

Memorandum

To: 2-7242D and 2-7242B
From: D. Shaff
Date: September 22, 2009
Re: Error on Water Right License

The question about the combined limit for quantity came through an objection to Right 2-7242D in the SRBA. No disagreement exists for the quantity itself for the water rights. The remarks in question in the Water Right Licenses read as follows:

This water right when combined with Right No. 02-7103 and 02-7104 shall not exceed 9.0 cfs.

The remark was based on the presumed fact 2-7242D and 2-7242B were both using the exact same diversion works as the diversion works for 2-7103 and 2-7104 used during the licensing exam for 2-7103 and 2-7104. The evidence indicates the examiner erred in making the presumption.

The development of 2-7103 and 2-7104 utilized a 100-hp motor (GE 5K6267XH3A) and pump diverting 9.0 cfs. The field report for 2-7242D states (incorrectly) the diversion works was the same as the one used by 2-7103 and 2-7104. Perhaps confusing the picture, 2-7242C does use a 100-hp motor (Westinghouse SN7111) and pump (Peerless) but at a different point of diversion with a different system. Consistent with the facts, however, is the field report for 2-7242B where a 125-hp motor (GE 5K6278XH5A) was driving a pump (L&B Vertiline SN 00203)) diverting water into the same Bybee Canal, as recorded in each field report, where both 2-7242B and 2-7242D re-divert water. Were the permit holders for 2-7242B and 2-7242D using the same pump from the river (C J Striker Reservoir)? The answer is yes. Rights 2-7103 and 2-7104 currently use the Ward pump, the same 125-hp motor and pump described in 2-7242B.

Time Line

May & July 1978. Field examination conducted for determining beneficial use of 2-7103 and 2-7104 with a diversion works utilizing a 100-hp GE motor delivering a total of 9.0 cfs.

February 9, 1979. Garth and Phillip Aslett executed an Exchange Agreement with Lees for land where 2-7242C and 2-7242D are described together with "18% Pump #00203-Motor LHJ1108121" which is the same one for a 125-hp motor in a predecessor lease agreement for the place of use of 2-7103 and 2-7104.

March 5, 1979. Garth Aslett submitted proof of beneficial use for 2-7242 without giving a specific description of the diversion works other than "pumps, pipeline, mainlines, laterals."

June 10, 1982. Field examination for determining beneficial use conducted for 2-7242C and 2-7242D. The diversion works for 2-7242C were different (100-hp Westinghouse motor) and came from a different point of diversion than 2-7242D. The field examination report for 2-

7242D shows the same diversion works as the one for 2-7103 and 2-7104 and a later field examination as 2-7242B all using the 125-hp GE motor shown in 2-7242B.

August 4, 1983. Field examination conducted for determining beneficial use of 2-7242B using a diversion works (125-hp GE pump).

January 1, 1988. Garth Aslett leases land for the place of use of 2-7103 and 2-7104 and diversion works consistent with the diversion works for 2-7242B shown above (125-hp GE motor serial number LHJ1108121 and Layne and Bowler pump).

September 3, 2009. Communication from Kent Frisch, manager of the Bybee Canal and also the Farm Manager for Simplot Trust farms that use water from the Bybee system including water rights 2-7103 and 2-7104, describing a pump (125-hp motor SN LHJ1108121 Model 5K6278XH5A) and Vertiline pump 6800 gpm 60 feet head) used to deliver the rights for the Simplot property.

Remedial Recommendation

The field examiner for 2-7242D erred in presuming the diversion works described in 2-7103 and 2-7104 (100-hp GE motor) was the exact same one present for the diversion of 2-7242B and 2-7242D. The field examiner for 2-7242B recorded a different diversion works but failed to do a measurement but continued with the incorrect presumption of the diversion works only had a capacity of 9.0 cfs.

Using the standard IDWR formula to compare to a pumped diversion, the diversion works (125-hp motor with L&B pump) may produce 12.83 cfs.

$$Q = P * E * 8.8/h$$

Where Q = quantity in cfs

P = motor horse power

E = efficiency

h = lift in feet

$$Q = 125 * 0.70 * 8.8 / 60$$

$$Q = 12.83 \text{ cfs}$$

Using the same formula would require an efficiency in the range of nearly 83 per cent to equal the 6,800 gallons per minute indicated in the Frisch communication. The Frisch number apparently came from a pump rating curve.

Regardless, the sum of the rights using the 125-hp motor is 11.74 cfs. (2-7103 and 2-7104 combined not more than 9.0 cfs, 2-7242B = 0.32 cfs, and 2-7242D = 2.42 cfs) To equal the summed flow, the efficiency using the formula above would be about 64 per cent.

The combined diversion rate remark tying one to the other should be removed from 2-7242B and 2-7242D. Right 2-7242B has a recent SRBA decree with the remark but may come back on a motion to set aside the decree. Right 2-7242D is contested over the combined diversion rate remark and could be settled by removing the remark.