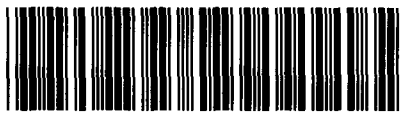

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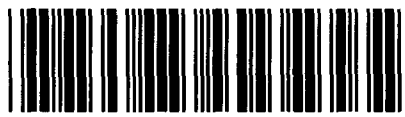

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Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Toby Baker, *Executive Director*

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 12, 2018

Mr. Robert M. Viera, P.E.
LNV, Inc.
801 Navigation Boulevard
Corpus Christi, TX 78408

Re: Nueces WSC - Public Water System ID No. 1780052
Proposed Banquete Booster Pump Station Improvements
Engineer Contact Telephone: (361) 883-1984
Plan Review Log No. P-09252018-154
Texas Water Development Board (TWDB) Project No. 62622
Nueces County, Texas

CN:600693485; RN:101261147

Dear Mr. Viera:

On September 25, 2018, the Texas Commission on Environmental Quality (TCEQ) received planning material with your letter dated September 13, 2018 for the proposed Banquete Booster Pump Station improvements. Based on our review of the information submitted, the project generally meets the minimum requirements of Title 30 Texas Administrative Code (TAC) Chapter 290 - Rules and Regulations for Public Water Systems and is **conditionally approved for construction** if the project plans and specifications meet the following requirement(s):

1. Please submit documentation of ownership of the 50,000-gallon elevated storage tank (EST) that is proposed to be removed and permission to remove the EST if sole or partial ownership belongs to any entity other than Nueces WSC.

2. Separation distances and encasement requirements for installations of potable water distribution lines and wastewater collection lines, wastewater force mains and other conveyances and appurtenances must conform to 30 TAC §290.44(e).

3. Please be advised that starting July 30, 2015, as per the recent revisions of the TCEQ regulations, the use of chloramines as disinfection now has design, operation, maintenance, sampling, recording keeping and other requirements in TCEQ rules. Please note: If water containing chloramines and water containing free chlorine are blended, then a case-by-case review (exception) under §290.39(l) of this title will be required. Public water systems that use chloramines as a disinfectant must be aware of the following rule requirements:

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A. A public water system that uses chloramines must notify their retail and wholesale customers of the use of chloramines, as required by §290.110(g)(6).
   a. The initial notification must contain the exact wording included in Appendix H of §290.47.
   b. Prior to initially providing the chloraminated water to its existing customers, the water system must provide notification by mail or direct delivery at least 14 days before the change.
   c. Additionally, the notification must be provided to the news media, hospitals, renal disease facilities, dialysis clinics, physicians, local health departments, and entities which maintain live fish directly by letter, e-mail, or hand delivery.
   d. New customers must also be notified before they begin receiving water from the water system.
   e. Where appropriate, the notice must be multilingual.

B. The water system must create and maintain a Nitrification Action Plan (NAP) as required by §290.46(z). The system must create a written NAP that:
   a. contains the system-specific plan for monitoring free ammonia, monochloramine, total chlorine, nitrite, and nitrate levels;
   b. contains system-specific action levels of the above monitored chemicals where action must be taken;
   c. contains specific corrective actions to be taken if the action levels are exceeded; and,
   d. is maintained as part of the system's monitoring plan in §290.121 of this title.

   To maintain the disinfection system performance and to control the levels of nitrifying bacteria in its distribution system, the public water system using chloramines may revert to free chlorine (also known as a chlorine conversion, shock, or burn) periodically as a part of the system's written NAP.

C. When using chloramines, §290.42(e)(7)(E) requires public water systems to provide equipment for making at least the following determinations for purposes of complying with the requirements in §290.110 of this title:
   a. free ammonia (as nitrogen);
   b. monochloramine;
   c. total chlorine;
   d. free chlorine; and,
   e. nitrite and nitrate (both as nitrogen). The public water systems must either obtain equipment for measuring nitrite and nitrate or identify an accredited laboratory that can perform nitrite and nitrate analysis and can provide results to the public water systems within 48 hours of sample delivery.

D. Analyzers used to determine the effectiveness of chloramination (as required in §290.110(c)(5)) must be properly verified in accordance with the manufacturer's recommendations every 90 days, as required by §290.46(s)(2)(D). These analyzers include monochloramine, ammonia, nitrite, and nitrate equipment used by the public water system;

E. The residual disinfectant concentration in the water entering the distribution system shall be at least 0.5 mg/L chloramine (measured as total chlorine), and 0.2 milligram per liter (mg/L) free chlorine (when periodically reverting to free chlorine), as required by §290.110(b)(2).

F. The residual disinfectant concentration in the water within the distribution system shall be at least 0.5 mg/L chloramine (measured as total chlorine), or 0.2 mg/L free chlorine (when periodically reverting to free chlorine), as required in §290.110(b)(4) and §290.104(f)(2).

G. The running annual average of the free chlorine or chloramine residual (measured as total chlorine) of the water within the distribution system shall not exceed an MRDL of 4.0 mg/L, as required in §290.110(b)(5) and §290.104(f)(4).

H. Public water systems must determine the effectiveness of chloramination, and shall monitor to ensure that monochloramine is the prevailing chloramine species and that nitrification is controlled, as required by §290.110(c)(5) and it's subparts.

One Time Source Water Monitoring Requirement*

Test	Frequency at each source (including purchased water take points)
Ammonia *(as nitrogen)*	Once or more to determine the availability of ammonia for chloramine formation. • If source has more than 0.5 mg/L free ammonia (as nitrogen), monitor monthly for six months to establish baseline.
Nitrate and Nitrite *(as nitrogen)*	Once or more to provide a reference for downstream nitrate/nitrite levels that may indicate nitrification.

**If you have already completed this source water monitoring in the past and have the results, there is no requirement to take new samples.*

Baseline and Ongoing Routine Chloramines Monitoring Requirement

	At or After the **Entry Point(s)**	Upstream and Downstream of Any Chlorine or Ammonia **Injection Points**	In the **Distribution System**
Total Chlorine	At least weekly.	Weekly and before and after adjusting the chlorine or ammonia feed rate.	Daily/weekly.[a]
Free Ammonia	At least weekly.	Weekly and before and after adjusting the chlorine or ammonia feed rate.	At least weekly.[b]
Mono-chloramine	At least weekly.	Weekly and before and after adjusting the chlorine or ammonia feed rate.	At least weekly.[b]
Nitrite and Nitrate	Monthly for at least 6 months to set baseline, then quarterly.	Routine sampling not required.	At least quarterly, and in response to action level triggers.

a. Total chlorine must be collected weekly/daily based on your system size at locations representing the entire distribution system in accordance with 30 TAC §290.110.
b. Free ammonia and monochloramine should be measured at same time as routine total chlorine monitoring.

I. In accordance with §290.46(d)(2), disinfection equipment shall be operated to maintain a chloramine residual of 0.5 mg/L (measured as total chlorine) in each finished water storage tank and throughout the distribution system at all times.

J. The following records shall be retained for at least three years, as required by §290.46(f)(3)(B):
   a. the disinfectant residual monitoring results from the distribution system;
   b. free and total chlorine, monochloramine, ammonia, nitrite, and nitrate monitoring results if chloramines are used in the water system; and
   c. copies of any public notice issued by the water system.

These conditions may not cover all the rules pertaining to chloramine disinfection. Please see the following links for additional information and guidance.

To obtain a copy of the rules:

http://www.tceq.texas.gov/rules/indxpdf.html

Chloramines Fact Sheet:

https://www.tceq.texas.gov/assets/public/permitting/watersupply/pdw/Chloramine_Fact_Sheet.pdf

Nitrification Action Plan (NAP) Guidance:

https://www.tceq.texas.gov/assets/public/permitting/watersupply/pdw/NAP_Guidance.pdf

These two documents listed above, NAP examples and templates, and more can be found on the Nitrification web page:

https://www.tceq.texas.gov/drinkingwater/disinfection/nitrification.html

The submittal consisted of 26 sheets of engineering drawings and technical specifications. The approved project consists of:

- Two (2) 10,000-gallon American Society of Mechanical Engineers (ASME) Section VIII, Division 1 hydropneumatic tanks;
- Two (2) 400 gallon per minute (gpm), 30 horsepower (hp), high-service pumps at 165-feet total dynamic head (tdh);
- One (1) 100,000-gallon American Water Works Association (AWWA) D103 galvanized bolted carbon steel or AWWA D110 Type III, prestressed concrete ground storage tank;
- One (1) chlorine gas injection system equipped with two 150-lb gas cylinders, chlorinator capable of dispensing up to 100 pounds per day, and electronic scales;
- Liquid ammonium sulfate (LAS) disinfection with one 25-gallon HDPE tank with spill containment, and feed pump capable of delivering up to 0.9 gallons per hour;
- Three (3) fiberglass reinforced plastic shelters to house the chemical feed equipment and air compressor;
- One (1) free chlorine analyzer, one (1) air compressor, and one (1) 60 KVA emergency diesel generator with auxiliary tank;
- Remove one (1) 50,000 gallon elevated storage tank;
- Various yard piping, valves, fittings, and appurtenances; and,
- All-weather access road and intruder resistant fence.

This approval is for the construction of the above listed items only. Any wastewater components contained in this design were not considered.

The Nueces WSC public water supply system and South Texas Water Authority public water supply system provide water treatment.

The project is located south of State Highway 44, between Second and Fourth Streets on Water Tower Road in Banquete, in Nueces County, Texas.

An appointed engineer must notify the TCEQ's Region 14 Office in Corpus Christi at (361) 825-3100 when construction will start. Please keep in mind that upon completion of the water works project, the engineer or owner will notify the commission's Water Supply Division, in writing, as to its completion and attest to the fact that the completed work is substantially in accordance with the plans and change orders on file with the commission as required in 30 TAC §290.39(h)(3).

Please refer to the Plan Review Team's Log No. **P-09252018-154** in all correspondence for this project.

Please complete a copy of the most current Public Water System Plan Review Submittal form for any future submittals to TCEQ. Every blank on the form must be completed to minimize any delays in the review of your project. The document is available on TCEQ's website at the address shown below. You can also download the most current plan submittal checklists and forms from the same address.

https://www.tceq.texas.gov/drinkingwater/udpubs.html

For future reference, you can review part of the Plan Review Team's database to see if we have received your project. This is available on TCEQ's website at the following address:

https://www.tceq.texas.gov/drinkingwater/planrev.html/#status

You can download the latest revision of 30 TAC Chapter 290 - Rules and Regulations for Public Water Systems from this site.

If you have any questions concerning this letter or need further assistance, please contact Mrs. Cynthia R. Pierce, P.E., CFM at 512-239-4664 or by email at Cynthia.Pierce@tceq.texas.gov or by correspondence at the following address:

Plan Review Team, MC-159
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Sincerely,

Cynthia R. Pierce, P.E., CFM
Plan Review Team
Plan and Technical Review Section
Water Supply Division
Texas Commission on Environmental Quality

Vera Poe, P.E., Team Leader
Plan Review Team
Plan and Technical Review Section
Water Supply Division
Texas Commission on Environmental Quality

VP/CO/sg

cc: Nueces WSC, Attn: Ms. Carola G. Serrato, PO Box 415, Kingsville, TX 78364-0415

bcc: TCEQ Central Records PWS File 1780052 (P-09252018-154/Nueces WSC)
TCEQ Region No. 14 Office - Corpus Christi
TCEQ PWSINV, MC-155
Texas Water Development Board