



PUBLIC HEALTH DIVISION
Drinking Water Services

Tina Kotek, Governor

Oregon
Health
Authority

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March 30, 2023

Jessica Penetar, PE
Valley Science and Engineering
3511 Pacific Blvd
Albany, OR 97321

**Re: Campground Well (PR#25-2023)
Roadhouse Ranch and Camp
Conditional Approval**

Dear Jessica:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the campground well for Roadhouse Ranch and Camp. On March 10, 2023, our office received plans and a plan review fee of \$825.

The project includes modifying an existing well to supply water to a proposed campground including 10 tent/RV sites and 5 yurts, in addition to the existing residence. The existing well pump will be used, along with the existing underground concrete cistern, pump house, and 87-gallon pressure tank.

A regional geologist in our program reviewed the existing well construction. He noted the following:

- Calculated 13.6 sacks of bentonite were needed for the seal and 18 sacks were used. The bentonite seal and casing extend to a depth of 24 feet below ground surface (ft bgs) into consolidated material consisting of what the driller described as "lava". The construction appears to meet OWRD well construction standards and is considered adequate.
- Well DESC 501148 is constructed into a confined aquifer composed of sandstone, fractured "lava" (basalt) and cinders. Depth to the water bearing zone was measured at 665 ft bgs and the static water level (SWL) rose to 643 ft bgs. The rise in static water level indicates that the aquifer is most likely "locally" confined.
- If *E. coli* is confirmed in the source or repeated detections for coliform occur, the source

should be considered for further GWUDI (ground water under the direct influence of surface water) evaluation such as MPAs.

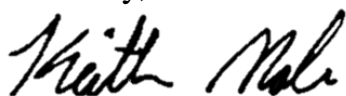
The plans are approved with the following conditions:

- A raw water sample tap is required close to the well head, prior to any storage or treatment.
- Provisions must be made for determining the depth to water surface in the well under pumping and static conditions.
- Piping arrangements must include provisions for pumping the total flow from the well to waste.
- A casing vent must be provided and must be fitted with a screen (not visible in the well head picture).
- Since the well is drilled in a confined aquifer and located near a road and trash receiving site, OAR 333-061-0050(2)(a)(D) and (E) apply. These rules allow DWS to waive the setback requirement for a road and other specified sanitary hazards that are located within 100' of a well. In order to approve this setback issue, information must be submitted that demonstrates how the well is "...protected against contamination from surface runoff or hazardous liquids which may be spilled on the roadway and is protected from unauthorized access".

Until we receive verification that the conditions have been met and final approval has been issued, the well 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 #25-2023 and can be emailed to me at keith.male@oha.oregon.gov.

If you have any questions, please feel free to email me at keith.male@oha.oregon.gov or call me at 503-939-1322.

Sincerely,

A handwritten signature in black ink that reads "Keith Male". The signature is fluid and cursive, with the first name "Keith" and last name "Male" clearly distinguishable.

Keith Male, EIT
Regional Engineer
Drinking Water Services

ec: Julie Wray, DWS
Carrie Gentry, OHA/DWS
Jeff Freund, Deschutes County Health Department