DENR/DEH

ON-SITE WASTEWATER SECTION

RSDJ

Sheet 1 of 3
PROPERTY ID #: 4853416973
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Brenda Mangan
ADDRESS: 2143 Pinebrook Circle Charlotte NC
PROPOSED FACILITY: 3BR Residence PROPOSED DESIGN FLOW (.1949): 360gpd
LOCATION OF SITE: Mills Rd. Union Grove
WATER SUPPLY: • Private • Public • (Well) • Spring • Other N/A
EVALUATION METHOD: • (Auger Boring) • Pit • Cut

APPLICATION DATE 5-14-12
DATE EVALUATED: 5-23-12
PROPERTY SIZE: 1.68 acres
PROPERTY RECORDED: YES
TYPE OF WASTEWATER: • (Sewage) • Industrial Process • Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	10% NS	6-24	RCL CL WABK	Fr SS Mod SE	+42"	42"	24"	42"	Need Pits
		24-42	GRAP						
		42	RCS						
2	16.5% NS	0-20	C ABK	Fr SS/SP Mod SE	+36"	36"	20"	36"	Need Pits
		20-36	CL SAP WABK	Fr SS Mod					
		36	RCS						
3	17.5% SS/NS	0-7	SCL SBK	Fr Coarse Matrix Mod SE	+19"	19"	+19"	19"	Need Pits
		7-19	Cl + Rock P	Fr					
		19	RCS						
4	20% SS/NS	0-6	SL SBK	Fr Fine SE	+24"	24"	+24"	24"	Need Pits
		6-24	SCL + Rock P	Fr MPL					
		24	RCS						

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	II	II
Site LTAR	0.25	0.25

OTHER FACTORS (.1946): N/A
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Justin Rhodes
OTHER(S) PRESENT: N/A

COMMENTS: Need Backhoe pits to evaluate saprolite

LEGEND

use the following standard abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope)	I	S (Sand)	1.2 - 0.8	0.6 - 0.4	NEXP (Non-expansive)	G (Single Grain)
CV (Convex Slope)		LS (Loamy Sand)			SEXP (Slightly Expansive)	M (Massive)
D (Drainage Way)					EXP (Expansive)	CR (Crumb)
DS (Debris Slump)	II	SL (Sandy Loam)	0.8 - 0.6	0.4 - 0.3		GR (Granular)
FP (Flood Plain)		L (Loam)				SBK (Subangular Blocky)
FS (Foot Slope)						ABK (Angular Blocky)
H (Head Slope)	III	Si (Silt)	0.6 - 0.3	0.3 - 0.15		PL (Platy)
L (Linear Slope)		SiCL (Silty Clay Loam)				PR (Prismatic)
N (Nose Slope)		CL (Clay Loam)				
R (Ridge)		SCL (Sandy Clay Loam)			**MOIST**	**WET**
S (Shoulder Slope)		SiL (Silt Loam)				
T (Terrace)					VFR (Very Friable)	NS (Non-sticky)
	IV	SC (Sandy Clay)	0.4 - 0.1	0.2 - 0.05	FR (Friable)	SS (Slightly Sticky)
		SiC (Silty Clay)			FI (Firm)	S (Sticky)
		C (Clay)			VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
		O (Organic)	None	None	EFI (Extremely Firm)	NP (Non-plastic)
						SP (Slightly Plastic)
						P (Plastic)
						VP (Very Plastic)

*Adjust LTAR due to depth, consistence, structure, soil wetness, landscape, position, wastewater flow and quality.

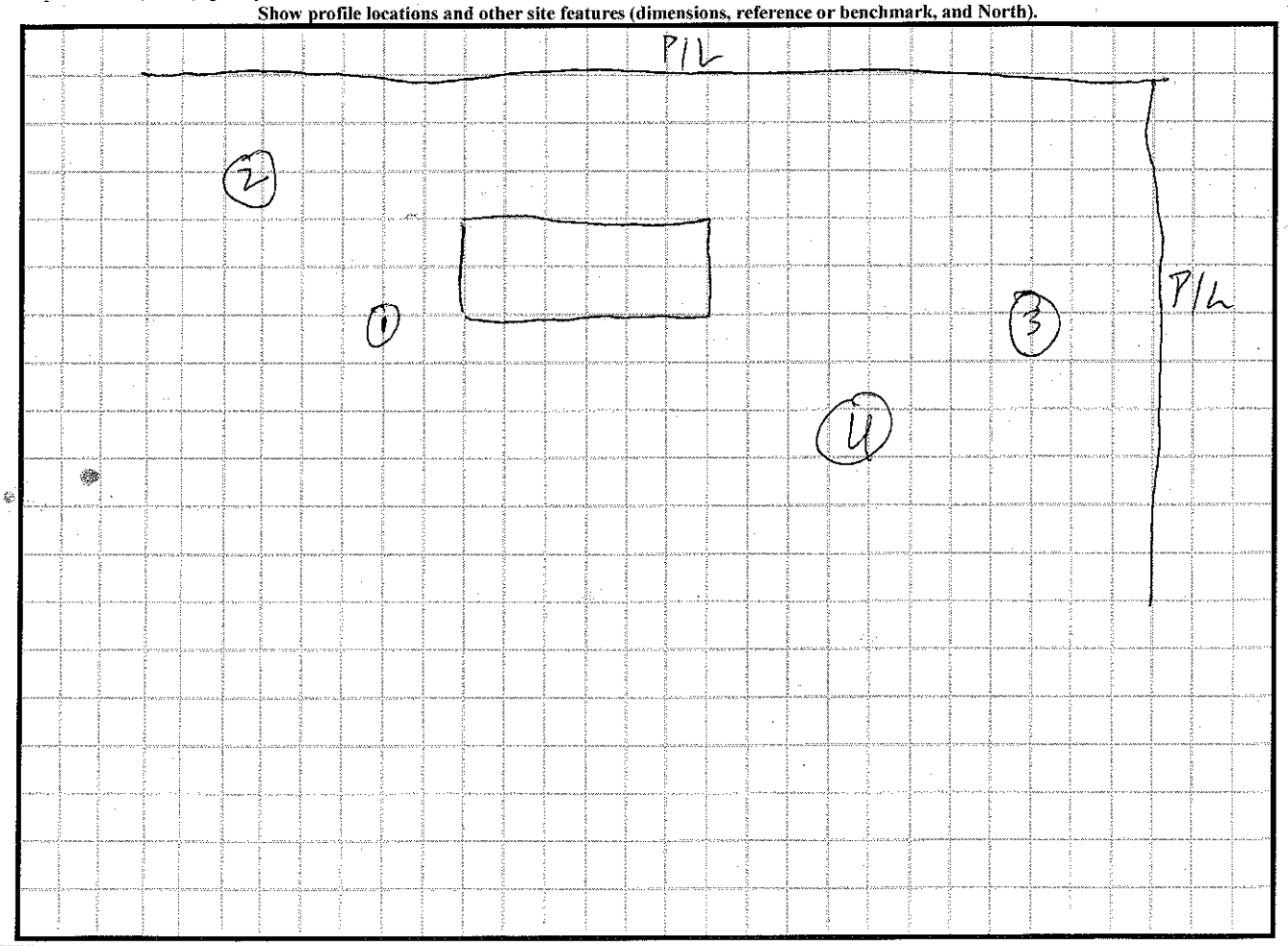
NOTES

HORIZON DEPTH	In inches below natural soil surface
DEPTH OF FILL	In inches from land surface
RESTRICTIVE HORIZON	Thickness and depth from land surface
SAPROLITE	S(suitable) or U(unsuitable)
SOIL WETNESS	Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation
CLASSIFICATION	S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

Evaluation of saprolite shall be by pits.

Long-term Acceptance Rate (LTAR): gal/day/ft^2

Show profile locations and other site features (dimensions, reference or benchmark, and North).



DENR (######)
Review (#####)

DENR/DEH

ON-SITE WASTEWATER SECTION

Sheet 2 of 3
PROPERTY ID #: 485341697 3
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Brenda Mangan
APPLICATION DATE: 5-14-12
ADDRESS: 2143 Pinebrook Circle Charlotte NC
DATE EVALUATED: 5-25-12
PROPOSED FACILITY: 3 Bdr Residence
PROPOSED DESIGN FLOW (.1949): 360gpd
PROPERTY SIZE: 1.68 acres
LOCATION OF SITE: Mullis Rd. Union Grove
PROPERTY RECORDED: Yes
WATER SUPPLY: • Private • Public • (Well) • Spring • Other N/A
EVALUATION METHOD: • Auger Boring • (Pit) • Cut
TYPE OF WASTEWATER: • (Sewage) • Industrial Process • Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	PTS 16.5% NS	0-20	C ABK micA	Fi Mod SE	+48"	+48"	+48"	+48"	PS 0.25
		20-49	BC C WABK	Fi Mod SE					
2	10% NS	0-11	SC GR	Fi SS Mod SE	+48"	+48"	+48"	+48"	PS 0.25
		11-27	C ABK mica	Fi SS Mod SE					
		27-48	BC CL WABK	Fi Mod SE					
3	17% NS	0-13	SCL Gr	Fi Fine SE	+44"	13"	+13"	13"	US
		13-44	>50% Roc	X					
4	19% NS	0-10	SCL Gr	Fi Mod SE	+30"	30"	+30"	30"	PS 0.25
		10-30	C ABK	Fi SS Mod SE					
		30"	RCS						

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	III	LPP IV
Site LTAR	0.25	0.25

OTHER FACTORS (.1946): N/A
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Justin Anderson
OTHER(S) PRESENT: Steve Hedrick & Tim Abee

COMMENTS: N/A

LEGEND

use the following standard abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope) CV (Convex Slope) D (Drainage Way) DS (Debris Slump) FP (Flood Plain) FS (Foot Slope) H (Head Slope) L (Linear Slope) N (Nose Slope) R (Ridge) S (Shoulder Slope) T (Terrace)	I	S (Sand) LS (Loamy Sand)	1.2 - 0.8	0.6 - 0.4	NEXP (Non-expansive) SEXP (Slightly Expansive) EXP (Expansive)	G (Single Grain) M (Massive) CR (Crumb) GR (Granular) SBK (Subangular Blocky) ABK (Angular Blocky) PL (Platy) PR (Prismatic)
	II	SL (Sandy Loam) L (Loam)	0.8 - 0.6	0.4 - 0.3		
	III	Si (Silt) SiCL (Silty Clay Loam) CL (Clay Loam) SCL (Sandy Clay Loam) SiL (Silt Loam)	0.6 - 0.3	0.3 - 0.15		
	IV	SC (Sandy Clay) SiC (Silty Clay) C (Clay)	0.4 - 0.1	0.2 - 0.05	**MOIST** VFR (Very Friable) FR (Friable) FI (Firm) VFI (Very Firm v. Very Sticky) EFI (Extremely Firm)	**WET** NS (Non-sticky) SS (Slightly Sticky) S (Sticky) VS (Very Sticky) NP (Non-plastic) SP (Slightly Plastic) P (Plastic) VP (Very Plastic)
		O (Organic)	None	None		

*Adjust LTAR due to depth, consistence, structure, soil wetness, landscape, position, wastewater flow and quality.

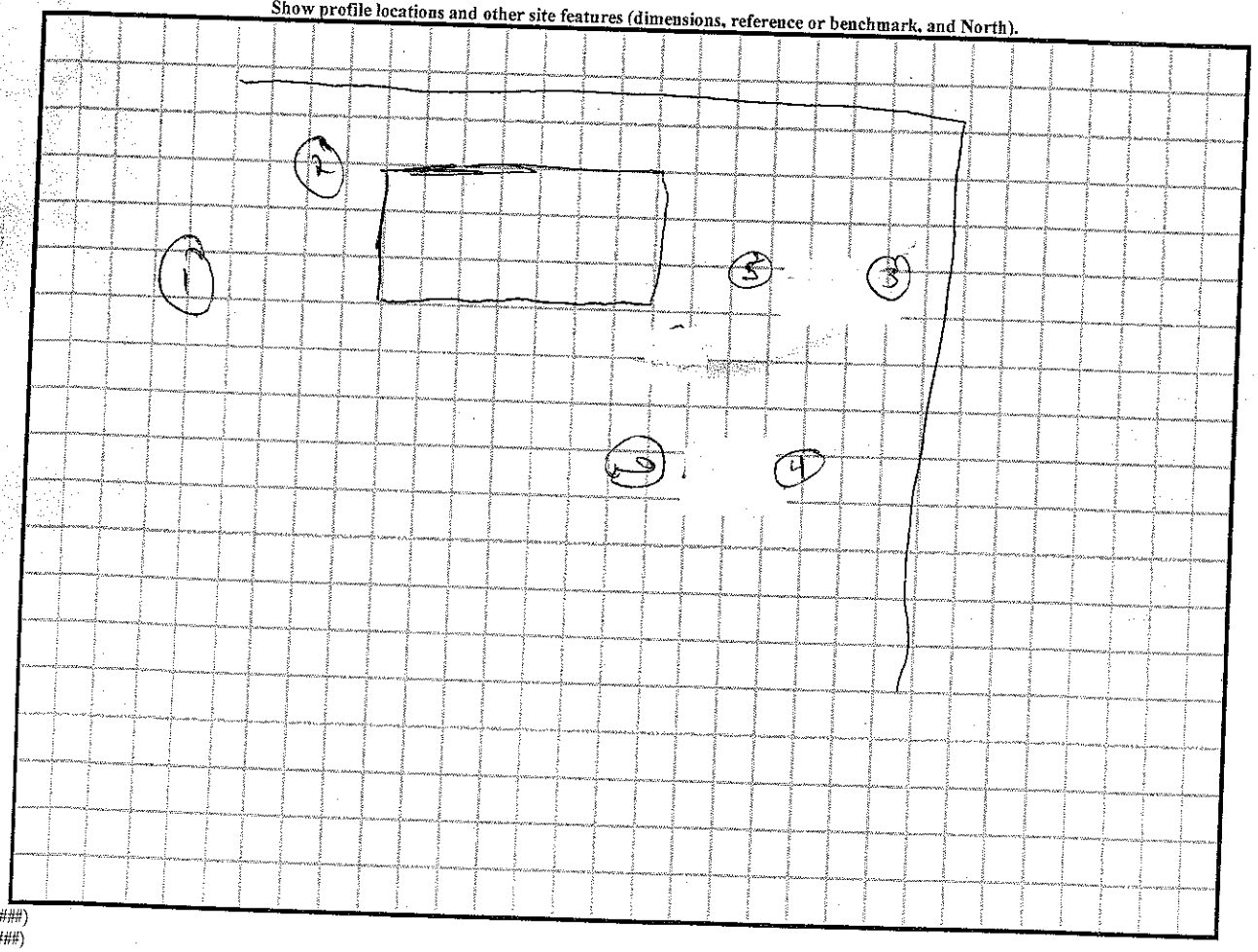
NOTES

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DEPTH OF FILL — In inches from land surface
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SOIL WETNESS — Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation
CLASSIFICATION — S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

Evaluation of saprolite shall be by pits.

Long-term Acceptance Rate (LTAR): gal/day/ft^2

Show profile locations and other site features (dimensions, reference or benchmark, and North).



DENR (#####)
Review (#####)

DENR/DEH

ON-SITE WASTEWATER SECTION

Sheet 3 of 3
PROPERTY ID #: 485341 6973
COUNTY: Iredell Co.

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Brenda Mangan — APPLICATION DATE: 5-14-12
ADDRESS: 2143 Pinebrook Circle Charlotte NC — DATE EVALUATED: 5-25-12
PROPOSED FACILITY: 3 BR Residence — PROPOSED DESIGN FLOW (.1949): 360gpd — PROPERTY SIZE: 1.68 acres
LOCATION OF SITE: Mullis Rd. Union Grove NC — PROPERTY RECORDED: Yes
WATER SUPPLY: • Private • Public • (Well) • Spring • Other N/A
EVALUATION METHOD: • Auger Boring • (Pit) • Cut — TYPE OF WASTEWATER: (Sewage) • Industrial Process • Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
P5	PTS								
5	18% NS	0-9	SC SBK	Fr Mod SE	+40"	26"	+48"	26"	PS 0.25
		9-26	C ABK	Fr Mod SE					
		26-40	Rock 75%						
P6									
6	16% NS	0-19	SC SBK	Fr Mod SE	+48"	+48"	38"	+48"	PS 0.25
		19-38	BC CL WABK	Fr Mod SE					
		38-48	SL SAP Gr	Fr Gm SE					
P7									
7									
P8									
8									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	II 25% Red	LPP IV
Site LTAR	0.25	0.25

OTHER FACTORS (.1946): N/A
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Justin Henderson
OTHER(S) PRESENT: Steve Hedrick & Tim Abee

COMMENTS: N/A