

**Vermont Department of Environmental Conservation
Drinking Water and Groundwater Protection Division**

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Agency of Natural Resources

January 16, 2018

Randolph Fire District 1
Attn. Carolyn Lumbra, Prudential Committee Chair
PO Box 314
Randolph Center, VT 05061

Ted Manazir
Facilities Director, VTC
PO Box 500
Randolph Center, VT 05061

Re: Sanitary Survey, Randolph Center Water System, a Public Community Water System in Randolph, VT
WSID # 5177

Dear Ms. Lumbra and Mr. Manazir,

This letter has been prepared to summarize the Vermont Department of Environmental Conservation, Drinking Water and Groundwater Protection Division's (the Division's) findings from the recent sanitary survey of the Randolph Center Water System (the Water System). This sanitary survey included a review of the Division's records for the Water System and a site inspection performed on December 20, 2017. Tim Raymond and I represented the Division during this sanitary survey and the Water System was represented by: Ted Manazir and Patricia Beavers, the Water System's certified operators; Bill Deflorio and John Lens, prudential committee members of Randolph Fire District 1; and Scott Beavers of P² Environmental (the contract operations firm retained by Randolph Fire District 1).

The Division identified the following significant deficiency during this survey, which must be corrected by the Water System:

- 1. A Permit to Operate Application is Required:** Per Subchapter 21-5 Section 5.1 of the Vermont Water Supply Rule (the Rule), "*No person shall conduct, control, manage, operate or maintain a **Public** water system without first receiving from the Secretary an operating permit or a temporary operating permit.*" Also, Per Section 5.3.1 of the Rule, "*Application for an operating permit shall be submitted to the Secretary, signed by the owner and shall contain such information as may be requested by the Secretary to enable him or her to determine whether the facility and its operation will comply with this rule.*" The Water System's most-recent permit to operate expired on October 1, 2010. As described in a May 10, 2017 letter to the Water System from the Division, the Division understands that the Water System is jointly owned by Vermont Technical College (VTC) and by Randolph Fire District 1 (RFD1), and requires that VTC and RFD1 submit a jointly-signed application for a permit to operate to the Division. The Division has not yet received this jointly-signed application. **On or before February 16, 2018**, the Water System is to submit Permit to Operate Application that has been jointly signed by VTC and RFD1. **Please be aware that pursuant to 10 V.S.A., Section 8008, the Agency may issue an Administrative Order for violations. An Administrative Order may assess penalties; require correction and/or remediation of the alleged violations; and may require other measures as deemed appropriate by the Division.**

The following minor deficiencies were identified during the survey and must be corrected:

- 2. Inadequate Disinfectant Monitoring, TP002:** Under Chapter 21, Section 9.1.2 of the Rule, "*all Public Water Systems providing treatment and all Public Community Water Systems shall submit a signed report to the Secretary at least once per month (or as otherwise directed by the Secretary) no*

later than ten (10) days following the end of the month with the following information, as applicable...” “...(d) results of chlorine residual analyses...;” and “...(h) any other information specified by the Secretary as a condition of a permit or temporary permit to operate.” Under 40 CFR 141.403(a) (6) (iv), “In order to ensure reliable treatment at or before the first customer, necessary equipment and sampling locations must be available and utilized at or prior to the first customer.” During the site inspection, the Water System reported that it is currently monitoring the performance of treatment plant TP002 (Langevin/Pennybrook Treatment Facility) by measuring and recording the disinfectant residual from a location within the distribution system, which is not the first connection served by this treatment facility. As discussed during the sanitary survey, the first connection served by TP002 is believed to be Nutting Hall. **On or before February 28, 2018**, the Water System is requested to commence monitoring of disinfectant residual associated with TP002 operations from the first connection served by this treatment facility (Nutting Hall). Daily disinfectant residual measurements must be reported on the monthly operating report that is routinely submitted to the Division.

3. **Inadequate Disinfectant Monitoring, TP001:** Under Chapter 21, Section 9.1.2 of the Rule, “*all Public Water Systems providing treatment and all Public Community Water Systems shall submit a signed report to the Secretary at least once per month (or as otherwise directed by the Secretary) no later than ten (10) days following the end of the month with the following information, as applicable...*” “...(d) results of chlorine residual analyses...;” and “...(h) any other information specified by the Secretary as a condition of a permit or temporary permit to operate.” Under 40 CFR 141.403(a) (6) (iv), “In order to ensure reliable treatment at or before the first customer, necessary equipment and sampling locations must be available and utilized at or prior to the first customer.” During the site inspection, the Water System reported that it is currently monitoring the performance of treatment plant TP001 (Spring Treatment Facility) by measuring and recording the disinfectant residual from the Parr Doering Residence. Review of the Water System’s Distribution System Map that was provided with the system’s approved Revised Total Coliform Sampling Plan indicates that the Fire Station is the first connection served by this treatment facility. **On or before February 28, 2018**, the Water System is requested to commence monitoring of disinfectant residual associated with TP001 operations from the first connection served by this treatment facility. Daily disinfectant residual measurements must be reported on the monthly operating report that is routinely submitted to the Division.

The Division offers the following comments regarding the Water System:

- A. **Updated Sampling Plans Are Required:** As part of this sanitary survey, the Division reviewed the Water System’s approved Lead and Copper, Stage-2 Disinfection Byproducts, and Coliform Sampling Plans. Based on this review, the Division is concerned that the entire distribution system may not be adequately represented by the approved Stage-2 Disinfection Byproducts Sampling Plan and the Revised Total Coliform Sampling Plan. **On or before February 28, 2018**, the Water System is requested to provide an updated distribution system map that clearly identifies all of the Water System’s existing routine sample collection locations, distribution mains, and service connections, including the connections associated with the Gifford Medical Center Senior Housing Facility. **On or before February 28, 2018**, The Division requests that the Water System submit an updated Revised Total Coliform Sampling Plan to the Division for review and approval that includes at least one routine coliform sampling location at a service connection associated with the Gifford Facility served by the Water System.

- B. Sample Collection Hydrants:** During the site inspection, the Division and Water System personnel discussed potential operational advantages of installing dedicated sample hydrant assemblies on distribution pipes to serve as routine sample collection locations. The Division encourages the Water System to consider installing dedicated sample collection hydrant assemblies at locations that could be utilized to collect routine coliform and disinfection byproduct samples. Installation of these hydrants could provide convenience for both the Water System's operator and users of the Water System. Please note that while a Construction Permit is not typically required for installation of dedicated sample hydrant assemblies, the Water System is encouraged to obtain the Division's approval of proposed new sample hydrant locations prior to their installation to ensure the proposed locations will meet applicable regulatory requirements associated with routine monitoring locations.
- C. Storage Tank inspection:** During the sanitary survey, the Water System reported that the storage tank was reconditioned in 2011. This reconditioning event reportedly included recoating the interior of the storage tank. Per Section 7.1.1 of the Rule, newly repainted tanks must be inspected within ten years of service and then on a 5-year schedule. Accordingly, the Division expects the storage tank will be inspected on or before December 31, 2021.
- D. Emergency Source:** During the site inspection, the Division and the Water System visited and discussed the Library Well, which is an unpermitted source of water that could potentially be utilized in an emergency scenario. This Library Well is connected to the Water System through a valved pipe connection in the TP001 vault, this valved connection does include an air gap that appears to be properly sized. However, the Division encourages the Water System to physically disconnect this well by removing the piping and valves that connect the Library Well and the Water System. During the site inspection, the Water System reported that the Library Well is "known to be contaminated with sodium chloride", and is believed to be capable of producing approximately 90 gallons per minute. Given this information, the Division believes that the Water System would be better served by eliminating the existing connection with the Library Well, and installing a dedicated hydrant associated with the Library Well that could be used, if necessary, in an emergency.
- E. System Instrumentation and Monitoring:** During the survey, the Division observed that the Water System is not equipped with a supervisory control and data acquisition (SCADA) system. The spring source pump station's (PF001) operation is controlled via a timer in the pump house; these pumps operate independently of the water level in the system's storage tank. The Water System would benefit from installing a SCADA telemetry system that enabled the operators to view routine operating data from and control operations of the entire water system. SCADA Systems are generally known for reducing the labor effort required for routine monitoring activities, and could also increase the operator's knowledge of the system's characteristic operating conditions. The Division strongly encourages the Water System consider installing a SCADA system for the entire Water System.

The Water System is requested to provide a written response to the above items **on or before February 16, 2018**. This response should either indicate that the corrective actions and schedules contained in this letter are acceptable, or should propose alternative corrective actions and/or dates for the Division's review and approval. In the absence of this requested written response, the Division will incorporate the schedule contained in this letter into a compliance schedule in the forthcoming permit to operate for the Water System.

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I appreciate meeting with everyone to conduct this survey, of the Randolph Center Water System, and look forward to continuing to work with Water System. Please do not hesitate to contact me if you have any questions, comments, or concerns regarding this letter. I may be reached at (802) 461-5661 or patrick.smart@vermont.gov.

Sincerely,

A handwritten signature in cursive script that reads "Pat Smart".

Patrick Smart
Operations Section Supervisor
Drinking Water and Groundwater Protection Division
C: Patricia Beavers, Operator, WSID 5177
Bill Deflorio, Prudential Committee Member, Randolph Fire District 1
Tim Raymond, Operations and Engineering Section Chief, DWGWP
Jeff Girard, Compliance and Certification Manager, DWGWPD
WSID File 5177