



## COMMONWEALTH of VIRGINIA

Department of Health  
OFFICE OF DRINKING WATER  
Culpeper Field Office

400 S. Main Street, 2<sup>nd</sup> Floor  
Culpeper, VA 22701  
Phone: 540-829-7340

Karen Shelton, MD, FACOG  
State Health Commissioner

### **NOTICE OF ALLEGED VIOLATION**

#### **Via Electronic Mail**

[tclemons@rapidan.org](mailto:tclemons@rapidan.org)

Mr. Tim Clemons  
General Manager  
Rapidan Service Authority

Re: Wilderness WTP Waterworks (PWSID VA6137999) - Orange County

Dear Mr. Clemons:

Based on observations and facts discovered from the Virginia Department of Health (VDH), Office of Drinking Water's (ODW) investigation into the odor event at the Wilderness WTP waterworks that led to Rapidan Service Authority (RSA) issuing a Do Not Use Water Advisory followed by a Do Not Drink Water Advisory, VDH has reason to believe that RSA may have violated the Virginia Public Water Supplies Law, Va. Code § 32.1-167 *et seq.*, and the Waterworks Regulations, 12VAC5-590-10 *et seq.* Attached to this notice is ODW's investigative summary, which is provided for RSA's reference.

Please refer herein and to the attached investigative summary for further observations and facts about the specific conditions and events for corresponding compliance requirements.

The purpose of this notice is to share VDH's concerns about the incident, to outline VDH's expectations with respect to next steps and action items, and to get RSA's commitment to work together to improve public trust of the drinking water supplied to consumers by RSA.

#### *Observations and Legal Requirements:*

RSA is alleged to be in violation of 12VAC5-590-360.A (Responsibilities of the Owner) of the Waterworks Regulations as follows:

1. RSA owns, and holds a permit to operate, the Wilderness WTP waterworks in Orange County, Virginia. The Wilderness WTP waterworks draws water from the Rapidan River. The Wilderness WTP waterworks provides drinking water to a population of about 13,000 people and has over 5,400 service connections. The Wilderness WTP waterworks operates 14 to 18 hours per day, treating and delivering about 1.2 million gallons per day (MGD) to subdivisions, restaurants, businesses, medical facilities, and other industries. The Wilderness WTP waterworks has several chemical feeds for treatment, including poly-aluminum chloride and sodium permanganate (pre-filter), caustic soda, chlorine, and fluoride (post-filtration).

2. On August 19, 2024, RSA had temporary wiring installed to the raw water pumps serving the Wilderness WTP waterworks. RSA later determined that this wiring was undersized, which starved the pumps of current and caused the pump failures, discussed below.
3. On August 20, 2024, a raw water pump at the intake from the Rapidan River suffered a catastrophic electrical failure that led to the release of approximately two to three gallons of food grade mineral oil from the pump.
4. On August 21, 2024, RSA began receiving complaints from customers about an odor in the water. RSA issued a Do Not Use Water Advisory after receiving complaints of an odor associated with the drinking water. Customers were asked to only use the water for toilet flushing. Customers described the objectionable odor in various ways, including “WD-40,” “diesel,” “gasoline,” or a “mechanics shop.” RSA confirmed the objectionable odor was also evident at the Wilderness WTP waterworks. VDH and the Department of Environmental Quality (DEQ) began assisting RSA in its emergency response to the odor complaints and the shutdown of the Wilderness WTP waterworks’ operations.
5. While RSA was aware that the pump at the intake had failed, and subsequently two other nearby pumps failed, RSA personnel first became aware of the catastrophic nature of the pump failure on or about August 27, 2024, when RSA was notified by Atlantic Pump, which serviced the failed pump. From August 21 through August 23, 2024, the Department of Environmental Quality (DEQ) asked RSA and its contractor about equipment function at the Wilderness WTP waterworks, and neither the contractor nor RSA reported any concern with plant equipment. Despite the ongoing, multi-agency investigation into the reason for the odor in the water, RSA did not inform the state agency investigative team about the catastrophic nature of the pump failure until September 4, 2024.
6. On August 24, 2024, following extensive water quality sampling, RSA, with VDH support, changed the Do Not Use Water Advisory to a Do Not Drink Advisory, meaning that water could be used for all purposes other than consumption.
7. On August 27, 2024, RSA lifted the Do Not Drink Advisory with VDH support, which allowed customers to use the drinking water for all purposes.
8. On September 13, 2024, VDH determined that the effects of a catastrophic failure of a raw water pump at the intake from the Rapidan River caused the objectionable odor. The catastrophic pump failure occurred on August 20, 2024, the day before customers noticed the objectionable odor. About two to three gallons of food grade mineral oil was released due to the catastrophic pump failure. The mineral oil was likely thermally altered, burned, or scorched from the catastrophic pump failure. A taste and odor (T&O) expert in Texas recreated the “WD-40” odor by heating the mineral oil. The T&O expert followed the new *Standard Method 2150D* Attribute Rating Test to determine that the food grade mineral oil in the pump matched the odor experienced by customers. Additionally, the internal stator of the pump showed that internal components of the pump were scorched, burned, or heated because of the catastrophic pump failure.
9. The National Primary Drinking Water Regulations (40 CFR Part 141), the Public Water Supplies Law (Va. Code § 32.1-167), and the Waterworks Regulations (12VAC5-590) establish standards

for drinking water quality, drinking water infrastructure, and oversight of the drinking water program.

10. The Waterworks Regulations, at [12VAC5-590-360.A](#), state, “The [waterworks] owner shall provide and maintain conditions throughout the entirety of the waterworks in a manner that will assure a high degree of capability and reliability to comply with Part II ([12VAC5-590-340 et seq.](#)) of [the Waterworks Regulations]. This requirement shall pertain to the source water, transmission, treatment, storage, and distribution system facilities and the operation thereof. The owner shall identify and evaluate factors with the potential for impairing the quality of the water delivered to the consumers. Preventative control measures identified in Part II of [the Waterworks Regulations] shall be promptly implemented to protect public health.”
11. RSA failed to identify and evaluate factors with the potential for impairing the quality of the water delivered to customers by not sufficiently overseeing the work of its contractors when the electrical contractor installed the undersized, temporary wiring and when the general contractor had cause to remove the failed pumps. Additionally, following RSA’s receipt of customer reports of the odor on August 21, 2024, RSA failed to further investigate the nature and extent of the failure of the pump that occurred on August 20, 2024. An odor of unknown origin has the potential to impair the quality of water delivered to customers. Furthermore, RSA’s monitoring systems and early warning mechanisms were either insufficient or not utilized effectively such that RSA did not identify the odor at the Wilderness WTP waterworks until RSA began receiving complaints from customers.

*Requested Corrective Actions:*

VDH wishes to address all aspects of the observations made through its exhaustive investigation with DEQ, including actions needed to ensure compliance with state law and regulations. VDH is very concerned about the events that occurred. If RSA cannot provide reliable drinking water free of objectionable odor and health hazards, then increased risk to public health could result. VDH is also concerned about receiving timely, accurate, and informative notice about significant equipment failures. VDH emphasizes that RSA must also provide proper and adequate notification to consumers whenever there is or may be an imminent threat to public health caused by the actual or potential for contamination. To reduce future risks to the reliability of the waterworks, VDH asks that RSA take these specific actions:

1. Within 60 days of RSA’s receipt of this notice, submit to ODW’s Culpeper Field Office, by electronic mail, a detailed and comprehensive plan to address the concerns outlined herein and detailed in the enclosed Investigative Summary Report, and including the following elements:
  - a. A listing of causal and contributing factors that resulted in the objectionable odor event from RSA’s post analysis of the event, including how RSA will effectively respond to those observations and the lessons learned to prevent a similar event from occurring.
  - b. Operational changes at RSA to actively and routinely monitor raw water quality and odor, which should include updating daily bench sheets completed by RSA’s licensed operators.
  - c. Changes in RSA’s policy and procedures to ensure infrastructure improvements at the

Wilderness WTP waterworks are closely monitored and overseen with a proactive construction inspection program before equipment is placed into operation.

- d. An appropriate and ongoing communication strategy with consumers to address public concerns about water quality.
  - e. Ensuring a responsive capital improvement plan to reduce disinfection by-products and improve RSA's ability to respond to taste and odor concerns.
  - f. Ensuring an effective emergency response plan and asset management plan.
  - g. Other items that RSA would feel important to share based on the Investigative Summary Report dated September 25, 2024, and this notice.
2. Schedule at least monthly meetings with ODW's Culpeper Field Office to review progress on RSA's plan, including its asset management, emergency response, and capital improvement plans.

VDH recognizes that many of the above recommended actions will take longer than 60 days to complete. VDH encourages RSA to consider a formal plan of action and understanding by entering into a Consent Order with VDH as a next step. Appropriate, timely action undertaken in response to this notice and investigative summary would ensure a cooperative understanding and positive outcome.

Pursuant to Code of Virginia § 2.2-4019 and [12VAC5-590-115](#) of the Waterworks Regulations, RSA may request an informal fact-finding proceeding (IFFP) if it disagrees with the allegations in this notice or wishes to obtain a determination as to whether a violation has occurred. Please advise VDH in writing within 15 business days of RSA's receipt of this notice if RSA wishes to request an IFFP. To request an IFFP, please contact Grant Kronenberg, ODW Director of the Division of Compliance, Enforcement, and Policy, at [grant.kronenberg@vdh.virginia.gov](mailto:grant.kronenberg@vdh.virginia.gov). If RSA fails to attend a scheduled IFFP absent good cause, VDH may issue an adverse case decision against RSA pursuant to Code of Virginia § 2.2-4020.2.

If you have questions, you may reach me directly at (540) 829-7340, (540) 424-4854, or [Jeremy.Hull@vdh.virginia.gov](mailto:Jeremy.Hull@vdh.virginia.gov). You can also contact Dwayne Roadcap, Office Director, at (804) 338-0371 or [Dwayne.Roadcap@vdh.virginia.gov](mailto:Dwayne.Roadcap@vdh.virginia.gov).

Sincerely,

Jeremy Hull, PE  
Field Director

Enclosures

ec: Dr. James "Jay" Carr, Health Director, Rappahannock Rapidan Health District  
Mr. Theodore Voorhees, County Administrator  
Mr. Dwayne Roadcap, Director, Office of Drinking Water