

Control Number: 46743



Item Number: 8

Addendum StartPage: 0



WATERENGINEERS, INC.

WATER & WASTEWATER TREATMENT CONSULTANTS

17230 HUFFMEISTER ROAD, SUITE A~CYPRESS, TEXAS 77429-1643

TEL: 281-373-0500 FAX: 281-373-1113

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2017 APR -7 AM 11:34

PUBLIC UTILITY COMMISSION
FILING CLERK

April 6, 2017

Public Utility Commission of Texas
Central Records
1701 N. Congress, Suite 8-100
Austin, TX 78701

Re: Application from T & W Water Service Company
to Amend Water CCN No. 12892 in Liberty County, TX
Docket No. 46743

Dear Public Utility Commission of Texas:

Please find enclosed the APPROVAL TO CONSTRUCT letter from TCEQ indicating that plans and specifications for the new water plant have been approved.

Please feel free to contact me if you require any additional information or if you have any questions regarding this submittal.

Sincerely,
WATERENGINEERS, INC.

Shelley Young, P.E.
Project Engineer

Encl. - 7 copies of attachments

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Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



PWS_1460187_CO_20170331_Plan Ltr

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 31, 2017

Mr. D Ray Young, P.E.
Water Engineers, Inc.
17230 Huffmeister Road, Suite A
Cypress, Texas 77429-1643

Re: Encino Estates - Public Water System ID No. 1460187
Proposed Water Well No. 1 and Water Plant
Proposed Distribution Systems
Engineer Contact Telephone: (281) 373-0500
Plan Review Log No. P-01312017-184
Liberty County, Texas

CN601363005; RN109717082

Dear Mr. Young:

On January 31, 2017, the Texas Commission of Environmental Quality (TCEQ) received planning material with your letter dated January 27, 2017 for the proposed water well, water plant and distribution system for the above referenced public water system. 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 requirements:

1. Four corrosive indices (Modified Larson's Ratio Langelier Saturation Index, Ryznar Stability Index and the Aggressive Index) will be used to calculate corrosivity of the water from new source(s). Corrosive or aggressive water could result in aesthetic problems, increased levels of toxic metals, and deterioration of household plumbing and fixtures. **If the water appears to be corrosive**, the system will be required to conduct a study and submit an engineering report that addresses corrosivity issues or may choose to install corrosion control treatment **before use may be granted**. All changes in treatment require submittal of plans and specifications for approval by TCEQ.

2. The space between the casing and drill hole shall be sealed by using enough cement under pressure to completely fill and seal the annular space between the casing and the drill hole. The well casing shall be cemented in this manner from the top of the shallowest formation to be developed to the earth's surface. The driller shall utilize a pressure cementation method in accordance with the most current American Water Works Association (AWWA) Standard for Water Wells (A100), Appendix C: Section C.2 (Positive Displacement Exterior Method); Section C.3 (Interior Method Without Plug); Section C.4 (Positive Placement, Interior Method, Drillable Plug); and Section C.5 (Placement Through Float Shoe Attached to Bottom of Casing). The grouting mixture used to pressure cement the annular space shall be neat cement as specified in the most current AWWA Standard for Water Wells and to which a maximum of 6%, by dry weight, bentonite and 2%, by dry weight, calcium chloride may be added. The minimum annular space between the outside diameter of the casing pipe and the borehole shall be no less than 1 1/2 inches in radial thickness or three inches in net diametrical difference and the pressure grouting shall be from the bottom upward utilizing one of the methods listed in this subparagraph for all public water system groundwater well construction. Cementation methods other than those listed in this subparagraph may be used on a site-specific basis with the prior written approval of the executive director. A cement bonding log, as well as any other documentation deemed necessary, may be required by the executive director to assure complete sealing of the annular space.
3. Waterline and wastewater line separation distances must comply with all requirements in 30 TAC Section 290.44(e) of the latest edition of the TCEQ's rules.
4. The proposed corrosion control treatment system will require a separate submittal. Until the well is drilled and the chemical analysis is performed there is not sufficient information for the TCEQ to evaluate any future corrosion control treatment. Please re-submit the corrosion control treatment, if necessary, after the well is drilled and chemical analysis is performed. The submittal must also include the plans and specifications; the specific corrosion control chemical with MSDS sheet; and calculations for sizing feed pumps and chemical storage tanks in accordance with 30 TAC Section 290.39(e)(8) to demonstrate that the proposed treatment system meets the requirements in 30 TAC Section 290.42(f).

Texas Water Code Section 36.0015 allows for the creation of groundwater conservation districts (GCDs) as the preferred method of groundwater management. GCDs manage groundwater in many counties and are authorized to regulate production and spacing of water wells. **Public water systems drilling wells within an existing GCD are responsible for meeting the GCD's requirements.** The authorization provided in this letter does not affect GCD authority to manage groundwater or issue permits.

The design engineer or water system representative is required to notify the Plan Review Team in writing by fax at (512) 239-6972 or by emailing kamal.adhikari@tceq.texas.gov and cc: vera.poe@tceq.texas.gov at least 48 hours before the well casing pressure cementing begins. If pressure cementing is to begin on Monday, then they must give notification on the preceding Thursday. If pressure cementing is to begin on Tuesday, then they must give notification on the preceding Friday.

The TCEQ does not approve this well for use as a public water supply at this time. We have enclosed a copy of the "Public Well Completion Data Checklist for Interim Approval (Step 2)". We provide this checklist to help you in obtaining approval to use this well.

The submittal consisted of 18 sheets of engineering drawings, technical specifications and an engineering summary. The proposed project consists of:

- One (1) public water supply well drilled to 450 feet with 390 linear feet (lf) of 6-inch outside diameter (od) pressure-cemented steel casing; 40 lf of 4-inch od stainless steel screen, 10 lf of 4-inch od blank steel liner;
- The well is rated for 185 gallons per minute (gpm) yield with a 25 horsepower, 3-inch, submersible pump set at 273 feet deep. The design capacity of the pump is 185 gpm at 390 feet total dynamic head;
- Well head concrete sealing block and well head piping including vent, sample tap and flow meter;
- One 125,000 gallon AWWA D103 bolted steel ground storage tank;
- One 6,500 gallon American Society of Mechanical Engineers Code hydropneumatic pressure tank and air compressor;
- Two 425 gpm each vertical turbine end suction centrifugal water supply pumps with associated piping, valves and control;
- Hypochlorination feed system including 75 gallon chemical storage tank with 100 gallon containment, two positive displacement peristaltic feed pumps with associated piping, valves and control;
- Approximately 2,596 lf of 8-inch AWWA C900 poly vinyl chloride (PVC) waterline;
- Approximately 10,356 lf of 6-inch AWWA C900 PVC waterline;
- Approximately 14,235 lf of 4-inch AWWA C900 PVC waterline;
- All weather access road;
- Intruder resistant fence; and
- Various valves, fittings and related appurtenances.

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

The Encino Estates public water system provides water treatment.

The project is located approximately one mile northwest of the intersection of Farm to Market (FM) Road 1008 and Trinity Hills Drive in Liberty County, Texas.

An appointed engineer must notify the TCEQ's Region 12 Office in Houston at (713) 767-3500 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 Section 290.39(h)(3).

Please refer to the Plan Review Team's Log No. P-01312017-184 in all correspondence for this project.

Mr. D Ray Young, P.E.
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Please Note for future submittals: In order to determine if a new source of water or a new treatment process results in corrosive or aggressive finished water that may endanger human health, we are requesting additional sampling and analysis of lead, alkalinity (as calcium carbonate), calcium (as calcium carbonate) and sodium in addition to the required chemical test results for public water system new sources. We are requiring these additional sampling results as listed in our currently revised checklists (Public Well Completion Data Checklist for Interim Use - Step 2 and Membrane Use Checklist - Step 2) which can be found on TCEQ's website at the following address:

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

Please include these additional sampling results in well completion submittals, membrane use submittals, and other treatment process submittals.

New surface water sources will need to also include lead, total dissolved solids, pH, alkalinity (as calcium carbonate), chloride, sulfate, calcium (as calcium carbonate) and sodium with the analysis required in 30 TAC Section 290.41(e)(1)(F).

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>

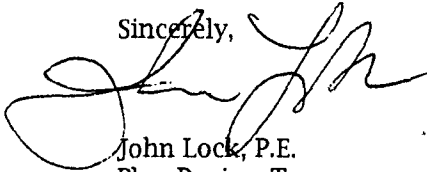
You can download the latest revision of 30 TAC Chapter 290 - Rules and Regulations for Public Water Systems from this site.

Mr. D Ray Young, P.E.
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If you have any questions concerning this letter or need further assistance, please contact Kamal Adhikari at (512)239-0680 or by email at kamal.adhikari@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,



John Lock, P.E.
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/JL/KA/db

Enclosure: "Public Well Completion Data Checklist for Interim Approval (Step 2)"

cc: Encino Estates - Attn.: Water Utilities Official, T & W Water Service Company, 12284 FM
3083, Conroe, Texas 77301