

ADDENDUM NO. 2 BRACKISH GROUNDWATER DESALINATION CLASS I UIC TEST INJECTION WELL

SAWS Job No. 10-8615 Solicitation No. B-11-026-DD

To Respondent:

This Addendum will be considered part of the Contract Documents and is issued to change, amplify, add to, delete from, or otherwise explain the Contract Documents dated September, 2011. Where provisions of this Addendum differ from those of the original Contract Documents, this Addendum will take precedence and govern. Respondents are hereby notified that they will incorporate this Addendum into their Proposals, and it will be construed that the Contractor's Proposal will reflect with full knowledge all items, changes, and modifications to the Contract Documents herein specified. Respondents will specifically acknowledge receipt of this Addendum.

Contract Documents and Specifications

1. Section 02000, Injection Well Drilling and Testing, Part 3, Paragraph 3.14.A. Remove the second paragraph and REPLACE with the following:

"3.14 SITE RESTORATION

- A. The Contractor will remove all equipment, materials, etc. to return the well site to its pre-workover condition. This includes removal of fencing, pits, etc. constructed specifically for constructing the well. It also includes disposal, off site, of all fluids, material and refuse that were a result of construction operations. It also includes restoring the site grading, especially where pits have been constructed. The temporary access road shall not be removed."
- 2. Section 02000, Injection Well Drilling and Testing, Part 3, Paragraph 3.3.K.4. ADD the following sentence:
 - "All coring samples shall be analyzed by Core Labs, Norman, Oklahoma and the cost to analyze the core samples shall be borne by the Contractor."
- 3. Section 02000, Injection Well Drilling and Testing, Part 3, Paragraph 3.8. Remove and REPLACE Paragraph 3.8 with the following:

"3.8 COLLECT RESERVOIR FLUID SAMPLES

- A. Fluid Sampling
 - 1. Water Sample: Prior to the well injection or flow testing, two (2) representative reservoir fluid samples shall be collected from both the upper Edwards formation and the lower Edwards formation. The Owner's



Representative shall determine at what times the samples will be collected. The Contractor shall collect the samples under the supervision of the Owner's Representative and store them in an appropriate manner as instructed by the laboratory. The Owner's Representative will utilize San Antonio Testing Laboratory for the fluid sampling analyses and will ensure the samples are picked up from the site and transported to the laboratory, and the results of the analyses are transmitted accordingly.

- 2. The Contractor shall collect an extra set of fluid samples and provide them to the Owner.
- B. The Contractor shall furnish and install a sample tap with valve for sampling. Samples for which laboratory analysis is required shall be collected in specially designated and approved sample containers to be provided San Antonio Testing Laboratory. The sample containers shall be clearly labeled with the project name, well identification, and the time and date and depth of sample collection.
- C. Chain of Custody forms shall be completed for all fluid samples. Copies of the Chain of Custody forms shall be submitted to the Owner within ten days of the final delivery of the samples to the laboratory. All persons handling the samples shall be required to sign the Chain of Custody form.
- D. The Contractor shall be apprised of applicable fluid sampling holding times for the samples for which he is responsible and shall assure that the samples are transmitted to the laboratory in time to meet holding time requirements.
- E. A list of fluid quality analyses components is listed in the following Table 1.

Table 1: Fluid Quality Analyses During Testing			
Density	Temperature	Silica	Selenium
Field and Lab pH	Sodium	Ammonia	Uranium
Total Hardness	Potassium	Arsenic	Radium-226
Turbidity	Carbonate	Cadmium	Radium-228
Color	Bicarbonate	Iron	Gross Alpha
Alkalinity	Sulfate	Lead	Gross Beta
Calcium	Chloride	Manganese	Hydrogen Sulfide
Conductivity	Fluoride	Mercury	Magnesium
Nitrate	Del ¹⁸ O of formation water	Del ² H of formation water	Methane
Total Dissolved Solids		Molybdenum	Total Petroleum Hydrocarbons (TPH)"



ACKNOWLEDGEMENT BY RESPONDENT

Each Respondent is requested to acknowledge receipt of this Addendum No. 2 by his/her signature affixed hereto and to file same as an attachment to his/her Proposal.

Rue, P.E. 73427

Ronn M. Brock, P.E.

Subsurface Technology Group

This P.E. Seal is specifically limited to the designs presented in the Contract Documents dated September, 2011 that were performed under the direct supervision of the Engineer signing hereof, and does not incorporate or relate to any work or design performed by others. Engineer makes no representations and has no liability hereof as to any work or designs or specifications performed by others.

The undersigned acknowledges receipt of this Addendum No. 2 and the Proposal submitted herewith is in accordance with the information and stipulation set forth.

Date

Signature of Respondent

END OF ADDENDUM