Barton Springs
Edwards Aquifer
CONSERVATION DISTRICT

November 10, 2015

Sent via regular mail and email

Mr. Kaveh Khorzad
Wet Rock Groundwater Services, LLC
317 Ranch Rd 620 South, Suite 203
Austin, TX 78734

RE: Temporary Production Permit and well repair for Needmore Water LLC.

Dear Mr. Khorzad:

This letter serves as a follow up to the November 2, 2015 meeting with you regarding the Needmore Water LLC (Needmore) Well D.

Increasing the Authorized Volume

At the November 2, 2015 meeting with the District, you asked whether Needmore could increase the volume authorized under the temporary permit. The District's position is that, pursuant to District rules and HB 3405, the temporary permit cannot be increased and the regular permit is limited to the amount set forth in the temporary permit unless reduced for failure to achieve the applicable DFC or an unreasonable impact on existing wells.

As the District explained in its October 19, 2015 letter to Mr. McCarthy, the maximum production capacity of the Needmore well of 179,965,440 was based upon the actual pump test pumping rate of 428 gpm at 80% of the annual permit term. The District believes this capacity is consistent with HB 3405, which requires the District to evaluate the actual operation of the well on or before the Act's June 19, 2015 effective date. The only evidence of actual operation is an abbreviated pump test producing a rate of 428 gpm for 22 hours. Using a theoretical maximum capacity based upon a pump size that was never operated in the well is inconsistent with HB 3405.

If Needmore desires to increase the amount permitted under the temporary permit, it must apply for a permit amendment to the regular permit at which time the District shall apply the standard of reasonable non-speculative demand to evaluate the amendment request.

Wildlife Management Plan

The District requires a copy of the TPWD-approved Wildlife Management Plan. Please submit no later than November 18, 2015.

Needmore Ranch II Ltd's authority to beneficially use water

Please provide written evidence of Needmore Ranch II Ltd's authority to beneficially use water supplied by Needmore Water LLC for agricultural wildlife management purposes. Please submit no later than November 18, 2015.

Well Repair

As discussed in our meeting, the District staff documented well construction violations and Well D's general deteriorated condition that require immediate attention to bring the well into compliance with current District and TDLR well construction standards. The District received a work plan to repair the well on November 3, 2015. The District's comments and site specific well construction requirements are listed below:

Well Schematic:	A revised well schematic must be submitted and approved by BSEACD. The schematic shall depict the proposed additional casing depths, the increased borehole intervals, total depth, casing size, annular seal intervals etc. The schematic should depict the meter location, the 1" conductor pipe, the ¾" e-line inspection report, and sampling spigot. Calculated grout volumes need to be submitted with proposed well design schematic.
Notification:	Please continue to apprise the District staff with daily reports that layout the planned well construction activities of the day. The District requests to be onsite during the setting of the casing and grout. A State of Texas Well Report shall be provided to District within 60 days after completion
Maximum Total Depth:	The well shall not be deepened beyond its current total depth. of 800 ft bgs.
Drilling/Casing:	The well shall be cased to a minimum a of 600 ft (estimated base of elevated sulfate zone). The diameter of the borehole from surface to the designated casing depth shall be 4" larger than outside diameter of the casing, therefore the borehole may need to be expanded to down to casing depth. The borehole beyond the designated casing depth shall remain 9 $^{7/8}$ inches.
Grout/Annular Seal:	Packers shall be set at a minimum of 600 ft bgs. Grout shall be emplaced under pressure from packers back up to the

surface.Sulfate resistant grout (Type V or Class H cement) shall be used for annular seal to seal off elevated sulfate zones. The total volume of grout to be used shall be calculated to be equal to 150% of the borehole-casing annulus volume of grout emplaced for the specified annular seal. Therefore the Driller must be prepared to have onsite a volume equivalent to 150% of the expected grout volumes.

Surface Completion: Surface completion should consist of 3/16" thick steel sleeve 2" larger than casing diameter or concrete sealing block 2 feet in all directions sloping away from the wellhead. There must be a minimum 12" of stickup. Well must be equipped with a water tight sanitary seal, a ¾ inch unobstructed e-line inspection port with threaded well plug, a sampling spigot hose bib (located between the well and any downstream equipment) and a meter. Well must also be equipped with a 1" ID conductor pipe that is screen and vented.

Geophysical Log :  A geophysical log is required to be run before casing is set and before grouting. The geophysical log shall include a caliper log and an electrical log with shallow and deep investigative curves (e.g., 16-inch short normal/64-inch long normal resistivity curves or induction log) with a spontaneous potential curve and natural gamma.

Video Log : A video log is required to be run after the damaged PVC pipe has been drilled out and after the borehole has been cleaned out. An additional final video log shall also be run upon final completion of the well with permanent casing and grout. The depth counter shall be legible on the video log and the District shall be provided with an electronic file.

Cementing Log & Report: Upon completion of the well the District must be provided with a cement report that is typically reported to the TCEQ and TDLR to document grout volumes emplaced to provide the annular seal. Additionally, if District staff cannot be present for grouting the District shall also be provided with a cement bond log.

In recent correspondence you have indicated your intention to temporarily install a pump with increased production capacity for aquifer testing purposes. Please note that if there is an intention to increase the capacity of the well (by equipping the well with a permanent larger pump) in excess of the amount authorized under the temporary permit, Needmore Water LLC must submit a well modification application.

The District very much appreciates your cooperation during the well construction repair process. Please contact us if you have any further questions or need clarification regarding the requested

information. You may contact my office by phone at 512/282-8441 or by e-mail at jdupnik@bseacd.org

Sincerely,

John T. Dupnik, P.G.
General Manager

cc:

Needmore Water LLC
3900 N. McColl Rd
McAllen, TX 78501

Ed McCarthy
Jackson, Sjoberg, McCarthy & Townsend LLP
711 West 7th Street
Austin, Texas 78701

Bill Dugat
Bickerstaff Heath Delgado Acosta LLP
3711 S. Mo-Pac, Suite 300
Austin, TX 78746