



COMMONWEALTH of VIRGINIA

DEPARTMENT OF HEALTH
OFFICE OF DRINKING WATER
Lexington Field Office

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September 27, 2010

SUBJECT: Louisa County
Water – North Anna Power Plant

Mr. Robert P. Hare
Dominion Resources
5000 Dominion Blvd.
Glen Allen, VA 23060

Dear Mr. Hare:

This letter is in reference to your September 16, 2010 request for a well siting and my September 22, 2010 evaluation of a proposed well site for approval as a public water supply source to serve the North Anna Power Plant.

In accordance with Section 12 VAC 5-590-280 of the Commonwealth of Virginia *Waterworks Regulations*, this letter is to advise that the proposed well site, approximately located on the attached Google Earth map is tentatively approved by this Department for construction. The well shall meet Class II-B specifications as set forth in Section 12 VAC 5-590-840 A4b of the Commonwealth of Virginia *Waterworks Regulations*. Please visit the Regulations web site at:

<http://leg1.state.va.us/000/reg/toc12005.htm#C0590>. Well development details will be located in section 840.

This approval is valid for a period of 12 months. If construction of the well has not commenced by September 27, 2011 a re-evaluation of the well site will be required. The following items/documents must be submitted to this office for final approval for wells intended for development:

1. The well must be located at least 50 feet inside the boundaries of a surveyed, platted, and dedicated well lot. The well lot must be graded to divert surface runoff from the well and to prevent ponding on the well lot, and an all-weather access road, public or private, must be provided to the well lot. The well lot plat must be recorded in Louisa County with the well lot dedication document. An example well lot dedication document is enclosed for your information.
2. The well must be constructed to meet Class II-B requirements. The well must be cased with approved casing to a depth of not less than 50 feet and the bottom of the well casing must terminate in solid bedrock or other impervious formation. In addition the well must be grouted with neat cement grout to a depth of not less than 50 feet. A signed copy of the well driller's water well completion report must be provided to this office indicating these minimum construction requirements have been met.
3. During construction of the well, it is requested that the Lexington Environmental Engineering Field Office be notified of the date and approximate time that grouting of the well will be accomplished. Please transmit this notification as soon as the information is available to you so that an engineer from the Division can be present, if possible.
4. Upon completion of the well, a yield and drawdown test of a minimum duration of 48 hours is required to determine the reliable well production. A copy of the completed test results must be submitted.

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5. Near the end of the yield test, water samples must be collected for metals, inorganic, organic, radiological, cyanide and nitrate analyses. You may use the state laboratory or any certified private laboratory for these analyses. You should be aware that few, if any, single private laboratories will be certified to conduct all of the required analyses so you may have to use several different labs to cover all of the required tests. We have enclosed a summary of all of the required chemical analyses and the associated state laboratory fees for your information. You are requested to notify this office for assistance in the proper collection of these samples and to insure that all required parameters are included in the analyses.
6. A series of twenty bacteriological samples must be collected from the discharge of the well and submitted to the state laboratory or any certified private laboratory to determine the bacteriological quality of the raw groundwater prior to the issuance of an operation permit. One bacteriological sample must be collected each hour of the pumping test. These samples must be analyzed by the total coliform **Most Probable Number (MPN)** test method. Additional bacteriological monitoring or other quality evaluations may be required depending upon the specific geology of the site and other factors. The need for additional water quality evaluations will be determined on a case by case basis.
7. Upon completion of the well and submittal of the samples, plans and specifications for construction of the well house and development of the well head must be submitted to the Office for review in accordance with Section 12 VAC 5-590-280 of the *Regulations*. These plans and specifications must be prepared by a professional engineer licensed in Virginia.

A listing of all undeveloped wells, including copies of the well drillers' logs, must be submitted to this office. All undeveloped wells must be accounted for and a determination made regarding securing for future, non-public, use or proper abandonment.

Upon receipt of all required information and documents, and after approval of the plans and specifications has been given, a construction permit will be issued by the State Health Commissioner in accordance with Section 12 VAC 5-590-240 of the *Regulations*. Construction of the facilities shall not commence until receipt of the construction permit.

If I can be of further assistance, please do not hesitate to call me at 540/463-7136.

Very truly yours,



Carl Christiansen
Environmental Health Specialist Supervisor

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Enclosure

cc Mr. Scott Slagley

Mr. Todd A. Beach, DEQ OSGWSP/Ground Water Characterization
Louisa County Health Department – Attn: Dr. Lilian Peake, MD, MPH
VDH – ODW – Richmond Central



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