

State of Florida



# Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD  
TALLAHASSEE, FLORIDA 32399-0850

**-M-E-M-O-R-A-N-D-U-M-**

COMMISSION  
CLERK

RECEIVED-PPSC  
APR - 4 AM 9:03

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**DATE:** April 3, 2012  
**TO:** Ann Cole, Office of Commission Clerk  
**FROM:** Robert Simpson, Engineering Specialist II, Division of Economic Regulation *RS*  
**RE:** Docket No. 110260-WS; Application for staff-assisted rate case in Lee County by Useppa Island Utilities Co., Inc.

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Attached are some documents addressing issues related to the injection well system for this rate case. Please place the attached documents in the docket file.

Should you have any questions, regarding this matter, please contact me.

Attachments

DOCUMENT NUMBER-DATE

02039 APR -4 2012

PPSC-COMMISSION CLERK



# Florida Department of Environmental Protection

South District  
P.O. Box 2549  
Fort Myers, FL 33902-2549

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

SENT VIA ELECTRONIC MAIL:

August 4, 2009

Eric Glidden, Utility Manager  
Useppa Inn & Dock Company  
Post Office Box 640  
Bokeelia, Florida 33922  
[eric@useppa.com](mailto:eric@useppa.com)

Re: Lee County - IW  
Useppa Inn & Dock Company  
Useppa Island R.O. Concentrate Disposal Facility  
Application No.: FLA146102-003-IW5C  
2<sup>nd</sup> Request for Additional Information

Dear Mr. Glidden:

Thank you for your letter response for additional information for the above referenced facility. A Department staff review of the letter response and supporting documentation, submitted July 6, 2009, and the Permitting and Groundwater Meeting on July 29, 2009 indicates the application is incomplete. Pursuant to the provisions of Section 62-4.055, Florida Administrative Code (F.A.C.), please provide the following information:

### Permitting Questions

(Please contact Deanna Newburg at Ext. 173 for questions regarding these comments.)

1. The response to comment 3 for the following request of providing a characterization of the demineralization concentrate discharge to ground water for the primary and secondary ground water standards as identified in Chapter 62-520, F.A.C. states "a revised page 2DC-20 has been included to reflect a discharge to groundwater. Primary and secondary testing of concentrate is being completed and will be submitted under a separate cover." The primary and secondary testing of the concentrate has not been received. Please provide the data from these tests.

### Groundwater Questions

(Please contact David Rhodes, P.G. at Ext. 125 for questions regarding these comments.)

On Wed. July 29, 2009 a meeting was held between representatives of the USEPPA facility and FDEP. The issues discussed at that meeting and the options for consideration in producing a permit are as follows:

2. Add additional monitor wells to the existing GWMP system and monitor the groundwater at the edge of the zone of discharge pursuant to Rule 62-520.600, F.A.C. The major shortcoming of that approach is that the additional wells will likely continue detection of the contaminant plume currently exceeding the groundwater standards contained in Chapter 62-550.310 and 62-550.320, F.A.C. and result

Page 1 of 3

DOCUMENT NUMBER-DATE

02039 APR-4 09

FPSC-COMMISSION CLERK

2<sup>nd</sup> Request of Additional Information Required  
Useppa Inn & Dock Company  
Useppa Island R.O. Concentrate Disposal System  
Application No.: FLA146102-003-IW5C  
August 4, 2009

in a non-compliance status of this facility with respect to the referenced rules. An occurrence of those violations may result in an enforcement case including fines and penalties along with a Consent Order requiring USEPPA to either cease the discharge or find another way to dispose of the concentrate from the RO system.

3. Combining the concentrate with the WWTP effluent is not likely to successfully resolve the problem as the concentrate will likely require a ten to one blending ratio at a minimum to lower the concentrate concentrations to levels that will not result in a violation of the groundwater standards at this facility. It does not appear that sufficient flow is available from the WWTP to achieve that scenario successfully.

4. Reducing the application rate and spreading the concentrate discharge over a larger area is not likely to resolve the issue as the concentrate will remain concentrated at levels above the tolerance of the vegetation and will likely result an increase of the overall area impacted by the wastestream discharge.

5. Disposal of the concentrate via deep well injection appears to be the best long term option and solution for this facility. The department and USEPPA representatives discussed a five year time table to be included in the permit renewal allowing for the design, permitting and construction of an injection well system on the island that will allow disposal of the concentrate and possibly the WWTP effluent in an industrially classified Class V injection well system. Retention of the existing disposal systems would allow the USEPPA system to maintain compliance with the UIC rules requiring an emergency discharge system for the injectate.

6. The USEPPA representatives were going to discuss these options internally within management and FDEP agreed to provide an RFI stating that the effluent analysis results remained outstanding and that after discussion of the options as provided as a part of the RFI letter USEPPA would reply with their selection of the best option and plans.

The application will remain incomplete until receipt of the requested information. Please refer to this correspondence in your response and submit three (3) copies, an original and two duplicates, of your response and supporting documentation. Also, it is important that your response to this correspondence must be signed, sealed and dated by an engineer registered in the State of Florida.

Please note that pursuant to Section 120.60, Florida Statutes and Rule 62-4.055, Florida Administrative Code (F.A.C.), failure of an applicant to provide the timely requested information by the applicable deadline will result in denial of the application. Please submit the requested information within 90 days of this letter.

2<sup>nd</sup> Request of Additional Information Required  
Useppa Inn & Dock Company  
Useppa Island R.O. Concentrate Disposal System  
Application No.: FLA146102-003-IW5C  
August 4, 2009

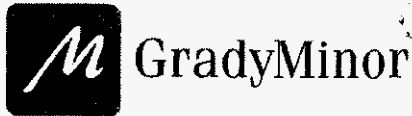
Should you have any permitting questions, please contact me at (239) 332-6975, ext 173. For groundwater questions, please contact David Rhodes at ext. 125. Thank you for your continued cooperation.

Sincerely,

  
Deanna Newburg  
Engineering Specialist Supervisor  
Industrial Wastewater Section

DLN/jl

cc: David Schmitt, P.E. – Q. Grady Minor & Associates, PA [dschmitt@gradyminor.com](mailto:dschmitt@gradyminor.com)  
Nolin Moon – FDEP [Nolin.Moon@dep.state.fl.us](mailto:Nolin.Moon@dep.state.fl.us)  
Keith Kleinmann – FDEP [Keith.Kleinmann@dep.state.fl.us](mailto:Keith.Kleinmann@dep.state.fl.us).



Civil Engineers • Land Surveyors • Planners • Landscape Architects

October 30, 2009

Ms. Deanna Newburg  
Florida Department of Environmental Protection  
2295 Victoria Avenue  
Suite 364  
Fort Myers, FL 33901-3884

**RE: Ussepa Island R.O. Concentrate Disposal  
Facility (FLA 146102-003-IW5C)**

Dear Ms. Newburg:

The following responses are made in regards to your letter of August 4, 2009 on the above referenced permit renewal. A copy of your letter is attached for reference.

Question No. 1

Attached is a copy of the test results on the concentrate discharge to groundwater. Sample data was 7/30/09. Report data was 8/19/09.

Question No. 2

Following the meeting with FDEP representatives on July 29, 2009 and subsequent meetings of representatives of Ussepa Island, Engineer and Entrix; it is proposed to begin the process of a seeking concentrate disposal via a Class V injection well system. Attached is a proposal from Entrix outlining the proposed steps required to achieve completion of a Class V injection well system. Please note, the end completion is subject to the successful completion of the previous steps. If a task is unsuccessful, it may be necessary to re-assess the proposed method of concentrate disposal. Following is a proposed schedule for the conversion to a Class V injection well system.

<u>Task &amp; Description</u>	<u>Time Duration</u>	<u>Cummulative Time From Permit Issuance</u>
A. Exploratory Program Approval & Test Permit	4-8 months	8 months
B. Exploratory Program	3-4 months	12 months
C. FDEP Review/Construction Permits	6-8 months	20 months
D. Complete Injection Well(s)	2-3 months	27 months
E. Obtain Operation Permits for System / Modification of Industrial Permit	6-8 months	35 months

If you have any additional questions please call.

Very truly yours,

David W. Schmitt, P.E.

c: Eric Glidden - Useppa  
Larry Holland, PG. - Entrix

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FDEP South District

O. Grady Minor & Associates, P.A.  
3800 Via Del Rey  
Bonita Springs, FL 34134

Ph. 239-947-1144 • Fx: 239-947-0375  
EB 0005151 • LB 0005151 • LC 26000266

G:\PROJ-ENG\DA\DW5102106DP\08FDEP\RL-9-14-09.doc

www.gradyminor.com

Client Project: Useppa WTP

Lab Project: F0907422

Report Date: 08/19/09



## Laboratory Results

Taken from R/0  
Concentrate.

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D.E.P. South District

Useppa Utilities  
PO Box 640  
Bokeelia, FL 33922

<u>Lab ID</u>	<u>Sample Description</u>	<u>Matrix</u>	<u>Sample Type</u>	<u>Received Date/Time</u>	<u>Sample Date/Time</u>			
F0907422-01	WATER PLANT CONCENTRATE	Waste Water	GRAB	7/30/09 11:40	7/30/09 7:45			
<u>Analysis</u>	<u>Method</u>	<u>Results</u>	<u>Qual</u>	<u>MDL</u>	<u>Units</u>	<u>Analysis Date/Time</u>	<u>Analyst</u>	<u>Cert ID</u>
Aluminum	200.7	0.011	U	0.011	mg/L	8/13/09 21:54	HBEL	E96080
Antimony	200.7	0.0035	U	0.0035	mg/L	8/13/09 21:54	HBEL	E96080
Arsenic	200.7	0.0032	I	0.0026	mg/L	8/13/09 21:54	HBEL	E96080
Barium	200.7	0.20		0.0010	mg/L	8/13/09 21:54	HBEL	E96080
Beryllium	200.7	0.00010	U	0.00010	mg/L	8/13/09 21:54	HBEL	E96080
Cadmium	200.7	0.00020	U	0.00020	mg/L	8/13/09 21:54	HBEL	E96080
Chloride	SM4500Cl-E	6300		I	mg/L	8/3/09 12:25	AS	E84380
Chromium	200.7	0.00060	U	0.00060	mg/L	8/13/09 21:54	HBEL	E96080
Color-True	SM2120B	5		5	C.U.	7/31/09 13:45	RH	E85457
Copper	200.7	0.0010	U	0.0010	mg/L	8/13/09 21:54	HBEL	E96080
Fluoride	SM4500F-C	2.0		0.1	mg/L	8/6/09 15:00	AS	E84380
Iron	200.7	0.0050	U	0.0050	mg/L	8/13/09 21:54	HBEL	E96080
Lead	200.7	0.0029	U	0.0029	mg/L	8/13/09 21:54	HBEL	E96080
Manganese	200.7	0.0020	U	0.0020	mg/L	8/13/09 21:54	HBEL	E96080
Mercury	EPA245.1	0.000060	U	0.000060	mg/L	8/9/09 12:00	HBEL	E96080
Nickel	200.7	0.0016	U	0.0016	mg/L	8/13/09 21:54	HBEL	E96080
Nitrate-N	EPA353.2	0.01	U	0.01	mg/L as N	7/31/09 14:16	SJ	E84380
Nitrite-N	EPA353.2	0.01	U	0.01	mg/L as N	7/31/09 13:52	SJ	E84380
Odor	SM2150B	200		I	TON	7/30/09 13:43	KS	E85457
pH	SM4500H-B	7.33	Q	0.01	std units	7/30/09 13:45	CZ	E85457
See attached results	Subcontract					7/31/09 12:53	SUB	
Selenium	200.7	0.0043	U	0.0043	mg/L	8/13/09 21:54	HBEL	E96080
Silver	200.7	0.00050	U	0.00050	mg/L	8/13/09 21:54	HBEL	E96080
Sodium	200.7	3600		0.50	mg/L	8/13/09 21:54	HBEL	E96080
Sulfate	ASTM-D516-90	893		2	mg/L	8/5/09 17:15	AS	E84380
Thallium	EPA279.2	0.001	I	0.001	mg/L	8/6/09 12:23	JPW	E84380

Client Project: Useppa WTP

Lab Project: F0907422

Report Date: 08/19/09

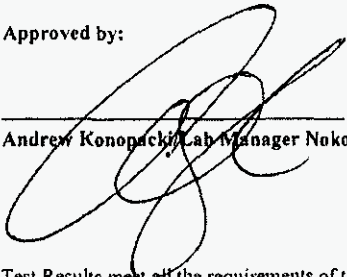
Laboratory Results

<u>Lab ID</u>	<u>Sample Description</u>	<u>Matrix</u>	<u>Sample Type</u>	<u>Received Date/Time</u>	<u>Sample Date/Time</u>
F0907422-01	WATER PLANT CONCENTRATE	Waste Water	GRAB	7/30/09 11:40	7/30/09 7:45

<u>Analysis</u>	<u>Method</u>	<u>Results</u>	<u>Qual</u>	<u>MDL</u>	<u>Units</u>	<u>Analysis Date/Time</u>	<u>Analyst</u>	<u>Cert ID</u>
Total Dissolved Solids	SM2540C	13600		20	mg/L	7/30/09 13:50	CZ	E85457
Zinc	200.7	0.016	1	0.0050	mg/L	8/13/09 21:54	HBEL	E96080

Approved by:



Andrew Konopacki, Lab Manager Nokomis

Comments:

Test Results meet all the requirements of the NELAC standards.

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# HBEL, Inc.

5600 U.S. 1 North, Fort Pierce, FL 34946  
Phone: (772) 465-8584 Fax: (772) 467-1584

Date issued: August 7, 2009

To: Tami Bright  
Sanders Laboratories, Inc.  
1050 Endeavor Court  
Nokomis, FL 34275

---

Client: Sanders Laboratories, Inc.  
Workorder ID: F0907422 CN/MBAS Grab [2035241]  
Received: 7/31/09 10:15

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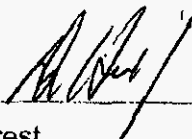
Dear Tami Bright;

Analytical results presented in this report have been reviewed for compliance with the HBEL, Inc. Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:  
E96080, E83509

Questions regarding this report should be directed to the Report Signatory at (772) 465-8584 referencing the HBEL Workorder ID [Number].

Respectfully submitted,



Eric Charest  
HBEL, Inc. Laboratory Manager

Note: This report is not to be copied, except in full, without the expressed written consent of HBEL, Inc.

5600 US 1 North  
Fort Pierce, FL 34946  
FDOH # E96080

4155 St. Johns Pkwy Suite 1300  
Sanford, FL 32771  
FDOH # E83509

Printed: 8/7/09

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# HBEL, Inc.

5600 U.S. 1 North, Fort Pierce, FL 34946  
Phone: (772) 465-8584 Fax: (772) 467-1584

## Quality Control Summary

Client: Sanders Laboratories, Inc.  
Workorder ID: F0907422 CN/MBAS Grab  
Received: 7/31/09 10:15

[2035241]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample		Method Narratives (If Applicable)	
Number	Sample ID	Analytical Method	Description

### Quality Control Summary

Method	HBEL Batch	Analyte	Analytical Issue
--------	------------	---------	------------------

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Fort Pierce, FL 34946  
FDOH # E96080

4155 St. Johns Pkwy Suite 1300  
Sanford, FL 32771  
FDOH # E83509



Printed: 8/7/09

# HBEL, Inc.

5600 U.S. 1 North, Fort Pierce, FL 34946  
Phone: (772) 465-8584 Fax: (772) 467-1584

## CERTIFICATE OF ANALYSIS

[2035241]

Client: Sanders Laboratories, Inc.

Workorder ID: F0907422 CN/MBAS Grab

Parameter	Qualifier	Result <sup>1</sup>	Units	Detection Limit	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2035241001							Sampled: 07/30/09 7:45		Received: 07/31/09 10:15		
Sample ID: F0907422 1E Water Conc.							Matrix: Water		Results reported on Wet Weight Basis		
Cyanide		0.0047U	mg/L	0.0047	0.019	SM4500CNE	WCGE31406	07/31/09 11:30	07/31/09 15:53	GG	E96080
Surfactants as LAS, Mol.wt.340		0.085 I	mg/L	0.022	0.088	SM5540 C	WCGE31404	07/31/09 11:00	07/31/09 14:35	GG	E96080

<sup>1</sup>Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit  
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

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5600 US 1 North  
Fort Pierce, FL 34946  
FDOH # E96080

4155 St. Johns Pkwy Suite 1300  
Sanford, FL 32771  
FDOH # E83509



Printed: 8/7/09



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September 9, 2009

Mr. Eric Glidden  
Useppa Utility Company  
P.O. Box 640  
Bokeelia, Florida 33922

**RE: Proposal to Provide Hydrogeologic Services in Support of  
Reverse Osmosis Concentrate Disposal  
Useppa Utilities, Useppa Island, Lee County, Florida**

Dear Mr. Glidden:

ENTRIX, Inc. (ENTRIX) is pleased to submit this proposal to provide hydrogeologic services in support of reverse osmosis (RO) concentrate disposal for Useppa Utility Company, located on Useppa Island, Lee County, Florida. The Useppa Utility Company maintains permits with the Florida Department of Environmental Protection (FDEP) for domestic wastewater disposal (Permit No. FLA 014494) and RO concentrate disposal (Permit No. FLA 146102). Domestic wastewater is disposed within a percolation pond and RO concentrate are disposed within a drainfield. The RO concentrate disposal permit is currently in the application process for renewal. The wastewater disposal permit will need to be renewed prior to March 2010. Approximately 30,000 gallons of domestic wastewater and about 50,000 gallons of RO concentrate are generated during a maximum or peak day demand.

The FDEP has indicated that disposal of RO concentrate via a Class V injection well system appears to be the best long term solution for disposal. The FDEP also indicated that the domestic wastewater could possibly be disposed through this injection well system. ENTRIX will approach the testing and permitting with the intent of a system that allows disposal of both RO concentrate and domestic wastewater. This approach can provide a long term solution to the utilities' disposal needs, and would result in a more simplified monitoring regime.

A Class V injection well system requires site testing and permitting through the FDEP. Site testing is necessary to identify a suitable injection zone that can meet FDEP criteria and to determine aquifer flow hydraulics. The project will require a mix of the following FDEP permits: 1) Exploratory Well Construction and Testing Permit, 2) Conversion of a test-injection well to a Class V well, 3) Construction Permit for Class V wells, and 4) Class V Wells Operation Permit. Work elements necessary for the completion of this project are outlined in the attached Scope of Work.

Based on the review of lithologic data from wells installed on Pine Island and Gayo Costa, there may be suitable strata for an injection zone within the upper 100 feet onsite. However, the driller will need to be prepared to advance a pilot hole (and wells) deeper if a zone is not identified in the upper 100 feet. Deeper installations will impact the cost of testing and well installations. Further, for the purposes of this proposal, ENTRIX assumes that a total of three injection wells will be necessary for the disposal of both RO concentrate and domestic wastewater. The actual number of wells that will be necessary could be more or less, based on aquifer hydraulics. This proposal assumes that Useppa Utility Company personnel will aid ENTRIX in the performance of a one to three day injection test. Further, the proposal assumes that the Useppa Utility Company will provide transportation on and off of the island for ENTRIX and its subcontractors.

Useppa Island Club\Proposals\jam\_aug\_eg\_pro

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1388 Colonial Blvd. • Fort Myers, FL 33907 • MAIN 239.574.1919 • FAX 239.574.8106 • 1.800.368.7544 • 3-0-2009

D.E.P. South District

Mr. Eric Glidden  
Useppa Utility Company  
September 9, 2009  
Page 2



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ENTRIX appreciates the opportunity to provide a proposal for hydrogeological services on your behalf. ENTRIX can start with the preliminary permitting and development of the exploratory testing program within one week of authorization. Please find attached two (2) complete original Standard Agreements for Professional Services. If this proposal is acceptable, please execute both copies of the Agreement, retain one for your files and return the other to ENTRIX. You may fax a copy of the authorization to (239) 574-8106 to expedite the start of work; however, we will require an original signed Agreement. Should you have any comments or questions, or require additional information, please do not hesitate to contact Brian Barnes at (239) 829-7004 ([bbarnes@entrix.com](mailto:bbarnes@entrix.com)) or Larry Holland at (239) 829-7007 ([lholland@entrix.com](mailto:lholland@entrix.com)).

Sincerely,

Brian K. Barnes  
Senior Managing Hydrogeologist

Larry K. Holland  
Senior Managing Hydrogeologist

BKB/LKH/gng

Enclosures: Standard Agreement for Professional Services (2 Originals)  
Attachment A - Scope of Work

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O.E.P. South District



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**STANDARD AGREEMENT FOR PROFESSIONAL SERVICES**

**Client:**  
Useppa Utility Company  
Attn: Mr. Eric Glidden  
P.O. Box 640  
Bokeelia, Florida 33922

**Date:** September 9, 2009  
**Project No.:** \_\_\_\_\_

**Project Name/Location:** Hydrogeologic Services in Support of RO Concentrate Disposal, Lee County, FL

**Fee Arrangement:** Fees Outlined in Attachment A

**Special Conditions:** Client agrees to pay invoices within 30 days of invoice date. Survey services and biological sampling are not included in our Scope of Services unless specifically noted.

**Scope of Work attached as Attachment A**

- Client to provide name, address and telephone number of property owner.
- Client to provide legal description(s) for the property.
- Client to provide parcel/folio number(s) for the property.
- Client to provide any special site access information (contacts, keys, etc.).
- Client to provide agency fees.

**This Agreement and the attached Terms and Conditions and Scope of Services constitute the complete agreement between ENTRIX and Client with respect to the scope of services hereunder.**

**Offered by:** \_\_\_\_\_  
September 9, 2009

**Accepted by:** \_\_\_\_\_

**Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**Brian K. Barnes, Senior Managing Hydrogeologist**

\_\_\_\_\_  
**Printed Name/Title**

\_\_\_\_\_  
**Printed Name/Title**

\_\_\_\_\_  
**ENTRIX, Inc.**

\_\_\_\_\_  
**Name of Firm**

\_\_\_\_\_  
**Name of Firm**

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## TERMS AND CONDITIONS

ENTRIX, Inc. (hereinafter referred to as ENTRIX) shall perform the services outlined in this Agreement for the stated fee arrangement in accordance with these terms and conditions:

**Access To Site:** Upon execution of this Agreement, the Client represents that they have secured legal rights to access the property and authorizes ENTRIX staff to access the site for activities necessary for the performance of the services.

**Fee:** Unless explicitly stated within the Scope of Services, the proposed cost reflects ENTRIX's best estimate of charges required to complete the project. In some cases all tasks necessary to complete the project are not known at the beginning of the project. Discoveries made during the project may require amendments to the Scope of Services, which could affect final project costs. If such discoveries and/or amendments to the Scope are necessary ENTRIX will inform the Client and provide an explanation of same and the parties shall agree on a modification of the Scope of Services or either party may terminate the Agreement. In the event the Agreement is terminated ENTRIX shall be compensated for all services and expenses committed or performed through the date of termination.

If additional support is requested or required to attend team meetings, public hearings, agency negotiations or other services not specifically referenced to in the Scope of Services, that time will be billed on an hourly basis per the standard ENTRIX Fee Schedule or under a separate agreement.

Where the fee arrangement is to be on an hourly basis or where additional services are requested by the Client, the hourly rates shall be those that prevail at the time services are rendered. Reimbursable out-of-pocket expenses will be invoiced at cost plus fifteen percent (15%). Such expenses may include: film, processing, outside reproduction costs, overnight delivery charges, laboratory fees, travel charges, subcontractors, equipment rental or project specific equipment purchases.

**Billings/Payments:** Invoices for ENTRIX's services shall be submitted on a monthly basis. Invoices shall be payable within thirty (30) days after the invoice date. In the event that the Client disputes any portion of an invoice, client shall notify ENTRIX of such disputed items within ten (10) days of invoice date. Retainers/deposits shall be credited on the final invoice.

**Late Payments:** Accounts unpaid thirty (30) days after the invoice date may be subject to a monthly service charge of one and one-half percent (1.5%) per month (eighteen percent per annum) on the unpaid balance. If invoices are not paid within sixty (60) days, ENTRIX may, without waiving any claim or right against the Client, and without any liability whatsoever to the Client, terminate performance of the services. In the event any portion or all of an invoice remains unpaid ninety (90) after billing, the Client shall pay all costs of collection, including reasonable attorney's fees. By executing this Agreement the Client represents that it has the legal rights and authority to engage ENTRIX to perform the requested services. Non payment of invoices for services may result in a mechanics lien being placed on the subject property.

**Indemnification:** The Client shall indemnify and hold harmless ENTRIX and all of its personnel and subcontractors from and against any and all claims, damages, losses and expenses (including reasonable attorney's fees) arising out of or resulting from performance of the services, provided that any such claim, damage, loss or expense is caused in whole or in part by the negligent act, omission, and/or strict liability of the Client, anyone directly or indirectly employed by the Client (except ENTRIX), or anyone for whose acts may be liable. ENTRIX shall perform its services consistent with industry practices.

**Limitation of Liability:** The Client agrees to limit the ENTRIX's liability to the Client for direct damages due to ENTRIX's negligent acts, errors or omissions, such that the total aggregate liability of ENTRIX shall not exceed ENTRIX's total fee for services rendered on this project.

**Termination of Services:** This Agreement is subject to termination by the Client or ENTRIX upon thirty (30) days written notice. In the event of any termination, ENTRIX shall be paid for all services rendered and reimbursables incurred through the date of notice of termination. In the event of termination, the Client shall pay all additional costs reasonably related to termination of the project and a proportionate amount of the consideration hereunder commensurate with the portion of the project accomplished.

**Contract Transfers:** This contract is an exclusive contract between ENTRIX and the Client. This contract may only be transferred with 30-day notification to ENTRIX, and at ENTRIX's discretion. ENTRIX reserves the right to not accept contract transfers to a third party for any reason.

**Ownership of Documents:** All report documents produced by ENTRIX under this Agreement shall be made available to the Client upon receipt of full payment for services rendered. ENTRIX shall retain ownership of all field notes, computer files and project files used to produce the work products and may make copies of all work products.

**Applicable Laws:** Unless otherwise specified, this Agreement shall be governed by the laws of the State of Texas. In the event legal action is undertaken, it is hereby agreed that the venue and jurisdiction shall be Harris County, Texas.

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**ATTACHMENT A  
SCOPE OF WORK FOR TESTING, PERMITTING, AND INSTALLATION  
OF A CLASS V INJECTION WELL SYSTEM**

The following is a phased program to permit, investigate and construct a Class V injection well disposal system. Dependent upon the hydraulics of the injection zone, this system may be used to dispose of both Reverse Osmosis by-product and treated waste water. This will require a mix of the following permits from the Florida Department of Protection (FDEP): 1) Exploratory Well Construction and Testing Permit, 2) Conversion of a test-injection well to a Class V well, 3) Construction Permit for Class V wells, and 4) Class V Wells Operation Permit.

**A – Exploratory Program Approval and Test Permit**

1. Develop Testing Program
2. Program Submittal to FDEP and Response

**B – Complete Exploratory Program**

1. Mobilize
2. Test Boring
  - Lithology
  - Water quality samples – samples from selected horizons
  - Identify target injection zone
  - Characterize confining layers
3. Convert Test Well to 2-inch or 4-inch monitor well (Injection zone)
4. Construct 4-inch test injection well
5. Review injection testing plan and set-up with FDEP
6. Complete Injection Testing – Assumes 24-hours and 1 monitor well
7. Complete Analysis and Report – Includes conceptual design for final wellfield
8. Submit Report for Client Review
9. Submit Report to FDEP

**C – Complete Injection Wells (for proposal purposes assumes a total of 3 Class V wells)**

1. Permit for conversion of test-injection well to Class V well
2. Permit for construction of Class V wells
3. Mobilize
4. Install remaining Class V wells
  - Lithologic samples
  - Well construction supervision
5. Complete 4 hour injection capacity test on each well (2 each)
6. Completion report
  - Report will include individual well capacities and suggested operation protocol.

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**ATTACHMENT A  
SCOPE OF WORK FOR TESTING, PERMITTING, AND INSTALLATION  
OF A CLASS V INJECTION WELL SYSTEM  
- Continued -**

**D -- Operation Permit**

1. Complete and submit Class V Operation Permit to FDEP
2. Assist in negotiating and developing operating and monitoring requirements

**E -- Assumptions and Limitations**

The following assumptions are made in the proposal:

1. The drill rig will be transported back to the mainland within 24-hours of client notification of work completion with the drill rig.
2. The day rate for the drill rig will be \$ /day if on the island after the 24-hour work completion notification.
3. The cost proposal assumes that the target injection interval will not exceed 100 feet below ground level. Other similar Class V projects in the area did not exceed this depth. However, since we do not have site-specific data, we cannot guarantee that a similar injection zone is present on site.
4. The injectivity test is estimated for two days (48 hours) duration. The client will provide the potable water to the wellhead for the test. The client will provide his on-site personnel to assist in data collection during the night shift. ENTRIX personnel will leave the site daily.
5. The well cost is for an open hole completion. Should a screened completion be necessary, an additional charge of \$ /well will be added.
6. Submittal of permit applications does not constitute a guarantee that the FDEP will issue permits. Further, the FDEP could request additional information that could result in additional costs.

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