

MEMO

State of Idaho

Department of Water Resources

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Date: March 11, 2009

To: Gary Spackman

From: Sean Vincent *SV*

cc: Rick Raymondi

Subject: Hydrology Section review of February 9, 2009 letter report prepared by Rocky Mountain Environmental Associates, Inc. in support of DKJ Farms water right application

Hydrology Section staff had the following observations when we met on March 9, 2009 to discuss the subject letter report:

1. The geology between the proposed well location and the South Fork of the Snake River is complex, making it difficult to arrive at definitive conclusions regarding hydrologic impacts caused by pumping.
2. Based upon the geology depicted on the figures that are appended to the letter report, staff generally agrees with the author's contention that structural and stratigraphic controls likely limit hydraulic communication between the proposed well on Jeppesen Property near Moody Creek and the South Fork of the Snake River at Heise.
3. Possible structural controls on hydraulic communication downstream from Heise cannot be evaluated using geologic cross-sections that intersect the South Fork of the Snake at Heise and upstream from Heise.
4. The plan view geologic map suggests that hydraulic communication between the proposed well and the South Fork of the Snake downstream from Heise is probable.
5. The geologic maps presented in the report are not published.

We maintain that the Eastern Snake River Plain Aquifer (ESPA) model is the best available tool for the prediction of hydrologic impacts from pumping. We concede, however, that uncertainty exists with respect to river reach response functions in the Rexburg Bench area owing to the lack

of water level control points that were available when the model was originally calibrated. The Eastern Snake Hydrologic Modeling Committee is in the process of developing a new version of the model that will be calibrated to synoptic water level measurement data that were collected by the USGS in 2008. These data will help reduce uncertainty in river reach response functions for model cells used to represent the Rexburg Bench area.