



April 17, 2023

Mark Witte
Brucepac
Via email: mwitte@brucepac.com

**Re: Well #7 (PR#10-2023)
JLR (PWS ID#94431)
Site Plan Approval**

Dear Mark:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the Well #7 project for JLR. On January 17, 2023, our office received a site plan, well log, land use compatibility statement, water rights, easement information and a plan review fee of \$825. Additional locational information was received on March 13, 2023.

The project includes a well (well ID MARI 69418), drilled to a depth of 247 feet in August 2020.

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

- The well meets current construction standards. The well is cased and sealed to a depth of 156 feet. The casing seal extends through a 25-foot-thick silt confining layer present at a depth of 130 feet below ground.
- A narrow diameter screen sits inside the casing and extends below the casing from 130 feet to 180 feet below ground. Most of the screen material is blank (unopen) screen that serves as a liner. Open screen material is present from 150 to 160 feet below ground. The annular space outside the well screen material has been backfilled with a permeable filter pack material from the bottom of the well to a depth of 130 feet below ground. Water enters the well through the filter pack below a depth of 156 feet and then through a section of open screen.
- The well draws water from a confined aquifer composed of multiple layers of sand and

gravel separated by intermittent silt layers. The static water level in the well rose 77 feet above the top of the targeted water-bearing zone indicating that the water within the aquifer is under pressure.

- Results from a sensitivity analysis indicate that the well construction does not contribute to the overall sensitivity of the water supply to nearby land use practices and the aquifer is not highly sensitive to local land use practices. Should chemical or coliform monitoring results suggest that there is a pathway for contaminants originating at the surface to enter the aquifer system, the sensitivity of the aquifer characteristics will be re-evaluated.

The project is granted site plan approval. The following needs to be submitted:

1. Raw (Untreated) Water Quality Data including coliform bacteria, IOC, SOC, and VOC. These are to be taken from the well's raw water sample tap at the wellhead.
2. Engineered plans that show the above-well structure detail including the well house, concrete slab, drainage, pump-to-waste piping and plans and specifications for connection of the new well to the water system. Specifically, the following features must be addressed:
 - 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.

The above items should reference Plan Review #10-2023 and can be emailed to me at Carrie.L.Gentry@oha.oregon.gov.

In addition to the above items, I have the following comment:

- 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,

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: Joshua Teamus, REHS, Oregon Department of Agriculture