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

**GROUNDWATER SECTION**
January 7, 2004

Kelly Munro and Monica Tanrmina
122 Hampshire Drive
Mooresville, North Carolina 28115

RE: Variance Request to Well Construction Rules NCAC 2C.0107.
Kelly Munro and Monica Tanrmina
247 Woodduck Loop
Mooresville, Iredell County, North Carolina

Dear Mrs. Munro and Tanrmina :

On January 5, 2004, the Mooresville Regional Office received your written request for a variance to Rule 15A NCAC 2C.0107(a)(2)(N). This rule requires a 50-foot separation distance between a well and a surface water body such as a lake. The variance request is for the construction of a water supply well for your residence at 247 Woodduck Loop, Mooresville, Iredell County, North Carolina.

In your request, you indicate that the only suitable location for the well is 30 feet from the lake. Based upon the information that you have submitted, a variance to the above cited rule is granted. The variance will be effective from the date issued until January 7, 2005. Since the well will not meet the regulatory requirements, the following minimum additional construction requirements will be necessary to mitigate any potential problems that could affect public health and/or the well's effective operation:

1. Galvanized steel casing shall be used.

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.

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

GROUNDWATER SECTION
January 22, 2004

Kelly Munro and Monica Tanrmina
122 Hampshire Drive
Mooresville, North Carolina 28115

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
247 Woodduck Loop, Mooresville
Iredell County, N.C.

Dear Mrs. Munro and Tanrmina,

I am writing in response to your letter that was received on January 20, 2004. 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 water supply well at your residence.

Since the 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. The well shall be cased to a minimum depth of 40 feet or at least 5 feet into competent bedrock.

2. The entire length of the casing shall be grouted.

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

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

*Please note that a drill bit with a diameter that is at least 1/3 greater than the outside diameter of the casing must be used to drill the cased portion of the well. Grout should be installed under pressure. Installation of grout using a tremmie pipe is acceptable if the annular space to be grouted is free of obstructions.*

Based on my review of the available information and recommendations by our 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).