

MEMORANDUM

TO: File 63-31281

FROM: Daniel Nelson – Staff Hydrologist

DATE: July 1, 2014

SUBJECT: Licensing Review for 63-31281

This is licensing review of the field exam that was supplied by the Certified Field Examiner (CFE), Ed Squires of Hydrologic Engineering. There are couple issues that need to be addressed in the licensing of this permit. I will address each issue separately.

The permit for this water right was approved prior to the 10/19/2009 Administration Memo, Licensing No. 1, which states that a license may be issued limiting the diversion rate in combination with the other right in the municipal system to the existing capacity of the municipal system. For this reason the diversion rate for the well will be licensed at the capacity of the well, and no combined conditions limiting the capacity of the system will be added to the water right license.

Diversion Rate:

The certified examiner provided several rates of diversion. The examiner's theoretical diversion rate seemed to try show the diversion rates under extreme circumstances, and it came up with a diversion rate of 2500 gpm at approximately 10 psi. The certified examiner also states that this well was designed to operate at 2,000 gpm at 316 ft of head. The City of Meridian's Water Master Plan states that this well has a capacity of 2,000 gpm. Real time flow measurements recorded for April of 2004 shows a maximum diversion rate of 1750 gpm. A pump test done on this well in December of 2011 shows a sustained diversion rate of 2,250 gpm at a reduced psi rating. The field examiner states that the City tries to operate the system between 50 and 72 psi. The December test was done with pressures between 37 to 44 psi. In reality, this well probably operates at 1,750 to 2,000 gpm, but it can produce 2,250 gpm under conditions that stress the system such as a major fire use period. A diversion rate of 2,250 gpm is 5.01 cfs, so the permitted amount of 5.00 cfs should be recommended for licensing.

Diversion Volume:

This permit is for a municipal use for the City of Meridian which qualifies as a municipality. Therefore, no volume is required on the license for this permit.

Well Is Used As A Back-Up Well:

The field examiner states that this well is currently on stand-by mode due to undesirable water conditions. This is confirmed with the City of Meridian Water Master Plan that claims that this well is a back-up well. The study goes on to say that well 23 has uranium levels that approach or exceed the 30 parts per billion MCL established for uranium in the Radionuclide Rule, and that the City will need to consider either abandoning the well, placing it on standby status, or implementing treatment for reducing the uranium contact to acceptable levels.

I am concerned that by licensing this water right, we will be adding a point of diversion to the system that is currently not being used, and may be abandoned as described in the City of Meridian Water Master Plan. However, according to the field exam report, the well was used as a production well in 2004, therefore, we must license this well as a standard production well without diversion rate limitations.

Well Depth:

The well driller's report for this well states the well for this permit was constructed to a depth of 695 feet. According to the well driller's report the well was then filled into a depth of 285 feet. The well driller's report also states that the well was screened from 195 to 285 feet. The field exam also includes an as-built well construction analysis. This document confirms that the well is screened from 195 feet to 285 feet. Condition #9 of the permit limits the water bearing zone to be appropriated to be between 350 and 800 feet.

The field examiner goes to some length to show that this well has not injured other water users in the area. However, from the field report, it appears as though this well was only used on a consistent basis in 2004, and since that time, the well has been used as a back-up well due to the water quality issues. This well is just a mile southwest of the Basin 63 Ground Water Restricted Area, so maintaining a water bearing zone would not be as big an issue if it were within boundaries of the Basin 63 Ground Water Restricted Area.

When combining the field examiner's analysis showing there is no substantial injury to other users and the well being outside of the borders for the Basin 63 Ground Water Restricted Area, we have decided to drop the water bearing zone condition.

Conditions:

Conditions 1(26A), 3(046), and 7(102) were removed at licensing. Conditions 2(004), 5(01M), 6(102) were carried forward to licensing. Condition 8 was changed to condition number 124. I also added condition X59, since the tax lot data shows this well is located in a tax lot in a subdivision.