



PUBLIC HEALTH DIVISION
Drinking Water Services

Tina Kotek, Governor

Oregon
Health
Authority

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March 3, 2023

Brian Irvine
Winemaker
NW Wine Company
Via email: brian@nwwineco.com

**Re: Well #2 (PR#184-2022)
NW Wine Company (PWS ID#95579)
Conditional Approval**

Dear Brian:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the Well #2 project for NW Wine Company. On December 22, 2022, our office received a well log, site plan, system narrative and a plan review fee of \$825.

Under OAR 333-061-0060(1)(b), submittals must be prepared by a Professional Engineer registered in Oregon, unless exempted by DWS. A request for an exemption was approved for this submittal. Note that by utilizing this exemption, the water system takes full responsibility for the project.

The project includes a well (YAMH59123), drilled to a depth of 568 feet in September 2022. The water system also uses a pressure tank and water softener.

A regional geologist with DWS reviewed the well log construction details and noted the following:

- The well meets current below-ground construction standards.
- The well was sealed and cased to a depth of 420 feet below ground surface (bgs). The casing and casing seal extend 283 feet into low permeability basalt that overlies the aquifer. A perforated liner extends to a depth of 537 feet which helps keep the borehole open but does not keep water from entering the well through the annular space between

the liner and the borehole wall. Water can enter through the uncased portion of the well between 420 and 568 feet bgs.

- The well draws water from a deep confined layered basalt aquifer. The water-bearing basalt occurs at a depth of 442 feet and is overlain by 305 feet of impermeable basalt that acts as a confining layer. Water within the aquifer is under pressure, rising 377 feet above the identified water-bearing zone to a depth of 65 feet bgs.
- Results from a sensitivity analysis indicate that neither the well construction nor the aquifer characteristics contribute to the overall sensitivity of this water source to local land use practices.

The plans are approved with the following conditions:

- The schematic submitted did not show setbacks from the well. Specifically, please provide a statement that there are no pressure sewer lines or septic drain fields within 50 feet of the well and no gravity sewer lines, or septic tanks within 100 feet of the well.
- Since the well is drilled in a confined aquifer and located near a road, OAR 333-061-0050(2)(a)(D) applies. This rule allows DWS to waive the setback requirement for a road that is 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".
- Above ground well head details must be provided (pictures may be the best way of showing these items), specifically:
 - Unless a pitless adapter was installed, a concrete slab must be provided around the well.
 - The casing height must be 12" above the slab (or 12" above grade, if a pitless adapter was installed.)
 - A watertight sanitary seal must be provided.
 - A sample tap at the well head must be provided.
 - Piping arrangements must include provisions for pumping the total flow of the well to waste. Pump-to-waste piping is typically installed for this, however, some systems plan to pump the flow to waste through the sample tap.
 - A method of determining the total output of the well must be provided (typically a flowmeter is installed for this purpose).
 - Unless a pitless adapter is installed, a well house must be provided. If the well house is not a small dog-house style, then it must be provided with light and heat. In all cases it must be lockable.
 - A casing vent with a screened return bend must be provided. If a pitless adapter

was installed, the caps are typically vented.

- IOC, SOC and VOC sample results must be submitted. These samples must be obtained from the well head raw water sample tap, prior to any treatment.

Until we receive verification that the conditions have been met and final approval has been issued, the facility is not approved for use. Documentation demonstrating how the above conditions were met should reference Plan Review #184-2022 and can be emailed to me at Carrie.L.Gentry@oha.oregon.gov.

Note that increased lead and copper sampling will be required once final approval is issued. The water system will be required to conduct two 6-month rounds at the original number of sample sites (5), with the new well in use.

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

Sincerely,



Carrie Gentry, PE
Regional Engineer
Drinking Water Services

ec: Nicole Alfafara, REHS, OHA/DWS
Sarah Schwab, REHS, Oregon Department of Agriculture