Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*

RECEIVED
SOURCE WATER
PROTECTION BRANCH
12 MAY 17 PM 1:08
6WQ-S

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 11, 2012

Ms. Stacey Dwyer, P.E.
United States Environmental Protection Agency
Region 6 (6WQ)
1445 Ross Avenue
Dallas, Texas 75202-2733

Re: UIC Program Revision to Establish an Aquifer Exemption
Fusselman Formation, Montoya Group, and El Paso Group, El Paso County

Dear Ms. Dwyer:

I am writing in response to your letter of April 9, 2012 raising questions on TCEQ's request for approval of the revision of TCEQ's Underground Injection Control Program to reflect the designation of portions of the Fusselman Formation, Montoya Group and El Paso Group as an exempted aquifer in El Paso County, Texas. Your letter requests a better understanding between the data in Table 2 and Appendix C as presented in the application by El Paso Water Utilities (EPWU). This concern was forwarded to EPWU, and TCEQ received a response with a revised version of Table 2. EPWU's response is enclosed. Information from the applicant indicates that the source water used for the desalination operation, over time, will be of poorer quality and therefore the quality of the concentrate stream injected into the Fusselman will also be of poorer quality (higher concentrations). Table 2 has been updated to highlight the highest concentration for analyzed parameters from the three Fusselman Formation water samples and updated information on the 50-year projections for the concentrate waste stream, water in the well bore (assuming a mix of formation and concentrate water), and blended formation and concentrate water at the edge of the 50-year plume.

While the TCEQ appreciates EPA's effort to understand this non-substantive program revision, the TCEQ again requests that the processing of program revisions relating to aquifer exemptions follow EPA's established regulations. Under 40 CFR Section 144.7(b)(3)(ii), the approval of a state program aquifer exemption for an aquifer or portion thereof identified under Section 146.4(c) becomes final if the state director submits the exemption in writing to the Administrator and the Administrator has not disapproved the designation with 45 days. This TCEQ program revision falls under Section 144.7(b)(3)(ii), and EPA regulations do not provide for the tolling of the disapproval period as you indicated in your letter.

As indicated in the original program revision request, the designation of this aquifer exemption is crucial for the planning and conservation of drinking water supplies in the arid El Paso area. The TCEQ hopes the provided information resolves your concern and would appreciate your prompt approval of this non-substantive program revision.

If you have any questions regarding this information, or if you want to discuss it further, please contact Bryan Smith at 512-924-9439 or bryan.smith@tceq.texas.gov.

Sincerely,

Charles W. Maguire, Director
Radioactive Materials Division
Office of Waste
Texas Commission on Environmental Quality

CWM/BSS/nlc

Enclosure

cc: Don Redmond, TCEQ Law Division
Dianne Goss, TCEQ Law Division

LBG-GUYTON ASSOCIATES

PROFESSIONAL GROUNDWATER AND ENVIRONMENTAL ENGINEERING

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2012 APR 13 PM 2:44
12 MAY 17 PM 1:08
6WQ-S

April 10, 2012

Ms. Susan Jablonski, P.E.
Director
Radioactive Materials Division (MC-233)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

DUE DATE ——
ARTS # 15817982
PM B. Smith

Re: El Paso Water Utilities Proposed Exempt Aquifer Water Quality Analyses

Dear Ms. Jablonski:

In response to EPA's April 9, 2012 correspondence to TCEQ regarding clarification between Table 2 and Appendix C in El Paso Water Utilities "Aquifer Exemption Request for Class V Injection Wells," we are providing a modified Table 2 which provides clarification of 50-year projections of concentrate from the plant, well bore concentration, and concentration at the edge of the plume (0.001 concentration line from model results). The concentrate from the plant (50-year projection) reflects assumed increases in current concentrations (Appendix C) due to degrading source water quality.

We greatly appreciate the cooperation of TCEQ in working with EPWU throughout the aquifer exemption process and respectfully request that TCEQ forward this information to EPA Region VI at your earliest convenience. Should you have any questions, please do not hesitate to contact me at (512) 327-9640.

Sincerely,

LBG-GUYTON ASSOCIATES

Brad L. Cross

Brad L. Cross
Associate

cc: Scott Reinert, EPWU
Ben Knape, TCEQ

Enclosure

Table 2

Proposed Exempt Aquifer Water Quality Analyses

All concentrations in milligrams per liter (mg/L) except where noted (Gross Alpha, Ra-226 + Ra-228, and uranium)

Parameter	Primary Standard	Injection Well				50-Year Projections		
		JDF-1	JDF-2	JDF-3	Highest Concentration of the Three Wells (Assumed Formation Water Quality)	Concentrate from Plant	Well Bore Concentration (Assumes 50/50 Mix of Formation Water and Concentrate)	Concentration at Edge of Plume (0.001 concentration line from model results)
Antimony	0.006	N/A	< 0.01	< 0.01	<0.01	BDL	BDL	BDL
Arsenic	0.01	0.0106	< 0.01	< 0.01	0.0106	0.079	0.0395	0.0107
Barium	2	N/A	0.055	0.056	0.056	0.466	0.261	0.056
Beryllium	0.004	N/A	< 0.004	< 0.004	<0.004	BDL	BDL	BDL
Cadmium	0.005	N/A	< 0.003	< 0.003	<0.003	BDL	BDL	BDL
Chromium	0.1	N/A	< 0.010	< 0.010	<0.010	BDL	BDL	BDL
Cyanide	0.2	N/A	< 0.02	< 0.02	<0.02	BDL	BDL	BDL
Fluoride	4	3.11	1.09	1.12	3.11	5.6	4.36	3.11
Gross Alpha (less Ra and U) (pCi/L)	15	412 ± 56.721	620 ± 170	774 ± 40	774 ± 40	24	399	773
Mercury	0.002	N/A	< 0.0005	< 0.0005	<0.0005	BDL	BDL	BDL
Nitrate	10	< 0.5	< 0.10	< 0.10	<0.10	BDL	BDL	BDL
Nitrite	1	1.14	< 0.05	< 0.05	1.14	BDL	0.57	1.14
Ra-226 + Ra-228 (pCi/L)	5	N/A	15 ± 1	19 ± 2	19 ± 2	10.8	14.9	19.0
Selenium	0.05	N/A	< 0.010	< 0.010	< 0.010	BDL	BDL	BDL
Thallium	0.002	N/A	< 0.010	< 0.010	< 0.010	BDL	BDL	BDL
Uranium (ug/l)	30	N/A	21	8.6	21	22	21.5	21.0

Notes:

Concentrate from Plant (50-Year Projection) reflects assumed increases in conentrate concentrations (from Appendix C) due to degrading source water quality

BDL = Below Detection Limit

Equals or Exceeds Primary Drinking Water Standard

50-year water quality projections

1. Trend of water quality degradation was established using the TDS of the source water entering the plant during the years 2008-2011.
2. The starting, ending, and average TDS for the years 2008-2011 was 2610, 3235, and 2922 mg/l, respectively.
3. From the linear regression, assume a degradation factor of 2 for the 50-year period.

50 year projections of water quality parameters in the concentrate.

1. The water quality of the undiluted concentrate is found in Appendix C (from June 2009). Using a degradation factor of 2, we can estimate the chemical composition of the concentrate in 50 years.

Parameter	Undiluted concentrate (Appendix C) June 2009	50-year projection
Arsenic	39 ppb	79 ppb
Barium	0.233 mg/l	0.466 mg/l
Antimony	BDL	BDL
Beryllium	BDL	BDL
Cadmium	BDL	BDL
Chromium	BDL	BDL
Cyanide	BDL	BDL
Flouride	2.81 mg/l	5.6 mg/l
Gross Alpha Less Ra and U	12 ±7 pCi/l	24 pCi/l
Mercury	BDL	BDL
Nitrate	BDL	BDL
Nitrite	BDL	BDL
Ra-226+Ra-228	5.4 pCi/l	10.8 pCi/l
Selenium	BDL	BDL
Thallium	BDL	BDL
Uranium	11ug/l	22 ug/l