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ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

**Big Bend Power Station
Economizer Ash and Pyrite Pond System
13031 Wyandotte Road
Gibsonton, FL 33572**

Prepared for

Tampa Electric Company
Tampa, FL

Prepared by
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Project FR2814

January 26, 2021

EXECUTIVE SUMMARY

In accordance with the United States Environmental Protection Agency (“USEPA”) coal combustion residuals (“CCR”) rule (40 Code of Federal Regulations Part 257, Subpart D) (“CCR Rule”), this *2020 Annual Groundwater Monitoring and Corrective Action Report* fulfills CCR reporting requirements for activities completed in 2020 at the economizer ash and pyrite pond system (EAPPS) located at Tampa Electric Company’s (TEC) Big Bend Power Station (BBS) in Hillsborough County, Gibsonton, Florida.

In 2016, TEC established a CCR groundwater monitoring well network to monitor groundwater quality within the uppermost aquifer in the vicinity of the EAPPS. Per the requirements of 40 CFR 257.90(b), baseline monitoring was performed between June 2016 and August 2017, and detection monitoring for Appendix III constituents was conducted in 2018 and 2019. Statistical evaluation of CCR groundwater monitoring data collected through 2018 identified statistically significant increases (“SSIs”) of pH (Appendix III constituent) above background levels at two monitoring well locations (BBS-CCR-1 and BBS-CCR-2). In April 2018, an Alternate Source Demonstration (ASD) established that the elevated groundwater pH was not a result of a release from the EAPPS. Therefore, a transition to assessment groundwater monitoring was not required.

Although the four years of groundwater data did not indicate that either assessment monitoring or an assessment of corrective measures at the EAPPS were required, TEC decided to close the EAPPS by removal (e.g., “clean closure”) based on other provisions of the CCR Rule. The closure project was initiated in December 2019 and continued throughout 2020. Groundwater monitoring was terminated, and the five monitoring wells were abandoned in September 2020. The closure project is anticipated to be completed by no later than the end of 2021.

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ACRONYMS

BBS	Big Bend Station
CCR	Coal Combustion Residuals
CCR Rule	Coal Combustion Residuals Rule
CFR	Code of Federal Regulations
EAPPS	Economizer Ash and Pyrite Pond System
GWPS	Groundwater Protection Standard
PE	Professional Engineer
RCRA	Resource Conservation and Recovery Act
SP	Statistical Analysis Plan
SSI	Statistically Significant Increase
TEC	Tampa Electric Company
USEPA	United States Environmental Protection Agency

1. BACKGROUND

On April 17, 2015, the United States Environmental Protection Agency (USEPA) published 40 Code of Federal Regulations (CFR) Parts 257 and 261: Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule (USEPA, 2015). This regulation addresses the safe disposal of coal combustion residuals (CCR) as solid waste under Subtitle D of the Resource Conservation and Recovery Act (RCRA) and is referred to herein as the CCR Rule. The CCR Rule became effective on October 14, 2015. The rule provides national minimum criteria for “the safe disposal of CCR in new and existing CCR landfills, surface impoundments, and lateral expansions, design and operating criteria, groundwater monitoring and corrective action, closure requirements and post closure care, and recordkeeping, notification, and internet posting requirements.” The groundwater monitoring requirements of the CCR Rule apply to the economizer ash and pyrite pond system (EAPPS) at Tampa Electric Company’s (TEC) Big Bend Power Station (BBS) in southeast Hillsborough County, Gibsonton, Florida (**Figure 1**).

This document has been prepared to meet the requirements of 40 CFR 257.90(e) concerning the Annual Groundwater Monitoring and Corrective Action reporting required by the CCR Rule for the EAPPS and BBS. At a minimum, the annual groundwater monitoring and corrective action report must contain the information described below and the information required by 257.90(e)(1) through (5), to the extent available.

“For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility’s operating record as required by § 257.105(h)(1)”

In late 2015, TEC decided to close the EAPPs voluntarily by removing all CCR material for offsite disposal and restoring the area to pre-development conditions. This closure is not driven by exceedances of Groundwater Protection Standards (GWPS) as demonstrated by the results of the Detection Monitoring Program. Nevertheless, since the bottom of the impoundment is periodically less than five feet from the mean high groundwater table elevation, TEC decided to close the impoundment by removal of all CCRs from the unit, which was inactivated and ceased receiving CCRs in April 2017. Engineering began in October 2018 and closure of the EAPPS commenced in December 2019. Excavation and disposal of CCRs continued in 2020 and final closure and restoration activities will be completed not later than the end of 2021.

This annual report covers the period January 1, 2020 through December 31, 2020. Sections of this report that are required by the CCR Rule but are not applicable for the reporting period, contain the text “Not applicable for this annual reporting period”.

2. SITE DESCRIPTION

2.1 Site Setting

The BBS is located on the eastern shore of Tampa Bay in Sections 9, 10, 15, and 16, Township 31, Range 19 East of the Gibsonton Quadrangle, with the center of the facility at approximately 27°47'36" north latitude and 82°24'16" west longitude and encompasses approximately 1,492 acres. Topography at the Site ranges from approximately sea level (along the western portion of the BBS) to approximately 10 feet mean sea level (MSL) near the eastern portions of the property along U.S. Highway 41. The location of the BBS and the components of the EAPPS, namely the north and south economizer ash ponds and the suction pond, are shown on **Figure 2**.

Construction of BBS began in the late 1960s on two dredge/fill peninsulas. Four coal-fired power generating units are present at the BBS and were placed into service in 1970, 1973, 1976, and 1985. Units 1, 2, and 3 are wet-bottom slag-tap type units that originally used saltwater slag-handling systems and electrostatic precipitators for stack gas emissions control. However, these units are now operating as freshwater systems that allow more internal water recycling. Unit 4 is a dry-bottom unit with a closed-loop freshwater ash-slucie system. All units are equipped with electrostatic precipitators and stack gasses are treated with limestone flue gas desulfurization (FGD) and selective catalytic reduction (SCR) systems.

2.2 CCR Units

The EAPPS was built in the early 1980s to support the operation of Big Bend Unit 4 and consists of three lined ponds. The EAPPS is considered one CCR unit by 40 CFR 257.53 and is located approximately 1,000 feet southeast of the active power generating units (**Figure 1**). The EAPPS ceased operation in April 2017. Economizer ash from Unit 4 is now combined with bottom ash and the combined product is stored in the Bottom Ash Ponds at the site for offsite shipment and beneficial use.

The pond bottom and dike crest elevations for each pond are reportedly 5.5 ft NGVD and 31 ft, NGVD respectively. The South Economizer Ash Pond contains an estimated 337,400 cubic yards (cy) of CCR material over a surface area of 7.2 acres. The north pond contains an estimated 90,000 cy of CCR material (Geosyntec, 2016) over a surface area of 5.4 acres.

2.3 Summary of Site Geology and Hydrogeology

The units that form the hydrogeologic framework in the region include the surficial aquifer system (SAS), the Intermediate Confining Unit (ICU), and the upper Floridan aquifer system (UFAS). Based on Site-specific data as well as hydrogeologic studies of west-central Florida, the intermediate aquifer system has not been identified as being present at this location (Tihansky and Knochenmus, 2001).

The SAS sediments consist of Pleistocene shell deposits and terrace sands. Due to the irregular surface of the underlying limestone, the SAS varies in thicknesses but typically ranges between 20 and 30 feet (ft) thick in the area of the Site (SWFWMD, 2010). Groundwater (the water table) in the SAS is unconfined. The groundwater flow direction in

the SAS is generally towards Tampa Bay as the discharge point; however, flow direction is influenced by various surface water features including ponds, drainage ditches, canals, and small creeks locally. Upward vertical flow gradients from the UFAS to the SAS are common based on historical data trends, and in certain cases can lead to artesian conditions (ECT, 2003; 2007).

The ICU resides within the undifferentiated Hawthorn Group. Due to the absence of the intermediate aquifer system, the permeable strata are absent and consequently the less permeable, fine grained clastic clay units are generally more prevalent. These clay units with varying silt, sand content, and marls comprise the semi-confining unit that separates the SAS and the UFAS.

The UFAS consists of a continuous series of carbonate units and is composed of the limestone sequences that occur in the Tampa Member of the Arcadia Formation of the Hawthorn Group as well as the underlying Suwannee Limestone and other carbonate strata. The Tampa Member encompasses sandy limestone containing varying amounts of clays and marls. The thickness of the UFAS may exceed 1,200 ft beneath the facility. Groundwater in the UFAS generally flows regionally from northeast to southwest towards Tampa Bay.

Additional details regarding the regional and Site-specific geology and hydrogeology are provided in the *CCR Rule Groundwater Monitoring Program Plan (GWMP), Big Bend Power Station*, (October 2016).

2.4 Aquifer System Description

2.4.1 Identification of Uppermost Aquifer

The uppermost aquifer is defined by § 257.91(a)(1) as the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary. The uppermost aquifer at the Site is the SAS.

2.4.2 Groundwater Flow Direction

A surface water feature, Jackson Branch, to the north/northeast of the EAPPS appears to influence local groundwater flow toward the stream in contrast to the general groundwater flow direction at the BBS, which is east to west. The groundwater flow direction near the EAPPS has consistently been north to northeast from groundwater elevations generated during the September 2019 detection monitoring event, which was the final groundwater sampling event performed at the Site (**Appendix A**).

2.4.3 Groundwater Flow Rates

The average linear velocity of groundwater in the SAS at the EAPPS ranges from 0.03 to 0.07 ft/day¹. This flow velocity corresponds to a range of flow velocities from approximately 12

¹ Based on average hydraulic conductivity of 3.4 feet/day for SAS deposits, a porosity of 0.2 for sand, and horizontal hydraulic gradients between 0.002 and 0.004.

to 27 feet per year. An approximate groundwater flow velocity of 20 feet per year was estimated using the September 17, 2019 groundwater level measurements.

3. GROUNDWATER MONITORING SYSTEM

The groundwater monitoring system (GMS) installed at the EAPPS was designed to monitor the water quality in the SAS upgradient of the EAPPS to evaluate background concentrations and downgradient of the EAPPS to evaluate the potential effects of a release. The GMS consisted of two background monitoring wells (identified as BBS-CCR-BW1 and BBS-CCR-BW2) located hydraulically upgradient of EAPPS. Three monitoring wells (identified as BBS-CCR1, BBS-CCR-2, and BBS-CCR-3) were located at the waste boundary and at the “hydraulically downgradient perimeter (i.e., the edge) of the CCR unit or at the closest practical distance from this location” [80 FR 21400].

TEC initiated clean closure activities (CCR removal) of the EAPPS in December 2019. Therefore, all five GMS monitoring wells were abandoned and detection monitoring was not conducted in 2020. The former location of the monitoring wells comprising the GMS are shown on **Figure 3**.

3.1 Status of the Groundwater Monitoring and Corrective Action Program

Groundwater monitoring was initiated at the EAPPS in June 2016 in accordance with the requirements of 40 CFR 257.90(b). Ten sampling events were conducted as part of baseline monitoring between June 2016 and August 2017, and detection monitoring was conducted in 2018 and 2019.

The groundwater monitoring program was terminated in 2020 with the initiation of clean closure activities (CCR removal) of the EAPPS in December 2019 and the abandonment of the GMS monitoring wells in September 2020.

3.2 Identification of Monitoring Wells Installed, Abandoned, or Decommissioned -257.90 (E)(2)

The five monitoring wells comprising the GMS were abandoned on September 14, 2020 by a Florida licensed driller. The monitoring well construction information is provided in **Table 1**. Copies of the well abandonment permits from the Southwest Florida Water Management District and the abandonment forms are provided in **Appendix B**.

4. SUMMARY OF 2020 CCR RULE ACTIVITIES COMPLETED

4.1 Requirements Completed

Closure of the EAPPs continued through 2020 and are currently ongoing. These activities included dewatering, excavation, and offsite shipment of CCR for disposal in Class I Landfills in the region.

4.2 Completion of Required Reports

The following reports were completed during the reporting period:

- Annual Groundwater Monitoring and Corrective Action Report, Big Bend Power Station – Economizer Ash and Pyrite Pond System, January 2020.

4.3 Problems Encountered and Resolution

Not applicable for this annual reporting period.

5. GROUNDWATER MONITORING DATA - 257.90(E)(3)

5.1 Detection Monitoring

Not applicable for this annual reporting period. As stated previously, detection monitoring has not been performed since 2019 following the initiation of closure by removal of the EAPPS by TEC.

5.1.1 Alternative Monitoring Frequency – 257.94(d)(3)

Not applicable for this annual reporting period.

5.1.2 Identification of Appendix III Constituents Detected at SSI Over Background – 257.94(e)

None.

5.1.3 Alternate Source Demonstration – 257.94(e)(2)

In April 2018, an ASD was successfully completed and certified by a Professional Engineer to address SSIs of groundwater pH at BBS-CCR-1 and BBS-CCR-2 in accordance with 40 CFR.94(e)(2). The groundwater pH SSIs in 2019 were shown to be a result of alternate sources.

5.1.4 Transition from Detection to Assessment Monitoring – 257.90(e)(4)

The detection monitoring program for the groundwater monitoring system was initiated in October 2017 pursuant to §257.90(b). Based on the monitoring results and the ASD completed in April 2018 in accordance with §257.94(e)(2), the EAPPS remained in detection monitoring until initiation of closure activities in December 2019.

5.2 Assessment Monitoring

None of the provisions of 40 CFR 257.95 were applicable for this annual reporting period. All closure activities for this unit will conclude in 2021.

6. DATA USABILITY EVALUATION

Not applicable for this annual reporting period.

7. DETECTION MONITORING STATISTICAL ANALYSIS

Not applicable for this annual reporting period.

8. ASSESSMENT MONITORING STATISTICAL ANALYSIS

Not applicable for this annual reporting period.

9. ACTIVITIES PLANNED FOR 2021

The projected key activities for the upcoming year include the following:

- Continuation of the EAPPS closure activities in accordance with 40 C.F.R. § 257.102(c) (closure by removal).

10. CORRECTIVE MEASURES

Not applicable for this annual reporting period.

11. REMEDY SELECTION

Not applicable for this annual reporting period.

12. CORRECTIVE ACTION

Corrective action of the EAPPs is not required in accordance with the Rule. However, TEC has opted to closure the EAPPS in accordance with 40 C.F.R. § 257.102(c).

13. REFERENCES

- Environmental Consulting & Technology (ECT). 2003. Supplemental Assessment Report, Tampa Electric Company, Big Bend Station. Tampa, Florida.
- Environmental Consulting & Technology. 2007. Sodium Ground Water Quality Exemption Application for the TECO Big Bend Station. Tampa, Florida.
- Geosyntec Consultants, Inc. 2016. CCR Groundwater Monitoring Program Plan, Big Bend Power Station, Economizer Ash and Pyrite Ponds, September 2016.
- Geosyntec Consultants, Inc. 2016. Basins of Design and Preliminary Closure Evaluation Report; Economizer Ash and Pyrite Ponds; Big Bend Power Station, September 2016.
- Geosyntec Consultants, Inc. 2017. Groundwater Monitoring Well Design, Installation, Development, and Decommissioning Report, Big Bend Power Station, Economizer Ash and Pyrite Pond System, October 2017.
- Geosyntec Consultants, Inc. 2017. Statistical Analysis Plan, Big Bend Power Station, Economizer Ash and Pyrite Pond System, October 2017.
- Geosyntec Consultants, Inc. 2018. Alternate Source Demonstration, Economizer Ash and Pyrite Pond System, Big Bend Power Station, April 2018.
- Southwest Florida Water Management District, 2010. 2010 Regional Water Supply Plan, Tampa Bay Planning Region. Brooksville, Florida.
- Tihanksy, A.B. and L.A. Knochenmus. 2001. Karst Features and Hydrogeology in West-central Florida-A Field Perspective. US Geological Survey-Water-Resources Investigations Report 01-4011.
- USEPA, April 2015. 40 CFR Part 257, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule, EPA-HQ-RCRA-2009-0640.

TABLES

Table 1: Former CCR Monitoring Well Construction DetailsTEC Big Bend Station Economizer Ash and Pyrite Pond System
Gibson, FL

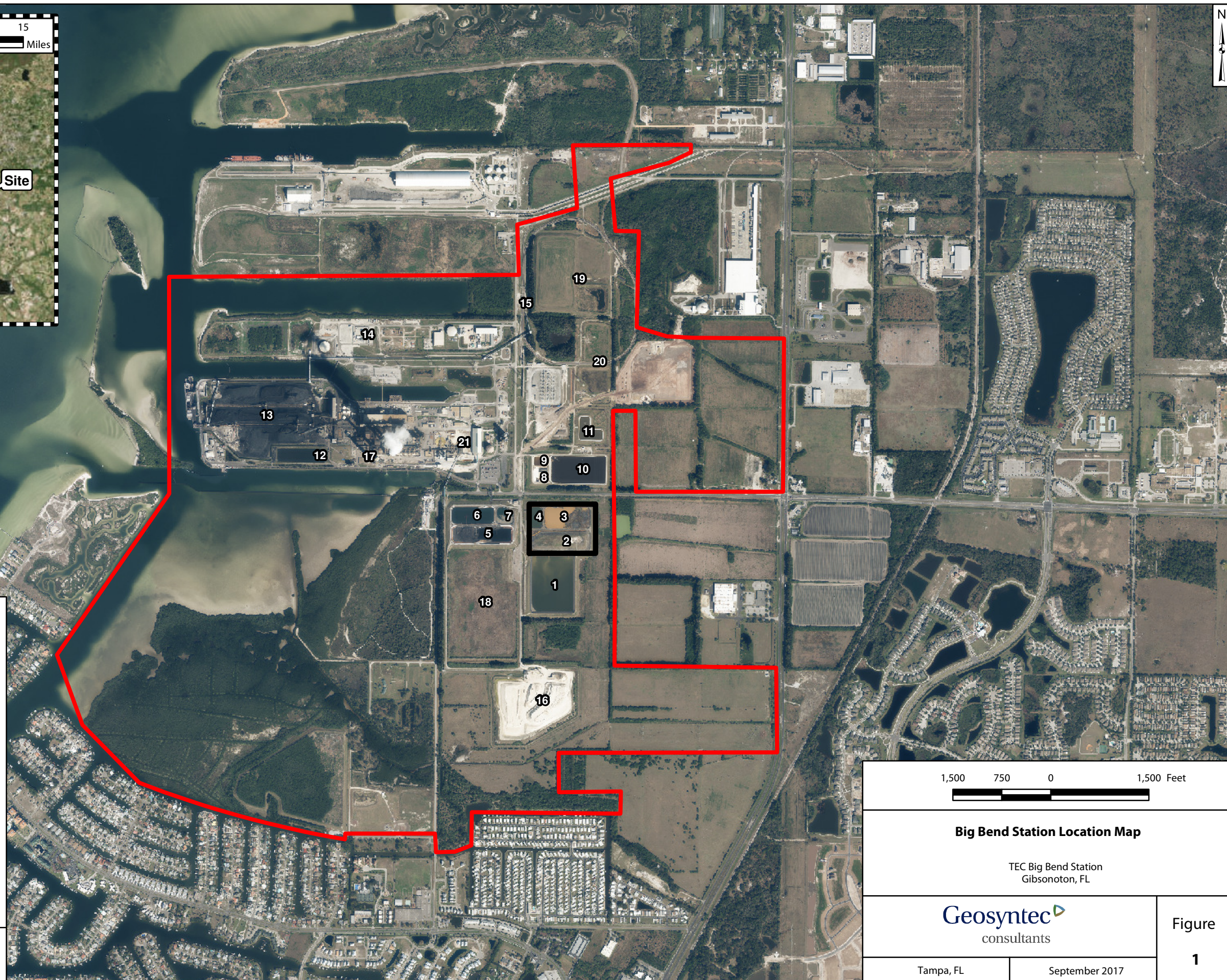
Well ID	Designation	Northing (NAD 1983)	Easting (NAD 1983)	Ground Surface Elevation (ft NAVD)	TOC Elevation* (ft NAVD)	Total Depth (ft bls)	Screen Interval (ft bls)	Top of Screen Elevation (ft NAVD)	Bottom of Screen Elevation (ft NAVD)
BBS-CCR-BW1	Background	1256638.34	528461.95	29.10	33.40	40	30-40	-0.90	-10.90
BBS-CCR-BW2	Background	1256966.67	527897.28	7.70	12.54	19	9-19	-1.30	-11.30
BBS-CCR-1	Detection	1257433.85	528211.74	5.00	9.82	17.5	7.5-17.5	-2.50	-12.50
BBS-CCR-2	Detection	1257429.29	528769.31	5.00	9.34	17.5	7.5-17.5	-2.50	-12.50
BBS-CCR-3	Detection	1257154.61	529023.26	4.90	9.20	18.5	8.5-18.5	-3.60	-13.60

Notes

1. Monitoring wells are 2 inches in diameter.
2. ft bls = feet below land surface
3. Horizontal datum surveyed to the North American Datum (NAD) of 1983 US State Plane Florida West.
4. Vertical datum surveyed to the North American Vertical Datum (NAVD) of 1988.
5. *Top of casing elevations were revised in September 2016 during final aboveground well completions. The additional PVC stickup was measured in the field and added to the surveyed top of casing elevation

FIGURES





- Legend**
1. Long Term Fly Ash Pond/Reclaimed Water Pond (lined)
 2. South Economizer Ash Pond (lined)
 3. North Economizer Ash Pond (lined)
 4. Economizer Ash Suction Pond (lined)
 5. South Bottom Ash Pond (lined)
 6. North Bottom Ash Pond (lined)
 7. Bottom Ash Suction Pond (lined)
 8. Settling Basins (concrete)
 9. Settling Pond (lined)
 10. South Recycle Pond (lined)
 11. North Recycle Pond (lined)
 12. Storm Water Pond
 13. Coal Field
 14. BB Aero Unit CT4
 15. Rail Car Unloading
 16. Gypsum Storage Area
 17. Slag Dewatering Bins
 18. Long Term Bottom Ash Area
 19. Dredge Disposal Area DA-2
 20. Former Spray Field
 21. Limestone and FGD Area
- Approximate Site Boundary
 Economizer Ash and Pyrite Pond System (EAPPS)

Notes:
 1. Site boundary provided by Tampa Electric Company.
 2. Source of 2014 Aerials: Florida Department of Transportation, Surveying and Mapping Office.

1,500 750 0 1,500 Feet

Big Bend Station Location Map

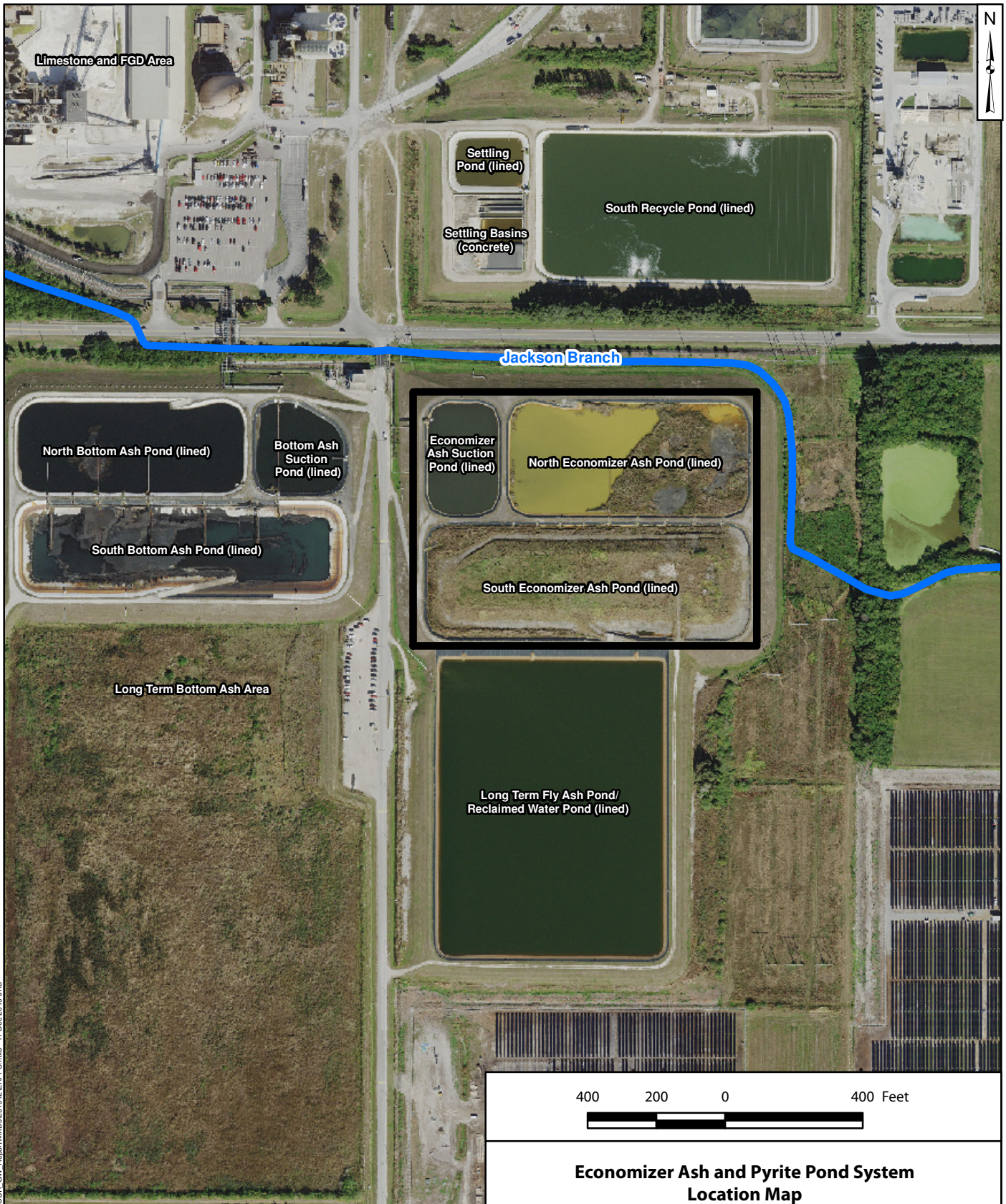
TEC Big Bend Station
Gibsonton, FL

Geosyntec
consultants

Tampa, FL September 2017

Figure
1

Path: (\\traveler-01\data)\P\GIS\FE2033_TECO_BigBend\MXD\201606\Site_Location.mxd 18 Sep 2017 JRB



400 200 0 400 Feet



**Economizer Ash and Pyrite Pond System
Location Map**



TEC Big Bend Station
Gibsonton, FL

Geosyntec
consultants

Figure

2

Legend

-  Jackson Branch
-  Economizer Ash and Pyrite Pond System (EAPPS)

Note:
Source of 2017 Aerials: Florida Department of Transportation, Aerial Photo Look Up System website.



Tampa, FL

January 2021

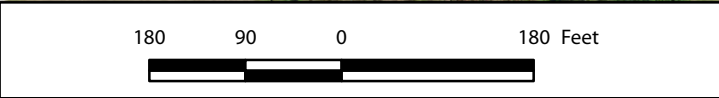


Path: [I:\usville-01\DATA\T:\OGS\SR2814_Annual_CCR_GW_Report\MXDs\2019\2\CCR_MW_Locs.mxd 11 December 2019 _JRB

Legend

-  Background Well Location (abandoned Sept. 2020)
-  CCR Monitoring Well Location (abandoned Sept. 2020)

Note:
2017 Aerial Imagery source, Florida Department of Transportation Surveying and Mapping Office APLUS website.



**Former CCR Monitoring Well Locations
Economizer Ash and Pyrite Pond System**

TEC Big Bend Station
Gibsonton, FL

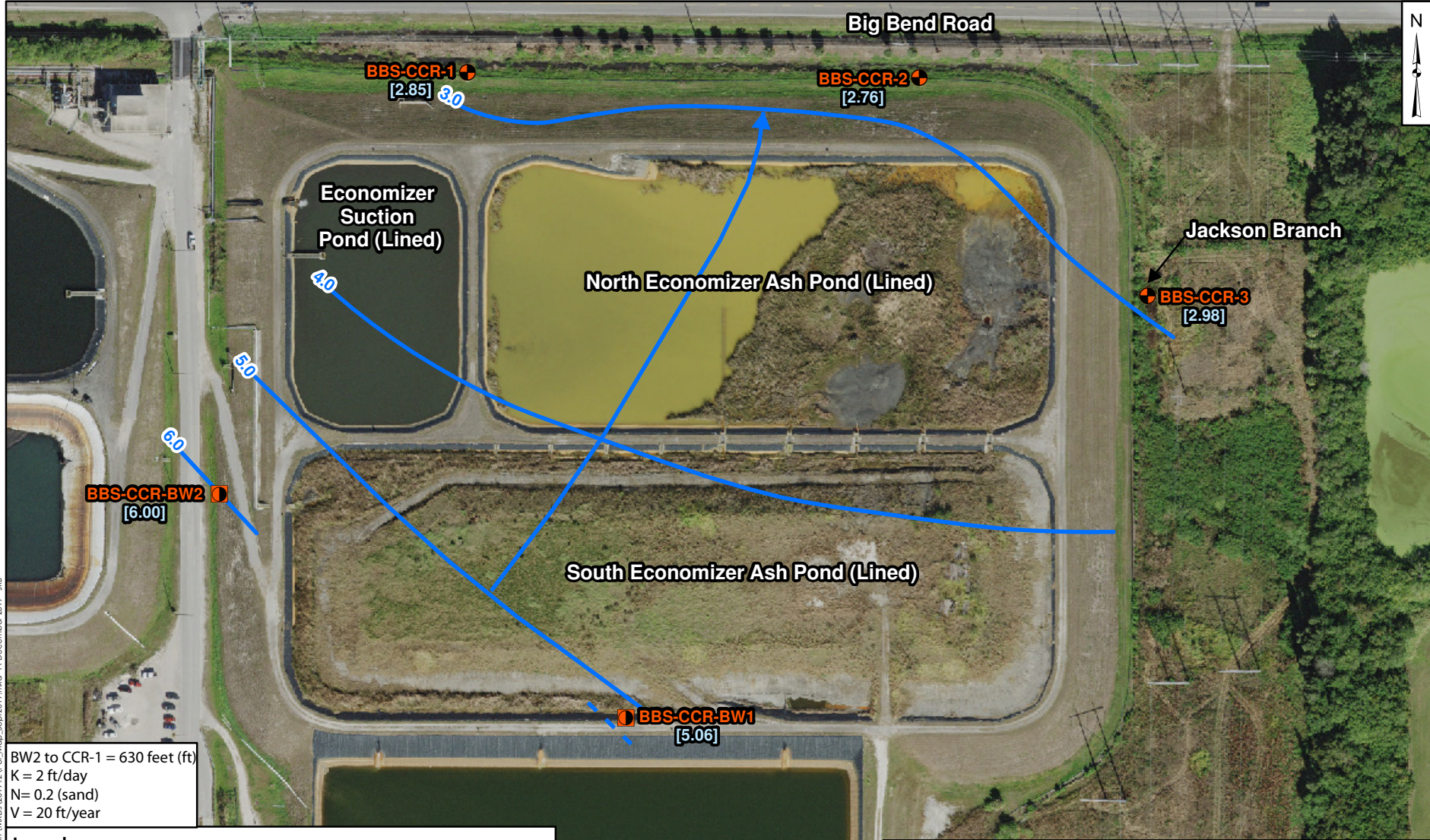
Geosyntec
consultants

Figure
3

Tampa, FL

January 2021

APPENDIX A
September 2019 Surficial Aquifer
Potentiometric Surface



BW2 to CCR-1 = 630 feet (ft)
 K = 2 ft/day
 N = 0.2 (sand)
 V = 20 ft/year

Legend

- Background Well Location
- CCR Monitoring Well Location
- Potentiometric Surface Elevation (dashed where inferred, ft NAVD88)
- Groundwater Flow Direction
- Groundwater Elevation (ft NAVD)

Notes:

1. NAVD88 indicates North American Vertical Datum of 1988.
2. NM indicates not measured.
3. 2017 Aerial Imagery source, Florida Department of Transportation Surveying and Mapping Office APLUS website.

**Long Term
Fly Ash
Pond (Lined)**

0 90 180 Feet

**Economizer Ash and Pyrite Pond System
Surficial Aquifer Potentiometric Surface -
September 17, 2019**
 TEC Big Bend Station
 Gibsonton, FL

Geosyntec
 consultants

Figure
3

Tampa, FL January 2020

Path: (I:\ville-01\DATA\1\06GIS\FR2814\Annual\CCR_GW_Report\MXD\2019\2\Fig_Map_Sep2019.mxd 11 December 2019 - JRB

APPENDIX B
SWFWMD Monitoring Well Abandonment
Permits and Forms



STATE OF FLORIDA PERMIT APPLICATION TO CONSTRUCT, REPAIR, MODIFY, OR ABANDON A WELL

PLEASE FILL OUT ALL APPLICABLE FIELDS (*Denotes Required Fields Where Applicable)
The water well contractor is responsible for completing this form and forwarding the permit application to the appropriate delegated authority where applicable.

Permit No. 891740
Florida Unique ID
Permit Stipulations Required (See Attached) 04
62-524 Quad No. Q3120 Delineation No.
CUP/WUP Application No.

1. TAMPA ELECTRIC CO TECO ENERGY CORP TAX DEPT TAMPA FL 33601
*Owner, Legal Name if Corporation *Address *City *State *ZIP *Telephone Number
2. BIG BEND RD APOLLO BEACH
*Well Location - Address, Road Name or Number, City
3. 1931151SF00000005000U
*Parcel ID No. (PIN) or Alternate Key (Circle One) Lot Block Unit
4. 15 31 19 Hillsborough Subdivision Check if 62-524: Yes X No
*Section or Land Grant *Township *Range *County
5. Gregory W Campbell 2613 (727) 561-7477 chad@pdsflorida.com
*Water Well Contractor *License Number *Telephone Number E-mail Address
6. 8820 66th St. N. Pinellas Park FL 33782
*Water Well Contractor's Address City State ZIP

7. *Type of Work: Construction Repair Modification X Abandonment NO LONGER IN USE
8. *Number of Proposed Wells 3
9. *Specify Intended Use(s) of Well(s):
Domestic Landscape Irrigation Agricultural Irrigation Site Investigation
Bottled Water Supply Recreation Area Irrigation Livestock Monitoring
Public Water Supply (Limited Use/DOH) Nursery Irrigation Test
Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal
Class I Injection Golf Course Irrigation HVAC Supply
Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage
Remediation: Recovery Air Sparge Other (Describe)
X Other (Describe) PLUGGED (Note: Not all types of wells are permitted by a given permitting authority)

Date Stamp
Received:
Jul 21, 2020 8:23 am
Official Use Only

10. *Distance from Septic System if <= 200 ft. 0 11. Facility Description UTILITY 12. Estimated Start Date 07/27/2020
13. *Estimated Well Depth 20 ft. *Estimated Casing Depth 10.0 ft. *Primary Casing Diameter 2 in. Open Hole: From To ft.
14. Estimated Screen Interval: From 10.0 To 20.0 ft.
15. *Primary Casing Material: Black Steel Galvanized X PVC Stainless Steel
Not Cased Other:
16. Secondary Casing: Telescope Casing Liner Surface Casing Diameter in.
17. Secondary Casing Material: Black Steel Galvanized PVC Stainless Steel Other
18. *Method of Construction, Repair, or Abandonment: Auger Cable Tool Jetted Rotary Sonic
Combination (Two or More Methods) Hand Driven (Well Point, Sand Point) Hydraulic Point (Direct Push)
Horizontal Drilling X Plugged by Approved Method Other (Describe)
19. Proposed Grouting Interval for the Primary, Secondary, and Additional Casing:
From 0.0 To 20.0 Seal Material (Bentonite X Neat Cement Other)
From To Seal Material (Bentonite Neat Cement Other)
From To Seal Material (Bentonite Neat Cement Other)
From To Seal Material (Bentonite Neat Cement Other)
20. Indicate total number of existing wells on site 2 List number of existing unused wells on site 2
21. *Is this well or any existing well or water withdrawal on the owner's contiguous property covered under a Consumptive/Water Use Permit (CUP/WUP) or CUP/WUP Application? Yes X No If yes, complete the following: CUP/WUP No. District Well ID No.
22. Latitude 27 47 28.78 Longitude 82 23 35.99
23. Data Obtained From: GPS X Map Survey Datum: NAD 27 X NAD 83 WGS 84

I hereby certify that I will comply with the applicable rules of Title 40, Florida Administration Code, and that a water use permit or artificial recharge permit, if needed, has been or will be obtained prior to commencement of well construction. I further certify that all information provided in this application is accurate and that I will obtain necessary approval from other federal, state, or local governments, if applicable. I agree to provide a well completion report to the District within 30 days after completion of the construction, repair, modification, or abandonment authorized by this permit, or the permit expiration, whichever occurs first.

I certify that I am the owner of the property, that the information provided is accurate, and that I am aware of my responsibilities under Chapter 373, Florida Statutes, to maintain or properly abandon this well, or I certify that I am the agent for the owner, that the information provided is accurate, and that I have informed the owner of his responsibilities as stated above. Owner consents to allowing personnel of this WMD or Delegated Authority access to the well site during the construction, repair, modification, or abandonment authorized by this permit.

Digitally Signed 2613 Digitally Signed 7/21/2020
*Signature of Contractor *License No. *Signature of Owner or Agent *Date

Approval Granted By Automatically Issued Issue Date 07/21/2020 Expiration Date 10/19/2020 Hydrologist Approval Initials
Fee Received \$.00 Receipt No. Check No.
THIS PERMIT IS NOT VALID UNTIL PROPERLY SIGNED BY AN AUTHORIZED OFFICER OR REPRESENTATIVE OF THE WMD OR DELEGATED AUTHORITY. THE PERMIT SHALL BE AVAILABLE AT THE WELL SITE DURING ALL CONSTRUCTION, REPAIR, MODIFICATION, OR ABANDONMENT ACTIVITIES.



STATE OF FLORIDA PERMIT APPLICATION TO CONSTRUCT, REPAIR, MODIFY, OR ABANDON A WELL

- Northwest
St. Johns River
South Florida
Suwannee River
DEP
Delegated Authority (If Applicable)

PLEASE FILL OUT ALL APPLICABLE FIELDS (*Denotes Required Fields Where Applicable)

The water well contractor is responsible for completing this form and forwarding the permit application to the appropriate delegated authority where applicable.

Permit No. 891741
Florida Unique ID
Permit Stipulations Required (See Attached)
04
62-524 Quad No. Q3120 Delineation No.
CUP/WUP Application No.

1. TAMPA ELECTRIC CO TECO ENERGY CORP TAX DEPT TAMPA FL 33601
*Owner, Legal Name if Corporation *Address *City *State *ZIP *Telephone Number

2. 490 BIG BEND RD APOLLO BEACH
*Well Location - Address, Road Name or Number, City

3. 1931151SF00000003000U
*Parcel ID No. (PIN) or Alternate Key (Circle One) Lot Block Unit

4. 15 31 19 Hillsborough
*Section or Land Grant *Township *Range *County Subdivision Check if 62-524: Yes X No

5. Gregory W Campbell 2613 (727) 561-7477 chad@pdsflorida.com
*Water Well Contractor *License Number *Telephone Number E-mail Address

6. 8820 66th St. N. Pinellas Park FL 33782
*Water Well Contractor's Address City State ZIP

7. *Type of Work: Construction Repair Modification X Abandonment NO LONGER IN USE
*Reason for Repair, Modification, or Abandonment

8. *Number of Proposed Wells 5
9. *Specify Intended Use(s) of Well(s):

Domestic Landscape Irrigation Agricultural Irrigation Site Investigation
Bottled Water Supply Recreation Area Irrigation Livestock Monitoring
Public Water Supply (Limited Use/DOH) Nursery Irrigation Test
Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal
Class I Injection Golf Course Irrigation HVAC Supply
Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage
Remediation: Recovery Air Sparge Other (Describe)
X Other (Describe) PLUGGED (Note: Not all types of wells are permitted by a given permitting authority)

Date Stamp
Received:
Jul 21, 2020 8:25 am
Official Use Only

10. *Distance from Septic System if <= 200 ft. 0 11. Facility Description UTILITY 12. Estimated Start Date 07/27/2020

13. *Estimated Well Depth 40 ft. *Estimated Casing Depth 35.0 ft. *Primary Casing Diameter 2 in. Open Hole: From To ft.

14. Estimated Screen Interval: From 35.0 To 40.0 ft.
15. *Primary Casing Material: Black Steel Galvanized X PVC Stainless Steel
Not Cased Other:

16. Secondary Casing: Telescope Casing Liner Surface Casing Diameter in.

17. Secondary Casing Material: Black Steel Galvanized PVC Stainless Steel Other

18. *Method of Construction, Repair, or Abandonment: Auger Cable Tool Jetted Rotary Sonic
Combination (Two or More Methods) Hand Driven (Well Point, Sand Point) Hydraulic Point (Direct Push)
Horizontal Drilling X Plugged by Approved Method Other (Describe)

19. Proposed Grouting Interval for the Primary, Secondary, and Additional Casing:
From 0.0 To 40.0 Seal Material (Bentonite X Neat Cement Other)
From To Seal Material (Bentonite Neat Cement Other)
From To Seal Material (Bentonite Neat Cement Other)
From To Seal Material (Bentonite Neat Cement Other)

20. Indicate total number of existing wells on site 3 List number of existing unused wells on site 3

21. *Is this well or any existing well or water withdrawal on the owner's contiguous property covered under a Consumptive/Water Use Permit (CUP/WUP) or CUP/WUP Application? Yes X No If yes, complete the following: CUP/WUP No. District Well ID No.

22. Latitude 27 47 32.20 Longitude 82 23 42.42
23. Data Obtained From: GPS X Map Survey Datum: NAD 27 X NAD 83 WGS 84

I hereby certify that I will comply with the applicable rules of Title 40, Florida Administration Code, and that a water use permit or artificial recharge permit, if needed, has been or will be obtained prior to commencement of well construction. I further certify that all information provided in this application is accurate and that I will obtain necessary approval from other federal, state, or local governments, if applicable. I agree to provide a well completion report to the District within 30 days after completion of the construction, repair, modification, or abandonment authorized by this permit, or the permit expiration, whichever occurs first.

I certify that I am the owner of the property, that the information provided is accurate, and that I am aware of my responsibilities under Chapter 373, Florida Statutes, to maintain or properly abandon this well, or, I certify that I am the agent for the owner, that the information provided is accurate, and that I have informed the owner of his responsibilities as stated above. Owner consents to allowing personnel of this WMD or Delegated Authority access to the well site during the construction, repair, modification, or abandonment authorized by this permit.

Digitally Signed 2613 Digitally Signed 7/21/2020
*Signature of Contractor *License No. *Signature of Owner or Agent *Date

DO NOT WRITE BELOW THIS LINE - FOR OFFICIAL USE ONLY

Approval Granted By Automatically Issued Issue Date 07/21/2020 Expiration Date 10/19/2020 Hydrologist Approval

Fee Received \$.00 Receipt No. Check No.
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STATE OF FLORIDA WELL COMPLETION REPORT

Southwest Northwest St. Johns River South Florida Suwannee River DEP Delegated Authority

Date Stamp Received: Nov 9, 2020 9:59 am Official Use Only

1. Permit Number 891740 CUP/WUP Number DID Number 62-524 Delineation No.
2. Number of permitted wells constructed, repaired, or abandoned 2 Number of permitted wells not constructed, repaired, or abandoned 1
3. Owner's Name TAMPA ELECTRIC CO 4. Completion Date 09/14/2020 5. Florida Unique ID
6. BIG BEND RD APOLLO BEACH
7. County Hillsborough Section 15 Land Grant Township 31 Range 19
8. Latitude 27 47 28.64 Longitude 82 23 36.07
9. Data Obtained From: GPS X Map Survey Datum: NAD 27 X NAD 83 WGS 84
10. Type of Work: Construction Repair Modification X Abandonment
11. Specify Intended Use(s) of Well(s): Domestic Landscape Irrigation Agricultural Irrigation Site Investigation
12. Drill Method: Auger Cable Tool Rotary Combination (Two or More Methods) Jetted Sonic
13. Measured Static Water Level 6.0 ft. Measured Pumping Water Level ft. After Hours at GPM
14. Measuring Point (Describe) Which is ft. Above Below Land Surface Flowing: Yes No
15. Casing Material: Black Steel Galvanized X PVC Stainless Steel Not Cased Other
16. Total Well Depth 17.0 ft. Cased Depth 17.0 ft. Open Hole: From To ft. Screen: From To ft. Slot Size
17. Abandonment: X Other (Explain) PLUGGED
18. Surface Casing Diameter and Depth: Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
19. Primary Casing Diameter and Depth: Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
20. Liner Casing Diameter and Depth: Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
21. Telescope Casing Diameter and Depth: Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
22. Pump Type (If Known): Centrifugal Jet Submersible Turbine Horsepower Pump Capacity (GPM) Pump Depth ft. Intake Depth ft.
23. Chemical Analysis (When Required): Iron ppm Sulfate ppm Chloride ppm Laboratory Test Field Test Kit
24. Water Well Contractor: Contractor Name Gregory W Campbell License Number 2613 E-mail Address chad@pdsflorida.com
Contractor's Signature Digitally Signed Driller's Name (Print or Type) Brian Ehrhart



STATE OF FLORIDA WELL COMPLETION REPORT

- Southwest
Northwest
St. Johns River
South Florida
Suwannee River
DEP
Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp
Received:
Nov 9, 2020 9:59 am
Official Use Only

1. *Permit Number 891740 *CUP/WUP Number *DID Number 62-524 Delineation No.
2. *Number of permitted wells constructed, repaired, or abandoned 2 *Number of permitted wells not constructed, repaired, or abandoned 1
3. *Owner's Name TAMPA ELECTRIC CO 4. *Completion Date 09/14/2020 5. Florida Unique ID

6. BIG BEND RD APOLLO BEACH
*Well Location - Address, Road Name or Number, City, ZIP

7. *County Hillsborough *Section 15 Land Grant *Township 31 *Range 19

8. Latitude 27 47 24.72 Longitude 82 23 36.79

9. Data Obtained From: GPS X Map Survey Datum: NAD 27 X NAD 83 WGS 84

10. *Type of Work: Construction Repair Modification X Abandonment
11. *Specify Intended Use(s) of Well(s):
Domestic Landscape Irrigation Agricultural Irrigation Site Investigation
Bottled Water Supply Recreation Area Irrigation Livestock Monitoring
Public Water Supply (Limited Use/DOH) Nursery Irrigation Test
Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal
Class I Injection Golf Course Irrigation HVAC Supply
Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage
Remediation: Recovery Air Sparge Other (Describe)
X Other (Describe) PLUGGED

12. *Drill Method: Auger Cable Tool Rotary Combination (Two or More Methods) Jetted Sonic
Horizontal Drilling Hydraulic Point (Direct Push) X Other PLUGGED BY APPROVED METHOD

13. *Measured Static Water Level 6.0 ft. Measured Pumping Water Level ft. After Hours at GPM

14. *Measuring Point (Describe) Which is ft. Above Below Land Surface *Flowing: Yes No

15. *Casing Material: Black Steel Galvanized X PVC Stainless Steel Not Cased Other

16. *Total Well Depth 17.0 ft. Cased Depth 17.0 ft. *Open Hole: From To ft. *Screen: From To ft. Slot Size

17. *Abandonment: X Other (Explain) PLUGGED
2' From 0.00 ft. To 17.00 ft. No. of Bags 0.34 Seal Material (Check One): X Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

18. *Surface Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

19. *Primary Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

20. *Liner Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

21. *Telescope Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

22. Pump Type (If Known): Centrifugal Jet Submersible Turbine
Horsepower Pump Capacity (GPM)
Pump Depth ft. Intake Depth ft.
23. Chemical Analysis (When Required):
Iron ppm Sulfate ppm Chloride ppm
Laboratory Test Field Test Kit

24. Water Well Contractor:
*Contractor Name Gregory W Campbell *License Number 2613 E-mail Address chad@pdsflorida.com

*Contractor's Signature Digitally Signed *Driller's Name (Print or Type) Brian Ehrhart
(I certify that the information provided in this report is accurate and true.)



STATE OF FLORIDA WELL COMPLETION REPORT

- Southwest
Northwest
St. Johns River
South Florida
Suwannee River
DEP
Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required Fields Where Applicable)

Date Stamp
Received:
Nov 9, 2020 10:28 am
Official Use Only

1. Permit Number 891741 CUP/WUP Number DID Number 62-524 Delineation No.
2. Number of permitted wells constructed, repaired, or abandoned 5 Number of permitted wells not constructed, repaired, or abandoned 0
3. Owner's Name TAMPA ELECTRIC CO 4. Completion Date 09/14/2020 5. Florida Unique ID
6. 490 BIG BEND RD APOLLO BEACH
Well Location - Address, Road Name or Number, City, ZIP
7. County Hillsborough Section 15 Land Grant Township 31 Range 19
8. Latitude 27 47 32.59 Longitude 82 23 44.80
9. Data Obtained From: GPS X Map Survey Datum: NAD 27 X NAD 83 WGS 84
10. Type of Work: Construction Repair Modification X Abandonment
11. Specify Intended Use(s) of Well(s):
Domestic Landscape Irrigation Agricultural Irrigation Site Investigation
Bottled Water Supply Recreation Area Irrigation Livestock Monitoring
Public Water Supply (Limited Use/DOH) Nursery Irrigation Test
Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal
Class I Injection Golf Course Irrigation HVAC Supply
Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage
Remediation: Recovery Air Sparge Other (Describe)
X Other (Describe) PLUGGED
12. Drill Method: Auger Cable Tool Rotary Combination (Two or More Methods) Jetted Sonic
Horizontal Drilling Hydraulic Point (Direct Push) X Other PLUGGED BY APPROVED METHOD
13. Measured Static Water Level 6.0 ft. Measured Pumping Water Level ft. After Hours at GPM
14. Measuring Point (Describe) Which is ft. Above Below Land Surface Flowing: Yes No
15. Casing Material: Black Steel Galvanized X PVC Stainless Steel Not Cased Other
16. Total Well Depth 17.0 ft. Cased Depth 17.0 ft. Open Hole: From To ft. Screen: From To ft. Slot Size
17. Abandonment: X Other (Explain) PLUGGED
2' From 0.00 ft. To 17.00 ft. No. of Bags 0.34 Seal Material (Check One): X Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
18. Surface Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
19. Primary Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
20. Liner Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
21. Telescope Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
22. Pump Type (If Known): Centrifugal Jet Submersible Turbine
Horsepower Pump Capacity (GPM)
Pump Depth ft. Intake Depth ft.
23. Chemical Analysis (When Required):
Iron ppm Sulfate ppm Chloride ppm
Laboratory Test Field Test Kit
24. Water Well Contractor:
Contractor Name Gregory W Campbell License Number 2613 E-mail Address chad@pdsflorida.com
Contractor's Signature Digitally Signed Driller's Name (Print or Type) Brian Ehrhart
(I certify that the information provided in this report is accurate and true.)



STATE OF FLORIDA WELL COMPLETION REPORT

Southwest Northwest St. Johns River South Florida Suwannee River DEP Delegated Authority (If Applicable) PLEASE, FILL OUT ALL APPLICABLE FIELDS (* Denotes Required Fields Where Applicable)

Date Stamp Received: Nov 9, 2020 10:28 am Official Use Only

1. Permit Number 891741 CUP/WUP Number DID Number 62-524 Delineation No. 2. Number of permitted wells constructed, repaired, or abandoned 5 Number of permitted wells not constructed, repaired, or abandoned 0 3. Owner's Name TAMPA ELECTRIC CO 4. Completion Date 09/14/2020 5. Florida Unique ID 6. 490 BIG BEND RD APOLLO BEACH Well Location - Address, Road Name or Number, City, ZIP 7. County Hillsborough Section 15 Land Grant Township 31 Range 19 8. Latitude 27 47 32.59 Longitude 82 23 38.62 9. Data Obtained From: GPS X Map Survey Datum: NAD 27 X NAD 83 WGS 84 10. Type of Work: Construction Repair Modification X Abandonment 11. Specify Intended Use(s) of Well(s): Domestic Landscape Irrigation Agricultural Irrigation Site Investigation Bottled Water Supply Recreation Area Irrigation Livestock Monitoring Public Water Supply (Limited Use/DOH) Nursery Irrigation Test Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal Golf Course Irrigation HVAC Supply Class I Injection HVAC Return Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage Remediation: Recovery Air Sparge Other (Describe) X Other (Describe) PLUGGED 12. Drill Method: Auger Cable Tool Rotary Combination (Two or More Methods) Jetted Sonic Horizontal Drilling Hydraulic Point (Direct Push) X Other PLUGGED BY APPROVED METHOD 13. Measured Static Water Level 6.0 ft. Measured Pumping Water Level ft. After Hours at GPM 14. Measuring Point (Describe) Which is ft. Above Below Land Surface Flowing: Yes No 15. Casing Material: Black Steel Galvanized X PVC Stainless Steel Not Cased Other 16. Total Well Depth 30.0 ft. Cased Depth 30.0 ft. Open Hole: From To ft. Screen: From To ft. Slot Size 17. Abandonment: X Other (Explain) PLUGGED 2. From 0.00 ft. To 30.00 ft. No. of Bags 0.60 Seal Material (Check One): X Neat Cement Bentonite Other From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other 18. Surface Casing Diameter and Depth: Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other 19. Primary Casing Diameter and Depth: Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other 20. Liner Casing Diameter and Depth: Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other 21. Telescope Casing Diameter and Depth: Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other 22. Pump Type (If Known): Centrifugal Jet Submersible Turbine Horsepower Pump Capacity (GPM) Pump Depth ft. Intake Depth ft. 23. Chemical Analysis (When Required): Iron ppm Sulfate ppm Chloride ppm Laboratory Test Field Test Kit 24. Water Well Contractor: Contractor Name Gregory W Campbell License Number 2613 E-mail Address chad@pdsflorida.com Contractor's Signature Digitally Signed Driller's Name (Print or Type) Brian Ehrhart (I certify that the information provided in this report is accurate and true.)

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
 PHONE: (352) 796-7211 or (800) 423-1476
 WWW.SWFWMD.STATE.FL.US

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 4049 REID STREET, PALATKA, FL 32178-1429
 PHONE: (386) 329-4500
 WWW.SJRWMD.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
 (U.S. Highway 90, 10 miles west of Tallahassee)
 PHONE: (850) 539-5999
 WWW.NWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 P.O. BOX 24680
 3301 GUN CLUB ROAD
 WEST PALM BEACH, FL 33416-4680
 PHONE: (561) 686-8800
 WWW.SFWMD.GOV

SUWANNEE RIVER WATER MANAGEMENT DISTRICT
 9225 CR 49
 LIVE OAK, FL 32060
 PHONE: (386) 362-1001 or (800) 226-1066 (Florida only)
 WWW.MYSUWANNEERIVER.COM

***DRILL CUTTINGS LOG** (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)

From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____
From _____ ft.	To _____ ft.	Color _____	Grain Size (F, M, C) _____	Material _____

Comments: Finish: PLUGGED

BBS-CCR-2

*Detailed Site Map of Well Location



Give distances from all reference points or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well.



STATE OF FLORIDA WELL COMPLETION REPORT

PLEASE, FILL OUT ALL APPLICABLE FIELDS (*Denotes Required Fields Where Applicable)
[X] Southwest
[] Northwest
[] St. Johns River
[] South Florida
[] Suwannee River
[] DEP
[] Delegated Authority (If Applicable)

Date Stamp
Received:
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Official Use Only

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*Well Location - Address, Road Name or Number, City, ZIP
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Bottled Water Supply Recreation Area Irrigation Livestock Monitoring
Public Water Supply (Limited Use/DOH) Nursery Irrigation Test
Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal
Class I Injection Golf Course Irrigation HVAC Supply
Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage
Remediation: Recovery Air Sparge Other (Describe)
X Other (Describe) PLUGGED
12. *Drill Method: Auger Cable Tool Rotary Combination (Two or More Methods) Jetted Sonic
Horizontal Drilling Hydraulic Point (Direct Push) X Other PLUGGED BY APPROVED METHOD
13. *Measured Static Water Level 6.0 ft. Measured Pumping Water Level ft. After Hours at GPM
14. *Measuring Point (Describe) Which is ft. Above Below Land Surface *Flowing: Yes No
15. *Casing Material: Black Steel Galvanized X PVC Stainless Steel Not Cased Other
16. *Total Well Depth 40.0 ft. Cased Depth 40.0 ft. *Open Hole: From To ft. *Screen: From To ft. Slot Size
17. *Abandonment: X Other (Explain) PLUGGED
2" From 0.00 ft. To 40.00 ft. No. of Bags 0.80 Seal Material (Check One): X Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
18. *Surface Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
19. *Primary Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
20. *Liner Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
21. *Telescope Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
22. Pump Type (If Known): Centrifugal Jet Submersible Turbine
Horsepower Pump Capacity (GPM)
Pump Depth ft. Intake Depth ft.
23. Chemical Analysis (When Required):
Iron ppm Sulfate ppm Chloride ppm
Laboratory Test Field Test Kit
24. Water Well Contractor:
*Contractor Name Gregory W Campbell *License Number 2613 E-mail Address chad@pdsflorida.com
*Contractor's Signature Digitally Signed *Driller's Name (Print or Type) Brian Ehrhart
(I certify that the information provided in this report is accurate and true.)



STATE OF FLORIDA WELL COMPLETION REPORT

Southwest
 Northwest
 St. Johns River
 South Florida
 Suwannee River
 DEP
 Delegated Authority (If Applicable) _____

PLEASE, FILL OUT ALL APPLICABLE FIELDS
 (*Denotes Required Fields Where Applicable)

Date Stamp
 Received:
 Nov 9, 2020 10:28 am

Official Use Only

1. *Permit Number 891741 *CUP/WUP Number _____ *DID Number _____ 62-524 Delineation No. _____

2. *Number of permitted wells constructed, repaired, or abandoned 5 *Number of permitted wells not constructed, repaired, or abandoned 0

3. *Owner's Name TAMPA ELECTRIC CO 4. *Completion Date 09/14/2020 5. Florida Unique ID _____

6. 490 BIG BEND RD APOLLO BEACH
 *Well Location - Address, Road Name or Number, City, ZIP

7. *County Hillsborough *Section 15 Land Grant _____ *Township 31 *Range 19

8. Latitude 27 47 27.61 Longitude 82 23 48.01

9. Data Obtained From: GPS Map Survey Datum: NAD 27 NAD 83 WGS 84

10. *Type of Work: Construction Repair Modification Abandonment

11. *Specify Intended Use(s) of Well(s):
 Domestic Landscape Irrigation Agricultural Irrigation Site Investigation
 Bottled Water Supply Recreation Area Irrigation Livestock Monitoring
 Public Water Supply (Limited Use/DOH) Nursery Irrigation Test
 Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal
 Class I Injection Golf Course Irrigation HVAC Supply
 HVAC Return
 Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage
 Remediation: Recovery Air Sparge Other (Describe) _____
 Other (Describe) PLUGGED

12. *Drill Method: Auger Cable Tool Rotary Combination (Two or More Methods) Jetted Sonic
 Horizontal Drilling Hydraulic Point (Direct Push) Other PLUGGED BY APPROVED METHOD

13. *Measured Static Water Level 6.0 ft. Measured Pumping Water Level _____ ft. After _____ Hours at _____ GPM

14. *Measuring Point (Describe) _____ Which is _____ ft. Above Below Land Surface *Flowing: Yes No

15. *Casing Material: Black Steel Galvanized PVC Stainless Steel Not Cased Other _____

16. *Total Well Depth 17.0 ft. Cased Depth 17.0 ft. *Open Hole: From _____ To _____ ft. *Screen: From _____ To _____ ft. Slot Size _____

17. *Abandonment: Other (Explain) PLUGGED

2. *From 0.00 ft. To 17.00 ft. No. of Bags 0.34 Seal Material (Check One): Neat Cement Bentonite Other _____
 From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____

18. *Surface Casing Diameter and Depth:
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____

19. *Primary Casing Diameter and Depth:
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____

20. *Liner Casing Diameter and Depth:
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____

21. *Telescope Casing Diameter and Depth:
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
 Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____

22. Pump Type (If Known): Centrifugal Jet Submersible Turbine
 Horsepower _____ Pump Capacity (GPM) _____
 Pump Depth _____ ft. Intake Depth _____ ft.

23. Chemical Analysis (When Required):
 Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
 Laboratory Test Field Test Kit

24. Water Well Contractor:
 *Contractor Name Gregory W Campbell *License Number 2613 E-mail Address chad@pdsflorida.com
 *Contractor's Signature Digitally Signed *Driller's Name (Print or Type) Brian Ehrhart
 (I certify that the information provided in this report is accurate and true.)



STATE OF FLORIDA WELL COMPLETION REPORT

Date Stamp
Received: Nov 9, 2020 10:28 am
Official Use Only

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required Fields Where Applicable)
[X] Southwest
[] Northwest
[] St. Johns River
[] South Florida
[] Suwannee River
[] DEP
[] Delegated Authority (If Applicable)

1. *Permit Number 891741 *CUP/WUP Number *DID Number 62-524 Delineation No.
2. *Number of permitted wells constructed, repaired, or abandoned 5 *Number of permitted wells not constructed, repaired, or abandoned 0
3. *Owner's Name TAMPA ELECTRIC CO 4. *Completion Date 09/14/2020 5. Florida Unique ID
6. 490 BIG BEND RD APOLLO BEACH
*Well Location - Address, Road Name or Number, City, ZIP
7. *County Hillsborough *Section 15 Land Grant *Township 31 *Range 19
8. Latitude 27 47 31.73 Longitude 82 23 47.59
9. Data Obtained From: GPS X Map Survey Datum: NAD 27 X NAD 83 WGS 84

10. *Type of Work: Construction Repair Modification X Abandonment
11. *Specify Intended Use(s) of Well(s):
Domestic Landscape Irrigation Agricultural Irrigation Site Investigation
Bottled Water Supply Recreation Area Irrigation Livestock Monitoring
Public Water Supply (Limited Use/DOH) Nursery Irrigation Test
Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal
Class I Injection Golf Course Irrigation HVAC Supply
Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage
Remediation: Recovery Air Sparge Other (Describe)
X Other (Describe) PLUGGED

12. *Drill Method: Auger Cable Tool Rotary Combination (Two or More Methods) Jetted Sonic
Horizontal Drilling Hydraulic Point (Direct Push) X Other PLUGGED BY APPROVED METHOD
13. *Measured Static Water Level 6.0 ft. Measured Pumping Water Level ft. After Hours at GPM
14. *Measuring Point (Describe) Which is ft. Above Below Land Surface *Flowing: Yes No
15. *Casing Material: Black Steel Galvanized X PVC Stainless Steel Not Cased Other
16. *Total Well Depth 17.0 ft. Cased Depth 17.0 ft. *Open Hole: From To ft. *Screen: From To ft. Slot Size

17. *Abandonment: X Other (Explain) PLUGGED
2" From 0.00 ft. To 17.00 ft. No. of Bags 0.34 Seal Material (Check One): X Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

18. *Surface Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

19. *Primary Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

20. *Liner Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

21. *Telescope Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): Neat Cement Bentonite Other

22. Pump Type (If Known): Centrifugal Jet Submersible Turbine
Horsepower Pump Capacity (GPM)
Pump Depth ft. Intake Depth ft.
23. Chemical Analysis (When Required):
Iron ppm Sulfate ppm Chloride ppm
Laboratory Test Field Test Kit

24. Water Well Contractor:
*Contractor Name Gregory W Campbell *License Number 2613 E-mail Address chad@pdsflorida.com

*Contractor's Signature Digitally Signed *Driller's Name (Print or Type) Brian Ehrhart
(I certify that the information provided in this report is accurate and true.)

