



February 27, 2023

Mark Proden
The Black Dog Vineyard
Via email, mark@thewineryatmanzanita.com

Re: New System and Well (PR#179-2022)
The Black Dog Vineyard (PWS ID#95696)
Final Approval

Dear Mark:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the new system and well for The Black Dog Vineyard. On December 6, 2022, our office received a site plan, well log, sampling results and a plan review fee of \$825.

The project includes a well (well ID YAMH 58999), drilled to a depth of 238 feet in June 2022. The water system does not have a 100' radius of control around the well. A request for a waiver from construction standards was submitted on December 16, 2022. The waiver was approved on January 6, 2023. Additionally, a roadway is within 100' of the well. A well head protection berm was installed, with verification of the berm received on February 6, 2023.

A regional geologist with DWS reviewed the well log construction details. He noted that the well meets current construction standards. The well was cased and sealed to a depth of 38.5 feet. The casing and casing seal extend 11.5 feet into low permeability siltstone and sandstone bedrock that overlies the aquifer. Water enters the well through the uncased portion of the well between 38.5 feet and 238 feet below ground.

The well draws water from a deep sandstone aquifer. The water-bearing sandstone occurs at a depth of 112 feet and is overlain by 85 feet of siltstone and sandstone that acts as a confining layer. Water within the sandstone aquifer is under pressure, rising 87 feet above the identified water-bearing zone to a depth of 25 feet below ground.

Results from a sensitivity analysis indicate that neither the well construction nor the aquifer

contribute to the overall sensitivity of this well to local land use practices. Should nitrate be detected at concentrations greater or equal to 5 mg/L, the aquifer may be reclassified as highly sensitive.

Final approval is issued at this time, and the facility is approved for use. If you have any questions, please feel free to call me at (971) 201-9794.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Gentry', written in a cursive style.

Carrie Gentry, PE
Regional Engineer
Drinking Water Services

cc: Sarah Schwab, REHS, Oregon Department of Agriculture

encl: Approved waiver from construction standards