SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

September 23, 2019

CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Cody Smith, Manager
Heavener Utility Authority
906 W. Avenue I
Heavener, OK 74556

Veolia North America, LLC
c/o Tim DeWitt, Project Manager
103 E Avenue B
Heavener, OK 74937-2601

Re: NOV No. P-1020101-19-2
PWSID No. OK1020101
Problem: Construction, Operation, and Maintenance Violations

NOTICE OF VIOLATION

Pursuant to 27A O.S. § 2-3-502 and the Oklahoma Administrative Code ("OAC") 252:4-9-1, this is to provide you with notice of apparent violations of the Oklahoma Environmental Quality Code identified by the Department of Environmental Quality ("DEQ").

Heavener Utility Authority ("Authority") owns a community public water supply ("PWS") in Leflore County, Oklahoma, where the source of water is surface water. The PWS serves approximately 3300 customers. The Authority has contracted with Veolia North America, LLC, ("Veolia") to operate and maintain the Authority's water treatment plant ("WTP")

The Authority contacted DEQ and requested that a water treatment plant assessment be performed. On August 28, 2019, in response to the Authority's request, Candy Thompson, P.E., Project Engineer for DEQ, Steven Hoffman, P.E., Project Engineer for DEQ, Rachel Brookins, E.I., District Representative for DEQ, and Trey Peterson, E.I., District Representative for DEQ, met with Cody Smith, Manager for the Authority, and Veolia's WTP operations staff and performed an assessment of the Authority's WTP. DEQ representatives inspected each major unit treatment process at the WTP and identified the violations listed below.

Raw Water Source

- There were not individual sample taps at each source.
- Iron, manganese, and pH samples were not being collected from each source.

Chemical Addition

- Control equipment to keep chemical feed rates proportional to the WTP flow rate was not provided.
- The presence of all necessary alarms to warn operators of treatment failures.
- The length of chemical feed lines was excessive.
- There was not adequate spill containment.
- The potassium permanganate did not have adequate contact time.

Clarification

- The clarifiers did not have adequate capacity to meet the maximum daily demand with the largest unit out of service.

Filtration

- There was not sufficient water available to backwash one (1) filter at least 15 minutes at the designed backwash rate.
- The filter media depths could not be confirmed to be adequate.
- The filter bed expansion during a backwash could not be confirmed to be adequate.
- Rate of flow controllers to ensure that the rated capacity of each filter is not exceeded during the operation of the other filters were not equipped.
- There was not an adequate air gap between the turbidimeter effluent piping and the drainage pipe.
- The filter backwash residual lagoons did not have three (3) feet of freeboard or two (2) feet of clear water depth.
- One of the residuals lagoon was not cleared of deep rooted vegetation.
- The filter-to-waste capabilities after the filter backwashes were not being utilized.

Operations

- The filter headloss device was inoperable.
- The turbidimeter sample taps did not draw from a representative location on the filter effluent piping.
- The length of the turbidimeter sample tubing was excessive.
- The rate of flow through the turbidimeters was not within the acceptable range according to the manufacturer's specifications.
- There were not records of the last calibration service date for the turbidimeters.
- Provisions for measuring quantities of chemicals applied were not provided for each chemical injection. The chemical feed equation for orthophosphate was being used for potassium permanganate.
- Veolia's onsite personnel were unable to confirm the presence of all necessary alarms to warn of treatment failures. In particular, Veolia's onsite personnel could not identify the meaning of various alarms. These operator issues constitute an imminent threat to the environment and public health.

Monitoring

- The reported Combined Filter Effluent ("CFE") values were capped at 0.3 NTU.
- The past three years of Individual Filter Effluent ("IFE") turbidity data was not available for review.

On September 10, 2019, Jeffery Brents, Regional Manager for DEQ, and Mike Robinson, Environmental Specialist for DEQ, responded to a complaint in the Authority's distribution system. They measured the free chlorine residual to be 0.07 ppm.

Distribution System

- The free chlorine residual in the distribution system was inadequate.

This Notice is to inform you that the items listed above are violations of the following provisions of the OAC:

OAC 252:621-5-1(1) - which states, "protect all lagoon dikes and berms against erosion by using soil, gravel, concrete pads, shallow-root vegetation or other methods. Trees and deep-root vegetation shall not be used as erosion control and shall be removed in a timely manner to maintain the integrity and stability of the lagoon. Protect inner dikes from wave action and outer dikes from runoff and floodwaters."

OAC 252:621-5-1(10)(d) – which states, "maintain at least 3 feet of freeboard on all lagoons covered by this Chapter unless otherwise specified in a permit. At no time shall wastewater be allowed to spill over the tops of the dikes."

OAC 252:626-5-6 – which states, "Each public water supply must have its own equipment and facilities for routine laboratory testing necessary to ensure proper operation. Provide methods for verifying adequate quality assurances and for routine calibration of the equipment."

OAC 252:626-5-8 – which states, "provide for sample taps in the approvable plans:
(1) for each raw water source,
(2) from each treatment unit, including on each filter, located to obtain representative samples of unit contents."

OAC 252:626-5-7(a) – which states, "provide accurate and dependable flow measuring devices, equipped with totalizers, for measuring the raw and finished water flow. Make provisions for manual verification of measuring devices."

OAC 252:626-5-15(a) – which states, "avoid cross connections in the system…"

OAC 252:626-5-15(f) – which states, "design and install all piping to eliminate possible back-siphonage in conformity with the latest American Standards Association, Recommended Practice for Backflow Prevention and Cross-Connection Control, Manual of Water Supply

Practices, —14, 3rd Edition, 2004. Provide an air gap for all filter-to-waste connections. Filter pipe gallery floors and pump rooms must be protected from flooding by backflow from filter waste lines, sewers or drains."

OAC 252:626-9-1(b) – which states, "design the plant capacity of the treatment facility so that it will not be overloaded, including water required to wash the filters, on the day of maximum demand at the end of the design period. Balance the plant capacity with finished water storage."

OAC 252:626-9-6(b) –which states, "If chemicals are to be used for taste and odor control, add them at a point ahead of other treatment processes to assure adequate contact time."

OAC 252:626:9-9(b)(2) – which states, "Head loss through the filter media is monitored by differential pressure-cell devices that measure the water pressure above and below the filter media. The head loss sensor connection to the filter box should be located approximately four inches (4") above the top of the washwater collection trough to prevent the wash water from entering the sensor. A sediment trap with a drain shall be installed on the sensor line to capture any sediment that may enter the line. The end of the sensor shall be turned up, keeping a full column of water in the line at all times to minimize air entrainment. A fine mesh stainless steel screen shall be installed on the end of the sensor to prevent clogging of the filter media."

OAC 252:626:9-9(d)(5)(D) – which states, "Garnet, silica sand, and anthracite (multi-media) must have a total depth of media of at least 30 inches with a minimum of 4.5 inches of garnet, 9 inches of silica sand, and 16.5 inches of anthracite.

(i) Garnet must have an effective size of 0.15 – 0.35 mm.

(ii) Silica sand must have an effective size of 0.45 - 0.55 mm and a uniformity coefficient not greater than 1.65.

(iii)Anthracite must have an effective size of 0.45 - 1.2 mm and a uniformity coefficient not greater than 1.85."

OAC 252:626:9-9(d)(8) – which states, "Equip each filter with a rate of flow controller to ensure that the rated capacity of each filter is not exceeded during operation of other filters."

OAC 252:626-9-9(d)(11)(A) – which states, "a minimum backwash rate of 15 gal/min/ft2 , or at a rate necessary for 50 percent expansion of the filter bed. A reduced rate of 10 gal/min/ft2 may be acceptable for full depth anthracite or granular activated carbon filter."

OAC 252:626:9-9(d)(11)(D) – which states, "sufficient water to backwash 1 filter for at least 15 minutes at design backwash rate."

OAC 252:626-11-1(3)(A) – which states, "ensure that feeders will be able to supply the necessary amounts of chemicals at an accurate feed rate throughout the plant operating range.

OAC 252:626:11-3(b)(2) – which states, "provide control equipment to keep feed rates proportional to the plant flow rate."

OAC 252:626-11-3(b)(4) – which states, "make provisions for measuring quantities of chemicals applied."

OAC 252:626:11-3(b)(5) – which states, "equip feeders with alarm devices to warn operators of failures."

OAC 252:626-11-3(g)(4)(B) – which states, "provide liquid chemical storage tanks with an overflow and a receiving basin or drain capable of receiving accidental spills or overflows."

OAC 252:626-11-3(j)(1) – which states, "design feed lines to be as short as possible."

OAC 252:631-3-1 – which states, "All systems must properly operate, in accordance with a Operations and Maintenance manual as required by OAC 252:626-3-7. All systems must maintain each unit to provide treatment of the water in accordance with the DEQ approved plans and specifications, in accordance with the purpose for which the units were designed and according to the terms of their permits. Permits may contain more stringent provisions than contained in the rules to meet the requirements of the provisions of 40 CFR adopted by reference in this chapter. Employees must be trained in the proper operation and maintenance of the system."

OAC 252:631-3-1(c) – which states, "public water supply systems must comply with all applicable monitoring and analytical requirements in 40 CFR Part 141, which includes, but is not limited to, the following:

(9) Filtration, disinfection and enhanced treatment requirements in 40 CFR Sections 141.74, 141.174, and Subparts T & W."

OAC 252:631-3-3(c)(1) – which states, "The minimum free chlorine residual at the most distant points in a water distribution system must be 0.2 mg/l."

OAC 252:631-3-4 – which states, "Notwithstanding other provisions of this Chapter, samples that are not properly collected or submitted, not collected by trained and authorized personnel, not analyzed in an accredited laboratory, or samples that do not represent the distribution system must not be used to determine compliance with these regulations. DEQ must document the determination of circumstances or conditions that require samples to be invalidated."

OAC 252:631-3-10(4)(B) – which states, "Systems that treat or blend for the reduction in concentration of regulated contaminants must monitor the raw and finished water for those contaminants daily in addition to collecting compliance samples."

OAC 252:631-3-11(a) – which states, "Each system must report to the DEQ by the end of the next business day if any of the following occur:

(2) Finished water turbidity exceeds 1 NTU."

OAC 252:631-3-19(b) – which states, "Disposal of wastewater and residuals from treatment units (filter backwash water, clarifier blow-off, etc.) must be according to OAC 252:606 (Discharge Standards), OAC 252:621 (Non-Industrial Flow-through and Public Water Supply Impoundments, Including Land Application) and OAC 252:626 (PWS Construction). Each lagoon shall be cleaned when the depth of the residuals is within two feet (2') of the maximum operating depth. For information about permits and requirements, contact the DEQ Water Quality Division."

Given the potential threat posed to public health by one or more of the violations mentioned above, it is the Authority's and/or their third party contractor's duty to correct the violations cited above by doing the following:

1) Within fourteen (14) days of the date this Notice of Violation ("NOV") is received, the Authority and/or their third party contractor shall take whatever corrective action(s) is/are necessary to eliminate and prevent the recurrence of the violations cited herein; and

2) Within fourteen (14) days of the date this NOV is received, the Authority and/or their third party contractor shall provide DEQ with a written response to this NOV detailing the specific actions taken and why such actions are sufficient to prevent recurrence of the cited violations; or

3) If the Authority and/or their third party contractor believes that correction of the cited violations is not possible within the above prescribed time periods, the Authority and/or their third party contractor shall within fourteen (14) days of receipt of this NOV, submit a written comprehensive plan for the expeditious elimination and prevention of such violations (called an "initial compliance plan"), including reasonable deadlines by which the initial compliance plan will be complete.

Send all documentation required above to:

Trey Peterson, E.I., District Representative
Public Water Supply Engineering and Enforcement Section
Water Quality Division
Department of Environmental Quality
P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677.

Your failure to either correct the cited violation(s) within the time specified above or to provide DEQ with a written response demonstrating your plans to correct the violation(s) **within fourteen (14) days of your receipt of this NOV** will result in an escalated enforcement action against you. State statutes provide that DEQ may seek injunctive relief and/or issue an Order under which corrective action may be ordered and administrative penalties assessed.

If you have questions about the requirements of this NOV, or if you believe the violations have been cited in error, feel free to contact Mr. Peterson at the address above or at (405) 702-8103. Thank you for your time and attention to this matter.

Sincerely,

Terence Lyhane

for Shellie R. Chard, Director
Water Quality Division
Oklahoma Department of Environmental Quality

c: Brian Clarke, CEO, Veolia North America, LLC