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Technical Memorandum

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From: James L. Machin, P.E., CPESC

Subject: Comments on KBA Additional Information Letter dated 4/7/2015

Date: May 22, 2015

Project No.: 212892.0002

In the KBA letter dated 7 April 2015, Item 3 Water Quality Information is misleading. Item 3 presents the results of one well (groundwater) sampling and three stream (surface-water) samplings collected on 21 May 2014, 8 October 2014, and 17 March 2015.

The groundwater results are similar to the three samples TRC collected February 6, 7, and 10, 2014, all of which contained elevated total dissolved solids (TDS), chlorides, and sulfates at levels significantly above the instream water quality standards.

The surface-water samples comprise three isolated events over a period of 10 months. Such a sample set is not conclusive proof of critical water-quality conditions. There are many variables that can affect surface-water quality in samples, such as antecedent streamflow, channel and impoundment storage, urban watershed conditions, known and unknown discharges, and sampling locations and techniques. Effluent limitations on discharges and the impact on a stream are evaluated under steady-state, critical low-flow conditions. The presence of the reservoirs would necessitate a longer time for the stream to come to steady state under average conditions. A much longer time would be necessary to reach steady state under critical conditions because of the time required to replace water in the reservoirs that flowed in under prior non-critical conditions. The data as presented are a good example of that. The groundwater has significantly higher concentrations of all constituents than either the upstream or downstream samples. The downstream samples in these three instances contained lower concentrations than the upstream samples. If the system was in equilibrium, by simple mass balance the downstream samples should have exhibited higher concentrations rather than lower concentrations. The system clearly was not at steady-state, critical conditions. In addition, because zero groundwater was pumped into the reservoir during April 2014, the May 2014 downstream samples would not support any conclusions of how groundwater is impacting downstream portions of the stream.

The TCEQ has procedures and calculations for evaluating discharges under critical conditions. This is a more precise method of determining the impact of a discharge.

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The report conclusion of “the use of the Woodbine Aquifer will not result in an adverse impact to other water right holders or the environment” is unfounded.

