

MEMORANDUM

TO: Transfer No. 76971 & Application for Permit 63-33245 File

FROM: Angie Grimm

DATE: June 30, 2011

RE: Evaluation of Sufficiency of Information Submitted

The transfer proposes to add the existing injection well as an alternate PD for right 63-12342. Also, the applicant proposes to discharge the spent water from the cooling system to the Boise River via a storm drain rather than injecting the water into the shallow aquifer via the applicant's injection well. This change requires removing the condition requiring reinjection of water diverted from the production water bearing zone of 79 ft to 195 ft. Also, condition 027 will be modified to highlight non-consumptive use when the river and shallow aquifer are viewed together. Otherwise, it would appear the proposed change would be consumptive for the aquifer.

The permit application proposes to add an additional increment of rate for cooling use and acquire a water right for heating use that is currently occurring at this site. The applicant states no additional volume in excess of that authorized for diversion under right 63-12342 (125 AF for cooling use) is needed for the cooling or heating use.

The site is the Union Block Building in downtown Boise at 730 W Idaho St on the north side of Idaho St between 8th St and Capitol St.

Contact person for the applicant is Lori Graves, SPF Water Engineering LLC.

Deviations from Transfer Policy Standards

The transfer application was received March 23, 2009, prior to licensing of right 63-12342. The current policy is to return such applications, but this transfer and fee were receipted and held until the right was licensed on July 7, 2010. Since the right has been licensed, the transfer can now be processed. The only discrepancy between the right as licensed and the right as summarized in the transfer application is the volume of the right (rate the same as permitted). The applicant acknowledged the volume may be different once the right is licensed on the application, so an amendment to the transfer application was not requested.

Summary of Information Submitted for Transfer 76971

Authority to File: The applicant is the current owner on record. The applicant has authority to change its own right. The applicant is authorized to do business in the State of Idaho as they are registered with Idaho Secretary of State under Organizational ID C79894. Ada Co taxlot data indicates Union Block Associates LLC is the current property owner. In response to my letter of December 23, 2010, the applicant provided information indicating Ken Howell (president) is the majority owner of Union Block Associates LLC and the sole owner of Parklane Company Inc.

The applicant's response also stated that as the majority owner of Union Block Associates LLC, Ken Howell gives Parklane Company Inc. all rights and authority to make the permit and transfer filings related to "Application for Permit 63-33245 and Transfer 76971 of WR 63-12342" for Union Block Associates LLC.

Water Right Validity: Right presumed to be valid based on license issued 7/7/2010, within the past five year period. SRBA is not applicable to this right developed after 1987.

Injury to Other Water Rights: Adding the injection well as an alternate PD will not likely injure other water rights considering the total diversion from both PDs will be limited to the currently authorized diversion rate and volume. As a ground water right, use of the existing and proposed PDs are subject to reasonable pumping level provisions of I. C. § 42-226. The existing and proposed PDs are within the Boise Front Ground Water Management Area (GWMA), but these wells are less than 300 ft deep and therefore are not subject to this GWMA's management plan. The proposed additional PD is on the same 0.4 acre parcel. The production zone/screened interval of this well is 150 to 195 ft. The current PD's production zone/screened interval is from 79 ft to 89 ft within the approved water bearing zone of the right (79 ft to 195 ft). The proposed PD would divert water from the same water bearing zone currently authorized. The nearest spring used for a recorded water right is over one mile away. Diversion for the applicant's heating and cooling system is not likely to impact this spring based on the radius of impact information provided by the applicant's representative. Ground water levels in the area appear to be stable based on Department data indicating there is currently not a shortage of shallow ground water to supply current diversions.

The applicant proposes to cease reinjection of the discharge water from the cooling system into the shallow aquifer. This could potentially cause a reduction in quantity of water available to other shallow aquifer rights nearby. Information submitted by the applicant's representative (received 4/15/11) indicates there are 11 active ground water right diversions and a total of 37 wells within a 2,000 ft radius of the proposed diversion sites per Department water right and well construction information. Four of the 37 wells (including two of the 11 active rights) produce water from a different (deeper) production zone than the applicant proposes to use. The closest well with a water right is 330 ft away on different property owned/operated by the applicant. The applicant's representative gave two sets of drawdown estimates based on different aquifer properties under the assumption the wells in the applications were pumped at a combined rate of 0.41 cfs for 154 days (equal maximum volume proposed). The first set of estimates (worst case scenario) indicates a possible drawdown of 22.7 ft a distance of 100 ft away to 6.0 ft of drawdown a distance one mile away. The second set of estimates is a more reasonable/likely (per the applicant's representative). These indicate a drawdown of 12.1 ft a distance of 100 ft away and 3.7 ft of drawdown a distance of one mile away. Water level data submitted by the applicant's representative supports their claim that injury is not likely to occur "...because (1) the aquifer is productive and (2) area water levels are not declining." It is unlikely the applicant ceasing to reinject the spent cooling water will reduce the quantity of water available below that authorized for diversion or historically beneficially used by shallow ground water rights or wells in the area.

The right proposed for transfer is within the area where ground water shallower than 200 ft is considered tributary to the full appropriated reach of the Boise River. Rights in this area typically require some form of mitigation to avoid injury to the river. The applicant proposes to discharge the spent water to the Boise River via an Ada County Highway District (ACHD) storm drain directly east of the wells where the potential cone of depression pulls water from the Boise River during pumping (per information submitted by the applicant's representative). Discharge of the

spent water directly into the river via the ACHD storm drain will likely benefit Boise River water rights more directly than injection into the shallow ground water zone would. Therefore, no injury with respect to Boise River water rights should occur and mitigation is not required.

Enlargement of Use: The applicant does not propose to increase the diversion rate or diversion volume. The cooling use under this right, i.e. the method/diversion works of the heat exchange unit, will not change as a result of this transfer. The cooling use itself will remain non-consumptive. The applicant is seeking approval to discharge the spent water more efficiently, i.e. to the storm drain instead of into the injection well. Discharge directly to the river (via the storm drain) instead of into the shallow ground water production zone will not result in an enlargement of the right, because the shallow ground water is considered tributary to the Boise River, i.e. the water that was reinjected is presumed to eventually discharge to the Boise River.

Local Public Interest: Authorizing the applicant to cease injection into a problematic injection well and use that well as an additional PD for this system will allow the applicant to divert the authorized amount of water to make full beneficial use of the system under the right. The applicant's development of a more efficient system to make full use of the right serves the local public interest.

Beneficial Use/Conservation of Water Resources: The application proposes beneficial use consistent with conservation of water resources in Idaho.

Review of the application finds there is no clear inconsistency with criteria of I. C. § 42-222 preventing processing of the application.

Summary of Information Submitted for Application 63-33245

The application proposes to divert shallow ground water at a rate of 0.41 cfs for heating and cooling of the Union Block Building. Right 63-12342 authorizes diversion of 125.0 ac-ft at a maximum rate of 0.26 cfs for cooling of the Union Block Building. The applicant's representative stated (letter dated 1/5/11) the volume authorized for diversion under right 63-12342 (125.0 ac-ft) is sufficient to operate the Union Block Building's heating and cooling system. In other words, the applicant does not intend to divert a volume in excess of the licensed water right for cooling or heating. However, the applicant does wish to acquire a water right for the heating use (already occurring per 63-12342 beneficial use field report) and an additional increment of rate for the cooling use.

A flow measurement was not conducted during the field exam for licensing of 63-12342. Two theoretical rate calculations were performed based on two different pressures (50 psi and 70 psi) and information from the well log for the current production well. The two theoretical rates calculated exceeded the permitted rate, thus the permitted rate of 0.26 cfs was the limiting factor for licensing of 63-12342. The volume associated with right 63-12342 was calculated using a modification of equations found in Application Processing Memo No. 23 together with cooling degree day information per the license review memo. The modified equation did not take into account the 0.8 factor that should be applied for two story buildings and used cooling degree day information for a base temperature of 65°F not the 71°F inside design temperature of the system. However, the calculated volume of 125 AF is very close to the volume calculation of 127 AF based on diversion at the maximum rate of 0.26 cfs for the 246 day season of use.

The permit application requests a year round season of use for the proposed heating use and additional increment of flow for the cooling use. Right 63-12342 only authorizes cooling use from 3/15 to 11/15. Although the applicant claims to not be seeking an additional increment of volume for the system, it is presumed the applicant will be diverting an additional increment of volume for the heating use and the increased diversion rate and season of use beyond that currently authorized for cooling. With this in mind, the volume will not be limited to that currently authorized under right 63-12342 via a permit condition at this time. The volume for the diversion and uses to be approved under this permit shall be confirmed upon licensing of the new right, should this permit be approved.

Additional Information/Analysis for Transfer 76971

On December 16, 2010, Department staff conducted a conference call with the applicant's representative to discuss the applicant's proposal to change the right requirement that all flows be reinjected into the same zone the flows are diverted from. The consensus reached was that it would be allowable to discharge the flows to the river directly rather than injecting so long as no shallow ground water rights are injured. Part of the reasoning behind this conclusion is the fact that the requirement for reinjection originated because shallow ground water in this area is considered tributary to the fully appropriated (during the irrigation season) reach of the Boise River. The applicant's representative submitted an analysis that concluded the radius of impact that would likely result from pumping at the maximum diversion rate proposed (0.41 cfs) for 154 days (time required to divert maximum of 125 ac-ft). This analysis (representative's letter dated 1/5/11) along with additional information regarding nearby shallow ground water rights and wells (representative's letter dated 4/13/11) concludes injury to shallow ground water rights and wells is not likely. See the Injury to Other Water Rights portion of review memo above for details.

Water District 63 Watermaster will be sent a comment letter during the advertising process of the permit and transfer applications. The Watermaster should be made aware of the proposal to divert additional shallow ground water considered tributary to the Boise River and direct discharge of that water to the Boise River should the applications be approved.

Discussion for Transfer 76971

Data entry affected the water right record for right 63-12342. This right, licensed on July 7, 2010, was developed after 1987 and therefore is not subject to the SRBA.

There are no overlapping rights at the existing or proposed PDs or the PU. Application for permit 63-33245, being processing simultaneously with this transfer, proposes heating use and an additional increment of flow (rate not volume) for the cooling use authorized under this right as discussed above. Right 63-33245, if approved, will use the same PDs proposed for right 63-12342 and have the same PU.

Summary for Transfer 76971

Assuming protests are not filed and/or other information does not contradict the above analysis, the transfer application can be approved as reflected by the draft approval.