



# COMMONWEALTH of VIRGINIA

Karen Remley, MD, MBA, FAAP  
State Health Commissioner

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Director, Office of Drinking Water

DEPARTMENT OF HEALTH

OFFICE OF DRINKING WATER  
Culpeper Field Office

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MAR 10 2011

SUBJECT: Loudoun County  
Water - Raspberry Falls  
PWSID 6107601

Mr. Bruce Ringrose, P.E.  
Loudoun Water  
44961 Loudoun Water Way  
PO Box 4000  
Ashburn, VA 20146

Dear Mr. Ringrose:

We have reviewed the *Final Well Development, Long-Term Yield, and Detailed Water Quality Testing of Proposed (Replacement) Community Water Supply Well RSP-F*, prepared by Emery & Garrett Groundwater, Inc., (EGGI) and dated February 2011. This report documents the additional well development, long-term yield testing and water quality analyses for community supply well RSP-F for the Raspberry Falls Subdivision in Loudoun County.

This report is satisfactory and is approved for development of well RSP-F as a community supply well with the following requirements:

1. Based on a demonstrated yield of 100 gpm and recommended maximum pumping rate of 100 gpm, the approved well design capacity will be limited to 80,000 gpd based on the limited well yield.
2. Based on the developmental samples collected on November 12, 2010 and analyzed by the State Laboratory, the physical, chemical and radiological parameters are satisfactory and no treatment is required for these parameters.
3. Based on the bacteriological samples collected during the long-term pumping test (October 18- November 12, 2010), summarized in Table VI of the report, the geometric mean of the MPN samples is less than 3 cfu/100 mL and disinfection treatment is not required, per the Virginia *Waterworks Regulations*. Based on the recent history at Raspberry Falls, Loudoun Water is required to provide 4-log inactivation of virus disinfection treatment.
4. Consistent with the recommendation by EGGI, VDH ODW will require an ongoing raw water quality monitoring program to include biweekly MPN samples and MPA samples at least twice per year. A raw water monitoring plan for Well RSP-F and approved by this office will be required prior to issuance of an operation permit for the well.

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5. Loudoun Water has voluntarily sampled the entry point weekly for total coliform for some time, which serves to confirm that the disinfection treatment is operating properly. We will expect Loudoun Water to continue weekly entry point coliform sampling and also to initiate weekly distribution coliform sampling to confirm that the finished water quality is satisfactory.
6. The previously approved corrosion control treatment consisting of orthophosphate addition should be applied to well RSP-F as was the case for Well PW-1, which it is intended to replace.
7. Loudoun Water will take all reasonable measures to implement the most recent *Raspberry Falls Wellhead Protection Plan*. In addition to implementing the Plan, VDH ODW is requesting Loudoun Water, Loudoun County, Loudoun County Health Department and the landowner(s) in the Raspberry Falls Subdivision and to the extent possible in surrounding areas, address abandonment of unused wells in the area. It is important that any unused wells be properly abandoned. State regulation *12VAC5-630-450* and Loudoun County regulation *Title 4, Chapter 1040.10 (f)* require that unused wells be properly abandoned.

You have submitted plans and specifications and other supporting documents in support of a construction permit application for Well RSP-F. After the plans and specifications have been approved, a construction permit will be issued by the State Health Commissioner in accordance with *12 VAC 5-590-230* of the *Virginia Waterworks Regulations*. The construction of modifications to the waterworks shall not be started until the construction permit has been issued.

Please contact Robert D. Edelman, P.E., District Engineer if you have questions or need assistance regarding this matter.

Sincerely,



Hugh J. Eggborn, P.E.  
Engineering Field Director

RDE/tjb

CC: Loudoun County Health Department (Dr. David Goodfriend)  
Peter Foster (Emery & Garrett Groundwater, Inc.)  
ODW - Central

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