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May 15, 2024

Justin Ford, PE Senior Engineer **Consor Engineering** Via email: Justin.Ford@consoreng.com

Re: **Cascade Well #8 (PR#161-2019)** Rockwood PUD (PWS ID#00668) **Conditional Approval**

Dear Justin:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of additional plan review information for the Cascade Well #8 project for Rockwood PUD. On March 25, 2024, our office received plans, specifications, well log (MULT 136609), a waiver request, pump test results and a table of sample results.

The well was drilled to a depth of 1,200 feet in April 2021. A regional geologist with our program reviewed the well log construction details and noted the following:

- The well meets current below-ground construction standards. The well is cased and sealed to a depth of 1,000 feet. The casing and casing seal extend 220 feet into a clay and silt layer of low permeability. A screened liner extends below the casing to a depth of 1,195 feet. A sand filter pack has been placed between the liner and the borehole wall from 986 to 1,200 feet below ground level. Water can enter the well through the filter pack and liner screens.
- The well draws water from a deep confined sand aquifer. The aquifer is overlain by 240 feet of silt and clay that acts as a confining layer. Water in the aquifer is under pressure, rising roughly 690 feet above the top of the aquifer to a depth of 327 feet below ground level.
- Results from a sensitivity analysis indicates that the well construction has low sensitivity to local land use practices and the aquifer is not highly sensitive to local land use practices.

The construction standard waiver was approved. Details on where to see the approved waiver will be in the email that accompanies this letter.

The plans are approved with the following conditions:

- A raw water sample tap is required close to the well head, prior to any storage or treatment.
- The laboratory sample sheets must be turned in; the table of sample results is not sufficient for plan review purposes.

Until we receive verification that the conditions have been met and final approval has been issued, the facility is not approved for use. Upon completion of the project, the engineer must verify in writing that construction was completed according to the submitted plans. If substantial changes are made, a set of as-built drawings must be submitted. Documentation demonstrating how the above conditions were met should reference Plan Review #161-2019 and can be emailed to me at Carrie.L.Gentry@oha.oregon.gov.

Note that once the well has received final approval and is in operation, the water system will need to conduct two 6-month rounds of lead and copper monitoring at an increased number of sample sites. Additional sample schedules will be established once formal laboratory result sheets are received and reviewed.

If you have any questions, please feel free to call me at (971) 201-9794. Sincerely,

Carrie Gentry, PE Regional Engineer Drinking Water Services

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cc: Jeremy Hudson, PE, District Engineer, Rockwood Water PUD