



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

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TOWN CLERK, ROCKLAND
JAN 21 '22 PM 2:08

October 30, 2019

Richard Lincoln
Coneco Building, LLC
4 First Street
Bridgewater, Massachusetts 02324

RE: ROCKLAND-Public Water Supply
Shinglemill Development
BRP WS 13, REQUEST FOR SITE EXAM/
PUMP TEST PROPOSAL
Transmittal No. X283798

Dear Mr. Lincoln:

Please find attached a letter of approval for the "Request for Site Exam/Pump Test Proposal" for the public water supply wells associated with the proposed Shinglemill Development to be located off Pond Street in Rockland, Massachusetts.

Please note that the signature on this cover letter indicates formal issuance of the attached document. If you have any questions regarding this document, please contact Charles Shurtleff @ 508-946-2879.

Sincerely,

Richard J. Rondeau, Chief
Drinking Water Program
Bureau of Water Resources

R/CPS

Attachment: Appendix A

cc: Susan Hunnewell, P.E.
Onsite Engineering, Inc.
279 East Central Street, PMB 241
Franklin, MA 02038

ecc: Rockland Board of Health

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Shinglemill Development
Off Pond Street
Rockland, Massachusetts
BRP WS 13, REQUEST FOR SITE EXAM/PUMP TEST PROPOSAL
Transmittal #X283798

The Massachusetts Department of Environmental Protection (the "Department") received the above-referenced application on September 6, 2019, and Supplemental Information on October 2, 2019. The supplement information was submitted in response to the Department's request for additional information. The BRP WS 13 permit application and the associated supplemental information were submitted on your behalf by Onsite Engineering, Inc. of Franklin, Massachusetts, under the signature of Susan Hunnewell, Massachusetts Registered Professional Engineer P.E. # 41824 (the Engineer) . The subject document, a Request for Site Examination and Pump Test Proposal, was submitted as part of the process of developing public water supply sources for the proposed Shinglemill Development Residential Apartment Complex to be located off Pond Street in Rockland, Massachusetts.

Shinglemill Development (the facility) is a proposed Community Public Water Supply system to serve a 236-unit, 343-bedroom apartment complex to be incorporated into two buildings. The application proposes three bedrock wells to serve the facility's potable water needs. A 48-hour pumping tests is proposed for each of the three bedrock wells. The pumping test will be performed independently from each other. The proposed 6-inch wells will be located in an undeveloped area southwest of the proposed facility. The anticipated demand will be 37,730 gallons per day (GPD) with the following associated Zone Is, IWPA's and pump test withdrawal rates:

	<u>Zone I</u>	<u>IWPA</u>	<u>PROPOSED PUMP TEST RATE</u>
WELL #1	266 FT	684 FT	11.8 GPM (gallons per minute)
WELL #2	290 FT	811 FT	17.1 GPM
WELL #3	300 FT	879 FT	20 GPM

The requested withdrawal rate based on the Title 5 design flow is 37,730 gallons per day (GPD) based on a 343-bedroom facility. The pump test water discharge location for the testing of the three wells will be at least 200-feet from the test wells and in an area that will not erroneously effect any of the required staff gauges in the surrounding wetland areas and with precautions to prevent erosion. The pump tests pumping rates will be determined based on step drawdown test and stabilization.

Based on the available Zone Is for all three proposed wells and the possibility of altering the parking area in order to achieve a 300-foot Zone I for well # 1, the maximum approvable withdrawal for the combined wells is between 52,807 and 61,566 GPD. The required redundancy capacity for a community PWS is double the design demand and in this case, is 75,460 GPD. This application acknowledges that the wells will not be capable, based on available Zone I areas, of providing well water redundancy. As such, it is stated within this application that a two-day supply of finish water storage will be provided in order to comply with the Drinking Water Regulations 310 CMR 22.21(3)(a).

As part of this approval process, initial water quality testing for secondary contaminants and volatile organic compounds is required from each well. Collect these required testing parameters during the step drawdown tests for the wells and submit the results on approved state forms to the Department for review prior to the commencement of the pumping test.

Based on the Department's review of submitted information, the Department hereby approves the

proposed well site for further analysis and pumping test with the following conditions:

1. The Department shall be notified at least 10 days in advance of initiation of the pumping test to allow for Department inspection.
2. The discharge location of the well water during the pump test was not established in the proposal. The Department will require that the discharge location be located at least 200 feet down gradient from the test well. Any and all protective measures required by the Town of Rockland Conservation Commission shall be put in place. The pump test discharge water location shall be located as to not erroneously affect the wetland staff gauges.
3. In order to determine any subsurface interconnection between the wells, Wells #1 & #2 shall be monitored for drawdown during the pump test of Well #3 and Wells #2 & #3 will be monitored for drawdown during the pump test of Well #1 and test Wells #1 & #3 will be monitored during the pump test of Well #2.
4. Monitoring of all the abutters drinking water wells is required during the 48-hour pump tests in order to document any possible adverse impacts on them from the pumping of any of the proposed test wells. The Facility shall submit documentation of all abutter drinking water wells and the monitoring results for these wells during the three 48-hour pumping tests. In the event an abutter refuses monitoring, provide signed documentation of that refusal.
5. The required initial water quality testing for secondary contaminants and volatile organic compounds shall be collected during the step drawn test of the well. Submit the results to the Department for review and approval prior to the commencement of each pumping test.
6. Authorization by the Department to terminate the pumping test is not required on the condition that the pumping test is conducted successfully and in accordance with the Department's most recent Guidelines for Public Water Systems (the Guidelines) and this approval letter.
7. The pump test shall be conducted in accordance with the current Drinking Water Program Guidelines, Section 4, Groundwater Supply Development and Source Approval Process.
8. A laboratory certified by the State of Massachusetts for the analysis of drinking water shall perform all water quality testing. All monitoring results for these pumping tests shall be submitted to the Department on approved Department forms as part of permit application BRP WS 15, Pumping Test Report Approval/Approval to Construct Source.
9. All water quality samples included in Appendix A of the Guidelines, attached herein for your convenience, shall be collected as follows. The wells shall be monitored for bacteria at the beginning, midpoint and end of the test. Secondary Contaminants shall be monitored 1 hour after commencement of the pumping test, at the midpoint and just prior to the shut down of the pumping test. Samples for Inorganic Contaminants, Nitrates, Nitrites, regulated and unregulated Volatile Organic Compounds, Synthetic Organic Compounds, Perchlorate and Radionuclides shall be monitored on the final day of the pump test just prior to shutdown.
10. In accordance with U.S. EPA Drinking Water Health Advisories and MassDEP Office of Research and Standards Guidelines, Public Water Suppliers are required to test all new sources of drinking water, including replacement sources, for six per- and polyfluoroalkyl substances. The analytical methodology to be used is EPA Method 537 or 537.1. Laboratories used

should be listed by EPA

<https://www.mass.gov/files/documents/2019/09/16/PFAS%20testing%20laboratories%20for%20web%20posting.pdf> or approved by MassDEP. Method 537 can be used to analyze drinking water for fourteen (14) PFAS compounds. Method 537.1 can be used to analyze drinking water for (18) PFAS compounds. The PWS should ask for reporting limits of 5 parts per trillion (ppt) or lower for each of the following (6) PFAS:

Perfluorooctanoic acid (PFOA)
Perfluorooctanesulfonate (PFOS)
Perfluorononanoic acid (PFNA)
Perfluorohexanesulfonic acid (PFHxS)
Perfluoroheptanoic acid (PFHpA)
Perfluorodecanoic acid (PFDA)

All other contaminants must be reported at this level or, if not achievable, at the lowest feasible Minimum Reporting Level (MRL). Results of the analytical testing must be presented on appropriate "Massachusetts Department of Environmental Protection – Drinking Water Program" report forms.

Appendix A

Water Quality Testing Requirements for Source Approval

All testing must be done in accordance with 310 CMR 22.00 (Massachusetts Drinking Water Regulations). Among these requirements are the use of a laboratory certified in the specific analyte, using approved methodology and reporting on MassDEP forms (pursuant to 310 CMR 22.11A) as well as meeting all applicable method detection limits.

1. **Coliform Bacteria**

If the result of any analysis is positive for total coliform, then the sample must be analyzed for *E.coli* (or enterococci and/or



2. **Secondary Contaminants**

- Alkalinity-Total (CaCO₃)
- Aluminum
- Calcium
- Chloride
- Color
- Copper
- Hardness (CaCO₃)
- Iron
- Manganese
- Magnesium
- Odor
- pH
- Potassium
- Silver
- Sulfate
- TDS
- Turbidity
- Zinc

3. **Lead**

4. **Nitrate**

5. **Nitrite**

6. **Perchlorate**

7. **Inorganic Compounds**

- | | |
|------------------------------------|-----------------------------------|
| <input type="checkbox"/> Antimony | <input type="checkbox"/> Fluoride |
| <input type="checkbox"/> Arsenic | <input type="checkbox"/> Mercury |
| <input type="checkbox"/> Barium | <input type="checkbox"/> Nickel |
| <input type="checkbox"/> Beryllium | <input type="checkbox"/> Selenium |
| <input type="checkbox"/> Cadmium | <input type="checkbox"/> Sodium |
| <input type="checkbox"/> Chromium | <input type="checkbox"/> Thallium |
| <input type="checkbox"/> Cyanide | |

8. **Volatile Organic Compounds (VOCs)**

All VOCs as per 22.07B(1) and 22.07C(5)

9. **Synthetic Organic Compounds (SOCs)**

All regulated and unregulated SOCs per 310 CMR 22.07A(1) excluding:

- Diquat
- Endothall
- Glyphosate
- 2,3,7,8-TCDD (Dioxin)

Note: Surface water sources do not have to test for EDB and DBCP.

10. **Radionuclides**

- Radon
- Gross alpha activity
- Radium 226 & Radium 228
- Uranium
- Beta particle and photon activity [if required, see 310 CMR 22.09A(3)]
 - Additional testing is required if the gross beta particle activity less the naturally occurring potassium-40 is greater than 50 pCi/L.
 - Iodine-131 (if required)
 - Tritium (if required)
 - Strontium-90 (if required)

11. **Field Testing**

Carbon dioxide (not for TNCs <10,000 gpd)

Nitrogen (Ammonia) may substitute a laboratory analysis

- pH
- Specific conductance
- Temperature

12. **Other Contaminants** of public health concern as per Section 4.3.1.2.3.j.(2)(g).