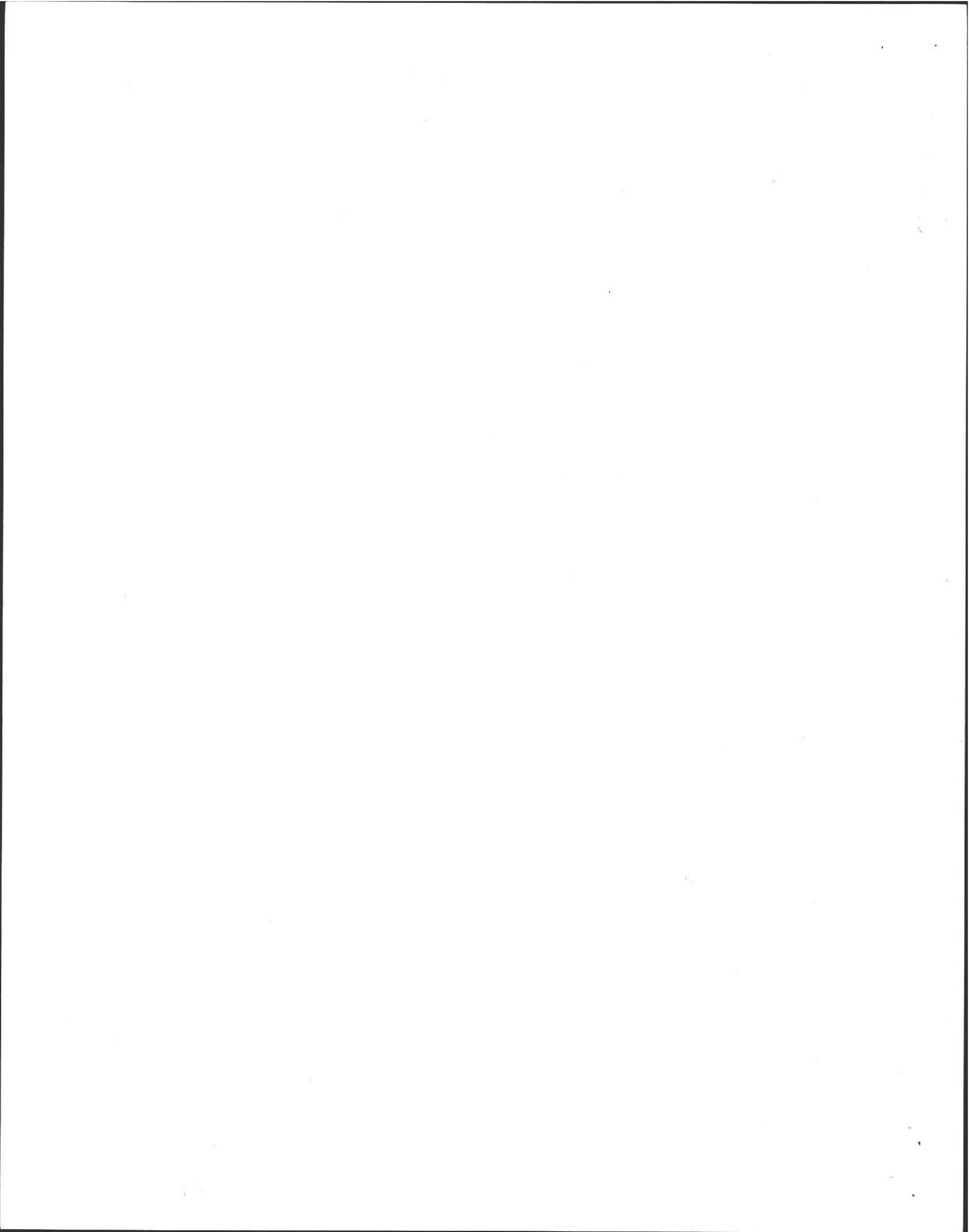
Index Well No. \_\_\_\_\_ Reading Date \_\_\_\_\_ Index Well Level \_\_\_\_\_  
Adjustment factor \_\_\_\_\_ Adjusted ground water level \_\_\_\_\_**Depth of Naturally Occurring Previous Material**

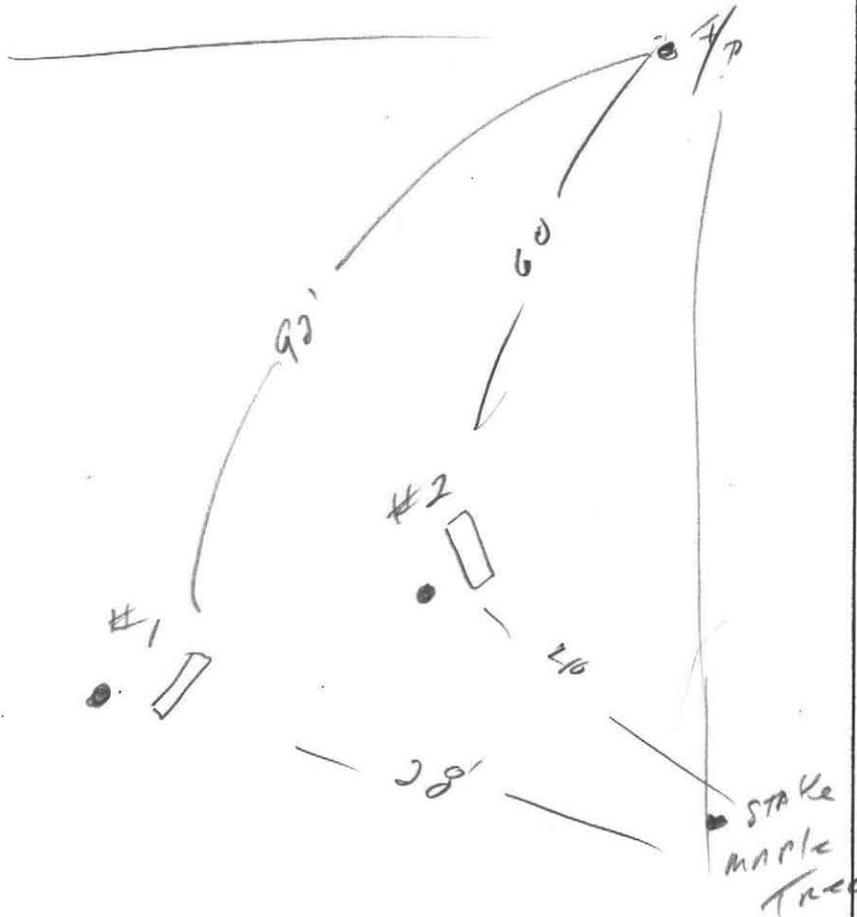
Does at least four feet of naturally occurring previous materials exist in all areas observed throughout the area proposed for this soil absorption system? \_\_\_\_\_

If not, what is the depth of naturally occurring previous material?  
\_\_\_\_\_**Certification**

I certify that on \_\_\_\_\_ (date) I have passed the soil evaluator examination approved by the Department of Environmental Protection and that the above analysis was performed by me consistent with the required training, expertise, and experience described in 310 CMR 15.017.

Signature \_\_\_\_\_  
Date \_\_\_\_\_





FORM 12: Percolation Test

Location Address or Lot #

Shutesbury Rd

Commonwealth of Massachusetts

Town of

Amherst

PERCOLATION TEST \*

DATE:

5/3/04

TIME:

8:30

Observation Hole #	(1)	(2)
Depth of Perc	38	38
Start Pre-soak	9:20	10:10
End Pre-soak		10:25
Time at 12"	CANT	10:25
Time at 9"	HOLD	10:48
Time at 6"	WATER	11:23
Time (9"-6")		35
Rate Min./Inch		12

\*Minimum of one percolation test must be performed in both the primary area and reserve area.

Site Passed

Site failed

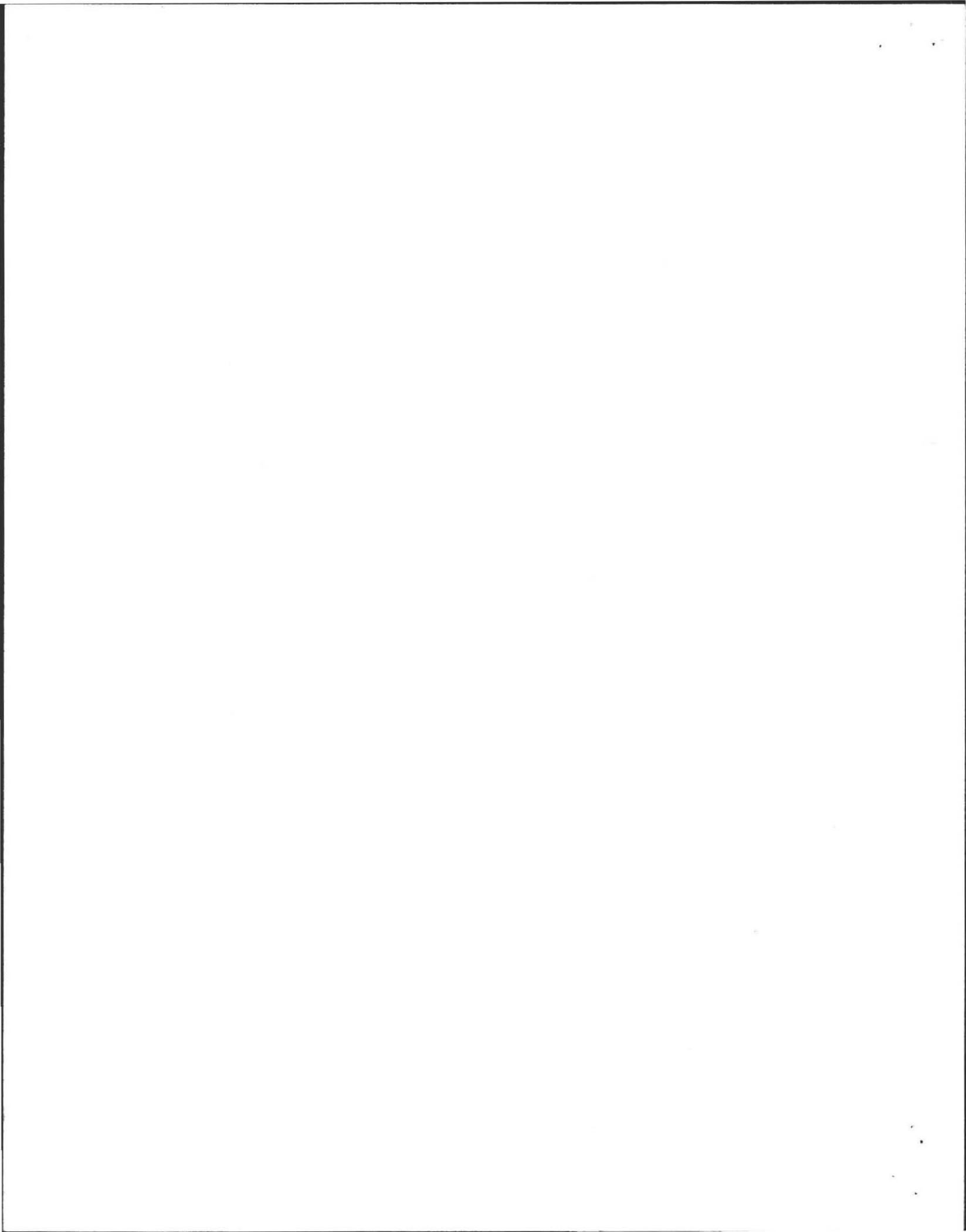
Performed by

Bob Lewis

Witnessed by

David J. J. J.

Comments:



Shutesbury Rd  
Rout 52

On-Site Review

Deep Hole Number ① Date: 5/3/05 Time 9  
 Weather cloudy 50  
 Location (identify on site plan) \_\_\_\_\_  
 Land Use woods Slope (%) 2-5  
 Surface Stone few  
 Vegetation: mixed wood (cedar)

Landform: terrace

Position on Landscape (sketch on back) \_\_\_\_\_

Distances from:  
 Open Water Body 100 feet Drainageway 120 feet  
 Possible Wet Area 100 feet Property Line 25 feet  
 Drinking Water Well 100 feet Other \_\_\_\_\_

DEEP OBSERVATION HOLE LOG

depth from surface (inches)	soil horizon	soil texture (USDA)	soil color (Munsell)	soil mottling	other (structure, stones, boulders) Consistency, % gravel
4	A	o/Late	10YR 2/2		
18	Bw	LS	10YR 4/6	44"	Few stones
120	C	LS	2.5Y 5/4	2.5Y 6/6	Few stones

Parent Material (geologic) SCHIST  
 Depth to Bedrock 120  
 Depth to Groundwater: \_\_\_\_\_  
 Standing Water in the Hole \_\_\_\_\_  
 Weeping from Pit Face \_\_\_\_\_  
 Estimated Seasonal High Water 44"

On-Site Review

Deep Hole Number ② Date: 5-13/05 Time 9.30  
 Weather \_\_\_\_\_  
 Location (identify on site plan) \_\_\_\_\_  
 Land Use \_\_\_\_\_ Slope (%) \_\_\_\_\_  
 Surface Stone \_\_\_\_\_  
 Vegetation: same

Landform: \_\_\_\_\_

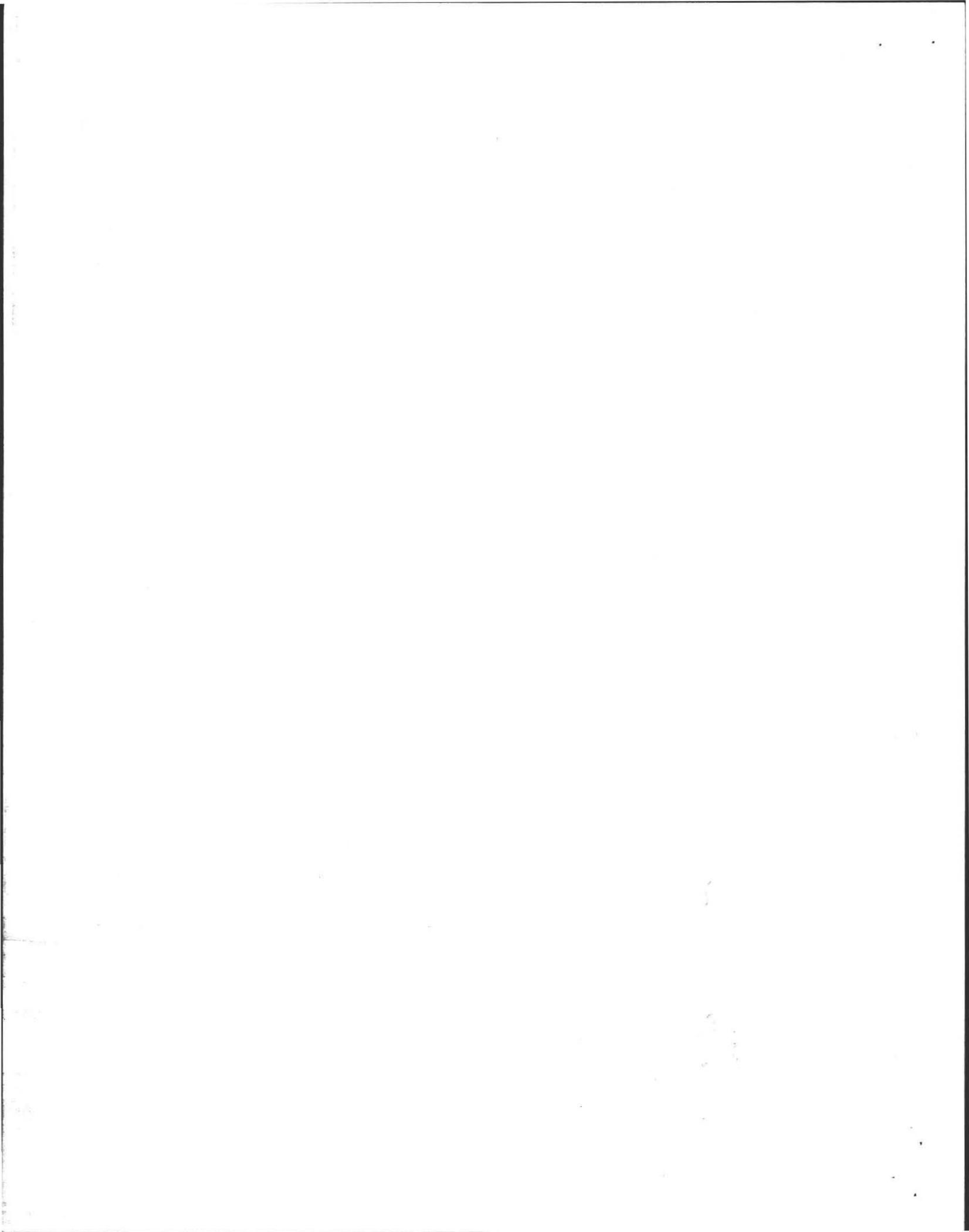
Position on Landscape (sketch on back) \_\_\_\_\_

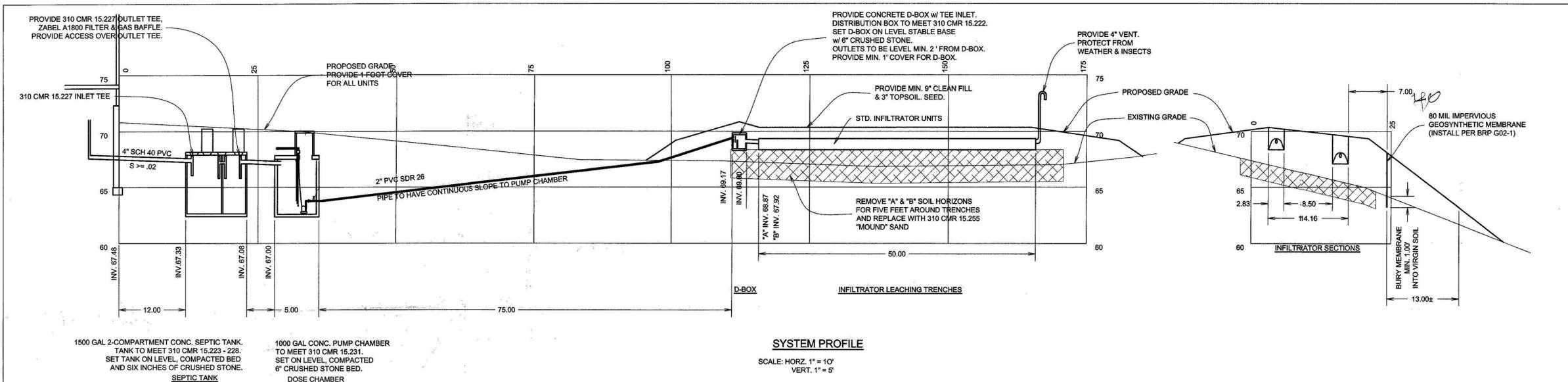
Distances from:  
 Open Water Body \_\_\_\_\_ feet Drainageway \_\_\_\_\_ feet  
 Possible Wet Area \_\_\_\_\_ feet Property Line 15 feet  
 Drinking Water Well \_\_\_\_\_ feet Other \_\_\_\_\_

DEEP OBSERVATION HOLE LOG

depth from surface (inches)	soil horizon	soil texture (USDA)	soil color (Munsell)	soil mottling	other (structure, stones, boulders) Consistency, % gravel
47	A	o/lims	10YR 2/2		
20	Bw	LS	10YR 4/6	47"	Same
100	C	LS	2.5Y 5/4		

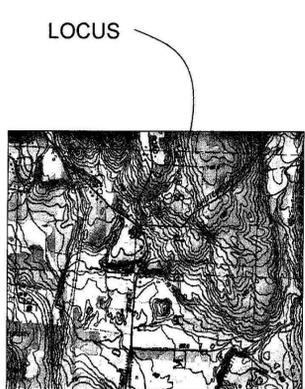
Parent Material (geologic) \_\_\_\_\_  
 Depth to Bedrock \_\_\_\_\_  
 Depth to Groundwater: \_\_\_\_\_  
 Standing Water in the Hole \_\_\_\_\_  
 Weeping from Pit Face \_\_\_\_\_  
 Estimated Seasonal High Water 47





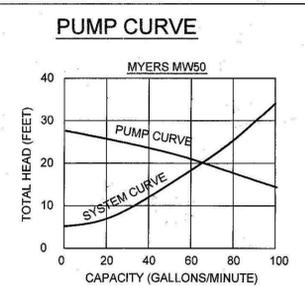
### LEGEND

EXISTING	PROPOSED
BENCHMARK	
5' CONTOURS	
1' CONTOURS	
WELL	
TEST PIT	
WATER	
SEWER	
PROPERTY LINE	



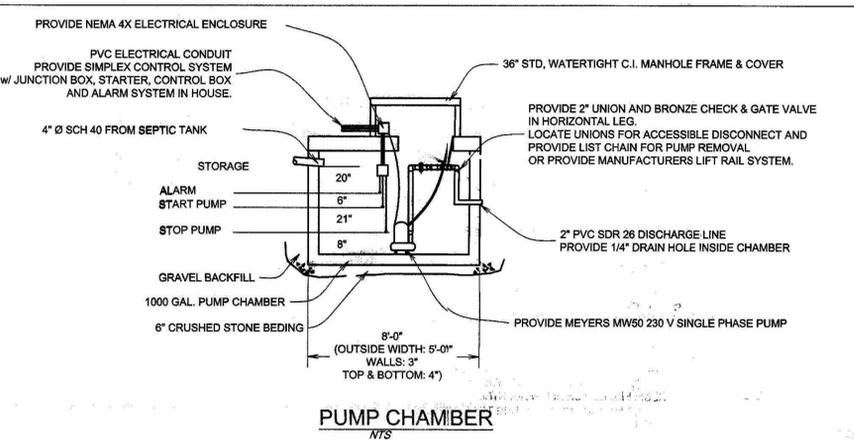
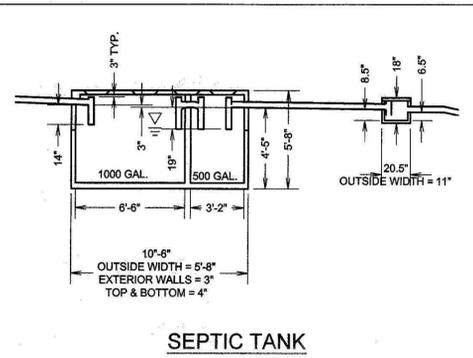
### ELEVATIONS

ATTRIBUTE	TRENCH	
	A	B
GRADE	70.33	69.08
TOP OF CHAMBER	69.33	68.08
INVERT	68.87	67.62
BOTTOM OF CHAMBER	68.33	67.08
HIGHEST EXISTING GRADE	67.00	65.75
GROUNDWATER	63.33	62.08



### MATERIALS

- CLEAN FILL TO BE FREE FROM STONES GREATER THAN 2", ROOTS & DEBRIS. MAX. FINES 5%.
- PVC - POLYVINYL CHLORIDE PIPE, ASTM D1785, SCH 40, SOLVENT WELDED PER MANUFACTURER'S SPECIFICATIONS.
- PERFORATED PVC - POLYVINYL CHLORIDE PIPE, ASTM D1785, SCH 35.
- PIPE INSTALLATION: THE PIPE SHALL BE HANDLED, PLACED AND JOINED IN ACCORDANCE WITH THE APPROPRIATE MANUFACTURER'S INSTALLATION GUIDE. THE PIPE SHALL BE LAID AT CONTINUOUS AND CONSTANT GRADE AT THE SLOPES SHOWN ON THE PLAN.
- MATERIALS OR EQUIPMENT IDENTIFIED ON THE PLANS REFERENCED TO MANUFACTURER'S NAMES AND NUMBERS ARE INTENDED TO ESTABLISH A STANDARD. MATERIALS AND EQUIPMENT OF OTHER MANUFACTURERS THAT ARE, IN THE OPINION OF THE ENGINEER, OF EQUAL QUALITY AND FUNCTION WILL BE ACCEPTABLE. THE CONTRACTOR SHALL SUBMIT SUPPORTING DATA TO THE ENGINEER TO DETERMINE EQUALITY AND WILL BE RESPONSIBLE FOR ALL INCIDENTAL COORDINATION AND/OR FITTING TOGETHER AS REQUIRED.



### MAINTENANCE

- CONSERVE WATER. DO NOT POUR OILS, GREASE, WAX OR HAZARDOUS MATERIALS IN THE DRAINS.
- INSPECT SEPTIC TANK ANNUALLY TO DETERMINE RATE OF ACCUMULATION OF SCUM AND SLUDGE. PUMP TANK WHEN THE SUM OF THEIR DEPTHS EQUALS ONE-THIRD OF THE LIQUID DEPTH OF THE TANK OR WHEN FILTER CLOGS, WHICHEVER COMES FIRST.
- CLEAN FILTER WHEN PUMPING TANK BY BACK WASHING WITH GARDEN HOSE.
- SYSTEM NOT DESIGNED FOR USE WITH GARBAGE DISPOSAL.
- AVOID DRIVING HEAVY EQUIPMENT OVER SYSTEM COMPONENTS.

### SEPTIC SYSTEM GENERAL NOTES:

- AVOID DRIVING ON LEACH FIELD BEFORE, DURING & AFTER CONSTRUCTION.
- CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND SETBACKS. CONTACT WHEATSTONE ENGINEERING WITH ANY DISCREPANCIES OR CHANGES BEFORE PROCEEDING.
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH 310 C.M.R. 15.00, "MINIMUM REQUIREMENTS FOR THE SUBSURFACE DISPOSAL OF SANITARY SEWAGE" AND TOWN OF AMHERST BOARD OF HEALTH REGULATIONS.
- IF SOIL BENEATH EXCAVATED TRENCH CAN BE ROLLED INTO A "WIRE" THE SOIL IS TOO MOIST FOR CONSTRUCTION. ALLOW SOIL TO DRY BEFORE PROCEEDING.
- LEACH AREA WALL AND BOTTOM SHOULD BE SACRIFICED TO THREE INCH DEPTH BEFORE PROCEEDING.
- ALLOW WHEATSTONE ENGINEERING MINIMUM THREE DAY ADVANCE NOTICE FOR FINAL INSPECTION. DO NOT COVER UNTIL ENGINEER & HEALTH AGENT HAVE INSPECTED SYSTEM.
- CONTRACTOR RESPONSIBLE FOR VERTICAL AND HORIZONTAL LAYOUT CONTROL.
- PLAN BASED ON SOIL EVALUATION BY ROBERT LEET, DATED 9/05/05.
- NO PROPERTY LINES WITHIN 10' OF DISPOSAL SYSTEM.
- NO WETLANDS WITHIN 50 FEET OF PROPOSED WORK AREA.
- NO EXISTING WELLS WITHIN 150 FEET OF PROPOSED LEACH FIELD.
- TOPOGRAPHICAL SURVEY BASED ON PLAN ENTITLED "ELEVATION REFERENCE MARKS' PLAN OF LAND IN AMHERST, MASSACHUSETTS PREPARED FOR LAWRENCE R. KLAR & JANELLE M. KLAR" DECEMBER 4, 2002, BY RANEDALL E. IZER, PLS. DATUM ASSUMED 71.00 MLL IN 9\"/>

### SPECIFICATIONS

- USE MYERS MW50 SEWAGE PUMP  
BLAKE PUMP CO.  
GREENFIELD, MA 413/773-3883
- USE SJ ELECTRO 101H HIGH WATER ALARM  
BLAKE PUMP CO.  
GREENFIELD, MA 413/773-3883
- USE 2 COMPARTMENT 1500 GALLON  
1000/500 CONC. SEPTIC TANK  
WILLIAM N. LAMARRE CONC. PRODUCTS  
GREENVILLE, NH, 603/878-1340
- USE 5 OUTLET CONC. DISTRIBUTION BOX  
WILLIAM N. LAMARRE CONC. PRODUCTS  
GREENVILLE, NH, 603/878-1340
- USE 1000 GALLON CONC. PUMP CHAMBER  
WILLIAM N. LAMARRE CONC. PRODUCTS  
GREENVILLE, NH, 603/878-1340
- USE INFILTRATOR HIGH CAPACITY CHAMBERS  
INFILTRATOR SYSTEMS, INC.  
OLD SAYBROOK, CT

### DESIGN DATA

DESIGN BASIS  
SINGLE FAMILY RESIDENCE  
110 GAL. x 4 BEDROOMS = 440 GPD

SEPTIC TANK  
200% x 440 = 880 GALLONS  
USE MIN. 1500 GALLON TANK

EFFLUENT LOADING RATE  
SOIL CLASS: LOAMY SAND, CLASS II  
PERCOLATION RATE: 12 MINUTES/INCH  
LTAR = 0.60 GPD/SQ. FT.

LEACHING TRENCHES  
INFILTRATOR HIGH CAPACITY CHAMBER:  
EFFECTIVE LEACHING AREA: 7.79 SQ. FT. / FT.  
LENGTH: 2 TRENCHES x 50.0 FOOT / TRENCH = 100.0 FT.  
TOTAL AREA: 100.0 FT. x 7.79 SQ. FT. / FT. = 779.0 SQ. FT.

CAPACITY: 779.0 SQ. FT. x 0.6 GPD/SQ. FT. = 467 GPD

PUMP CHAMBER  
1000 GAL. (258 GAL/FT FOOTPRINT)

DOSE  
REQUIRED: 440 GPD / 1 DOSE/DAY = 440 GAL/DOSE  
PRIME: 75 FT @ 20\"/>

### BUOYANCY CALCULATIONS

ASSUMPTIONS:  
ESTIMATED SEASONAL HIGHWATER TABLE: 40"

SEPTIC TANK  
ELEVATIONS:  
EXISTING GRADE = 73.00  
ESHWT = 68.45  
BOTTOM OF TANK = 65.75  
SUBMERGED DEPTH = 2.70

TANK WEIGHT:  
SIDEWALLS: 10.5' x 5.67' x 25' x 2 = 29.77 C.F.  
END WALL & PARTITION: 5.17' x 5.67' x 25' x 3 = 21.99 C.F.  
TOP & BOTTOM: 10.5' x 5.67' x .33' x 2 = 32.29 C.F.  
TOTAL TANK WEIGHT = 84.04 C.F. x 155 LB/C.F. = 13,026 LBS

BUOYANT FORCE:  
WATER DEPTH: 69.88 - 65.00 = 4.88'  
WATER WEIGHT: 10.5' x 5.67' x 2.70 x 62.5 PCF = 10,046 LBS

FACTOR OF SAFETY: 13,026 / 10,046 = 1.3 OK

PUMP CHAMBER  
ELEVATIONS:  
EXISTING GRADE = 69.00  
ESHWT = 64.50  
BOTTOM OF TANK = 62.70  
SUBMERGED DEPTH = 1.80

TANK WEIGHT:  
SIDEWALLS: 8.5' x 5.50' x 25' x 2 = 23.37 C.F.  
END WALL & PARTITION: 4.83' x 5.50' x 25' x 2 = 13.28 C.F.  
TOP & BOTTOM: 8.5' x 4.83' x .33' x 2 = 27.10 C.F.  
TOTAL TANK WEIGHT = 63.75 C.F. x 155 LB/C.F. = 9,881 LBS

BUOYANT FORCE:  
WATER DEPTH: 64.50 - 62.70 = 1.80'  
WATER WEIGHT: 8.5' x 4.83' x 1.80' x 62.5 PCF = 4,618 LBS

FACTOR OF SAFETY: 9,881 / 4,618 = 2.14 OK

### SOIL LOGS

SOIL EVALUATION BY: ROBERT LEET  
BOH AGENT/WITNESS: DAVE ZAROZINSKY

DEEP HOLE 1

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	NOTES
0-4"	A	O/LUFF	10YR 2/2		
4-18"	Bw	LS	10YR 4/6		FEW STONES
18-120"	C	LS	2.5Y 5/4	2.5Y 6/6 @ 44"	FEW STONES

COMMENTS:  
PARENT ROCK: SCHIST; NO WEEPING; ESHWT = 44"; BEDROCK = 120"

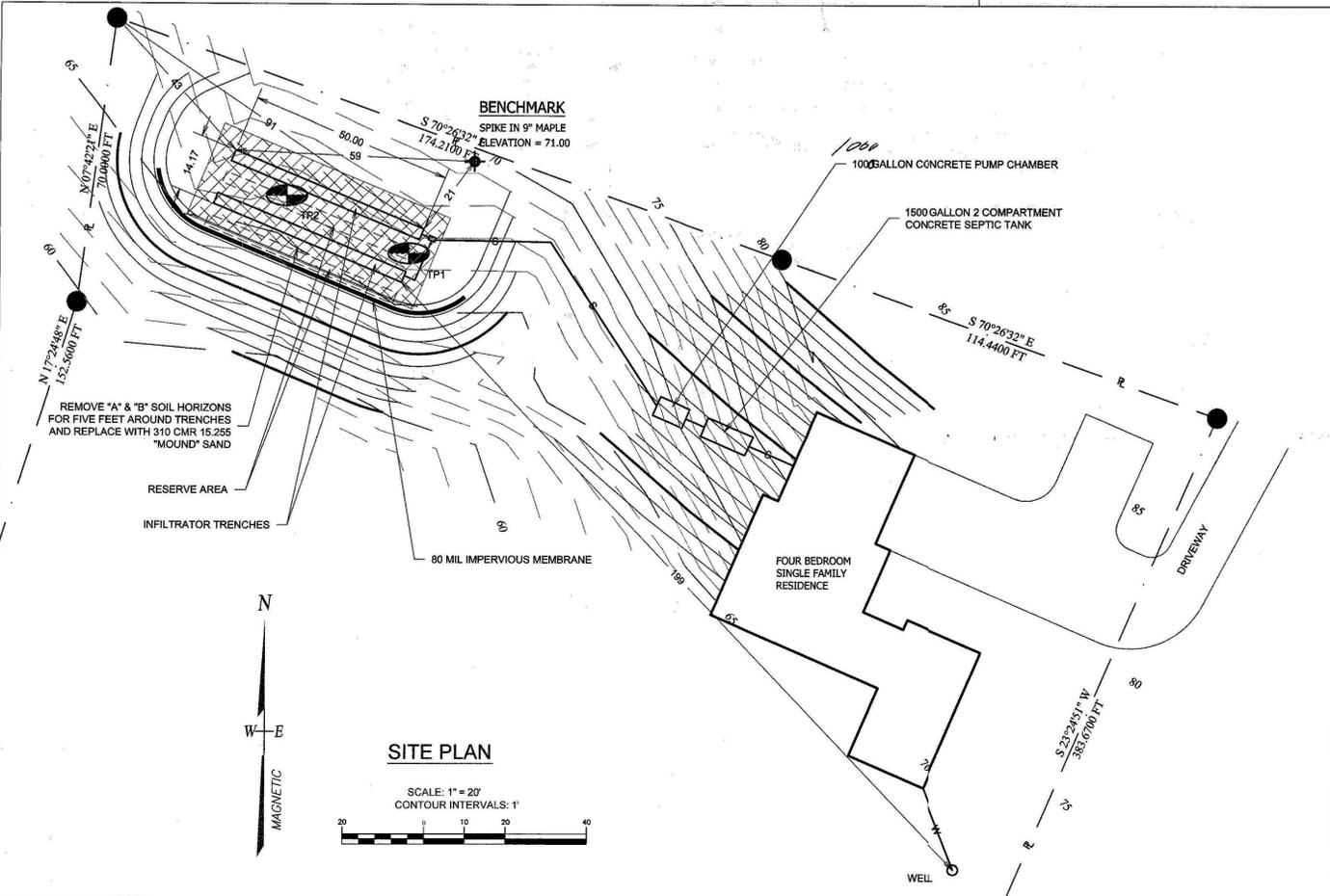
DEEP HOLE 2

DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	NOTES
0-4"	A	O/LUFF	10YR 2/2		
4-20"	Bw	LS	10YR 4/6		FEW STONES
18-100"	C	LS	2.5Y 5/4	2.5Y 6/6 @ 47"	FEW STONES

COMMENTS:  
PARENT ROCK: SCHIST; NO WEEPING; ESHWT = 47"; BEDROCK = 100"

### PERCOLATION TEST

PERCOLATION TEST NO.	RATE (MIN./INCH)	DATE
P-1	<2	5/03/2005
P-2	12	5/03/2005



### LOCATION PLAN

ALL DIMENSIONS AND CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. ANY ERRORS OR DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER BEFORE COMMENCING WITH ANY WORK. ALL DOCUMENTS CREATED BY WHEATSTONE ENGINEERING REMAIN THE PROPERTY OF WHEATSTONE ENGINEERING AND ARE INTENDED FOR USE ONLY ON THE STATED PROJECT.

P.O.B. 881 WENDELL MA 01379  
TEL/FAX 978/544-8000  
riet@shoyanet.com

DESIGN	RTL
DRAWN	RTL
SCALE	AS SHOWN
DATE	9/09/05
JOB #	02044

REV.	DATE	DESCRIPTION
#1	9/27/05	ELEVATION, TANK, WELL DISTANCE
#2	10/02/05	CRUSHED STONE, "H" VENT

FOR: SNELL

PROJECT: 136 SHUTESBURY ROAD, AMHERST, MA

## ON-SITE SUBSURFACE SEWAGE DISPOSAL SYSTEM

DWG. NAME: PLANS & SPECIFICATIONS

DWG. NO.: C-1.1