Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director
Division of Water Quality

AQUIFER PROTECTION SECTION
December 20, 2006

Advanced Well Drilling
2221 Pump Road
Catawba, North Carolina 28609
Attention: Michael Shaw

RE: Request for Variance -
NORTH CAROLINA WELL CONSTRUCTION STANDARDS
Rule 15A NCAC 2C .0107(a)(2)(M) – Separation Distance
Between Well and a Building Foundation
Burke Builders LLC
171 Clover Bank Lane
Mooresville, Iredell County, N.C.

Dear Mr. Shaw,

Staff from the Mooresville Regional Office received an application December 19, 2006, You requested approval of a variance from the referenced Rule, which requires a 25-foot horizontal separation distance between a well and a building foundation. The variance request is for the construction of a new water supply well at the residence of Burke Builders 171 Clover Bank Lane Mooresville, Iredell County, N.C. approximately 12 feet from the building foundation.

Since the new well will not meet the regulatory requirements, the following minimum additional construction requirements would act to mitigate any potential problems that could affect public health and/or the well's effective operation:

1. Galvanized steel casing with drive shoe shall be used, or PVC casing may be used if fitted with appropriate galvanized steel shoe.

2. The casing shall extend into consolidated bedrock in accordance with the following table:

DEPTH TO CONSOLIDATED BEDROCK	MINIMUM DEPTH OF CASING
Less than 50 feet	15 feet into bedrock
50 to 100 feet	10 feet into bedrock
More than 100 feet	5 feet into bedrock

3. The entire length of the casing shall be grouted. A drill bit that is at least 1/3 greater than the outside diameter of the casing shall be used to drill the cased portion of the well. Grout should be installed using the pressure method. The installation of grout using a tremmie pipe is acceptable if the annular space to be grouted is free of obstructions, if not, then a well liner with packer must be installed and fully grouted.

4. The well shall be located in the area indicated on your map.

5. The well driller shall be certified by the North Carolina Well Contractor Certification Commission as required by General Statutes 87-98.4, Title 15A NCAC 27.0101 and .0110.

Based on my review of the available information and recommendations by staff, it is my finding that the above additional requirements are sufficient to satisfy the conditions for approval of a variance as defined in 15A NCAC 2C .0118. A copy of this variance should be attached to the required WELL CONSTRUCTION RECORD (Form GW-1).

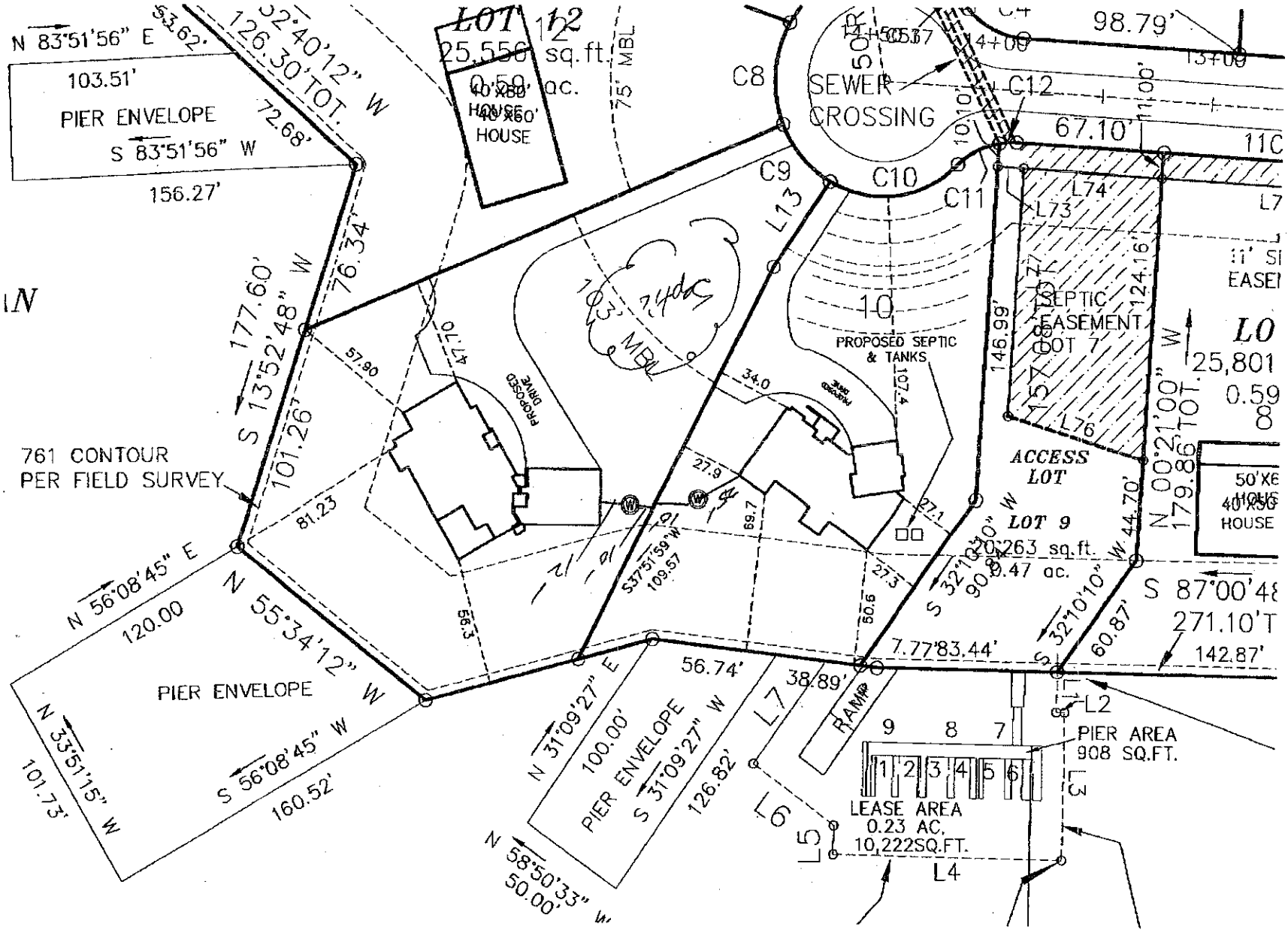
On that basis, the requested variance is hereby granted. The granting of this variance does not affect any of the other requirements of the WELL CONSTRUCTION STANDARDS or of the requirements of any other applicable laws or rules. If you are dissatisfied with this decision, you may commence a contested case by filing a petition under G.S. 150-23 within sixty (60) days after receipt of the decision.

If you have any questions regarding this variance, please contact Kevin Bubak at (704/235-2184)

Sincerely,

Andrew H. Pitner, P.G.
Regional Aquifer Protection Supervisor
Mooresville Regional Office

cc: Burke Builders – PO Box 3481 Mooresville, NC 28117
Joe Alexander- Iredell County Environmental Health Mooresville


LOT 12
25,556 sq.ft.
0.59 ac.
40'x80'
HOUSE
40'x60'
HOUSE
75' MBL
N 83°51'56" E
103.51'
PIER ENVELOPE
S 83°51'56" W
156.27'
53.62'
126.30'TOT.
S 2°40'12" W
72.68'
177.60'
S 13°52'48" W
76.34'
101.26'
761 CONTOUR
PER FIELD SURVEY
N 56°08'45" E
120.00
N 55°34'12" W
PIER ENVELOPE
N 33°51'15" W
101.73'
S 56°08'45" W
160.52'
C8
C9
C10
C11
C12
L13
SEWER
CROSSING
50' R
14+00
13+00
98.79'
67.10'
11C
L74'
L73'
L7
SEPTIC
EASEMENT
LOT 7
124.16'
146.99'
PROPOSED SEPTIC
& TANKS
107.4'
34.0
47.70
57.90
27.9
89.7
27.1
27.3
56.6
56.3
S37°51'59"W
109.57
ACCESS
LOT
LOT 9
20,263 sq.ft.
0.47 ac.
S 32°10'10" W
90.96'
N 00°21'00" W
179.86'TOT.
44.70'
S 87°00'48
271.10'T
142.87'
60.87'
S 32°10'10"
7.77'83.44'
56.74'
38.89'
RAMP
N 31°09'27" E
100.00'
PIER ENVELOPE
S 31°09'27" W
126.82'
L7
L5
L4
L2
L3
9 8 7
1 2 3 4 5 6
PIER AREA
908 SQ.FT.
LEASE AREA
0.23 AC.
10,222SQ.FT.
N 58°50'33" W
50.00'
25,801
0.59
8
50'X6
HOUS
40'X60
HOUSE

SITE WASTEWATER SECTION

PROPERTY ID #: _____
COUNTY: _____

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: _____ APPLICATION DATE _____
ADDRESS: _____
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): _____ DATE EVALUATED: _____
LOCATION OF SITE: lot 11 Estates PROPERTY SIZE: _____
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☐ Other _____ PROPERTY RECORDED: _____
EVALUATION METHOD: ☐ Auger Boring ☐ Pit ☐ Cut
TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed

.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
	0-19	RC SLM	fi SP					P 3
	19-48	RCL MFSM	fri SSSP					
	0-22	RC SLMF	fi SP SBK					P 3
	22-50	RCL MFSM	fri SSP SBK					
	0-4	RSLF GR	fi SSSP					P 3
	4-48	RC SLM	fri SSSP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)		
System Type(s)		
Status		

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _____
EVALUATED BY: _____
OTHER(S) PRESENT: _____

COMMENTS: _____

LEGEND

use the following standard abbreviations

NDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
(Concave Slope)	I	S (Sand)	1.2 - 0.8	0.6 - 0.4	NEXP (Non-expansive)	G (Single Grain)
(Convex Slope)		LS (Loamy Sand)			SEXP (Slightly Expansive)	M (Massive)
Drainage Way)					EXP (Expansive)	CR (Crumb)
(Debris Slump)	II	SL (Sandy Loam)	0.8 - 0.6	0.4 - 0.3		GR (Granular)
(Flood Plain)		L (Loam)				SBK (Subangular Blocky)
(Foot Slope)						ABK (Angular Blocky)
Head Slope)	III	SCL (Sandy Clay Loam)	0.6 - 0.3	0.3 - 0.15		PL (Platy)
Linear Slope)		SiL (Silt Loam)				PR (Prismatic)
Nose Slope)		CL (Clay Loam)				
Ridge)		SiCL (Silty Clay Loam)			**MOIST**	**WET**
Shoulder Slope)		Si (Silt)				
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		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.**

)TES

)RIZON DEPTH	In inches below natural soil surface
EPTH OF FILL	In inches from land surface
STRICTIVE HORIZON	Thickness and depth from land surface
PROLITE	S(suitable) or U(unsuitable)
)IL 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
LASSIFICATION	S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

valuation of saprolite shall be by pits.

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

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

ENR (######)

erview (#####)