

**Beeline Community
Development District**



**Plug and Abandonment Report for
Deep Injection Well System at the
Beeline Community Development District
Plug and Abandonment Permit # 0044926-007-UA**



August 12, 2011

Gardner Strasser, P.G.
Florida Department of Environmental Protection – Southeast District
400 North Congress Avenue, Suite 200
West Palm Beach, Florida 33401

SUBJECT: Plug and Abandonment Report
Plug & Abandonment of DIW System - Beeline Community Development District (BCDD)
FDEP UIC Plug & Abandonment Permit Number 0044926-007-UA

Dear Gardner,

The purpose of this submittal is to document the activities related to the plug and abandonment of Florida Department of Environmental Protection (FDEP) regulated Class I deep injection well identified as IW-1 and associated dual-zone monitor well MW-1 as per FDEP-issued Plug and Abandonment Permit Number 0044926-007-UA. This well is located at the Beeline Community Development District's (BCDD) Wastewater Treatment Facility at 17900 Beeline Highway, West Palm Beach, Palm Beach County, Florida.

The plug and abandonment of deep injection well IW-1 was successfully completed in late September and early October of 2010. As per the requirements of Chapter 62-528.425 (FAC), post-closure monitoring was conducted for a period of six (6) months, after the plug and abandonment of injection well IW-1, to monitor the attenuation of any pressure effects and water quality changes caused by the underground injection operation in the injection zone and/or in overlying aquifers. Based on the post closure monitoring of dual-zone monitoring well MW-1, no adverse impacts were observed from the previous operation of IW-1. A post closure monitoring report was submitted to FDEP in May of 2011. The plug and abandonment of dual-zone monitor well MW-1 was successfully completed in June of 2011.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

If you have any questions or concerns based on the information provided herein, please contact me at 561-684-3375.

Sincerely,

Michael Bennett, P.G.
Senior Hydrogeologist
AECOM/WPB

Cc: Peter Pimentel BCDD
Karen Brandon, P.E. AECOM/WPB
Joe Haberfeld FDEP Tallahassee
Emily Richardson SFWMD
Darrel Graziani PBCHD/Bureau of Water
File

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- Appendix A: FDEP-issued Plug and Abandonment Permit Number 0044926-007-UA
- Appendix B: General Affidavit to Record IW-1 with Palm Beach County Clerk of Court
- Appendix C: AECOM Reports of Daily Activity
- Appendix D: Geophysical Logs and Video Survey in DVD Format
- Appendix E: FDEP Form 62-528.900 “Certification of Plugging Completion Class I, III or V Well”

Introduction

The purpose of this report is to document the activities related to the plug and abandonment of Florida Department of Environmental Protection (FDEP) regulated Class I deep injection well identified as IW-1 and associated dual-zone monitor well MW-1 as per FDEP-issued Plug and Abandonment Permit Number 0044926-007-UA. This Class I injection well is located at the Beeline Community Development District's (BCDD) Wastewater Treatment Facility at 17900 Beeline Highway, West Palm Beach, Palm Beach County, Florida, see **Figure 1**. A copy of the plug and abandonment permit is included in **Appendix A**. A notarized general affidavit to record IW-1 with the Palm Beach County Clerk of Court is included in **Appendix B**.

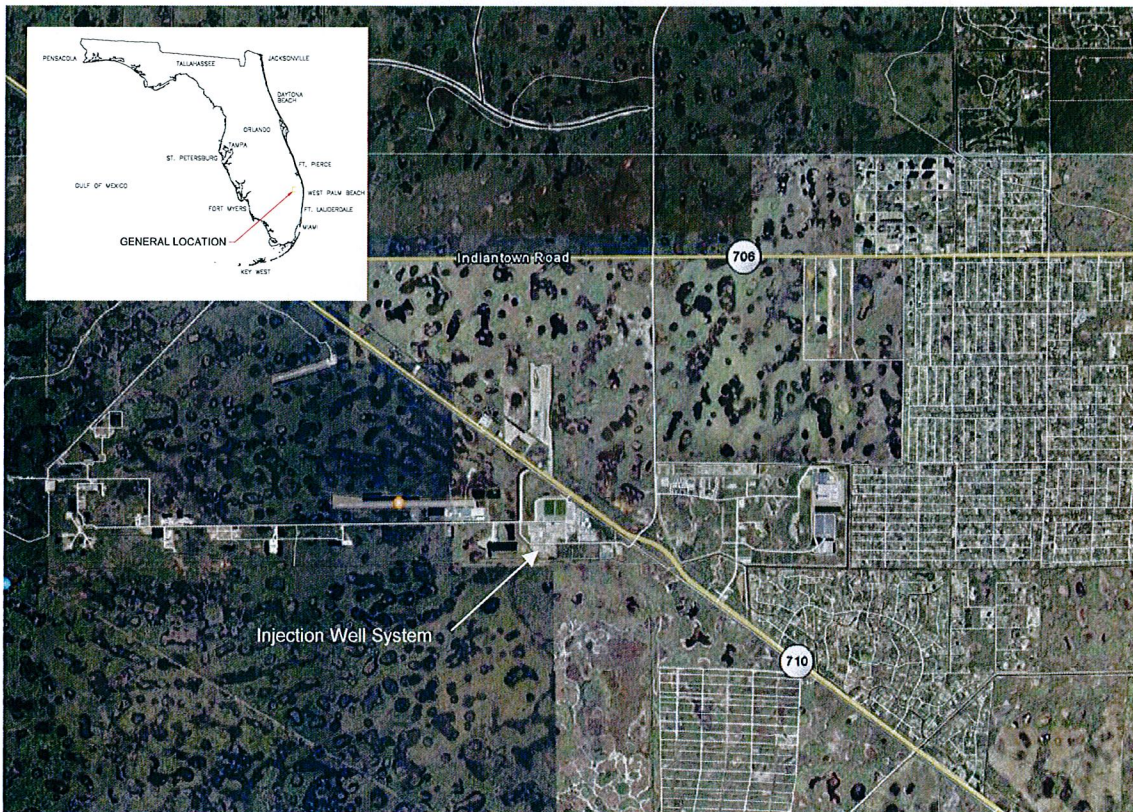


Figure 1: Site Location Map

Plug and Abandonment of Deep Injection Well IW-1

The plug and abandonment of deep injection well IW-1 was successfully completed on October 1, 2010 with cement returns visible at surface and later hard tagged at three (3) feet below pad level. AECOM daily activity reports documenting the plug and abandonment activities are included in **Appendix C**. Before the start of plug and abandonment operations, a video survey and geophysical logging was conducted at IW-1 which included: 4-arm caliper, natural gamma ray and cement bond density logs. Copies of the geophysical logs and the video survey can be found in **Appendix D**. The base of the 10 $\frac{3}{4}$ -inch diameter stainless steel injection casing was documented at a depth of 2,730 feet bpl via the video

survey and 4-arm caliper log. The video survey was terminated when an obstruction in the injection zone was encountered at a depth of 3,035 feet bpl. The obstruction appeared to be a stainless steel centralizer that was dislodged during initial casing installation. Geophysical logging was not performed below this depth due to the obstruction.

The plug and abandonment details for deep injection well IW-1 are illustrated in **Figure 2** and summarized in **Table 1**. The open-hole injection interval from the total depth of 3,303 feet bpl to 2,756 feet bpl (547 feet) was backfilled using FDOT #57 Stone. The 10 3/4-inch diameter stainless steel injection casing was filled with ASTM Type II Neat Cement from 26 feet below the base of the injection casing (2,756 feet bpl) to land surface in four (4) separate stages. Stage 1 of the cementing activities sealed-off the interval from 2,756 feet bpl (26 feet below the base of the injection casing) to 2,698 feet bpl (32 feet inside the 10 3/4-inch injection casing). Stage 2 of the back plugging sealed the injection casing from 2,698 to 1,971 feet bpl (727 feet of lift). Stage 3 of the cementing activities back plugged the injection casing from 1,971 to 766 feet bpl (1,205 feet of lift). Stage 4 of the cementing activities plugged the injection casing from 766 to 3 feet bpl (763 feet of lift) as summarized in **Table 1**. A signed and completed FDEP Form 62-528.900 (2) "Certification of Plugging Completion Class I, III or V Well" is included in **Appendix E**.

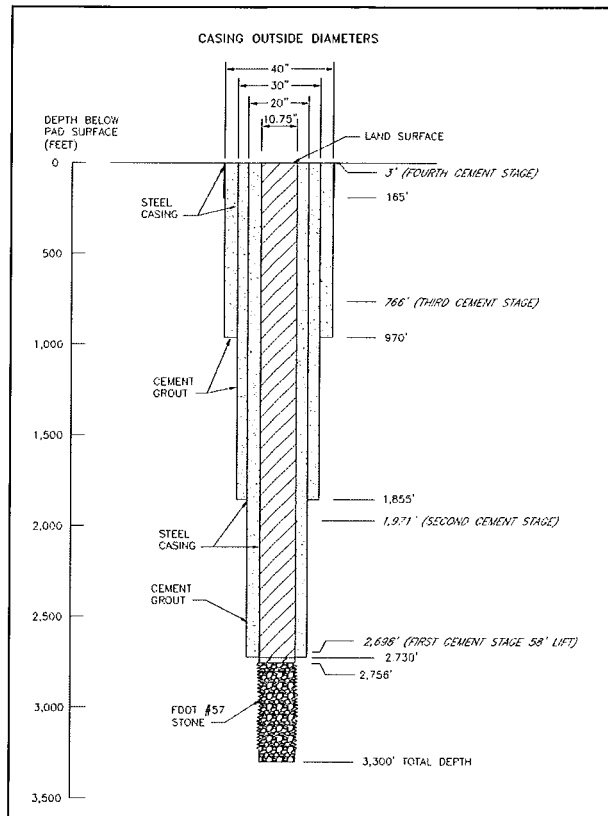


Figure 2: IW-1 Plug and Abandonment Details

Table 1: IW-1 Plug and Abandonment Summary

Stage #	Date	Material Used	Volume Used	Theoretical Volume Based on Caliper Log	Depth Interval of Plug (feet bpl)	Feet of Lift (feet)
Backfill	9/22/10	FDOT #57 Stone	27 cubic yards		3,303 - 2,756	547
1	9/28/10	ASTM Type II Neat Cement	12 barrels	12 barrels	2,756 - 2,698	58
2	9/29/10	ASTM Type II Neat Cement	84 barrels	83 barrels	2,698 - 1,971	727
3	9/30/10	ASTM Type II Neat Cement	125 barrels	136 barrels	1,971 - 766	1,205
4	10/1/10	ASTM Type II Neat Cement	81 barrels	86 barrels	766 - 3	763

Post-Closure Monitoring

As per the requirements of Chapter 62-528.425 (FAC), post-closure monitoring is required, after the plug and abandonment of the injection well, to monitor the attenuation of any pressure effects and water quality changes caused by the underground injection operation in the injection zone and/or in overlying aquifers.

The dual-zone monitor well identified as MW-1 was sampled monthly for six months after the closure of deep injection well IW-1 and tested for the following parameters: pH, temperature, specific conductance, and total dissolved solids (TDS). In addition to water quality testing, continuous water level data was recorded and monitored for both the upper and lower zones of MW-1.

MW-1 Upper Zone

The results of the post closure monitoring data for the upper zone of MW-1 are summarized in **Table 2** and illustrated on **Figures 3** through **5**. In addition to the data collected during the post closure monitoring period, relevant data provided to the Department, via Monthly Operating Reports (MOR's) as part of injection well operating permit, for six months prior to the plug and abandonment of IW-1 is also included. Water quality and water level data remained consistent throughout the post closure monitoring period. It should be noted that variations in the minimum monthly water levels are due to the pumping of the well during water quality sampling events. Based on the post closure monitoring data of the upper monitoring zone of MW-1, there were no apparent adverse impacts observed from the previous operation of IW-1.

Table 2: MW-1 Upper Zone Post Closure Monitoring Summary

Date	Conductivity (umhos/cm)	TDS (mg/L)	p.H. (S.U.)	Temperature (C)	Maximum Monthly Water Level (feet)	Average Monthly Water Level (feet)	Minimum Monthly Water Level (feet)
Jan-10	4,091	3,170	7	26.5	23.0	17.7	13
Feb-10	5,050	2,940	8.1	26.7	23.0	18.4	8
Mar-10	5,290	3,180	7.7	25.9	23.0	18.9	14
Apr-10	4,970	3,180	8.0	27.1	20.3	19.6	10
May-10	4,780	3,120	8.0	27.5	22.5	19.1	16
Jun-10	4,700	3,210	8.0	28.4	19.0	18.2	18
Jul-10	4,530	3,130	8.4	26.8	19.8	19.1	18.3
Aug-10	4,900	3,090	7.1	27.0	19.8	18.8	18
Sep-10	4,870	2,960	8.3	26.9	19.8	18.8	18.5
Oct-10	5,310	3,040	8.1	27.0	19.8	18.7	8
Nov-10	5,300	3,470	6.9	26.8	19.0	18.9	18.5
Dec-10	5,450	2,950	7.8	26.6	19.0	13.7	4
Jan-11	5,440	3,140	6.8	25.1	18.5	17.9	6
Feb-11	5,050	3,140	7.1	25.4	19.0	15.3	11
Mar-11	5,440	3,250	8.0	27.4	18.5	18.0	17.5
Apr-11	5,320	3,190	8.2	27.0	19.0	17.4	8

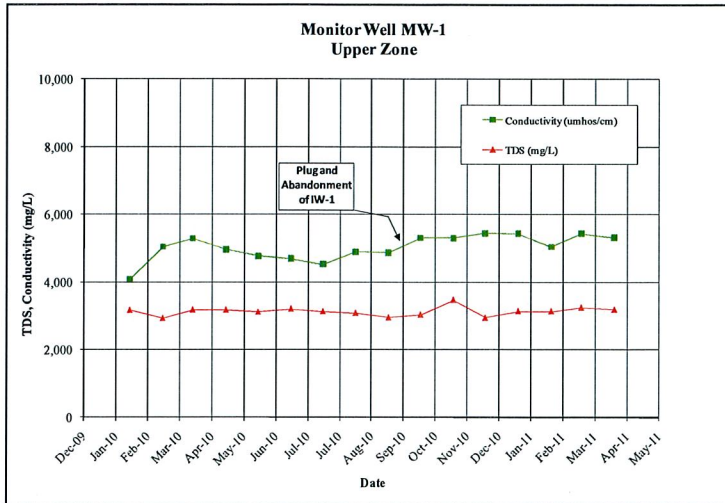


Figure 3: MW-1 Upper Zone - Conductivity and TDS

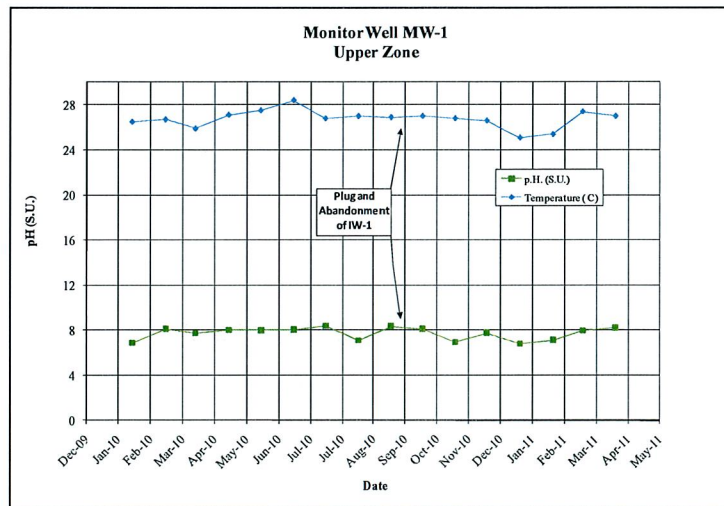


Figure 4: MW-1 Upper Zone - pH and Temperature

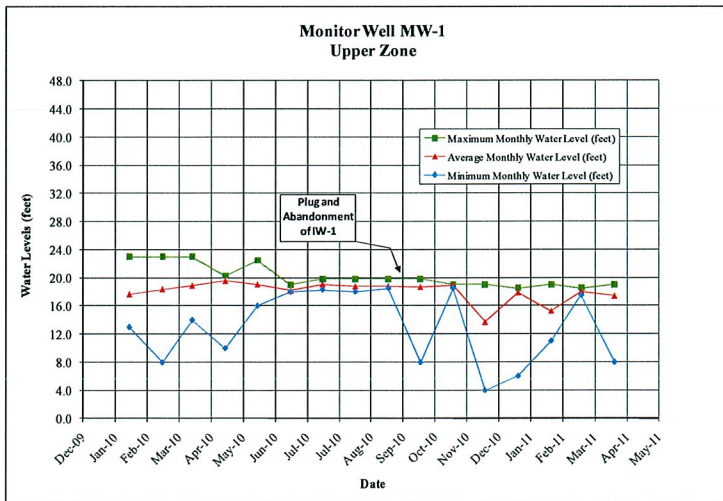


Figure 5: MW-1 Upper Zone - Water Level Data

MW-1 Lower Zone

The results of the post closure monitoring data for the lower zone of MW-1 are summarized in **Table 3** and illustrated on **Figures 6** through **8**. In addition to the data collected during post closure monitoring period, relevant data provided to the department, via Monthly Operating Reports (MOR's) as part of injection well operating permit, for six months prior to the plug and abandonment of IW-1 is also included. Water quality and water level data remained consistent throughout the post closure monitoring period. Please note that conductivity values for June and July, 2010 have not been included due to faulty field equipment that recorded inaccurate data. It should also be noted that variations in the minimum monthly water levels are due to the pumping of the well during water quality sampling events. Based on the post closure monitoring data of the lower monitoring zone of MW-1, there were no apparent adverse impacts observed from the previous operation of IW-1.

Table 3: MW-1 Lower Zone Post Closure Monitoring Summary

Date	Conductivity (umhos/cm)	TDS (mg/L)	p.H. (S.U.)	Temperature (C)	Maximum Monthly Water Level (feet)	Average Monthly Water Level (feet)	Minimum Monthly Water Level (feet)
Jan-10	41,200	32,500	7.0	27.0	25.00	22.80	15.5
Feb-10	40,930	30,800	7.5	26.8	27.00	23.10	22
Mar-10	39,980	32,600	6.9	25.6	24.30	23.40	18
Apr-10	41,170	32,400	7.7	27.2	24.80	24.00	19.8
May-10	40,100	30,000	7.6	27.6	26.00	23.30	21.5
Jun-10	**	31,300	7.7	28.1	24.00	23.30	22.5
Jul-10	**	30,600	7.8	27.3	23.80	22.90	22.3
Aug-10	40,800	31,700	7.4	27.4	23.80	23.20	22.5
Sep-10	39,530	32,200	8.0	27.2	24.30	23.50	23
Oct-10	40,500	30,400	7.7	27.2	25.00	23.70	15.5
Nov-10	39,500	29,900	6.9	26.8	24.00	22.50	21.8
Dec-10	41,600	31,700	7.4	26.7	22.80	19.90	17
Jan-11	39,300	31,500	6.5	26.0	24.00	20.00	17.5
Feb-11	41,130	32,100	6.5	26.1	22.50	18.30	12.5
Mar-11	42,390	31,700	7.6	27.5	22.50	22.00	21.5
Apr-11	41,780	32,000	7.7	27.6	22.50	21.40	17.5

** inaccurate field data recorded

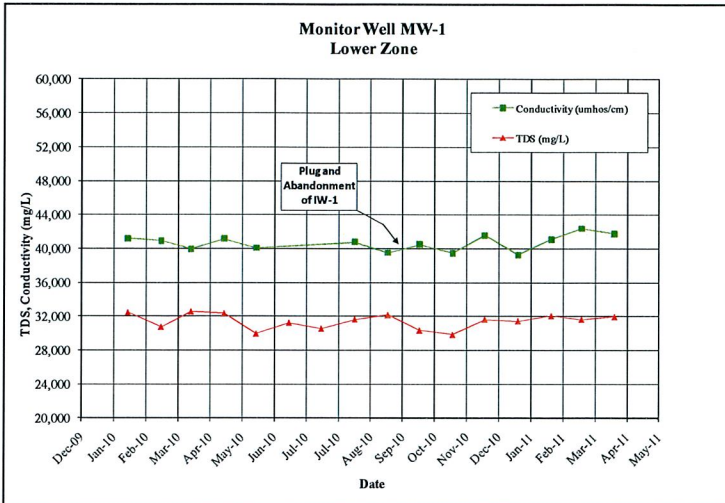


Figure 6: MW-1 Lower Zone - Conductivity and TDS

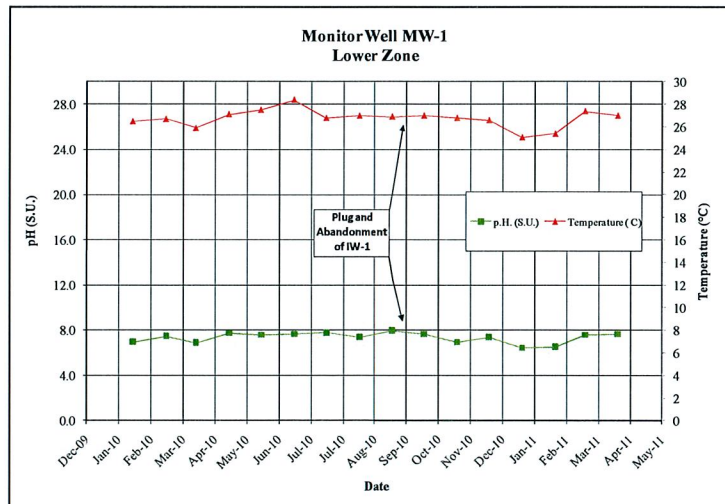


Figure 7: MW-1 Lower Zone - pH and Temperature

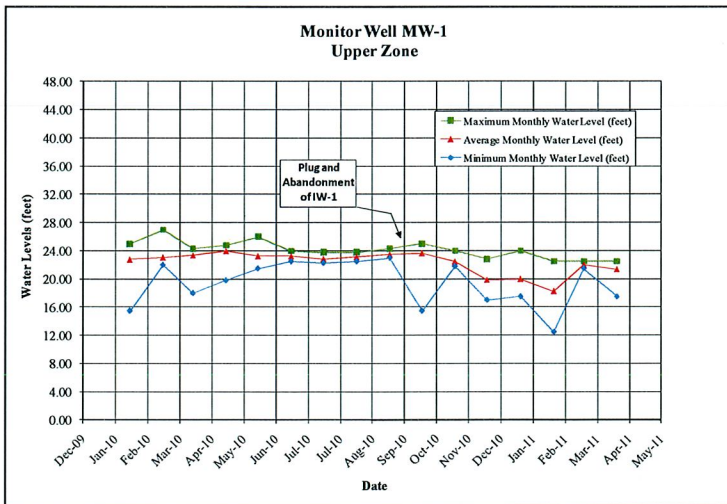


Figure 8: MW-1 Lower Zone - Water Level Data

Plug and Abandonment of Dual-Zone Monitor Well MW-1

Upon FDEP request approval, the plug and abandonment of dual-zone monitor well MW-1 was successfully completed in June of 2011 in accordance with Chapter 62-528, Florida Administrative Code (FAC) and the FDEP-issued Plug and Abandonment Permit Number 0044926-007-UA. The plug and abandonment details for dual zone monitor well MW-1 are illustrated in **Figure 9** and summarized in **Tables 4 & 5**.

It should be noted that during the plug and abandonment activities of MW-1 it is believed that the Contractor (AWE) inadvertently punctured the walls of the 6 inch casing. After completing the first and second stages of cementing and completely sealing off the open hole section of the lower monitor zone, it was observed that the well was alive and displaying artesian flow. It was concluded that there was a hole connecting the fluids in the 6 inch pipe to the fluids of the upper monitor zone in the annulus between the 16 inch and the 6 inch casing for the following reasons: the lower monitor zone had been sealed off and unless there was a breach in the casing there was nowhere for the water to be coming from; static water levels for the lower monitor zone, which had been monitored for the past year during Post Closure Monitoring, are below land surface and never displayed a pressure head that was above land surface.

To confirm that there was a breach in the 6 inch casing, a static water level reading was taken (after the lower monitor interval had been sealed) using a water interface indicator and then 3 bbls of water was pumped into the well column. It was observed that the water levels rose after the 3 bbls was introduced into the well and then fell back down to the equilibrium point fairly quickly (3-5 minutes). Once it was confirmed that the 6 inch casing had been punctured, it was decided to seal off the open hole section of the upper monitor zone before ensuing activities to back plug the 6 inch casing of the lower monitor zone.

MW-1 Upper Zone

The open-hole upper monitor zone and annulus between the 16" casing and the 6" casing was filled with ASTM Type II Neat Cement to land surface in five (5) separate stages. Stage 1 of the cementing activities sealed-off the open hole monitor zone interval from 1,207 to 1,081 feet bpl. Stage 2 of the cementing activities sealed-off the remaining portion of the open hole monitor

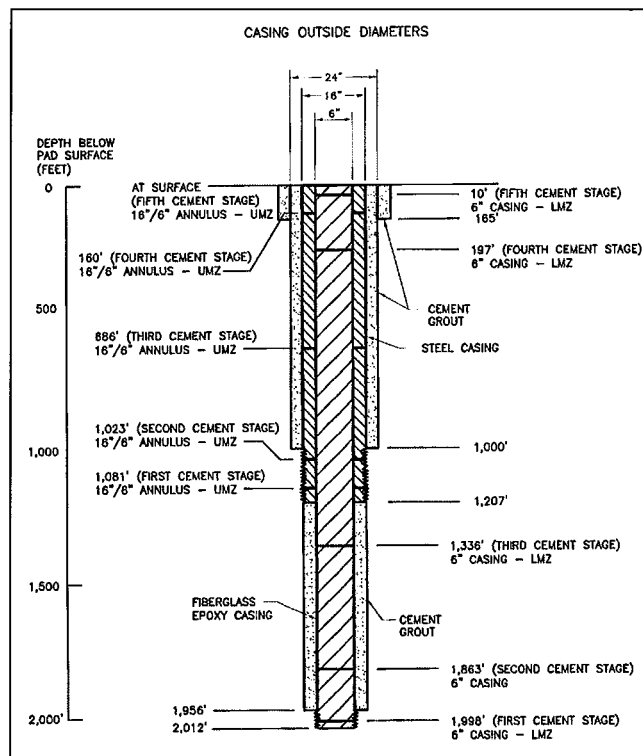


Figure 9: MW-1 Plug and Abandonment Details

zone interval and up into the annulus between the 16” casing and the 6” casing from 1,081 to 1,023 feet bpl. Stage 3 of the cementing activities back plugged the annulus between the 16” casing and the 6” casing from 1,023 to 686 feet bpl. Stage 4 of the cementing activities back plugged the annulus between the 16” casing and the 6” casing from 686 to 160 feet bpl. Stage 5 of the cementing activities back plugged the annulus between the 16” casing and the 6” casing from 160 feet bpl to land surface as summarized in **Table 4**.

Table 4: MW-1 Upper Monitor Zone Plug and Abandonment Summary

Stage #	Date	Material Used	Volume Used	Depth Interval of Plug (feet bpl)	Feet of Lift (feet)
1	6/3/11	ASTM Type II Neat Cement	57 barrels	1,207 – 1,081	126
2	6/3/11	ASTM Type II Neat Cement	32 barrels	1,081 – 1,023	58
3	6/6/11	ASTM Type II Neat Cement	71 barrels	1,023 - 686	337
4	6/7/11	ASTM Type II Neat Cement	92 barrels	686 - 160	526
5	6/7/11	ASTM Type II Neat Cement	24 barrels	160 - 0	160

MW-1 lower Zone

The open-hole lower monitor zone and 6” casing was filled with ASTM Type II Neat Cement to 10 feet blow land surface in five (5) separate stages. Stage 1 of the cementing activities sealed-off the open hole monitor zone interval from 2,012 to 1,998 feet bpl. Stage 2 of the cementing activities sealed-off the remaining portion of the open hole monitor zone interval and up into the 6” casing from 1,998 to 1,863 feet bpl. Stage 3 of the cementing activities back plugged the 6” casing from 1,863 to 1,336 feet bpl. Stage 4 of the cementing activities back plugged the 6” casing from 1,336 to 197 feet bpl. Stage 5 of the cementing activities back plugged the 6” casing from 197 to 10 feet bpl as summarized in **Table 5**.

Table 5: MW-1 Lower Monitor Zone Plug and Abandonment Summary

Stage #	Date	Material Used	Volume Used	Depth Interval of Plug (feet bpl)	Feet of Lift (feet)
1	5/31/11	ASTM Type II Neat Cement	10 barrels	2,012 – 1,998	14
2	6/1/11	ASTM Type II Neat Cement	9.5 barrels	1,998 – 1,863	135
3	6/1/11	ASTM Type II Neat Cement	18 barrels	1,863 – 1,336	527
4	6/4/11	ASTM Type II Neat Cement	36 barrels	1,336 - 197	1,139
5	6/6/11	ASTM Type II Neat Cement	6 barrels	197- 10	187

Shallow Monitor Wells (SMW-1 and SMW-2)

Shallow Monitor Wells SMW-1 and SMW-2 were constructed to a depth of 20 feet bpl with 2 inch PVC pipe and were originally installed to monitor the surficial aquifer during the construction of the Deep Injection Well System. These wells could not be located at the site and may or may not have been previously removed.

Summary

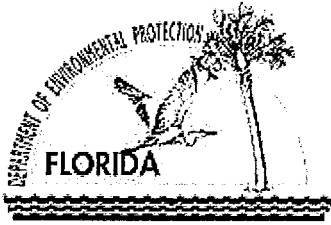
From September 22, 2010 through October 1, 2010, the Class I injection well IW-1 located at the BCDD Wastewater Treatment Facility was successfully plugged and abandoned using FDOT #57 Stone and ASTM Type II Neat Cement. Approximately 27 cubic yards of FDOT #57 Stone was used to backfill the injection horizon from total depth (3,303 feet bpl) to 2,756 feet bpl (26 feet below the base of the 10 ¾-inch diameter stainless steel injection casing). A total of 317 barrels of ASTM Type II neat cement was utilized to back-plug the upper portion of the injection horizon and the 10 ¾-inch diameter injection casing to 3 feet bpl.

Post-closure monitoring was conducted for a period of six (6) months, after the plug and abandonment of injection well IW-1, to monitor the attenuation of any pressure effects and water quality changes caused by the underground injection operation in the injection zone and/or in overlying aquifers. Based on the post closure monitoring of dual-zone monitoring well MW-1, there were no adverse impacts observed from the previous operation of IW-1. Upon FDEP request approval, the plug and abandonment of dual-zone monitor well MW-1 was successfully completed in June of 2011.

The Class I injection well IW-1 and associated dual-zone monitor well MW-1 were plugged and abandoned in accordance with Chapter 62-528, Florida Administrative Code (FAC) and the FDEP-issued Plug and Abandonment Permit Number 0044926-007-UA.

APPENDIX A

**FEDP-Issued Plug and Abandonment Permit Number
0044926-007-UA**



Florida Department of Environmental Protection

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

Southeast District
400 N. Congress Avenue, Suite 200
West Palm Beach, Florida 33401

ELECTRONIC CORRESPONDENCE

June 10, 2009

Mr. Peter Pimentel
President
Beeline Community Development
11000 Prosperity Farms Road, Suite 104
Palm Beach Gardens, Florida 33410
ppimentel@sdsinc.org

UIC - Beeline Community Development
Class I Injection Well (IW-1)
File: 0044926-007-UA

Dear Mr. Pimentel:

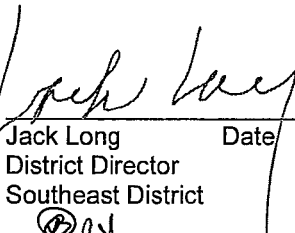
Enclosed is Permit Number 0044926-007-UA, to plug and abandon one Class I injection well (IW-1), the Dual Zone Monitor Well (MW-1), two shallow monitoring wells SMW-1 and SMW-2 located at the Beeline Community Development District's Wastewater Treatment Facility located at the United Technologies, Pratt and Whitney Facility, at 17900 Beeline Highway, West Palm Beach, Palm Beach County, Florida. This permit is issued pursuant to Section(s) 403.087, Florida Statutes and Florida Administrative Codes 62-4, 62-520, 62-522, 62-528 and 62-550.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, Mail Stop 35, 3900 Commonwealth Blvd., Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Should you have any questions, please contact Joe May, P.G. or J. Gardner Strasser, P.G., of this office, telephones (561) 681-6691 or (561) 681-6688, respectively.

Executed in West Palm Beach, Florida.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

 6-10-09

Jack Long Date
District Director
Southeast District

JL/LAB/JRM/jgs
cc:

- Joe L. Haberfeld, FDEP/TL joe.haberfeld@dep.state.fl.us
- Nancy Marsh, USEPA/ATL marsh.nancy@epa.gov
- Steve Anderson, SFWMD/WPB sander@sfwmd.gov
- Ron Reese, USGS/MIA
- Michael W. Bennett, P.G., Boyle Engineering - mbennett@boyleengineering.com

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 6/10/09 to the listed persons.
Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to the §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Janessa Osborne
Clerk

6/10/09
Date

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Florida Department of Environmental Protection

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

Southeast District
400 N. Congress Avenue, Suite 200
West Palm Beach, Florida 33401

ELECTRONIC CORRESPONDENCE

PERMITTEE:

Mr. Peter Pimentel
President
Beeline Community Development
11000 Prosperity Farms Road, Suite 104
Palm Beach Gardens, Florida 33410

PERMIT/CERTIFICATION NUMBER: 0044926-007-UA

DATE OF ISSUANCE: June 10, 2009

EXPIRATION DATE: **June 9, 2011**

COUNTY: Palm Beach

LATITUDE/LONGITUDE: 26° 54' 05"N/ 80° 18' 23"W

PROJECT: Beeline Community Development

Class I Injection Well (IW-1), MW-1, SMW-1 and SMW-2

PROJECT: Abandonment permit to properly plug and abandon a Class I injection well (IW-1), the Dual Zone Monitor Well (MW-1), and shallow monitor wells SMW-1 and SMW-2 at the Beeline Community Development Wastewater Facility, located at the United Technologies, Pratt and Whitney Facility at 17900 Beeline Highway, West Palm Beach, Palm Beach County, Florida.

This permit is issued under the provisions of Chapter 403.087, Florida Statutes, and Florida Administrative Code (F.A.C.) Rules 62-4, 62-520, 62-522, 62-528 and 62-550. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

TO PLUG AND ABANDON: One Class I injection well (IW-1), One Dual Zone Monitor Well (MW-1), and Two monitor wells SMW-1 and SMW-2.

IN ACCORDANCE WITH: Application DEP Form 62-528.900(1) Application to Construct/Operate/Abandon Class I Injection Well for Class I injection well abandonment permit received on October 20, 2008; and information received on December 17, 2008, in response to the Reasonable Assurance Report (RFI-1) dated December 8, 2008; and publication of the Notice of Draft Permit in The Palm Beach Post newspaper on March 12, 2009.

INJECTION WELL LOCATED AT: The Beeline Community Development Wastewater Treatment Plant, located at the United Technologies, Pratt and Whitney Facility, 17900 Beeline Highway, West Palm Beach, Palm Beach County, Florida.

WELL DIMENSIONS: The Injection Well (IW-1) is constructed with a 10.75-inch diameter stainless steel casing. The injection well casing is set to a depth of 2728 feet below land surface (bls) and a total depth of 3300 feet bls. The Dual Zone Monitor Well (MW-1) is constructed with two monitoring intervals. The Upper Monitoring Zone (MW-1U) is constructed with a 16.00-inch diameter intermediate casing. The upper dual zone monitor well casing is set to a depth of 1000 feet bls and a total depth of 1237 feet bls. The Lower Monitoring Zone (MW-1L) is constructed with a 6.00-inch diameter FRP casing. The lower dual zone monitoring well casing is set to a depth of 1956 feet bls and a total depth of 2050 feet bls. The Shallow Monitor Well (SMW-1) is constructed with a 2-inch diameter PVC casing. The shallow monitor well (SMW-1) well casing and screen are set to a depth of 10 feet bls and a total depth of 20 feet bls. The Shallow Monitor Well (SMW-2) is constructed with a 2-inch diameter PVC casing. The shallow monitor well (SMW-2) well casing and screen are set to a depth of 10 feet bls and a total depth of 20 feet bls.

SERVED AS: The Injection Well was for the disposal of non-hazardous industrial and domestic wastewater effluent.

SUBJECT TO: General Conditions 1-24 and Specific Conditions 1-6.

"More Protection, Less Process"
www.dep.state.fl.us

GENERAL CONDITIONS:

The following General Conditions are referenced in Florida Administrative Code Rule 62-528.307.

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are "permit conditions" and are binding and enforceable pursuant to Section 403.141, F.S.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action.
3. As provided in Subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land, water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefrom; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, or are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - a. Have access to and copy any records that must be kept under conditions of this permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time will depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of noncompliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent the recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-528.350, F.A.C. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records shall be extended automatically unless the Department determines that the records are no longer required.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - 1) the date, exact place, and time of sampling or measurements;
 - 2) the person responsible for performing the sampling or measurements;
 - 3) the dates analyses were performed;
 - 4) the person responsible for performing the analyses;
 - 5) the analytical techniques or methods used
 - 6) the results of such analyses
 - d. The permittee shall furnish to the Department, within the time requested in writing, any information which the Department requests to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
 - e. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.
14. All applications, reports, or information required by the Department shall be certified as being true, accurate, and complete.
15. Reports of compliance or noncompliance with, or any progress reports on, requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each scheduled date.
16. Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

17. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
18. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.
19. This permit may be modified, revoked and reissued, or terminated for cause, as provided in 40 C.F.R. Sections 144.39(a), 144.40(a), and 144.41 (1998). The filing of a request by the permittee for a permit modification, revocation or reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
20. The permittee shall retain all records of all monitoring information concerning the nature and composition of injected fluid until five years after completion of any plugging and abandonment procedures specified under Rule 62-528.435, F.A.C. The permittee shall deliver the records to the Department office that issued the permit at the conclusion of the retention period unless the permittee elects to continue retention of the records.
21. All reports and other submittals required to comply with this permit shall be signed by a person authorized under Rules 62-528.340(1) or (2), F.A.C. All reports shall contain the certification required in Rule 62-528.340(4), F.A.C.
22. The permittee shall notify the Department as soon as possible of any planned physical alterations or additions to the permitted facility. In addition, prior approval is required for activities described in Rule 62-528.410(1)(h).
23. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or injection activity that may result in noncompliance with permit requirements.
24. The permittee shall report any noncompliance which may endanger health or the environment including:
 - a. Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water; or
 - b. Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

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1. General Requirements:

- a. Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- b. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- c. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.
- d. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation or reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- e. When requested by the Department, the permittee shall furnish, within the time specified, any information needed to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
- f. The permittee shall retain all records concerning the nature and composition of injected fluid until five (5) years after completion of any plugging and abandonment procedures specified under Rule 62-528.400(3) (hazardous waste wells) or 62-528.435, F.A.C. The permittee shall deliver the records to the Department office that issued the permit at the conclusion of the retention period unless the permittee elects to continue retention of the records.
- g. The permittee shall notify the Department and obtain approval prior to any physical alterations or additions to the injection or monitor well, including removal of the well head.
- h. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or injection activity that may result in noncompliance with permit requirements.
- i. The permittee shall report any noncompliance which may endanger health or the environment, including:
 - 1) Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water; or
 - 2) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

- k. The well shall be plugged and abandoned in a manner that will not allow fluid movement into or between underground sources of drinking water.
- l. In accordance with Rule 62-528.435(11), F.A.C., the permittee shall submit to the Department a plugging and abandonment report within ninety (90) days of completion of plugging and abandonment.

2. Quality Assurance/Quality Control Requirements

- a. Pursuant to Rule 62-528.440(5)(b), F.A.C., the Professional Engineer(s) of Record shall certify all documents related to the completion of the abandonment of the injection well system. The Department shall be notified immediately of any change of the Engineer(s) of Record.
- b. In accordance with Section 492, Florida Statutes, all documents prepared for the geological/hydrogeological evaluation of the abandonment project shall be signed and sealed by a Florida Licensed Professional Geologist or qualified Florida Licensed Professional Engineer.
- c. Continuous on-site supervision by qualified personnel (engineer and/or geologist) is required during all geophysical logging operations, mechanical integrity testing, cementing operations, and any other significant field activity.
- d. Any water produced during the implementation of abandonment activity shall be disposed of in accordance with all rules and regulations of the State of Florida and Palm Beach County.

3. Plugging and Abandonment Requirements

- a. The Department shall be notified within forty-eight (48) hours after work has commenced.
- b. The UIC-TAC meetings are scheduled on the second (2nd) and fourth (4th) Tuesday of each month subject to a five (5) working day prior notice and timely receipt of critical data by all UIC-TAC and the United States (US) Environmental Protection Agency (EPA), Region IV, members. Department approval at a scheduled UIC-TAC meeting shall be based on the Permittee's presentation that shows compliance with Department rules and this permit. Emergency meetings may be arranged when justified, to avoid undue delays.
- c. The plugging and abandonment should include, but not be limited to, the following steps:

Injection Well Abandonment.

- 1.) Suppress the flow from injection well IW-1 by using a drilling mud with an additive;
- 2.) Conduct a cement bond log (CBL) on the ten-inch diameter casing to compare with previous CBL logs;
- 3.) Evaluate the CBL logs with previous CBL log;
- 4.) Using the tremie pipe method, backfill the open hole portion of the well with clean gravel from 3300 feet bls to approximately 2778 feet bls or within 40 feet of the bottom of the injection casing;

- 5.) Using the tremie pipe method, backfill the open hole portion of the well with clean fine sand (used as a seal) from 2778 to approximately 2738 feet bls or within 10 feet of the bottom of the injection casing;
- 6.) Using the tremie pipe method, backfill the open hole portion of the well with neat cement grout from 2738 to land surface.

Post-Closure Monitoring Requirements.

The Dual Zone Monitor Well (MW-1) and associated shallow monitor wells (SMW-1 and SMW-2) shall be left accessible for monitoring purposes for at least six (6) months after the closure of the deep injection well IW-1. The dual zone monitor well shall be sampled monthly for a period of six (6) months after the closure of the injection well (IW-1) or longer if necessary. The dual zone monitor well shall be sampled for the following parameters: pH, temperature, specific conductance, and total dissolved solids (TDS), water level or pressure (maximum, minimum and average).

If the sampling results show any trends or changes, then a full suite of the permitted parameters may be required and sampling may be extended.

Conductivity (umhos/c);
Cyanide;
Residue, Total Filterable (TDS) (mg/l);
Heavy (RCRA metals);
Chloride (mg/l);
Ammonia as N (mg/l);
Temperature (F);
Total Kjeldahl Nitrogen as N (TKN, mg/l);
Total Phosphorous as P (mg/l);
Sulfate (mg/l); and
Fecal Coliform (# colonies/100ml)

Based on FDEP approval, the wastewater from the injection well abandonment and the purging of the monitoring wells will be disposed at the Palm Beach County Utilities Department or disposed of at another Class I Deep Injection Well facility.

Upon completion of the post-closure monitoring, a report shall be submitted to the Department, within thirty (30) days, for review and approval prior to the plugging and abandonment of the Dual Zone Monitor Well (MW-1) and the two shallow monitor wells (SMW-1 and SMW-2). Upon completion of plugging and abandonment of the injection well, the dual-zone monitor well and two shallow surficial wells, please include in the report a breakdown of the cost associated with the plugging and abandonment of the wells.

Dual Zone Monitor Well: Upper and Lower Zones.

Lower Monitor Zone.

- 1.) Suppress the flow from the lower monitor well;
- 2.) Using the tremie pipe method, backfill with neat cement grout from 2050 feet to land surface.

Upper Monitor Zone.

- 1.) Suppress the flow from the upper monitor well;
- 2.) Using the tremie pipe method, backfill with neat cement grout from 1237 feet to land surface.

Shallow Monitor Well (SMW-1).

- 1.) Using the tremie pipe method, backfill with neat cement grout from 20 feet to land surface.

Shallow Monitor Well (SMW-2).

- 1.) Using the tremie pipe method, backfill with neat cement grout from 20 feet to land surface.

4. Reporting Requirements

- a. **All reports and surveys required by this permit shall be submitted concurrently to all the members of the FDEP UIC-TAC. The FDEP UIC-TAC shall consist of representatives from these agencies:**

**Department of Environmental Protection, West Palm Beach and Tallahassee;
South Florida Water Management District (SFWMD), West Palm Beach; and
Palm Beach County Public Health Department (PBCHD), West Palm Beach.**

- b. The Department and other applicable agencies must be notified immediately, within twenty-four hours (24), of any unusual events occurring during plugging and abandoning activities (e.g. on-site spills, artesian flows, large volumes of circulation losses, equipment damage due to: fire, wind, and drilling difficulties, etc.) Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. A written submission describing the incident shall also be provided to the Department within five (5) days of the start of the event. The written submission shall contain a complete description of the noncompliance, a discussion of its cause(s), the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance and all other information deemed necessary by the Department.
- c. A plugging and abandonment plan schedule shall be submitted to the Department and the TAC prior to site preparation for the subject well.
- d. Weekly progress reports shall be submitted throughout the abandonment period, and shall include at a minimum the following information:
 - 1) A cover letter summary of the daily engineer report, driller's log and a projection for activities in the next reporting period;
 - 2) Current status and progress reports of in the field activities; and
 - 3) Detailed description of any unusual abandonment-related events that occur during the reporting period.

After the plugging and abandonment of the injection well the permittee shall submit to the Department monthly the monitoring data from the dual zone monitor well and the two shallow monitor wells as required by this permit no later than the twenty-eighth (28) day of the month [District may allow less than twenty eight (28) days] immediately following the month of record.

The results shall be sent to the Department of Environmental Protection, Southeast District Office, 400 North Congress Avenue, P.O. Box 15425, West Palm Beach, Florida 33416. A copy of this report shall also be sent to the Department of Environmental Protection, Underground Injection Control Program, MS 3530, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

- e. If any problem develops that may hinder in any way compliance with this permit, abandonment progress, or good abandonment practice, the Department shall be notified immediately. The Department may require the submittal of a detailed written report describing what problems have occurred, the remedial measures applied to assure compliance, and the measures taken to prevent recurrence of the problem.
- f. Pursuant to Rule 62-528.430(4)(b) , F.A.C., injection well IW-1 shall be surveyed and referenced to the North American Vertical Datum of 1988 (NAVD 88) and these measurements shall be filed in the county courthouse property records and submitted to the Department within ninety days after plugging and abandonment procedure is completed.

5. Post Plugging and Abandonment Requirements

- a. Prior to plugging, the permittee or his authorized representative is required to check the well to insure there are no obstructions that will interfere with the plugging operations. Cement will be injected into the open hole in accordance with Rules 62-528.435 and 62-528.460, and all the applicable requirements of Palm Beach County and the Rules of the South Florida Water Management District.
- b. In accordance with F.A.C., Rule 62-528.635(11), within ninety (90) days after completion of plugging and abandonment, the permittee of a well shall provide a final report and documentation that the well was properly abandoned and provide Certification of Plugging Completion on DEP Form 62-528.900(2).
- c. In accordance with Rule 62-528.460(6), F.A.C., the permittee shall retain all records concerning the nature and composition of injected fluid until five (5) years after completion of any plugging and abandonment procedures specified under Rule 62-528.435, F.A.C. The permittee shall deliver the records to the Department office that issued the permit at the conclusion of the retention period unless the permittee elects to continue retention of the records.

6. Signatories and Certification Requirements

- a. All reports and other submittals required to comply with this permit shall be signed by a person authorized under Rules 62-528.340(1) or (2), F.A.C.
- b. In accordance with Rule 62-528.340(4), FAC, all reports shall contain the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Issued this 10 day of June, 2009

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Jack Long
District Director
Southeast District

Date


JL/LAB/JRM/jgs

APPENDIX B

General Affidavit to Record IW-1 with Palm Beach County Clerk of Court

Sharon R. Bock
Palm Beach County Clerk & Comptrol
205 North Dixie Highway
West Palm Beach, Florida
Main Office Recording
561-355-2992

DATE:01/19/2011
TIME:01:58:03 PM
RECEIPT:3058154

BEELINE COMMUNITY

ITEM -01 AFF 01:58:03 PM
FILE:20110022392 BK/PG:0 24320/1552
RECORDING FEE 52.50
ABSTRACT FEE 0.60
Sub. Total 53.10

AMOUNT DUE:	\$53.10	
PAID CHECK:	\$53.10	
Check #:1329		\$53.10
TOTAL PAID:	\$53.10	

REC BY:SGERWE
DEPUTY CLERK



CFN 20110022392
 OR BK 24320 PG 1552
 RECORDED 01/19/2011 13:58:03
 Palm Beach County, Florida
 Sharon R. Bock, CLERK & COMPTROLLER
 Pgs 1552 - 1557; (6pgs)

GENERAL AFFIDAVIT

State of Florida
 County of Palm Beach

BEFORE ME, the undersigned Notary, *Deborah L. Williams* on this 19th day of January, 2011, personally appeared *Karen D. Brandon* known to me to be a credible person and of lawful age, who being by me first duly sworn, on his oath, deposes and says:

The purpose of this affidavit is to record with the Palm Beach County Clerk of Court, the location of a Florida of Department Environmental Protection (FDEP) permitted Class I injection well as per Rule 62-528 of the Florida Administrative Code. The Class I injection well identified as IW-1 was plugged and abandoned under FDEP Underground Injection Control Plug and Abandonment Permit No #: 0044926-007-UA. This Class I injection well was part of the Beeline Community Development District's Water & Wastewater Facility which was taken out of service and demolished in 2010. The Water & Wastewater Facility was located at The United Technologies Pratt & Whitney Facility, 17900 Beeline Highway, West Palm Beach, Palm Beach County, Florida.

The purpose of the Class I injection well was to serve as the primary disposal of wastewater treated to secondary wastewater treatment standards, and treated industrial wastewater from the Pratt & Whitney plating facility and landfill recovery system. Supplementing documents attached to this affidavit include:

1. A Certification of Plugging Completion for Class I, III or V Wells related to the Class I Injection Well identified as IW-1 at this site.
2. A signed and sealed specific purpose survey showing the location of the Class I injection well identified as IW-1.
3. Well completion diagrams for the injection well identified as IW-1 and associated dual zone monitor well identified as MW-1 as they were originally constructed.

Karen D. Brandon
 [signature of affiant]

Karen D. Brandon, P.E.
 AECOM
 2090 Palm Beach Lakes Blvd., Suite 600
 West Palm Beach, Fl 33409

State of Florida
 County of Palm Beach

Sworn to (or affirmed) and subscribed before me this 19th day of January, 2011 (year), by *Karen D. Brandon* (name of person making statement).

Deborah L. Williams
 (Signature of Notary Public - State of Florida)

Deborah L. Williams
 (Print, Type, or Stamp Commissioned Name of Notary Public)



Personally Known OR Produced Identification

Type of Identification Produced _____



Florida Department of Environmental Protection

Twin Towers Office Bldg, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

DEP Form No: 62-528.900(2)
Form Title: Certification of Plugging Completion Class I, III, or V Well
Effective Date:
DEP Application No.: (Filled in by DEP)

CERTIFICATION OF PLUGGING COMPLETION CLASS I, III OR V WELL

Pursuant to Rules 62-528.430(4)(b) and 62-528.645(3), Florida Administrative Code (F.A.C.), the permitted must provide evidence (such as a sealed copy of certification from the county clerk) that a surveyor's plot of the location of the abandoned well has been recorded in the county courthouse property records. Submit this information to the Department of Environmental Protection, 2600 Blair Stone Road, Twin Towers Building, Tallahassee, Florida 32399-2400.

A Class I, III, or V well was plugged in accordance with Permit # 0044926-007-UA issued 06/10/09 and located at Beeline Community Development District's WWTF, 17900 (date)

Beeline Highway, West Palm Beach, Fl, Palm Beach County, Fl.

ACTUAL DIMENSIONS: DATE PLUGGED 10/01/10
Diameter 10.75 in. PLUGGING METHOD Neat Cement and Limestone
Well Depth 3,300 ft.
Casing Depth 2,730 ft.

12-8-10
Date

Signature David W. Webb

All Webbs Enterprises, Inc.
Engineer of Record or Water Well Contractor
(Please print or type name)

309 Commerce Way
Address

561-746-2079
Phone Number

Jupiter, FL 33458

12/14/10
Date

Signature Pete Pimentel

Pete Pimentel
Owner or Authorized Representative*
(Please print or type name)

*Attach letter of authorization

2501A Burns Road
Address

561-630-4922
Phone number

Palm Beach Gardens, FL 33410

P:\2010\2010-06-06-10-01-00-01\2010-06-06-10-01-00-01.dwg Text-dwg Plot to Job by: N:\fraserash\ashdbn -- Plotted by: 8/24/2010 8:22:58 AM Date: 10/21/10 2:02 PM

SURVEYOR'S NOTES

1. FIELD SURVEY LAST CONDUCTED ON NOVEMBER 1, 2010.
2. ELEVATIONS SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCE NATIONAL GEODETIC SURVEY CONTROL POINT "M 547", ELEVATION 23.88 FEET.
3. THE BEARINGS AND COORDINATES SHOWN ON THIS SURVEY ARE "GRID" AND BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, TRANSVERSE MERCATOR PROJECTION, FLORIDA EAST ZONE, NORTH AMERICAN DATUM OF 1983/2007 ADJUSTMENT. THE HORIZONTAL CONTROL IS BASED ON NATIONAL GEODETIC SURVEY CONTROL POINT "M 547."
4. THE SPECIFIC PURPOSE OF THIS SURVEY IS TO LOCATE EXISTING DEEP INJECTION WELL AND MONITOR WELLS.

BEARING BASE

THE CENTERLINE OF INNOVATION DRIVE IS TAKEN TO BEAR NORTH 89°38'57" EAST AND ALL OTHER BEARINGS SHOWN HEREON ARE RELATIVE THERETO.

LEGEND

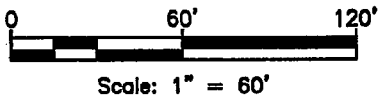
- ⊕ - CENTERLINE
- C.B.S.- CONCRETE BLOCK AND STUCCO
- P.V.C.- POLYVINYL CHLORIDE PIPE
- - SPOT ELEVATION

Certified Copy

© 2010 Boyle Engineering

<p>SURVEYOR AND MAPPER'S SIGNATURE UNLESS IT BEARS THE SIGNATURE AND ORIGINAL RAISED SEAL OF FLORIDA LICENSED SURVEYOR AND MAPPER, THIS MAP/REPORT IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT VALID. NO SEARCH OF THE PUBLIC RECORDS HAS BEEN MADE BY THIS OFFICE.</p> <p><i>[Signature]</i></p> <p>BRYAN C. KERNAN, PROFESSIONAL SURVEYOR & MAPPER STATE OF FLORIDA No. 6101</p>	<p>PROJECT NAME: SPECIFIC PURPOSE SURVEY BEELINE COMMUNITY DEVELOPMENT DISTRICT DEEP INJECTION WELL SITE</p>													
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Scale: NA</td> <td colspan="2">REVISIONS:</td> </tr> <tr> <td>Sheet: 1 OF 2</td> <td>Field Book: T41R40</td> <td>Page: 13</td> </tr> <tr> <td>Computed: BK</td> <td>Date: 11/3/2010</td> <td>FILE NO.: 60062010 exh</td> </tr> <tr> <td>Checked: CK</td> <td></td> <td>Project No.: 60062010</td> </tr> </table>			Scale: NA	REVISIONS:		Sheet: 1 OF 2	Field Book: T41R40	Page: 13	Computed: BK	Date: 11/3/2010	FILE NO.: 60062010 exh	Checked: CK	
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Computed: BK	Date: 11/3/2010	FILE NO.: 60062010 exh												
Checked: CK		Project No.: 60062010												
<p>AECOM USA, Inc. 3550 S.W. Corporate Parkway Palm City, Florida 34990 T 772.288.3883 F 772.288.3925 BPR & FBPE License No's: 2005 & LB 7717 www.boyle.aecom.com</p>														

Date: 11/8/2010 - 2:02 PM - LBFH, Inc.
 Plotted by: Kiernan, Brian
 Layout Name: sheet2
 Survey Name: 6062010 exh.dwg
 Drawing Name: 6062010



SET PK NAIL & DISK
 "AECOM LB7717"
 NORTHING 934255.80 FEET
 EASTING 882278.10 FEET

BENCHMARK:
 CONTROL STATION "M547"
 ELEVATION 23.88 FEET
 NORTHING 936499.75 FEET
 EASTING 884459.76 FEET

INNOVATION DRIVE

N89°38'57"E
 (BEARING BASE)

N89°43'07"E
 196.84'

SET PK NAIL & DISK
 "AECOM LB7717"
 NORTHING 934256.77 FEET
 EASTING 882474.94 FEET

SOUTH RIGHT OF WAY LINE

INJECTION WELL (ABANDONED)
 TOP OF FLANGE
 ELEVATION 26.13
 NORTHING 934092.81 FEET
 EASTING 882313.17 FEET

MONITOR WELL
 TOP OF CASING
 ELEVATION 26.67
 NORTHING 934165.13 FEET
 EASTING 882481.86 FEET

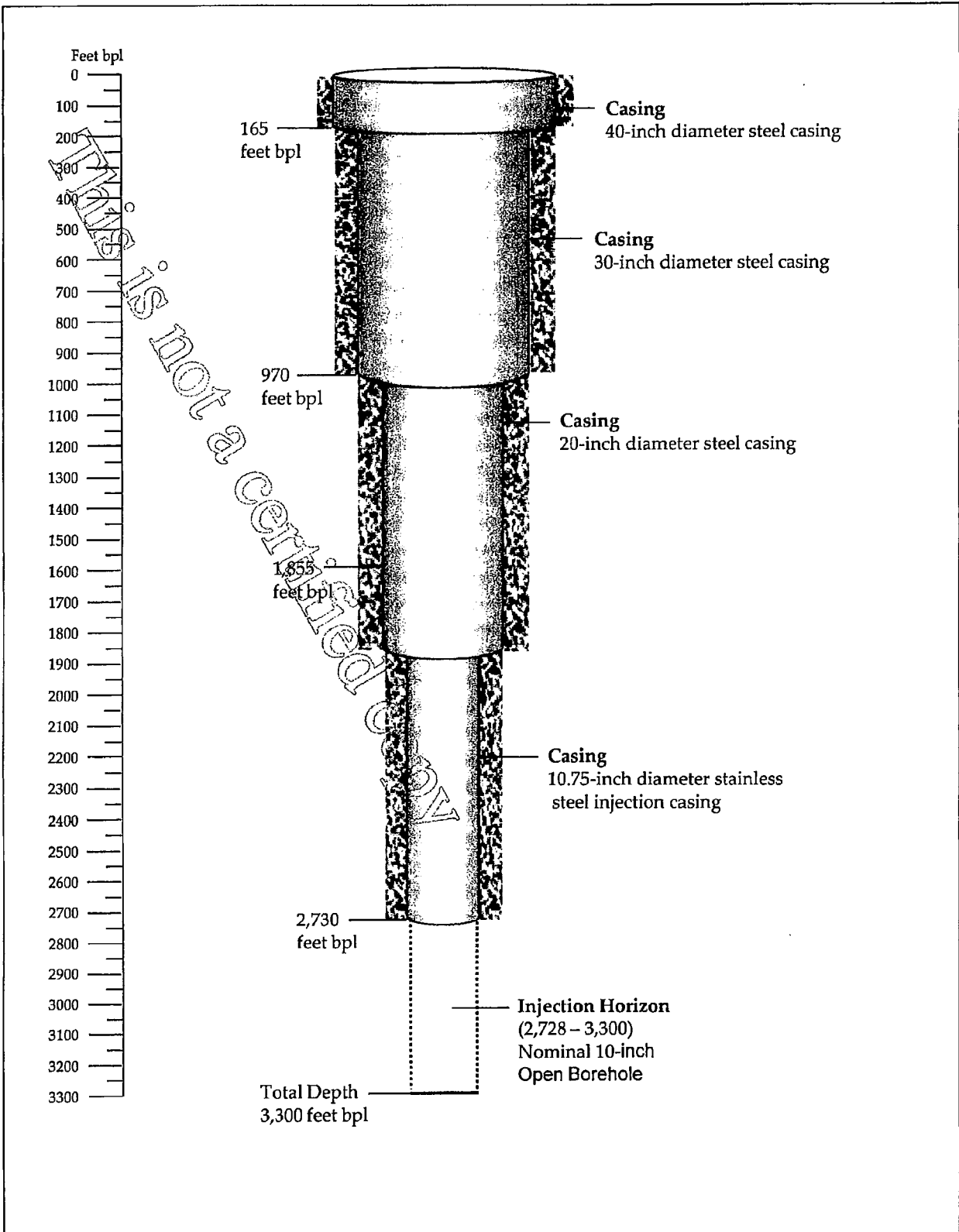
CONCRETE PAD
 8" C.B.S.
 WALL

MONITOR WELL
 TOP OF 4" P.V.C. CASING
 ELEVATION 26.93
 NORTHING 934094.03 FEET
 EASTING 882414.30 FEET

PARCEL 2
 INNOVATION SUBDIVISION
 PLAT BOOK 98, PAGE 50
 PALM BEACH COUNTY, FLORIDA

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AECOM USA, Inc. 3550 S.W. Corporate Parkway Palm City, Florida 34990 T 772.286.3883 F 772.286.3925 BPR & FBPE License No's: 2005 & LB 7717 www.boyle.aecom.com	AECOM	Scale: 1"=60'	PROJECT NAME:		
		Sheet 2 OF 2	BEELINE COMMUNITY DEVELOPMENT DISTRICT		
		Computed: BK	Date	FILE NO.	Project No.
		Checked: CK	11/3/2010	60062010 exh	60062010



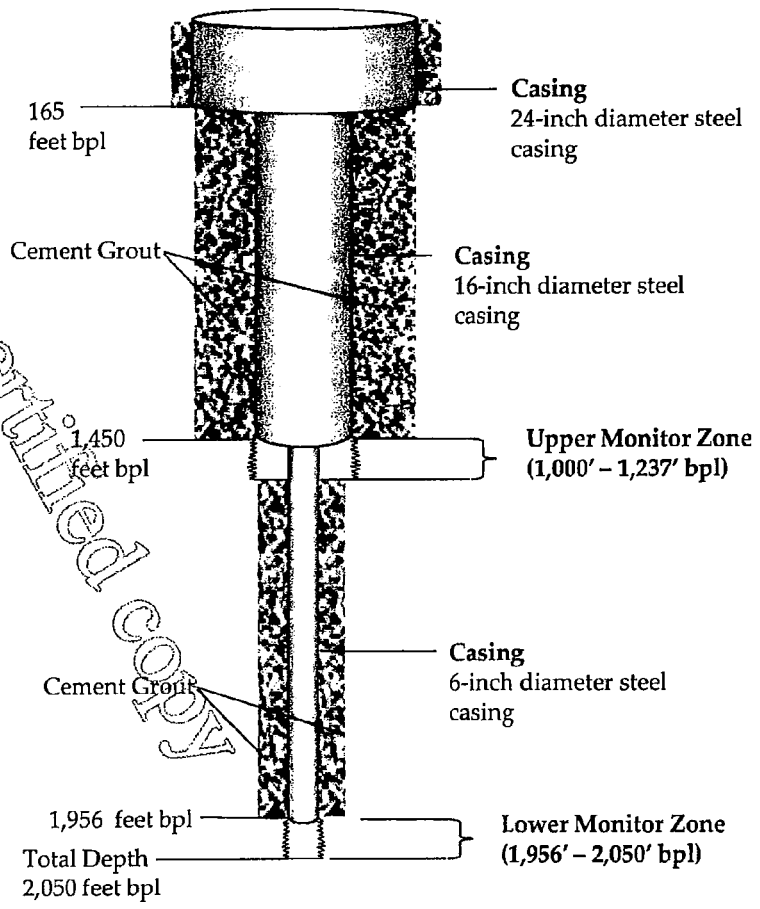
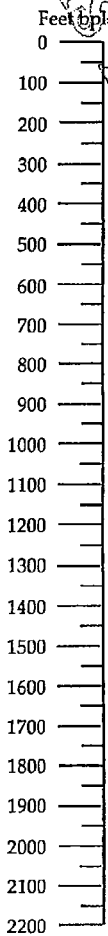
AECOM

Beeline Community
Development District

Deep Injection Well IW-1
Construction Details
Horizontally Exaggerated

Figure
1

This is not a certified copy



AECOM	Beeline Community Development District	Dual Zone Monitor Well MW-1 Construction Details Horizontally Exaggerated	Figure 2
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APPENDIX C

AECOM Reports of Daily Activity

FIELD REPORT

AECOM

Project Name: <i>PRAT WELL</i>	Date: <i>09-21-10</i>
AECOM Project No.: <i>60062010</i>	Time: <i>2:30</i>
Location: <i>PRAT</i>	Project Manager:
Contractor: <i>ALL WEBBS</i>	Field Representative: <i>Danny Patras</i>
Sub:	Signature: <i>[Signature]</i>

Weather/Site/Soil Conditions:

Description of Work:

WELL HEAD REMOVED AND STARTED INSTALLING 2" GROUT PIPE WHEN I ARRIVED.

INSTALLED 109 2" PIPE TO THE DEPTH 3303

FINISHED INSTALLING PIPE 6:05

Labor and Equipment on Site:

Instructions or Direction Given to Contractor:

Materials / Equipment Received:

Testing:

Other Comments:

FIELD REPORT

Project Name: PRAT WELL	Date: 09-22-10
AECOM Project No.: 60062010	Time: 8:00
Location: PRAT	Project Manager:
Contractor: ALL WIRBBS	Field Representative: <i>Diana Petrus</i>
Sub:	Signature: <i>[Signature]</i>

Weather/Site/Soil Conditions:

Description of Work:

8:30 To 9:45 PLACE 10YDS 57 STONE
 REMOVE 9 JOINTS OF 2" GROUT PIPE

10:50 To 12:20 PLACE 10 YDS 57 STONE
 REMOVE 3 JOINTS OF 2" GROUT PIPE

1:45 4:00 PLACE 7YDS 57 STONE
 REMOVE 2 JOINTS OF 2" GROUT PIPE
 PUT 3 1/2 YARDS ON GROUND TO TOP OFF

ROCK TO 20 FT FROM CASING
 SEVERAL OUT AT 2756

Labor and Equipment on Site:

Instructions or Direction Given to Contractor:

Materials / Equipment Received:

Testing:

Other Comments:

FIELD REPORT

AECOM

Project Name: <i>Pratt Well</i>	Date: <i>09-23-10</i>
AECOM Project No.: <i>60062010</i>	Time: <i>10:00</i>
Location: <i>PRAT</i>	Project Manager:
Contractor: <i>ALL WRBBY</i>	Field Representative: <i>Doug Peterson</i>
Sub:	Signature: <i>[Signature]</i>

Weather/Site/Soil Conditions:

Description of Work:

RETURN ON SITE - NO CONTRACTOR
IT APPEARS NO ROCK ADDED
THE GROUT INJECTION HEAD INSTALLED

Labor and Equipment on Site:

Instructions or Direction Given to Contractor:

Materials / Equipment Received:

Testing:

Other Comments:



DAILY REPORT OF ACTIVITY

Project Number: 60062010	Project Name: Plug and Abandonment of IW-1	Client: Beeline Community Development District (BCDD)	Date: 9/29/10	Day of Week: Wednesday	Contractor: All Webbs Enterprises (AWE)
Well Name: IW-1	FDEP Permit #: 0044926-007-UA	Starting Depth: N/A	Ending Depth: N/A	Bit Size: N/A	Cementer: David Webb Jr.

Primary Activity: Place Cement Plug inside 10.75" ID Casing (Second Lift)
Onsite Representative: Shamus English

Time	Activity
0730	Shamus English on site. AWE onsite and setting up for cementing operations. Weather forecast is overcast and raining all day. Hard tagged cement from lift #1 at 2,698' bpl, so cement is inside casing.
0839	Begin mixing cement.
0842	Begin pre-flush
0843	Finish pre-flush (5 bbls). Begin pumping cement at 2-3 bbls/min. Densometer = 15.1 lbs/gal.
0851	Stop after 20 bbls down to pull 3 joints of pipe and one 10' pup joint.
0905	Resume cement pumping operations. Rain gets heavier.
0907	25 bbls down
0909	Stop after 31 bbls down to pull 3 joints of pipe
0918	Resume cement pumping operations. Densometer = 15.0 lbs/gal.
0921	Stop after 43 bbls down to pull 3 joints of pipe
0936	Resume cement pumping operations.
0939	Stop after 59 bbls down to pull 3 joints of pipe
0951	Resume cement pumping operations. Densometer = 15.1 lbs/gal.
0954	Stop after 71 bbls down to pull 4 joints of pipe
1007	Resume cement pumping operations.
1011	Stop after 84 bbls down, finished cement pumping for the day, begin post flush
1015	Finish post flush (7 bbls)
***	Densometer ranged from 14.6 – 15.5 lbs/gal. Pump rate ranged from 2.4 – 3.0 bbls/min.
	caliper



DAILY REPORT OF ACTIVITY

Project Number: 60062010	Project Name: Plug and Abandonment of IW-1	Client: Beeline Community Development District (BCDD)	Date: 9/30/10	Day of Week: Thursday	Contractor: All Webbs Enterprises (AWE)
Well Name: IW-1	FDEP Permit #: 0044926-007-UA	Starting Depth: N/A	Ending Depth: N/A	Bit Size: N/A	Cementer: David Webb Jr.

Primary Activity: Place Cement Plug inside 10.75" ID Casing (Third Lift)
Onsite Representative: Shamus English

Time	Activity
0730	Shamus English on site. Pad is full of water. AWE say they hauled off one tanker of water from the pad yesterday but it hardly made a dent in the pool. AWE have not gotten a hard tag from cement lift number two yet.
0820	AWE begin pumping pad water into tanker. Per AWE, approximately 12,000 gallons of water collected in the pad from the recent rain events. AWE will still haul this water off site.
0915	Hard tag at 1,971' bpl.
1022	Begin mixing cement.
1026	Begin pumping cement. Mud balance = 14.8 lbs/gal. Densometer = 15.0 lbs/gal
1031	15 bbls down at 2-3 bbls/min
1034	Stop after 31 bbls down to pull 4 joints of pipe
1045	Resume cement pumping operations. Mud balance = 14.8 lbs/gal. Densometer = 14.9 lbs/gal
1049	Stop after 38 bbls down to pull 4 joints of pipe
1059	Resume cement pumping operations. Densometer = 15.0 lbs/gal
1103	Stop after 51 bbls down to pull 4 joints of pipe
1112	Resume cement pumping operations. Densometer = 15.0 lbs/gal. 2-3 bbls/min
1116	Stop after 65 bbls down to pull 4 joints of pipe
1126	Resume cement pumping operations. Mud balance = 14.7 lbs/gal. Densometer = 14.8 lbs/gal
1131	Stop after 79 bbls down to pull 4 joints of pipe
1132	Cemex truck on site with additional dry bulk cement.
1142	Resume cement pumping operations.
1145	Stop after 93 bbls down to pull 4 joints of pipe
1158	Resume cement pumping operations. Mud balance = 14.9 lbs/gal.
1202	Stop after 107 bbls down to pull 4 joints of pipe
1211	Resume cement pumping operations.
1216	Stop after 121 bbls down to pull 4 joints of pipe
1228	Resume pumping last 4 bbls (125 bbls total) of cement then chase with fresh water.
1232	Finish post flush (4 bbls). AWE to pull tubing and clean up.
1314	Finished pulling 15 joints of tubing.
1330	Shamus English off site.



DAILY REPORT OF ACTIVITY

Project Number: 60062010	Project Name: Plug and Abandonment of IW-1	Client: Beeline Community Development District (BCDD)	Date: 6/1/11	Day of Week: Wednesday	Contractor: All Webbs Enterprises (AWE)
Well Name: MW-1	FDEP Permit #: 0044926-007-UA	Starting Depth: N/A	Ending Depth: N/A	Bit Size: N/A	Cementer: David Webb Jr.

Primary Activity: Plug and Abandonment of MW-1 - Cement Plug inside 6" Casing of Lower Monitor Zone (Second and Third Stage)

Onsite Representative: Michael Bennett / Shamus English

Time	Activity
1015	Michael Bennett on site. AWE on site and setting up for Stage #2 cementing operations of Lower Monitor Zone. Lift #1 hard tagged at 2,012' bpl, tremmie pipe set at 2,007' bpl with 5' elevation above grade. Took pictures of Plug and Abandonment setup. Vac-truck removing artesian waer from well head
***	Note that well came alive after initial cement stage pumped.
1040	David Webb Jr. on site.
1045	Begin setup to pump stage #2 cement to plug 6" casing of lower monitor zone.
1112	Begin to mix neat cement in pumping tank and pre-flush with water to clean tubing.
1118	Cement sample taken. Density = 15.1 lbs/gal. Took physical cement sample.
1120	4 bbls pumped
1122	8 bbls pumped
1124	Finished pumping cement Stage #2 to plug 6" casing of lower monitor zone. 9.5 bbls pumped
1125	Chased with 7 bbls of water to clear tubing
1128	Completed 7 bbls water chase
1129	Started to pull cement tubing
1148	Pulled 10 sections of cement tubing
1150	Michael Bennett off site.
1645	Shamus English on site. AWE on site and lowering tubing down hole to get hard tag from cement stage #2. Setting up to pump cement lift #3 to plug 6" casing of lower monitor zone.
1705	Hard tagged cement from Stage #2 at 1,863' bpl.
***	Note that lower monitor zone has been flowing all day, lower monitor zone has been sealed off and should not display artesian flow. Contractor possibly punctured 6" casing while lowering tubing and now the 6" casing is receiving water from the upper monitor zone.
1735	AWE will pump approximately 18 bbls neat cement for Stage #3.
1748	Begin mixing cement
1802	Begin pumping neat cement. Density measured on densometer = 15.1 lbs/gal, Density measured on fluid balance = 14.8 lbs/gal.
1806	7 bbls pumped, density measured on densometer = 15.0 lbs/gal
1809	12 bbls pumped, cementing halted to pull 5 joints of tubing
1820	Cementing resumed

1825	Finished pumping 18 bbls neat cement, begin chase with water to clear tubing. Theoretical lift to 1,363' bpl
1830	Finished pumping 6 bbls chase, AWE begin to pull tubing and clean up.
1845	Shamus English off site.



DAILY REPORT OF ACTIVITY

Project Number: 60062010	Project Name: Plug and Abandonment of IW-1	Client: Beeline Community Development District (BCDD)	Date: 6/3/11	Day of Week: Friday	Contractor: All Webbs Enterprises (AWE)
Well Name: MW-1	FDEP Permit #: 0044926-007-UA	Starting Depth: N/A	Ending Depth: N/A	Bit Size: N/A	Cementer: David Webb Jr.

Primary Activity: Plug and Abandonment of MW-1 Place Cement Plug inside 16" ID Casing of Upper Monitor Zone (First and Second Stage)
Onsite Representative: Shamus English

Time	Activity
0800	Shamus English on site. AWE on site and setting up to pump stage #1 cement inside 16" casing to seal upper monitor zone. Hard tagged bottom at 1,207' bpl. Tremmie tubing set at 1,195' bpl. Will pump 20 bbls pull 3 joints of tubing and pump 20 more bbls.
0912	Begin mixing cement
0917	Begin pumping cement. Density measured on densometer = 15.3 lbs/gal, Density measured on fluid balance = 15.3 lbs/gal.
0925	12 bbls pumped, density measured on densometer = 15.4 lbs/gal
0929	20 bbls pumped, cementing halted to pull 3 joints of tubing
0937	Cementing resumed. Density measured on densometer = 15.3 lbs/gal, Density measured on fluid balance = 15.4 lbs/gal.
0944	43 bbls pumped, density measured on densometer = 15.3 lbs/gal
0947	52 bbls pumped, density measured on densometer = 15.3 lbs/gal. 3.5 bbls/min
0949	Finished pumping 57 bbls neat cement, begin chase with water to clear tubing.
0953	Finished pumping 4.5 bbls chase, AWE begin to pull tubing and clean up.
1015	Shamus English off site.
1500	Shamus English on site. AWE hard tagged cement from stage #1 inside 16" casing (annulus-UMZ) at 1,081' bpl. Setting up to pump stage #2 cement inside 16" casing to seal upper monitor zone, should take 17.3 bbls to bring cement inside casing.
1525	Cemex truck on site to deliver dry bulk cement.
1630	Still filling up dry bulk unit from Cemex truck
1645	Finished filling up dry bulk unit. Resume setting up to pump stage #2 cement inside 16" casing to seal upper monitor zone
1707	Begin pumping cement. Density measured on densometer = 15.0 lbs/gal, Density measured on fluid balance = 15.1 lbs/gal.
1724	Finished pumping 32 bbls neat cement, begin chase with water to clear tubing. No displaced water observed.
1745	Shamus English off site.

APPENDIX D

Geophysical Logs and Video Survey in DVD Format

APPENDIX E

FDEP Form 62-528.900

**Certification of Plugging Completion Class I, III or V
Well**



Florida Department of Environmental Protection

Twin Towers Office Bldg., 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

DEP Form No: 62-528.900(2)
Form Title: Certification of Plugging Completion Class I, III, or V Well
Effective Date:
DEP Application No.: (Filled in by DEP)

CERTIFICATION OF PLUGGING COMPLETION CLASS I, III OR V WELL

Pursuant to Rules 62-528.430(4)(b) and 62-528.645(3), Florida Administrative Code (F.A.C.), the permittee must provide evidence (such as a sealed copy of certification from the county clerk) that a surveyor's plot of the location of the abandoned well has been recorded in the county courthouse property records. Submit this information to the Department of Environmental Protection, 2600 Blair Stone Road, Twin Towers Building, Tallahassee, Florida 32399-2400.

A Class I, III, or V well was plugged in accordance with Permit # 0044926-007-UA issued 06/10/09 and located at Beeline Community Development District's WWTF, 17900 (date)

Beeline Highway, West Palm Beach, Fl, Palm Beach County, Fl.

ACTUAL DIMENSIONS: DATE PLUGGED 10/01/10

Diameter 10.75 in. PLUGGING METHOD Neat Cement and Limestone

Well Depth 3,300 ft.

Casing Depth 2,730 ft.

12-8-10 Date

Signature David W. Webb

All Webbs Enterprises, Inc. Engineer of Record or Water Well Contractor (Please print or type name)

309 Commerce Way Address

561-746-2079 Phone Number

Jupiter, FL 33458

12/14/10 Date

Signature Pete Pimentel

Pete Pimentel Owner or Authorized Representative* (Please print or type name)

*Attach letter of authorization

2501A Burns Road Address

561-630-4922 Phone number

Palm Beach Gardens, FL 33410