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REBUTTAL TO APPLICANT'S EXPERT REPORT

by
Edward S. Smith

Reference the: "Expert Report and Narrative Relative to Water Right Transfer# 79384 for irrigation" by Brockway Engineering, dated February 13, 2015. The referenced Expert Report focuses on transfer #79384 for a new irrigation well for use by Cedar Ridge Dairy, Filer, Idaho. The source of the proposed transfer is from the Leno-Well, near the Idaho/Nevada Border.

Since the three Expert Reports that involve new water, (#79357, #79380, #79384), are essentially the same in the writings of the main body of each report, I will focus my comments on transfer #79384, but the comments will apply to all three mentioned Expert Reports.

It is noticeable that the Expert Report(s) are not signed nor stamped with a professional seal as professional work would dictate.

Comments applying to the specific paragraphs of the Expert Report follow:

Page 3, Paragraph A.1.(Objectives) of the Expert Report states, in part that: "Hydraulic analysis of the regional aquifer is based upon published reports, well drillers logs, USGS/IDWR monitoring wells and pump test data. From this analysis, the effects of Transfer 79384 on the local aquifer and the Protestants' domestic wells can be determined."

Actually, the best that could be said of such an analysis is that the effects of the new irrigation well can only be estimated, not determined precisely. To say that the effects can be determined with certainty without a valid pump test and simultaneous monitoring of the neighbors' domestic wells is not supportable, considering the fractured basalt geology in the area.

Page 8, top paragraph of the Expert Report: This begins a discussion of the study by K.H. Fowler, 1960, titled "Preliminary Report on Ground Water in the Salmon Falls Area, Twin Falls County, Idaho."

Page 8, top paragraph of the Expert Report: There is no clear delineation between what K.H. Fowler said in his study and what the writer of the Expert Report interjected as his own thoughts. There is no use of quotation marks, nor page references from a 17 page study. The lead sentence of the Expert Report says: "This report states" when in fact in several places of the Expert Report the study does not state what is written. For instance:

It is unlikely Mr. Fowler would state that: "The precipitation and streams are located on the east side of highway 93..."

Further, in the second paragraph, the term "Salmon Falls Canal Company" is used instead of the official name of the Salmon River Canal Company. Mr. Fowler used the correct name.

The entire last paragraph on page 8 of the Expert Report is mostly a direct quote from page 7 of the study but no quotations are used. Additionally the term "Salmon River Creek Reservoir" is used,

which is an inaccurate name for the reservoir in question. The official name for the reservoir is: "Salmon Falls Creek Reservoir" per the Rogerson Quadrangle map.

Also, in the same paragraph, the Expert Report writer states that: "...very little ground water is discharged into the creek from the Salmon Falls Area between the Salmon River Creek Reservoir and the Roseworth crossing (Lily Grade)." The reservoir is roughly 11 miles long, and the Fowler study (page 7, below table) refers specifically to the dam location: i.e.: "...Salmon River Canal Co. dam..." to identify the specific stretch of Salmon Falls Creek (between the dam and Roseworth crossing) that receives little ground water discharge. The Expert Report generalizes where specifics should be used.

Page 8, last paragraph of the Expert Report: This begins a discussion of the study by Eakin and Moore, 1968, titled: "Water Resources-Reconnaissance Series Report 48, Water- Resources Appraisal of the Snake River Basin in Nevada."

Again, there is only occasional identifying of direct quotes nor are there reference page numbers of the study which is 102 pages in length.

On page 9 of the Expert Report, the long quote in the lower half of the page misquotes the term evapotranspiration and instead uses the term "evaporation". The difference is important since a large percentage of the ground water in the Shoshone Creek valley is lost to plant uptake (evapotranspiration). According to the Eakin/Moore study on page 27, last paragraph, it states: "Ground water is discharged from the Nevada part of the Snake River basin largely by evapotranspiration within the basin and by discharge to the perennial streams and thence out of the State as outflow".

The concluding line of the above cited paragraph on page 9 of the Expert Report refers to the uncertainty of determining potential versus actual recharge to the aquifer in the study area. However, this conclusion of the study refers to all seven basins looked at in the study. But, a closer look at just one of these basins, specifically the Salmon Falls Creek/Shoshone Creek confluence area (page 28, of the study, last paragraph), concludes that the underflow into Idaho is "impeded significantly", no matter what the potential versus actual recharge may be.

Page 10, top paragraph of the Expert Report: The production capability of the two wells: "in close proximity to Shoshone Creek" could likely come from the effect of the stream resupplying the pumped ground water, and not an overabundance of ground water. The Study states, on page 28 : "The shallow ground water along the Salmon Falls Creek near the mouth of Shoshone Creek implies that underflow from that area is impeded significantly, most probably by a north-trending fault along the east side of the hills and west of U.S. Highway 93".

The Moore and Eakin study findings do not support the conclusion of the writer of the Expert Report who implies there is "prolific" ground water underflowing into the Salmon Falls Tract. This is not the case, according to the study.

Page 10 , center paragraph, of the Expert Report: This begins a discussion of the Study by Crosthwaite, 1969: "Water Resources of the Salmon Falls Creek Basin Idaho-Nevada"

Page 10, center paragraph of the Expert Report. The Expert Report writer makes the statement that: "The natural discharge direction of the ground water flow is northward towards the Twin Falls Tract

and the Snake River.”

What is not pointed out, however, is that on page D21 and D22 of the Study it is stated: “The general slope of the water table is to the northwest...” This flow direction would direct any ground water toward the west and away from the new proposed Points of Diversion.

Page 10 , last paragraph of the Expert Report. The conclusion of the writer is: “... the aquifer flows northward towards the Snake River.” Again this is only a general direction. See my comments immediately above. The writer does however, in the last line of page 10 disclose a north northwest direction.

Page 12, top paragraph of the Expert Report. The writer of the Expert Report states: “In aquifer regions of basalt, granite or other solid rock formations, the water is more likely to be moving in areas of geologic faults, cracks or fisher areas of the rock formations. The ability of a well to supply an adequate amount of water in this type of aquifer may depend on whether the well connects with or was drilled through the underground channels formed by the faults, cracks and fishers.”

This is precisely the situation in the area of the new irrigation well and why a valid pump test should be performed to determine if an existing domestic well is in the same fault, crack or vein that the new irrigation well would be sharing. If they are both in the same water course, injury will occur.

Page 12 , last paragraph of the Expert Report: In a discussion of what monitoring wells should be used for analysis by the Applicants, the Expert Report writer points out that there was insufficient data points to use a specific USGS well in the Applicant's analysis. The point made was: “The intermittent data is not sufficient to define any statistically sound seasonal trends or long-term trends for well 11S16E-20CCC.”

This statement can also apply to the scarcity of data points in the pump test attempted by the Applicants. The Applicant's pump test should also be considered insufficient, considering the minimal data points collected during the test which was approximately 18 hours, but had less than 3 hours of data recorded.

Page 16, top paragraph of the Expert Report: “October 2015” is listed as the pump test date, but this date has not yet arrived.

Page 26, Table 2: The last entry depicts the location of the “Pump Test Well” in a location approximately 3 miles to the northwest of where it is actually located. Actual location is T11S R16E 8 SWSW, but the table shows the pump test well in T10S R15E 36SENW.

Page 26, paragraph 2 of the Expert Report: Referring to accurate pump tests and high discharge rates, the writer states: “The high discharge rate is important to stress or maximize the ability of the aquifer to provide water.”

If not done properly, accurate calculations can not be made to obtain hydraulic conductivity values which can be applied to the Applicant's computer modeling. The writer goes on to say that for irrigation wells: “...large discharge pump tests must be performed with large pumps for a period of several hours to several days”.

The pump test performed on 7, 8 October 2014, by the Applicants did not maintain a steady discharge rate, and only ran for less than 18 hours, and during that run time, less than 3 hours of data

were recorded. Also, while the test was being run, there was no monitoring of the neighbor's existing domestic wells to determine if the new irrigation well is in the same faults/cracks as the domestic wells. If they are in the same fault, injury to the domestic wells will occur. On all accounts, the pump test is inadequate.

Page 29 , paragraph F-1 of the Expert Report: The incorrect transfer number was used. (#79380 instead of #79384) for this particular Expert Report.

Page 29-30 , Paragraph F-3 of the Expert Report: "Injury to Other Water Rights and Domestic Wells". The writer of the Expert Report concludes: "It is expected that no significant hydraulic impact on local domestic wells will occur".

Saying that there will be no injury to domestic wells without properly monitoring those same domestic wells during a valid pump test is not an accurate statement. The computer modeling conducted by the Applicant can not, with certainty, conclude that any domestic wells will not be injured since the modeling used by the Applicants assumes a uniform subsurface geology which is not the case in fractured basalt. Therefore, the computer modeling conclusions can not be relied upon to state that there will be no injury to existing local domestic wells.

A pump test of a duration of at least 48 hours, with continuous data recordings, and simultaneous monitoring of domestic wells must be accomplished prior to any water transfer being approved by IDWR.



Edward S. Smith
Protestant

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