



April 11, 2022

Kyle Thompson, PE
Grayling Engineers
Via email

**Re: Well 3 Arsenic Treatment Improvements (PR#22-2022)
North Plains Water Department (PWS ID#00576)
Conditional Approval**

Dear Mr. Thompson:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the Well 3 Arsenic Treatment Improvements project for City of North Plains. On February 16, 2022, our office received plans, an arsenic treatment report and a plan review fee of \$825.

The project includes installation of ISOLUX Zirconium Hydroxide adsorption media in 4 pressure vessels to treat arsenic over the maximum contaminant level at Well #3. The well is an emergency source for the City. The media is packed into disposable cartridges that are placed in the pressure vessels. Chemical addition is required prior to the adsorption process to sequester silica.

The well will be operated at a maximum of 200 gpm, with half of the flow treated. The treated water and untreated water will combine before entering the million gallon reservoir, with the intent to have the arsenic concentration below the maximum contaminant level. The JWC intertie comes into the reservoir prior to the reservoir. A flow meter and chlorine injection point are also prior to the reservoir.

The plans are approved with the following conditions:

- All items in contact with potable water must meet NSF Standard 61 or equivalent. Chemicals must meet NSF Standard 60 or equivalent.
- Sample taps are required prior to (raw water) and after (finished water, after combining with untreated well water and prior to combining with JWC water) the arsenic treatment process.
- After installation of the treatment system is completed, a sample result from a sample

taken from the finished water sample tap must be submitted that shows the treatment system and combined untreated water is below the maximum contaminant level for arsenic.

- The water system must update their operations and maintenance manual to include the new treatment system.

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 #22-2022 and can be emailed to me at Carrie.L.Gentry@dhsosha.state.or.us.

In addition to the above conditions, I have the following comments:

- Once the water system has received final approval for the arsenic treatment system, sampling for arsenic at the entry point will consist of quarterly sampling for the first year and then a reduction to annual sampling with no further sampling reductions possible.
- Note that addition of arsenic treatment will trigger a requirement to have a Water Treatment 1 operator.
- The water system will also be required to conduct increased lead and copper sampling once final approval is issued. The water system will be required to conduct two 6-month rounds at the original number of sample sites (20), with the well and treatment system 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

cc: Nicole Alfafara, OHA/DWS
Ashley Davis, REHS, Washington County Health Department
Blake Boyles, Public Works Director, City of North Plains