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N C Utilities Commission  
Raleigh NC

Via e-file

In Re: Quarterly Report on Progress  
W-1075 sub 12

Pursuant to Provision 14, page 31, of Order entered in the above docket on 6-Aug-2018, we submit the following report concerning progress in improvement of production of Southern Trace Well 2.

As reported in our 6-Apr-2019 report Quarterly Report: We reported that efforts had been made to acquire a full e-mail address list for our customers. This has not been particularly successful, as we only have e-mail addresses for approximately 60% of the customers, although we are obtaining them of new customers. Several attempts have been made to further this effort will little response from the customers. We also reported that we were attempting to make contact with the owner of an adjoining property that contains several un-used previously public water system wells in an attempt to acquire one or more of them and the appropriate easements for water lines to connect them to the Southern Trace distribution system. Our attempts to affect the acquisition were summarily rebuffed.

Our management contractor, Management Group of NC, is near roll-out of an e-payment portal that will allow us to better accumulate e-mail addresses, as customers use the e-payment system. They also continue to obtain e-mail addresses from new customers.

As reported in our 11-Jul-2019 report, Mr. Stafford has identified one potential location for another well within the environs of Southern Trace. That location is quite complex, however, as it will require the acquisition of a small well site and protective easements from multiple property owners, and the piping of a rather large drainageway away from the proposed wellhead location to clear the protective easement of potential sources of contamination. He has contacted an engineer familiar with permitting such a stream relocation but has not received any firm recommendation to date.

In our 14-Oct-2019 report we advised that a dowser had been contacted to provide suggested locations for potential wells within the environs of Southern Trace. The dowser was accompanied by Mr. Stafford's son, who is actively involved in the operation of KRJ. The dowser located two specific locations that he felt that a well would have a potential for a usable yield rate. One location would consume nearly half of an occupied residential lot and, due to terrain, would be quite difficult to access with a drill rig. The suggested anticipated yield at that location was approximately half of the yield reduction observed with well 2.

The second potential well location is located in open space held by Southern Trace HOA, with a portion of the NCAC required 100-foot protective radius overlapping the rear yard of an adjoining lot occupied by a residence. The dowser predicted that a yield from a well installed at the precise location he indicated should produce sufficient flow to offset the lost yield from well 2. A surveyor has been retained to identify

the specifics of the location so that a protective easement can be obtained from both the HOA and the affected property owner. Soon after the surveyor was on the site, I received a call from the President of the HOA inquiring as to the process of identifying location, obtaining preliminary approval from Public Water Supply, negotiation of property interests, installation of the well, testing of the well product, design of treatment systems, permitting of treatment systems, and their installation. I explained the entire process and offered to attend a teleconference with the entire HOA Board so that I could explain the process to all of the members, so the President wasn't put in the position of attempting to recall and relate a relatively complex process. Thus far, I have not been invited to such a teleconference.

As soon as a final survey of the well site is available, a well site approval meeting will be scheduled with Public Water Supply and if they are agreeable to the proposed well site, formal contact will then be made by KRJ with both the HOA and the affected property owner in an attempt to obtain a protective easement suitable to Public Water Supply.

As was reported in our 12-Jan-2020 report, a well site inspection was needed to obtain a tentative well site approval so KRJ could meaningfully negotiate an easement for the well and well house and a protective easement to address the requirements of Public Water Supply Section (PWSS).

On 17-Jan-2020, I inquired of PWSS as to their knowledge of a protective easement instrument that had already been vetted by PWSS, so we didn't have to reinvent the wheel. I was advised that neither the Raleigh Regional Office (RRO) or Central Permitting had such an instrument.

On 26-Jan-2020, I requested a well site inspection appointment. The following is a chronology of transactions leading toward a tentative well site approval letter. The reason for the initial letter being "tentative" is that until the site is owned and/or controlled by the Public Water Supply System operator, a "standard" well site approval letter cannot be issued. However, without some sort of indication that the site can be utilized, provided that a suitable easement is obtained, negotiation of such an easement becomes nearly impossible.

- On 7-Feb-2020, I provided a draft well site map to Gregory Vital, in preparation for a meeting on site.
- On 12-Feb-2020, I met with Mr. Vital and we proceeded to walk and discuss the potential well site. I explained to him that I needed some sort of preliminary indication of the suitability of the site before KRJ approaches either the HOA or the owner of the lot encroached upon by the protective easement.
- On 17-Feb-2020, I provided Mr. Vital a revised "Due Diligence Letter" from KRJ concerning the potential well site.
- On 27-Feb-2020, I received an e-mail from PWSS reciting why a "Well Site Approval Letter" could not be generated at that time. The underlying thread being that we could not provide a copy of an easement document executed by the affected property owners. I responded that approaching them with my hat in hand and little to demonstrate that, even if they agreed to the easement, PWSS had provided nothing to assure that under what, if any, conditions the potential well site was usable.

On 15-Mar-2020, I inquired of PWSS/RRO as to the likelihood of us receiving a Tentative Well Site Approval letter, or something that would provide a level of assurance to both KRJ and the property owners that the well site could, in fact, be developed. PWSS/RRO responded on 17-Mar-2020 that such a letter had been drafted and forwarded "to management" for review as it is an atypical request.

Understanding that we are now in the midst of the Coronavirus situation, I don't expect the Tentative Well Site Approval letter, or such, in the near future; nor could we do much about it under the current circumstances.

On 6-May-2020, I received a letter from PWSS indicating the conditions under which the proposed site for well # 4 may be utilized. Since that time, data has been provided to our engineering consultant as to the conditions that must be addressed in a grading plan for the site, as well as the character of easement mapping to memorialize the site. As the well site is within the 100-year flood plain, the grading plan must be approved by Wake County prior to any work proceeding. The actual well site must be raised such that the well and well house are above the 100-year flood elevation. A sketchplan of the needed grading to accommodate the well within the floodplain has been forwarded to an engineer for their use in permitting the work.

During the hearing process of W-1075, sub 12, I proposed the installation of a SCADA system at Southern Trace to affect more discrete pressure control and monitoring as well as remote surveillance of operating conditions of the system. The SCADA system installation has been completed and the system was placed in operation on 12-Jun-2020. We now have the ability to remotely: observe the system pressure, which is recorded in a permanent record; observe actual pump running status; adjust the pump start/stop pressure set points; receive high/low system pressure alarms; adjust alarm set points; and receive alarms of pumps running when they are not supposed to, and the converse.

7-Oct-2020 - The potential of drilling a well at the northern end of Cabin Hill Way has been abandoned. Once the site was surveyed it was turned over to an engineer who was competent in the areas associated with filling in the flood plain. What we learned was: 1) filling in the flood plain is only permitted if the soil used to construct the fill originates from within the flood plain (net-zero gain). This would have resulted in a pond being constructed within or adjacent to the well protective radius; and, 2) there is no way to drain the 'pond' due to the restrictions imposed by the Neuse River Buffer rules. So, basically, the site could not be made to conform to the logical necessities of the well head being above the 100-year elevation.

In early September the dowser again visited Southern Trace with the purpose of attempting to locate water veins of sufficiency to address both the yield loss from Well 2, and the newly surfaced radiological issues with Well 1. He identified: two water veins crossing each other at a point within the 100-foot radius of Well 3; and, one vein located to the north of well 2, again within the 100-foot radius of Well 2. Our surveyor was on site on September 22, locating the points identified by the dowser. Once those maps are provided to us, we will request consent of PWSS to drill test wells at those locations to determine if quantity and quality warrant development of a well at those locations.

8-Jan-2021 Although our surveyor was scheduled to proceed with the mapping, he suffered a severe heart attack and was hospitalized for an extended period. Almost immediately after he returned to the office he was beset with a case of Shingles, which took him out of service for another few weeks. The maps were Survey data of the potential sites has been transmitted to PWSS/RRO for evaluation for approval of the installation of test wells on 14-Dec-2020.

On 28-Dec-2020 a SREC Preliminary Well Site Approval letter was issued for Wells # 4 & # 5, which are proposed on the existing lots of wells # 2 and # 3, respectively. Based on this information KRJ's current plan is to proceed with the installation of test wells at the sites designated by the Dowser, and memorialized by coordinates within the SREC letter.

We are currently determining the best method of making a safe way for a drill rig and service truck to access the sites. Drilling will proceed as soon as access can be to the well sites can be developed.

We will continue to provide updates to the Commission, as required in the order, as the work is prosecuted and results quantified.

Respectfully

A handwritten signature in blue ink, appearing to read 'James R. Butler', with a stylized flourish at the end.

James R. Butler, Manager