
Oregon

Theodore R. Kulongoski., Governor

Department of Human Services

Health Services

800 NE Oregon Street

Portland, OR 97232-2162

December 12, 2010

Brad Carr

HBH Consulting Engineers

20015 SW Pacific HWY, Suite 101

Sherwood, OR 97140

(971) 673-0405

(971) 673-0457 – FAX

(971) 673-0372 - TTY-Nonvoice

Re: Wickiup Water District (00063) Tracer Study – Test #1 SS Plant @ 525 gpm
Final Approval – PR #191-2010

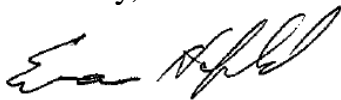
Dear Mr. Carr,

On May 11, 2010, our office received the Water Treatment Facility Disinfection Contact Time Tracer Study Test #1: 535 gpm dated February 26, 2010 for Wickiup Water District's 0.2 MG reservoir located at the slow sand treatment plant. The tracer study was conducted by replicating a flow of 525 gpm from a fire hydrant located just prior to the first user approximately 1,500-ft downstream of the reservoir. The contact time was determined to be 149 minutes at a flow of 525 gpm.

A Water System Survey conducted in September 2009 estimated that using a total volume of 196,336 gallons (6,932 gallons in 1,700-ft of 10" pipe plus 189,401 gallons within the 48-ft diameter, 0.2 MG tank at a low operating level of 14-ft) and a flow rate of 280 gpm, the theoretical contact time was determined to be 92.4 minutes (assuming a 10% baffling factor for the tank and plug flow through the pipeline). Assuming the same 14-ft operating level at the time of the tracer study and 1,500-ft of 10" pipe, the baffling factor is approximately 38%.

Thank you for your patience in this process and if you have any questions, or would like this in an alternate format, please feel free to call me at (971) 673-0419 or via e-mail at evan.e.hofeld@state.or.us.

Sincerely,



Evan Hofeld

Regional Engineer

DHS - Drinking Water Program

cc: Dennis Schweizer, Wickiup Water District