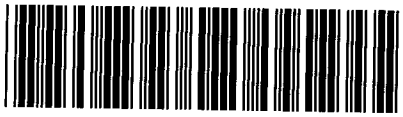
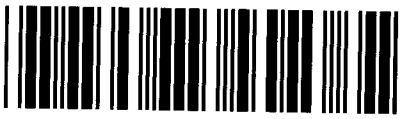


Control Number: 43241



Item Number: 3

Addendum StartPage: 0

House Bill (HB) 1600 and Senate Bill (SB) 567 83rd Legislature, Regular Session, transferred the functions relating to the economic regulation of water and sewer utilities from the TCEQ to the PUC effective September 1, 2014.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 12, 2014

Mr. Charles B. Walker, P.E.
Orbit Systems, Inc.
1302 Airline North
Rosharon, TX 77583

Re: Bayou Colony Subdivision - Public Water System ID No. 0200358
Proposed Wells, Hydropneumatic, Chlorination and Distribution System
Engineer Contact Telephone: (281) 369-2041
Plan Review Log No.: P-01292014-171
Brazoria County, Texas

Dear Mr. Walker:

On January 29, 2014, the Texas Commission on Environmental Quality (TCEQ) received planning material with your letter dated January 23, 2014 for the proposed Bayou Colony Subdivision public water system. Based on our review the project generally meets the minimum requirements of the Title 30 Texas Administrative Code (TAC) Chapter 290 - Rules and Regulations for Public Water Systems (Rules) and is **conditionally approved for construction** if the project plans and specifications meet the following requirement(s):

Existing Well (Well No. 1)

1. A 3 foot high berm will be conducted surroundings the existing well that has an existing elevation of 44 feet above sea level. The well head and well vent will be extended to two feet above the base flood elevation line that is 47 feet.

2. The driller shall utilize a pressure cementation method in accordance with the American Water Works Association (AWWA) Standard for water wells standard A100-06 as required by 30 TAC §290.41(c)(3)(C). The AWWA defines neat cement for a mixture of Class A or B of cement and water in the ratio of not more of 6.0 gallons of water per sack of cement, by weight, bentonite may be added. The 20 sacs of cement in well report, put the mixture of more of 8% of bentonite. An exception request was granted for this PWS by Technical Review and Oversight Team on April 1, 2014.

3. Please be aware that radionuclide testing is required if your well (wells 1 and 2) is located in Brazoria County.

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4. Please register this well report with the Texas Department of Licensing and Regulation (TDLR) well report database.

The location of this well is Lot 20, approximately 10-feet east of the western boundary and 20-feet south of northern-boundary and in the United States Geological Survey (U.S.G.S.) quadrangle sheet of Juliff, Texas.

Propose Well (Well No. 2)

1. A 3 foot high berm will be conducted surroundings the existing well that has an existing elevation of 44 feet above sea level. The well head and well vent will be extended to two feet above the base flood elevation line that is 47 feet.

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 AWWA Standard for Water Wells (A100-06), 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) as required by 30 TAC §290.41(c)(3)(C). The only two type of cement permitted are Class A and B.

The location of this well is Lot 20, approximately 25-feet east of the western boundary and 20-feet south of northern-boundary.

Water Distribution System

1. The hydrostatic leakage rate for polyvinyl chloride pipe (PVC) pipe and appurtenances shall not exceed the amount allowed or recommended by formulas in America Water Works Association (AWWA) Standard C-605 as required in 30 TAC §290.44(a)(5). Please ensure that the formula for this calculation is correct and the most current formula is in use; $Q = LD(P)^{1/2}/148{,}000$ where Q is the quantity of makeup water in gallons per hour, L is the length of pipe section being tested, in feet, D is the nominal diameter of the pipe in inches, and P is the average test pressure during the hydrostatic test in pounds per square inch. Please note this criteria into the specifications.

2. The use of pipes and pipe fittings that contain more than 8.0% lead or solders and flux that contain more than 0.2% lead is prohibited as indicated by 30 TAC §290.44(b)(1). Please be aware that beginning January 2014, changes to the Safe Drinking Water Act will further reduce the maximum allowable lead content of pipes, pipe fittings, plumbing fittings, and fixtures to 0.25 percent. Projects constructed after December 2013 must comply with the maximum allowable lead content of 0.25 percent. Acceptable product marking demonstrating third party certification with the requirements include NSF®-61-G or NSF®-61 and NSF®-372.

An appointed engineer must notify the TCEQ's Region 12 Office in Houston at (713) 737-3686 when construction will start.

Texas Water Code Section 36.0015 allows for the creation of groundwater conservation districts (GCD) as the preferred method of groundwater management. GCD's 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 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 Utilities Technical Review Team in writing by fax (512)239-6972 or email jose.castillo@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 a 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." We provide this checklist to help you in obtaining interim approval to use this well before we can give final approval.

The submittal consisted of 2 sheets of engineering drawings, technical specifications and an engineering summary. The proposed project consists of:

- One as built public water supply **Well No. 1** drilled of 6¾-inch diameter hole and 460 feet deep, 412 linear feet (lf) lf of 4-inch diameter steel casing and pressure cemented for 412 lf;
- 30 linear feet (lf) of 2½-inch screen diameter, 42 lf of 2½-inch diameter blank steel liner with 24 lf overlapping in main casing;
- This well is rated 60 gallon per minute (gpm) yield with a motor size of 5 horsepower (hr). The design capacity for pump is 60 gpm at 228 total dynamic head (tdh);
- One proposed public water supply **Well No. 2** drilled of 8-inch diameter hole and 425 feet deep, 375 linear feet (lf) lf of 5-inch diameter standard dimension ratio (SRD)-17 polyvinyl chloride (PVC) pipe casing and pressure cemented for 375 lf;
- 30 linear feet (lf) of 3-inch diameter slotted screen PVC pipe;
- This well was orillinally rated 60 gallon per minute (gpm) yield with a motor size of 5 horsepower (hr), a submersible pump set at 170 feet deep. The design capacity for pump is 60 gpm at 228 tdh;
- 5,380 linear feet (l.f.) of 3-inch, American Society for Testing and Material (ASTM) Standard 1785 Schedule 40 polyvinyl chloride (PVC) waterline;

- One (1) 2,500-gallon welded steel hydropneumatic tank;
- One (1) 55-gallon polyethylene tank to hold hypochlorite solution;
- One (1) chlorinator equipment with a dosage of 0 to 5 gallons-per-day.
- All valves, fittings and related appurtenances.

This proposed PWS is located approximately 0.40 miles north of the intersection Airline Road No. 3 E and Pursley Road in Brazoria County Texas

Please keep in mind that within 60 days of project completion the engineer must attest in writing that the project was constructed as described in the approved plans, specifications and any change orders filed with the TCEQ as required in Title 30 Texas Administrative Code §290.39(h)(3) of the Rules.

Please refer to the Utilities Technical Review Team's Log No. P-01292014-171 in all correspondence for this project. This will help complete our review and prevent it from being considered a new 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 our website at the address shown below.

http://www.tceq.texas.gov/utilities/planrev.html

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

http://www.tceq.texas.gov/utilities/planrev.html#status

You can download most of the well construction checklists and the latest revision of Chapter 290 "Rules and Regulations for Public Water Systems" from this site.

If you have any questions or concerns about this letter, please contact Mr. Jose J. Castillo, P.E. at (512)239-4787 or by email at "jose.castillo@tceq.texas.gov" or by correspondence at the following address:

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

Sincerely,

Jose J. Castillo, P.E.
Utilities Technical Review Team
Plan and Technical Review Section
Water Supply Division
Texas Commission on Environmental Quality

for Ada Lichaa, P.G., Manager
Plan and Technical Review Section
Water Supply Division
Texas Commission on Environmental Quality

vp/jjc/av

Enclosure: "Public Well Completion Data Checklist for Interim Approval"

cc: Bayou Colony Subdivision, Attn. Mr. Paul Peggy, 1302 Airline North, Rosharon, Texas 77583

bcc: TCEQ Central Records PWS File 0200358 (Bayou Colony Subdivision)
TCEQ Region No. 12 Office Houston
TCEQ, Ms. Leila Guerrero, Certificate of Convenience and Necessity (CCN) and Rate Change Application Technical Review, MC-153
TCEQ, Mr. David Simons, P.E., Technical Review and Oversight Team, MC-159

Well No 1 & 2

PUBLIC WELL COMPLETION DATA CHECKLIST FOR INTERIM APPROVAL

Texas Commission on Environmental Quality
Water Supply Division
Util. Technical Review Team MC-159
P.O. Box 13087, Austin, Texas 78711-3087

Public Water System I.D. No.: _____
TCEQ Log. No.: _____
Owner's Well Id No. or Name.: _____

Any well proposed as a source of water for a public water supply must have plans approved for construction by the TCEQ. Plans are reviewed for compliance with Rules and Regulations for Public Water Systems Title 30 TAC Chapter 290.38-290.49. After the well is drilled, the well completion data listed below must be submitted for TCEQ evaluation. Based on this submitted data, interim approval may be given for use of the well. Please include the TCEQ Log No. and owner's well name when submitting well completion information.

(Small print references in parentheses are Rules and Regulations for Public Water Systems Title 30 TAC Chapter 290.38-290.49)

1. ☐ Copies of ordinance or a recorded deed and map showing ownership and/or sanitary control easements as filed at the county courthouse (bearing the county clerk's stamp), covering all areas within 150 feet of the well owned by the system that will convey to others and neighboring tract not owned by the system (for a sample easement see 30 TAC 290.47(c), or contact the TCEQ Austin office or a Regional office. (Section 290.41(c)(1)(F) of the rules.)
2. ☐ Construction data on the completed well, including:
   - ☐ Casing size, bore hole diameter (at least 3-in wider than casing OD), total well depth, casing material (e.g. steel, PVC-SDR17), casing length, and cementing depth and method (one of the methods in AWWA Standard A-100-(latest rev'n), Appendix. C, *excluding* the dump bailer and tremie methods);
   - ☐ Driller's geologic log of strata penetrated during drilling of the well;
   - ☐ Copy of the official State of Texas Well Report filled out by the water well driller (some of the preceding data is included on the Water Well Report form. (Section 290.41(c)(3)(A),(B),(C) & (G) of the rules.)
   - ☐ Cementing certificate (Railroad Commission or company format). (Section 290.41(c)(3)(A))
3. ☐ A U.S. Geological Survey 7.5-minute topographic quadrangle map (include quadrangle name and number), or a legible copy, with "cross-hairs" showing the location of the completed well. (Section 290.41(c)(3)(A) of the rules.) ACCURACY: All locations collected shall maintain a minimum level of accuracy of at least 25 meters (82 feet). TCEQ OPP 8.11.02)
4. ☐ Record of a 36 hour pump test on the well showing stable production at the well's rated capacity (Section 290.41(c)(3)(A) & (G) of the rules). Include the final well pump capacity in gpm and feet, t.d.h.
5. ☐ Three bacteriological analysis reports showing raw well water to be free of coliform bacterial contamination; reports must be for samples of raw (untreated) water from the disinfected well, collected on three successive days, and submitted to a laboratory certified or accredited by TCEQ. (Section 290.41(c)(3)(A) & (F) of the rules.)
6. ☐ Chemical analysis reports for well water samples showing the water to be of acceptable quality for at least, the most problematic contaminants listed below (Section 290.41(c)(3)(A) & (G) of the rules, and Section 290.104 and 290.105 of Drinking Water Standards). Reports must come from a certified or accredited laboratory for interim use of the well. Maximum contaminant level (MCL) and secondary contaminant level (SCL) units are in mg/l (except arsenic).

MCL	PRIMARY	SCL	SECONDARY	SCL	SECONDARY	SCL	SECONDARY
10 (as N)	Nitrate	0.2	Aluminum	5.0	Zinc	300	Sulfate
1 (as N)	Nitrite	1.0	Copper	1,000	Total Dissolved Solids	300	Chloride
10 µg/l	Arsenic	0.3	Iron	2.0	Fluoride	≥7.0	pH
4.0	Fluoride	0.05	Manganese				

15 Gross alpha (pCi/liter)*
5 Radium-226/228 (pCi/liter)*
50 Beta particle (pCi/liter)*
30 Uranium (µg/liter)* (WHERE: pCi/liter=pico curies per liter, µg/liter=micrograms per liter)

Radionuclide water analyses required only in selected counties listed on the back of this checklist. For more guidance see "How to Conduct Radionuclide Testing for Well Completion Interim Approval"

7. ☐ By checking this box, submitter agrees to contact the Drinking Water Quality Team at 512/239-4691 within 120 days of receiving interim approval to schedule final approval sampling. These will be collected by TCEQ contractors, analyzed by a certified lab, and paid for by the Public Water Supply.
8. ☐ By checking this box, submitter acknowledges that Public Water Supply systems are subject to applicable Texas Administrative Code 30 Chapters 290, 291, 292 and 293.

List of Counties where Radionuclide Testing is Required

Please be aware when you review your radiological data that if the report has gross alpha over 15 pCi/L and uraniums are not reported, you will have to resample or reanalyze and resubmit radionuclide results. If you see gross alpha plus radium-228 over 5 pCi/L, and don't have radium-226, you will have to resample or reanalyze and resubmit complete results. For more information go to following website.

COUNTY	STATE CODE#
Atascosa	007
Bexar	015
Bosque	018
Brazoria	020
Brewster	022
Burnet	027
Concho	048
Culberson	055
Dallam	056
Erath	072
Fort Bend	079
Frio	082
Gillespie	086
Gray	090
Grayson	091
Harris	101
Hudspeth	115
Irion	118
Jeff Davis	122
Kendall	130
Kerr	133
Liberty	146
Llano	150
Lubbock	152

Continued	
McCulloch	154
Mason	160
Matagorda	161
Medina	163
Montgomery	170
Moore	171
Parker	184
Pecos	186
Polk	187
Presidio	189
Refugio	196
San Jacinto	204
San Saba	206
Tarrant	220
Tyler	229
Upton	231
Val Verde	233
Victoria	235
Walker	236
Washington	239
Wichita	243
Zavala	254