STATE OF FLORIDA
SITING BOARD

IN RE: TAMPA ELECTRIC COMPANY	)	
BIG BEND UNIT 1 MODERNIZATION	)	**DOAH CASE NO. 18-2124EPP**
PROJECT POWER PLANT SITING	)	**OGC CASE NO. 18-0198**
APPLICATION NO. PA79-12A2	)	
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FINAL ORDER ON CERTIFICATION

An Administrative Law Judge (ALJ) with the Division of Administrative Hearings (DOAH) submitted a Recommended Order on Certification (RO) on May 30, 2019, in this certification proceeding. The RO indicates that copies were served upon counsel for Tampa Electric Company (TECO or Tampa Electric) and counsel for the Department of Environmental Protection (DEP or Department). The RO also shows that copies were served on counsel for other designated state, regional and local agencies. A copy of the RO is attached hereto as Exhibit A. On June 17, 2019, the Department filed exceptions to correct several typographical errors in the RO. On June 17, 2019, Sierra Club (Sierra Club) also filed exceptions to the RO. This matter is now before the Governor and Cabinet, sitting as the Siting Board,[1] for final action under the Florida Electrical Power Plant Siting Act (PPSA), sections 403.501 *et seq.,* Florida Statutes.

BACKGROUND

In this proceeding, TECO seeks site certification from the Siting Board under the PPSA for existing Big Bend Generating Station Units 1, 2, and 3, and authorization to construct and operate the Big Bend Unit 1 Modernization Project at its existing Big Bend Power Station (Modernization Project) in Hillsborough County, Florida.

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[1] The Siting Board is an agency of the state as defined by section 120.52(1)(b), Florida Statutes.

DOAH PROCEEDINGS

The DOAH proceeding was conducted under the PPSA to consider TECO's application for certification of the Modernization Project. On April 18, 2018, [2] TECO filed with DEP a power plant site certification application (Application or SCA) to construct and operate the Modernization Project. The Modernization Project consists of repowering the existing coal and natural gas-fired Unit 1 with a natural gas-fired nominal 1,090 megawatt (MW) two-on-one combined-cycle generating facility and retiring existing Unit 2.

TECO's site certification application included a copy of its application to DEP for a separate air permit to construct the Modernization Project under Florida's federally approved Prevention of Significant Deterioration (PSD) preconstruction review program.

The various reviewing agencies submitted their reports to DEP that recommended approval and certification of the Project. DEP issued its Project Analysis Report (PAR) for TECO's Modernization Project, which incorporated the comments of the reviewing agencies, and recommended approval of the Modernization Project subject to the proposed Conditions of Certification, which are attached to, and part of, the PAR. DEP recommended certification of the project, subject to a set of Conditions of Certification (COCs), attached hereto as Exhibit B.

Sierra Club filed a Notice of Intent to be a Party on July 2, 2018, and TECO filed a response in opposition on July 9, 2018. Sierra Club's Notice of Intent to be a Party did not meet the statutory requirements necessary for party status and was denied on July 18, 2018. On

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[2] *See* DEP's Exception No. 2 and the Siting Board's ruling below on the exception. DEP's Exception No. 2 requested correction of a scrivener's error regarding when TECO's site certification application was filed with DEP.

October 2, 2018, Sierra Club filed a Motion to Intervene in the site certification proceeding, which DOAH granted on November 2, 2018.

On February 6, 2019, TECO filed a motion to strike, to which Sierra Club filed a response on February 13, 2019. On February 21, 2019, the ALJ entered an Order Limiting Issues and Striking Paragraphs. The Order struck several paragraphs from Sierra Club's Motion to Intervene and also limited evidence and argument that could be presented on matters within the scope of the Order. The ALJ's Order is incorporated by reference into this Final Order.

The site certification hearing was held on March 11 through March 15, 2019, in Riverview, Florida. TECO, DEP, and Sierra Club appeared and presented evidence and argument at the hearing. Other than DEP, no other agency filed a notice of intent to be a party to the certification hearing, and none appeared at the hearing. Additionally, no other agency or domestic nonprofit corporation or association described in section 403.508, Florida Statutes, filed a notice of intent to be a party to the certification hearing, and none appeared at the hearing.

At the start of the hearing, several outstanding motions were argued and ruled upon by the ALJ. Most of the motions were denied without prejudice to any appropriate objections being made throughout the proceeding. DEP and Tampa Electric Joint Exhibits 1 through 4 were admitted into evidence pursuant to the provisions of section 120.569(2)(p), Florida Statutes, regarding an applicant's prima facie evidence.

At the certification hearing, TECO presented the testimony of the following six witnesses: Paul Carpinone, a licensed professional engineer (P.E.) and director of environmental services for Tampa Electric; Shawn Copeland, the vice president of safety; William Karl, P.E., expert in air quality issues; Darrel Packard, P.E., expert in stormwater management systems; R. James Rocha, P.E., expert in resource planning; and Kristopher Stryker, P.E., project manager

for the Modernization Project. TECO Exhibits 1 through 22 and 27 through 36 were admitted into evidence.

DEP presented the testimony of Cynthia Mulkey, the program administrator for DEP's siting coordination office. DEP Exhibit 1 was admitted into evidence.

Sierra Club presented the testimony of Angelina Klanchar; Winston Mark Walters; Daniel Roberts, Jr.; Cristy Costello; and Susannah Randolph, who testified as fact witnesses for purposes of standing. Sierra Club also presented the expert testimony of Harold Wanless, Ph.D., a professor of geological sciences at the University of Miami; and Ranajit "Ron" Sahu, Ph.D., a mechanical engineer and independent consultant. Sierra Club tendered the testimony of Kevin Lucas, director of rate design at Solar Energy Industries Association; Devi Glick, associate with Synapse Energy Economics; and Bruce Biewald, chief executive officer at Synapse Energy Economics. Tampa Electric and DEP objected to the testimony of Mr. Lucas, Ms. Glick, and Mr. Biewald, who were excluded from testifying by the ALJ since the oral and written description of their expert testimony violated the scope of the certification hearing as limited by the ALJ's February 21, 2019, Order Limiting Issues and Striking Paragraphs. Sierra Club proffered their resumes and expert reports, which travel with this record as proffered exhibits SC-85, SC-86, SC-116, SC-117, SC-134, SC-135, and SC-137. Sierra Club also entered the deposition of Tom Fessler, the budget director of Hillsborough County, because of his absence from the hearing. His deposition was admitted into evidence as Sierra Club Exhibit SC-209.

Sierra Club Exhibits SC-001 through SC-007, SC-024, SC-025, SC-027, SC-028, SC-030 through SC-032, SC-040 through SC-044, SC-046, SC-047, SC-049, SC-050, SC-053, SC-054, SC-056, SC-058, SC-059, SC-063, SC-065 through SC-067, SC-072, SC-074, SC-076, SC-082, SC-084, SC-138 through SC-141, SC-143 through SC-148, SC-150, SC-152 through SC-162,

SC-173 through SC-176, SC-179, SC-203, and SC-208 were admitted into evidence. Sierra Club exhibits, SC-34.1 and a document containing Tampa Electric's answer and supplemental answer to Interrogatory 13, were not admitted into evidence but were proffered by Sierra Club.

Public testimony was taken the evening of Monday, March 11, 2019. Members of the public were sworn, testified orally, and submitted written comments on the Modernization Project. Comment letters were also sent to the ALJ by the deadline of 5:00 p.m. on Friday, March 15, 2019. Those comment letters were made a part of the record of this proceeding by the ALJ.

The five-volume Transcript of the certification hearing, and the one-volume Transcript of the public hearing were filed on April 12, 2019. The parties were authorized to submit proposed recommended orders of up to 75 pages by April 29, 2019. All the parties timely filed their proposed recommended orders, which were carefully considered by the ALJ in the preparation of the Recommended Order on Certification.

THE RECOMMENDED ORDER

The Parties

Tampa Electric is the applicant for site certification of Units 1, 2, and 3, and for approval of the Modernization Project at its Big Bend Power Station (Big Bend). Tampa Electric provides electric service to more than 734,000 residential, commercial, industrial, and governmental customers in west-central Florida. Its service territory includes all of Hillsborough County and portions of Polk, Pasco, and Pinellas counties. Its existing electric generating units are located at five facilities in the service territory, and consist of diverse generating technologies, including coal and natural gas-fired steam units, natural gas-fired combined-cycle and combustion turbine

units, an integrated coal-gasification combined-cycle unit, and renewable solar energy facilities. (RO ¶ 1).

DEP is the state agency charged with administering the Electrical Power Plant Siting Act (PPSA) contained in part II of chapter 403. DEP's Siting Coordination Office (Siting Office) coordinates the site certification process, receives comments from affected agencies, and prepares the Project Analysis Report (PAR) that contains DEP's recommendation to approve or deny the requested certification and the proposed Conditions of Certification. (RO ¶ 2).

Intervenor, Sierra Club, is a national non-profit environmental advocacy organization. A key component of Sierra Club's mission is to advocate for the use of clean energy sources. (RO ¶ 3)

Standing

Sierra Club's members are concerned about continued reliance on fossil fuels and related climate change impacts, including sea level rise, increased storm surge, severe weather events, and coastal flooding. (RO ¶ 4).

In Florida, Sierra Club has more than 30,000 members, including more than 2,000 members who live, work, and recreate in the Tampa Bay area and some near Big Bend in Hillsborough County. Sierra Club promotes outdoor activities, and many of its Florida members organize and participate in outdoor recreation for people of all ages. (RO ¶ 5).

Sierra Club members who testified at the certification hearing take their own kids and others picnicking, kayaking, canoeing, and on service projects throughout South Florida and the Tampa Bay area. Sierra Club members, who testified at the certification hearing live in the vicinity of Big Bend, are Tampa Electric customers and enjoy outdoor recreation, such as boating in Tampa Bay and visiting the beaches. Sierra Club members who testified at the

certification hearing have been injured by and suffered the effects of climate change impacts, including sea level rise, increased storm surge, severe weather events, and coastal flooding. (RO ¶¶ 6-7).

The substantial environmental interests of Sierra Club's Florida members in the Tampa Bay area include the potential adverse effects of climate change to which Tampa Electric's greenhouse gas emissions would allegedly contribute. Thus, a substantial number of Sierra Club's Florida members' substantial interests could reasonably be affected by climate change impacts, including sea level rise, increased storm surge, severe weather events, and coastal flooding in the Tampa Bay area. (RO ¶ 8).

Climate Change

Sierra Club's expert, Harold Wanless, Ph.D., provided testimony on various aspects of the general topic of climate change. Dr. Wanless testified that climate change is a complex, worldwide issue, with contributions from many different sources. According to his testimony, the primary source is carbon dioxide emissions resulting primarily from human activities, including the combustion of fossil fuels. (RO ¶ 9).

Dr. Wanless testified about his predictions regarding global sea level rise, storm surge, and hurricane activities in the coming years. He opined that all of this should be taken into account in the design and evaluation of a project such as the Modernization Project, but concurred that there are no current regulatory standards, other than the Hillsborough County Code of Ordinances discussed below, which address these issues. (RO ¶ 10).

Dr. Wanless conceded that his predictions were more extreme based on a comparison with government data, to which he also cited. He advocated the immediate cessation of burning fossil fuels, and that the solution must happen "one car, one power plant at a time." Dr. Wanless

also acknowledged that the timing and landfall of individual storm events, such as hurricanes, cannot be specifically attributed to human-induced global warming. (RO ¶ 11).

From a regulatory standpoint, the United States Environmental Protection Agency's (EPA) guidance for permitting for greenhouse gases states:

> As a general matter, GHG emissions contribute to global warming and other climate changes that result in impacts in the environment and society. However, due to the global scope of the problem, climate change modeling and evaluations of risks and impacts of GHG emissions currently is typically conducted for changes in emissions orders of magnitude larger than the emissions from individual projects that might be analyzed in PSD permit reviews. Quantifying these exact impacts attributable to the specific GHG source obtaining a permit in specific places is not currently possible with climate change modeling. Given these considerations, an assessment of the potential increase or decrease in the overall level of GHG emissions from a source would serve as the more appropriate and credible metric for assessing the relative environmental impact of a given control strategy.

Tampa Electric Ex. 22, p. 000296, ¶ 2 (quoting PSD and Title V Permitting Guidance for Greenhouse Gases, March 2011). (RO ¶ 12).

Big Bend Power Station Site

The Big Bend Power Station Site (the Site) is an existing electrical generating facility located on approximately 1,722 acres of property owned by Tampa Electric. It is approximately ten miles south of Tampa in the unincorporated southwestern portion of Hillsborough County, also known as Apollo Beach. Its address is 13031 Wyandotte Road, Gibsonton, Florida. (RO ¶ 13).

Approximately 1,096 acres of the Site is currently certified under the PPSA. The SCA sought certification of an additional 92 acres, for a total of 1,188 acres. The Site has been used for power generation since 1970. The main fossil fuel generating facilities are in the

northwestern portion of the Site located on land created by spoil materials from dredging the barge access channel to the Site in the late 1960s. (RO ¶ 14).

The Site contains four coal and natural gas-fired steam electric generating units, a combustion turbine generator peaking unit, and associated facilities. The Site contains the approximately 20 MW Big Bend I Solar Project that was placed into service in 2017 and an area for the approximately 33 MW Solar II Solar Project, which will be constructed in the future. (RO ¶ 15).

Each of the four coal and natural gas fired steam electric generating units uses what is known as a Rankine process to generate electricity. That process consists of taking high-pressure water and converting it in a boiler to high-pressure, high-temperature steam. The steam is then used in a steam turbine to convert the energy in the steam into mechanical energy. The mechanical energy provided by the steam is then used by the electrical generator associated with the steam turbine to create electrical energy. The steam leaving the steam turbine is condensed back to water by the condenser and pumped back into the boiler to complete the process. (RO ¶ 16).

Onsite facilities associated with electric generation include: boiler and steam turbine generator buildings; air pollution control equipment; three exhaust stacks; water and wastewater treatment facilities; cooling water intake and discharge structures and canals; coal delivery and storage facilities; gypsum storage areas; coal combustion residuals beneficial use storage and handling facilities; electrical enclosures; transmission lines; substation; natural gas pipeline; and water storage and stormwater management facilities. (RO ¶ 17).

The Site also contains a Manatee Viewing Center and the Florida Conservation and Technology Center, which is a partnership between Tampa Electric, the Florida Aquarium, and

the Florida Fish and Wildlife Conservation Commission (FWCC). Other facilities located on the Site include the STI Ash Beneficiation facility and the Tampa Bay Water desalination plant. (RO ¶ 18).

Portions of the Site were originally certified pursuant to the PPSA in 1981 for the construction and operation of Unit 4. That certification included associated facilities, which are shared with Units 1, 2, and 3, such as coal delivery and storage areas. Units 1, 2, and 3 were not subject to the PPSA because those units were constructed and operational in the 1970s prior to the effective date of the PPSA. (RO ¶ 19).

In addition to the Modernization Project, Tampa Electric sought certification of the associated facilities for Units 1, 2, and 3, and an approximately 92-acre adjacent parcel, which would increase the certified site area to approximately 1,188 acres. (RO ¶ 20).

Proposed Modernization Project

The Modernization Project would retire Unit 2 and repower Unit 1 as a clean natural gas-fired two-on-one combined-cycle generating facility on an approximately nine-acre portion of the Site. The Unit 1 boiler would be repowered with a new natural gas-fired combined-cycle unit that would utilize Unit 1's existing steam turbine generator. Upon completion, the repowered Unit 1 would have a nominal net generating capacity of 1,090 MW. (RO ¶ 21).

Tampa Electric selected two General Electric (GE) combustion turbine generators, each with a nominal generating capacity of 370 MW, for the new combined-cycle unit. Hot exhaust gases would be used to generate steam in two heat recovery steam generators, which would be routed to the steam turbine generator. The combustion turbine generators would be capable of operating in simple-cycle mode. (RO ¶ 22).

The Modernization Project would include construction of new onsite associated facilities, such as electrical equipment enclosures, a gas metering station, water pumps, fin-fan coolers, transformers, an emergency diesel generator, fire protection systems, hydrogen and carbon dioxide storage tanks, an ammonia skid, and stormwater management systems. (RO ¶ 23).

Existing Unit 1's steam turbine generator, the boiler/turbine structure, once-through cooling system, condenser, intake/discharge structures, the generator step-up transformer, the auxiliary tower, and various electrical and control systems would be refurbished and used for the repowered Unit 1. (RO ¶ 24).

Other existing infrastructure and systems, such as the demineralized water system, potable water and sanitary wastewater onsite service interconnections with Hillsborough County public services, and existing access roads, would also be used. (RO ¶ 25).

An administration office building would be located on approximately 1.4-acres north of the intake canal and southeast of the plant facilities. Temporary use of several areas for construction laydown and parking, barge delivery of larger equipment, and workspace for the gas pipeline horizontal directional drilling (HDD) activities will cover approximately 44 acres. (RO ¶ 26).

The existing 230 kilovolts (kV) transmission lines to the onsite substation would be upgraded. A new 230 kV transmission line interconnection would be constructed from the combined-cycle facilities to the existing substation. (RO ¶ 27).

An elevated pipe bridge across the intake canal would be constructed to carry steam from the heat recovery steam generators to the repowered Unit 1 steam turbine generator. The pipe bridge will also be used to support miscellaneous pipes, cable trays, and a personnel access walkway. (RO ¶ 28).

A new onsite natural gas pipeline interconnection would run east from the combined-cycle plant to a metering station tie-in along the north side of an existing access road located south of the barge canal. From the metering station, the pipeline would continue east to existing gas supply pipeline interconnection, located east of Wyandotte Road within the onsite railroad spur loop. (RO ¶ 29).

The Unit 1 once-through-cooling water (OTCW) aging circulating water pumps would be replaced in-kind. The cooling water intake structure (CWIS) would be upgraded to include modified traveling water screens and a fish-return system consistent with applicable federal regulations. Fish-holding tanks for the repowered Unit 1 fish return system would be constructed in the deconstructed Unit 2 CWIS area. There would be no changes to the OTCW system serving Units 3 and 4. (RO ¶ 30).

Construction activities for the Modernization Project would begin in July 2019, with commercial operation of the facility in simple-cycle mode in June 2021. Commercial operation of the combined-cycle plant would begin in January 2023. Unit 2 would continue to operate firing natural gas from the date of certification until 2021 when it would be retired. (RO ¶ 31).

Environmental and Other Impacts from Existing Site Utilization

Historical aerial photographs of southwestern Hillsborough County showed largely undeveloped lands with agricultural activity. Current land uses include transportation and utilities, agricultural activities along with upland non-forested areas and some wetland areas. The existing Big Bend generating facilities and associated facilities were primarily located on artificial fill dredged from Tampa Bay. These areas were heavily impacted by industrial activities associated with power generation. (RO ¶ 32).

Other areas of the Site, located south of the existing generating facilities, were less impacted by industrial activities. Those industrial activities began in the 1970s and continue to the present time. The developed nature of the Site resulted in low vegetative diversity, limited wetlands, and limited wildlife habitat. (RO ¶ 33).

There have been significant air emissions from existing Units 1, 2, 3, and 4 since each began operating. As explained below, the units have been capable of burning natural gas or coal since 2015, and Units 1, 2, and 3 have used only natural gas since mid-2017. Prior to mid-2017, those units' coal emissions were significantly higher than the emissions associated with burning natural gas. (RO ¶ 34).

The air emissions from Big Bend are regulated by state and federally delegated air permitting programs. Air quality in the area is affected by emissions not only from Big Bend, but from a number of surrounding sources. For example, Hillsborough County contains approximately 27 major sources of pollutants, including hospitals, airports, transportation, power production, and manufacturing. Ambient air quality standards were established for the protection of health and welfare-related concerns and those standards are currently being met in the area of the Site based on review of recent monitoring information. (RO ¶ 35).

The SCA included a copy of Tampa Electric's application to DEP for a separate air permit to construct the Modernization Project under Florida's federally approved PSD preconstruction review program. Tampa Electric published a Notice of Intent to Issue Air Construction Permit No. 0570039-119-AC (Air Permit) for the Modernization Project on June 1, 2018. Sierra Club submitted comments on June 15, 2018, regarding the Air Permit, which were received and considered by DEP in the final Air Permit. However, no challenge was filed to the Air Permit, which was subsequently issued in final form on July 16, 2018. (RO ¶ 36).

TECO's Big Bend facility has regulated wastewater discharges. Units 1, 2, 3, and 4 are steam electric generators that use water for cooling purposes. Cooling water is withdrawn from the man-made intake canal through CWIS 1 for Units 1 and 2 and CWIS 2 for Units 3 and 4. After being pumped through the condensers, the cooling water is discharged through outfalls into the man-made discharge canal on the south side of Big Bend. This activity is regulated in accordance with the requirements of National Pollutant Discharge Elimination System (NPDES) Permit FL000817. This NPDES permit is administered by DEP under a federally approved program. (RO ¶ 37).

The cooling water discharge is the largest volume of surface water discharge from Big Bend. Preexisting stresses to aquatic systems are associated with the electrical generating operations at Big Bend, particularly effects from entrainment and impingement and the thermal effects of the cooling water discharge. The stresses have diminished with the use of fine mesh screens. (RO ¶ 38).

The cooling water is heated when discharged as a result of cooling the condensers. When the cooling water is drawn from the intake canal by pumps and routed into the units, it contains organisms and fish that become trapped in the water and drawn through the intake structures and through the condensers. This causes mortality from entrainment and exposure to heat or impingement on the screens that are associated with the CWIS facilities. The CWIS for Units 1 and 2 has coarse screens that catch large fish and crabs. The CWIS for Units 3 and 4 has coarse and fine mesh screens that trap much smaller organisms that can be returned, alive, to the bay. These aspects are regulated by the federal Clean Water Act and the NPDES permit. (RO ¶ 39).

Ecological surveys and studies of impingement and entrainment at Big Bend began in 1970 prior to the start-up of TECO's Big Bend Unit 1 and have continued through 2013. The

thermal limitations were determined to be protective of indigenous shellfish, fish, and wildlife and were permitted to continue. The fine mesh screen system was determined to constitute best technology for reducing entrainment for Units 3 and 4, which satisfied certain federal Clean Water Act requirements. A renewal NPDES permit application is pending and additional review of these aspects will occur. (RO ¶ 40).

Solid waste materials are produced at Big Bend as a result of the operations. The combustion of coal produces various byproducts, including gypsum solids from the flue gas desulfurization equipment and fly ash from the electrostatic precipitators, both of which are air pollution control devices for the facilities. Bottom ash and slag are also produced. These materials are left over after the combustion process and are the noncombustible materials. Economizer ash is also produced as a result of the process. (RO ¶ 41).

The fly ash byproduct is conveyed to the Separation Technologies, Inc., facility located on an area leased from Tampa Electric at the Big Bend site. The product is separated and reused by cement companies. Bottom ash is stored in surface impoundments and conveyed hydraulically for beneficial reuse as a raw material for other products. Economizer ash is stored in a surface impoundment, and the slag material is stored for future recycling in bins. Approximately 95 percent of the coal combustion residuals are recycled for beneficial use. Materials that are not useable are sent for disposal to approved landfills. (RO ¶ 42).

Management of coal combustion residuals, including monitoring and inspection requirements are contained in a Coal Combustion Residuals Management Manual. The manual also contains an emergency response plan, which includes communication protocols for specific local, state, and public notifications. The locations of the facilities for the storage of bottom ash, fly ash, and recycling areas are shown on an aerial in the manual, as is the east gypsum storage

area. The active coal combustion residual materials storage areas are equipped with liners to prevent groundwater discharges. The facilities are subject to the federal coal combustion residuals rule. The south gypsum storage area and the economizer ash impoundments are in the process of being closed. (RO ¶ 43).

The Coal Combustion Residuals Management Manual was developed as a component of an April 10, 2001, consent order between TECO and DEP. The consent order implemented projects that resulted in all the coal combustion residuals storage units being lined and fully contained to prevent contact of the coal combustion residuals, process water, and stormwater runoff with the environment. Previously, those areas were identified as potential release points to groundwater. Groundwater monitoring did not show any exceedances. (RO ¶ 44).

Environmental and Other Benefits of the Modernization Project

A. Technology and Emissions

The Modernization Project includes repowering of Unit 1 into a highly efficient, state of the art, natural gas-fired two-on-one combined-cycle generating power plant using the existing steam turbine generator for Unit 1 along with other equipment. Repowered Unit 1, a combined-cycle generating facility, would consist of two combustion turbine generators, two heat recovery steam generators, and the existing steam turbine electrical generator from Unit 1. (RO ¶ 45).

Tampa Electric selected the advanced, large-frame GE Model 7HA.02 combustion turbine generator for the Modernization Project. In combined-cycle mode, these large combustion turbine generators are the most efficient electric generating technology currently available for utility scale power plants. The combined-cycle plants can achieve an efficiency of more than 60 percent, compared to combustion turbine generators alone in simple cycle mode at 35 to 38 percent and coal fired steam electric generating plants at 32 to 42 percent. (RO ¶ 46).

When a combustion turbine generator is operated alone in simple-cycle mode, hot exhaust gases from the combustion turbine generator are released to the atmosphere. In combined-cycle configuration, the hot exhaust gases from the combustion turbine generator are used to produce steam in the heat recovery steam generator and the steam is used to drive the steam turbine electrical generator to generate approximately 50 percent more electricity without using additional fuel, resulting in the efficiencies. (RO ¶ 47).

Sierra Club's expert witness, Ranajit Sahu, Ph.D., testified that the use of the existing steam turbine generator would result in a difference in generation compared to the use of a new steam turbine generator. Dr. Sahu testified that the increase in performance would be 13 MW. TECO's expert witness, Kristopher Stryker, testified that Dr. Sahu's opinion was not based on the latest study, which showed that the performance differential between the new steam turbine generator and the refurbished steam turbine generator was 5 MW, which is less than one-half of one percent of the total output of the facility. Mr. Stryker further testified that since extensive modifications would be required to the foundation to install a new steam turbine generator, a 5 MW increase in performance did not justify those modifications. (RO ¶ 48).

Bypass stacks would be located between the combustion turbine generators and the heat recovery steam generators, which would allow the initial simple-cycle operation of the combustion turbine generators and also allow simple cycle operation in the future in the event there is a reason to do so. The refurbished steam turbine generator would only be used when the facility is operating in combined-cycle mode. (RO ¶ 49).

The capacity of the combined-cycle unit is a nominal 1090 MW which would be the output at an average ambient temperature of 70 degrees Fahrenheit. Each combustion turbine

generator has a nominal capacity of 370 MW, and the steam turbine generator has a nominal capacity of 350 MW. (RO ¶ 50).

The combined-cycle facility would be designed with technologies to control air emissions. The two combustion turbine generators would be equipped with dry low-nitrogen oxide combustors to control nitrogen oxide air emissions. The heat recovery steam generators would be equipped with selective catalytic reduction systems to further reduce nitrogen oxide emissions. Emissions of other regulated air pollutants, including sulfur dioxide, volatile organic compounds, and particulate matter, would be controlled through the use of low sulfur, clean burning natural gas as the only fuel fired in the combustion turbine generators, along with advanced combustion equipment and operational practices. (RO ¶ 51).

The Modernization Project would minimize greenhouse gas emissions through the repowering of Unit 1 with clean burning natural gas, highly efficient combined-cycle electric generating technology, the retirement of Unit 2, and further reductions by dispatching other existing units in the system less often. (RO ¶ 52).

The Modernization Project was evaluated during the Air Permit process. TECO determined that the PSD program was not applicable because the Modernization Project would not result in a net increase in emissions from the Big Bend facility. Based upon the evaluation process for systemwide emissions that was conducted in accordance with the applicable requirements, TECO determined that the addition of the Modernization Project would result in a substantial net reduction in emissions in most cases, including a net decrease in greenhouse gas emissions of over two million tons per year. (RO ¶ 53).

The Modernization Project is projected to result in significant reductions in emissions compared to the continued operation of Units 1 and 2 firing either coal or natural gas as a

primary energy source. R. James Rocha, TECO's expert in resource planning, prepared projections using a Planning and Risk simulation model showing system-wide yearly energy produced or megawatt-hours (MWh) and the resultant yearly systemwide British Thermal Units (BTUs) or fuel use. First, if the Modernization Project is not constructed and Units 1 and 2 continue to operate into the future; and second, if the Modernization Project is constructed and Units 1 and 2 cease operations in 2021. The model is essentially an hourly dispatch simulation of the units in the Tampa Electric generating system taking into account a number of operational, fuel, probabilistic outage and planned maintenance outage scenarios, and other variables to develop a reliable estimate of the future operations of the system to meet the hourly needs of customers. Using a complex model, such as that used by Mr. Rocha, is a standard practice in the utility industry for forecasting the hourly dispatch of the system. (RO ¶ 54).

Outputs from the modeling and emission limits in existing permits, standard emission factors for natural gas, and heat input numbers, were then provided to William Karl, an expert in air quality analyses. Mr. Karl developed calculations of projected emissions reflecting continued operation of Units 1 and 2 burning coal and natural gas, or coal only into the future, compared to projected emissions from the operation of the Modernization Project into the future. (RO ¶ 55).

In Tampa Electric Exhibit 27, Mr. Karl showed the current carbon dioxide emission rates for Units 1 and 2 operating with coal as a primary energy source and operating with natural gas only, compared to the expected performance of the Modernization Project. The emission rates were expressed in pounds per MWh of energy produced. The Modernization Project carbon dioxide emission rate was projected to be 737 pounds per MWh of energy produced. Units 1 and 2 operating on natural gas only, each had a carbon dioxide emission rate of 1,250 pounds per MWh. Units 1 and 2 operating primarily on coal each had a carbon dioxide emission rate of

2,180 pounds per MWh. Both comparisons demonstrated substantial reductions in the carbon dioxide emission rate of the Modernization Project compared to Units 1 and 2. (RO ¶ 56).

With Tampa Electric Exhibit 28, Mr. Karl showed the projected Tampa Electric systemwide reduction in greenhouse gas and criteria pollutant emissions if the Modernization Project was constructed compared to Units 1 and 2 continuing to operate primarily on coal during the period of 2017 through 2046. This resulted in a projected reduction in greenhouse gas emissions of 50,500,000 tons and a reduction in emissions of criteria pollutants of 213,000,000 pounds during the period of 2017 through 2046. (RO ¶ 57).

With Tampa Electric Exhibit 29, Mr. Karl showed the projected Tampa Electric systemwide reduction in greenhouse gas emissions and all criteria pollutants with the Modernization Project constructed compared to operating Units 1 and 2 on natural gas only. This resulted in projected reductions in greenhouse gas emissions of 18,500,000 tons and projected reductions of all criteria pollutants of 21,000,000 pounds over the period of 2017 through 2046. (RO ¶ 58).

Sierra Club disputed that reduction credit should be given for the comparison of projected emissions from the Modernization Project to projected emissions from Units 1 and 2 continuing to operate using coal as a primary energy source. Sierra Club argued that Tampa Electric's decision to stop using coal in Units 1 and 2 was made prior to filing the SCA, and existing permits were modified to reflect that fact. Therefore, no benefit should be claimed for reduced air emissions resulting from a comparison of emissions of Units 1 and 2 burning coal projected into the future. (RO ¶ 59).

However, testimony from Paul Carpinone confirmed that if the Modernization Project is not constructed, TECO plans to continue operating Units 1 and 2, and a return to coal use

remains an option. Mr. Rocha explained that based on pricing, it could make sense for the customers to return to coal in Units 1 and 2 if the Modernization Project is not approved. Mr. Carpinone also testified that permit modifications would be required to return the units to coal use. (RO ¶ 60).

If it is assumed that coal would not be used at all in the future, the construction of the Modernization Project would result in substantial decreases in air emissions. These are projected as decreases of 18,500,000 tons of greenhouse gases and 21,000,000 pounds in all other criteria pollutants as compared to continuing to operate Units 1 and 2 on natural gas only. (RO ¶ 61).

Although the evidence may support downward adjustment to the projected reductions in emissions resulting from the comparison of the Modernization Project to continuing Units 1 and 2 on coal based on the time it could take to obtain the necessary permit modifications to return to coal, these projected reductions should still be considered as environmental benefits of the Modernization Project. (RO ¶ 62).

The ALJ found that the preponderance of the evidence demonstrated that the Modernization Project would operate at a substantially lower emission rate for greenhouse gases than the emission rates for Units 1 and 2 on natural gas or on coal. (RO ¶ 63).

B. Water Use

The most substantial water use for the Modernization Project would be the OTCW supply from Hillsborough Bay. The existing station is currently authorized to withdraw a combined 1,440 million gallons per day (MGD) for cooling purposes. Primarily as a result of the retirement of Unit 2 in 2021, eliminating Unit 2's cooling water requirements, the Modernization Project would reduce cooling water withdrawals by 25 percent to a maximum of 1,080 MGD. (RO ¶ 64).

Environmental benefits associated with the reduced cooling water withdrawals would include reductions in impingement and entrainment associated with reduced intake flows and velocity. Also, fish mortality will be reduced, because of new fish friendly modified traveling screens and fish return system that would be installed at CWIS 1, where there previously were no such systems. The fish return system would allow aquatic organisms washed from the modified traveling screens to be discharged back into Hillsborough Bay at a location that would minimize the potential for re-impingement. (RO ¶ 65).

Domestic and sanitary wastewater service for Big Bend with the Modernization Project would be provided by interconnection with the Hillsborough County wastewater system similar to existing operations. Potable water for the facility would also be provided by Hillsborough County, but the volume of backup service water use would be significantly reduced. (RO ¶ 66).

There would be various changes to the service water uses. These would include elimination of the auxiliary cooling tower associated with Unit 2, reduction of flue gas desulfurization system makeup water from county effluent, use of county effluent for wash down associated with the combined-cycle unit, and rerouting and reuse of several other relatively minor water streams. (RO ¶ 67).

C. Wastes

Nonhazardous and potentially hazardous waste generated during operation of the Modernization Project would be managed in accordance with applicable federal, state, and local regulations. The use of natural gas, which does not produce solid wastes, would further reduce the need for onsite solid waste management units for disposal areas, and any waste generated would be disposed of at an offsite permitted solid waste or hazardous waste management facility. (RO ¶ 68).

Eliminating coal use at Units 1 and 2 along with the Modernization Project, would decrease coal use at the Site. Decrease of coal use would lead to production of less coal combustion residuals and reduce the need for storage and handling of those residuals. (RO ¶ 69).

D. Stormwater Management

The Modernization Project would include onsite stormwater management. The stormwater management system would serve areas that include the combined-cycle and combustion turbine generator areas, onsite construction laydown and parking areas, barge unloading and laydown area, new office building area, and remote construction laydown area. (RO ¶ 70).

Tampa Electric's stormwater system design expert, Darrel Packard, was the lead civil engineer for the Modernization Project. Mr. Packard testified about the purpose of the stormwater management system and its design and benefits. The stormwater management system would convey runoff from developed areas in a controlled manner and attenuate the stormwater peak flow such that the discharge is not greater than the current discharge conditions. The system would provide water quality benefits through retention and Best Management Practices to minimize and control the discharge of nitrogen and phosphorus. (RO ¶ 71).

The stormwater system would also address the potential for flooding by the use of appropriately sized pipes and ditches to convey runoff from developed areas and discharge runoff into stormwater ponds that meet the regulatory requirements. Offsite flooding would also be prevented by attenuating the peak discharges that might be increased due to development. (RO ¶ 72).

Regulatory requirements applicable to the stormwater system include required sediment basins, Best Management Practices such as silt fences, the requirement to control a one-inch

runoff from the developed areas, provision of a littoral zone of approximately 35 percent of the pond surface area, and the retention of a one-inch volume of runoff for at least 120 hours prior to discharge. Half of that volume would be contained over 60 hours after the rainfall event. (RO ¶ 73). In addition, the design would be sufficient to control the 25-year stormwater runoff event, which is roughly 8.2 inches over 24 hours. (RO ¶ 74).

The Modernization Project would include installation of a floodwall surrounding repowered Unit 1 to protect it from flooding. Mr. Packard's testimony provided details about the design and dimensions of the floodwall. (RO ¶75).

TECO Exhibit 12 showed elevation details of the floodwall. Beginning from a published datum referred to as NAVD88 or North American Vertical Datum of 1988 reflected at 0.00 elevation on the exhibit, the existing grade was shown at elevation 8.3 feet above NAVD88. The top of the floodwall was depicted at elevation 18.029 feet above NAVD88, meaning that the total elevation of the flood protection would be 18.029 feet above NAVD88. (RO ¶ 76).

The design basis for the floodwall height took into account the elevation of the 100-year flood for facilities that are in a defined federal Emergency Management Agency (FEMA) AE Zone. Based on current FEMA flood maps, the Modernization Project is in the AE Zone, and the 100-year flood elevation is 12 feet above NAVD88. (RO ¶ 77).

Another 2.5 feet were added to the 12-foot, 100-year flood elevation. The Hillsborough County Code of Ordinances specified the use of the American Society of Civil Engineers Standard for Flood Resistant Design and Construction (ASCE Standard) 24-05. The Modernization Project would fall into Category 3 for the ASCE Standard 24-05, adding two feet. The applicable Hillsborough County Ordinance required an additional six inches, resulting in a total minimum flood protection height of 14.5 feet. (RO ¶78).

The design of the floodwall was 18.029 feet above NAVD88 and the amount by which it exceeded the 14.5-foot regulatory requirement provides a margin to account for uncertainties such as sea level rise. (RO ¶ 79).

The FEMA flood maps for the area are under revision and have not yet been finalized. Under section 403.5185, a proposed revised map not yet in effect is not applicable to this SCA. However, a comparison of the currently effective and the preliminary flood maps showed that the flood zone for the Modernization Project would not change. (RO ¶ 80).

Sierra Club's expert, Dr. Sahu, opined that since the Modernization Project concerns electric power generation facilities, heightened scrutiny and flood protection requirements should apply. However, Dr. Sahu's testimony did not dispute the Modernization Project's compliance with the applicable regulatory requirements. The Hillsborough County Code of Ordinances defines "critical facilities" as those for which even a slight chance of flooding might be too great. That definition of "critical facilities" does not include power plants. (RO ¶ 81).

The design details for the floodwall followed ASCE Standard 7-10 for the minimum design load requirements for buildings and other structures. The floodwall was designed considering two design cases. When the cases were considered, essentially three checks were made for wall stability, which included values obtained from the geotechnical report plus calculations performed by the geotechnical engineers. (RO ¶ 82).

Dr. Sahu questioned the design basis of the floodwall in terms of its ability to withstand the forces the wall was designed to withstand. His criticism was mainly based on a lack of ability to review final detailed design plans. DEP's witness, Cynthia Mulkey, explained in her testimony that final design plans are not required for every aspect of the project. Ms. Mulkey testified that it was not unusual that final detailed design plans were not available at the time the

application was being processed. The applicable nonprocedural requirement pertaining to this issue was contained in the Hillsborough County Code of Ordinances, Part A, SCC 8-1-Hillsborough County Construction Code, and the FEMA flood map. Dr. Sahu's testimony did not dispute the Modernization Project's compliance with these regulatory requirements. (RO ¶ 83).

E. Socioeconomic Benefits

Construction and operation of the Modernization Project is expected to provide significant benefits to the economy of Hillsborough County and the State of Florida through increased employment and revenues during construction and operation of the project. Direct benefits from construction will include employment and payroll for an average monthly employment of approximately 250 workers, as well as the purchase of equipment and materials. Approximately $300 million of construction expenditures for materials and services would occur during the construction period from 2019 through approximately mid-2023. Approximately $210 million would be spent in the local area. (RO ¶ 84).

Once the repowering project begins operations, tax revenues and operational and maintenance expenditures would be in the range of $18 million per year. The majority of construction wages would be spent within Hillsborough County. Anticipated annual property tax revenue and sales tax revenue would be $8.4 million and $1.26 million respectively. The peak construction employment would be approximately 500 workers, and this would occur in the most labor intensive construction period in 2021. (RO ¶ 85).

Land Use and Zoning

The applicable Hillsborough County future land use (FLU) map designation for the Modernization Project and barge offloading areas is Heavy Industrial. Electrical generation

plants and expansions of electrical power plants are among the allowed uses within this FLU designation. The remote construction laydown area is designated Community Mixed Use-12 which allows for light industrial multipurpose use. Areas associated with the Modernization Project are located within either Manufacturing or Planned Development-Industrial zoning districts. On June 1, 2018, Hillsborough County found the additional 92 acres, as well as the proposed activities, consistent with its existing land use plans and zoning ordinances. (RO ¶¶ 86-87).

Impacts from Construction of the Modernization Project

A. Environmental Impacts

The site certification process includes only state, regional, and local requirements. Federal permits issued by the state under federally approved or delegated permit programs that were sought, or modified, in association with the Modernization Project are processed separately from the SCA. These include the Air Permit, the NPDES Permit, and the United States Army Corps of Engineers (USACE) Section 404 application. (RO ¶ 88).

Tampa Electric would apply for applicable federally delegated stormwater discharge permit(s), including requirements for a comprehensive Stormwater Pollution Prevention Plan, prior to construction. During construction, stormwater would be managed to meet the requirements of those federal permits. As previously found, the stormwater management system for the Modernization Project would be designed to treat the first inch of runoff from the 25-year, 24-hour storm event and would meet federal, state, regional, and local requirements. (RO ¶ 89).

During operation, contact stormwater runoff from the power block and equipment areas would be collected and treated through a new oil/water separator and routed to a new contact

water transfer sump prior to discharge to the existing coal field pond. Noncontact stormwater runoff from the facility area would be collected and routed to a stormwater detention pond for treatment prior to discharge to the barge canal. (RO ¶ 90).

The Modernization Project would create a new internal outfall for the reverse osmosis (RO) concentrate, and the OTCW discharge from Unit 2 would cease. The NPDES discharge compliance point would include the combined cooling water discharge from Units 1, 3, and 4, and the treated effluent from the flue gas desulfurization treatment plant, as well as the RO concentrate to Hillsborough Bay, a Class III marine water, via the onsite discharge canal. (RO ¶ 91).

Low-volume industrial wastewater generated by the Site primarily includes floor and equipment drains, water treatment equipment waste, and service cooling tower and boiler blowdown. These waste streams are routed to a system of lined ponds, a reclaimed water storage pond, and bottom ash ponds for containment or reuse within the facility, and the same practice would continue with the Modernization Project. (RO ¶ 92).

Groundwater monitoring around the water storage ponds is required under the facility's industrial wastewater permit No. FLA017047 and would continue to be a requirement of the Site License. (RO ¶ 93).

The Modernization Project would include construction of stormwater detention ponds during the beginning stages of the Modernization Project development activities to provide stormwater storage and treatment for onsite runoff during construction. Because of the disturbed nature of the Site, preparation would require minimal clearing and grading. (RO ¶ 94).

Erosion, sedimentation, and runoff control measures, both pre- and post-construction, will meet applicable nonprocedural requirements of part IV of chapter 373, Florida Statutes,

Chapter 62-330, Florida Administrative Code, and applicable Hillsborough County land development regulations. (RO ¶ 95).

Best Management Practices (BMPs) and a sediment control plan would also be implemented during site construction. Monitoring of construction runoff and the operation and maintenance of BMPs for erosion and sediment control would be undertaken as required by applicable construction permits, such as the NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities contained in Chapter 62-621, Florida Administrative Code. (RO ¶ 96).

Under current operation, the Site does not withdraw groundwater for plant processes or potable water uses nor will the Modernization Project use groundwater as a source. The Site relies on treated effluent from Hillsborough County and recycled water for its process needs. There would be no consumptive use nor anticipated impact to groundwater supply due to the Modernization Project. (RO ¶ 97).

Site preparation and facility construction activities may have potential short-term effects on groundwater in the shallow surficial aquifer in the immediate area of the combined-cycle facilities from temporary dewatering activities. Because of the temporary and localized nature of potential dewatering activities and the direction of the flow from east to west of the Floridan aquifer in the area, construction of the Modernization Project is not anticipated to have significant adverse impacts to, on, or offsite groundwater resources. (RO ¶ 98).

Construction and operation of the Modernization Project would impact approximately 55 acres of the approximately 1,188-acre certified Site. The Site has been used for industrial purposes for the past 50 years. Therefore, most of the land was previously disturbed and not

prime habitat for wildlife species. Both uplands and wetlands are located onsite but are considered low-quality and contain a mixture of nuisance exotic and native species. (RO ¶ 99).

Construction of the Modernization Project would not result in permanent impacts to wetlands. In fact, over 99 percent of the wetlands and surface waters onsite would remain intact. An approximately 0.18-acre portion of a low-quality wetland is proposed to be temporarily cleared for workspace during the construction of the gas pipeline interconnection. Once construction is complete, this area would be allowed to revegetate naturally. (RO ¶ 100).

Other potential impacts proposed include: permanent impacts to an additional 0.02 acres of surface waters to construct a new pipe bridge across the existing intake canal; temporary impacts in the barge canal due to the spud columns; and fill to approximately 0.01 acres of a man-made, roadside ditch to construct a new culverted driveway for access to the remote construction laydown and/or parking area. (RO ¶ 101).

The wetland proposed for clearing is considered a lower quality wetland, and impacts would be offset by the purchase of mitigation bank credits or onsite mitigation, if necessary. Secondary impacts to preserved wetland communities would be minimized by maintaining an average 25-foot and minimum 15-foot buffer surrounding wetlands where no construction activities would occur. (RO ¶ 102).

Impacts from the in-water work during construction of the intake canal pipe bridge would be mitigated with the use of turbidity barriers. (RO ¶ 103).

Existing Units 3 and 4 and the repowered Unit 1 would continue to discharge through separate outfalls into the Site's 4,500-foot discharge canal that leads to Hillsborough Bay through an inlet at the north end of Apollo Beach. The south side of the discharge canal is bordered by a sheet pile seawall that serves as a thermal barrier to the adjacent shallow waters in North Apollo

Bay, minimizing thermal impacts to surface waters in this area. Adverse changes in hydrologic or water quality conditions in the existing intake and discharge canals or Hillsborough Bay are not expected to result from operation of the Modernization Project. (RO ¶ 104).

The existing Site's OTCW discharge provides a primary thermal refuge for the local population of West Indian manatees, and seagrass along the southern boundary of the discharge canal provides food for the manatees that winter in the canal. The area outside the discharge canal and the canal itself are designated as manatee protection areas under both state and federal laws. The Site's NPDES permit includes a manatee protection plan that contains requirements for timely communication with manatee recovery program personnel and to produce adequate warm water during the winter months. Because of these required measures, projected reductions in the effluent temperature and total thermal loading in the discharge canal from operation of repowered Unit 1 and retirement of Unit 2 are unlikely to adversely impact manatees. (RO ¶ 105).

B. Noise

Noise impacts resulting from construction activities are expected to be minimal and mitigated by the distance between the construction area of the power block and the site boundaries, and the fact that the construction activities will take place mainly on an existing power plant site that is currently operational. Average noise levels during the loudest construction activities are projected to be between 62 and 66 A-weighted decibels (dBA) at the northern property boundary, and noise levels from construction activities will be lower at all other property boundaries. (RO ¶ 106).

Under the rules of the Hillsborough County Environmental Protection Commission, Chapter 1-10, Noise Pollution, construction activities occurring during the hours of 7:00 a.m. and

6:00 p.m. are exempt from the noise rule if reasonable steps are taken to abate the noise. The construction activities, however, are expected to be below the 70 dBA level applicable to industrial land use category. Noise resulting from the operation of the Modernization Project would not have any adverse impact on the existing noise levels in the general vicinity of the Big Bend Power Station. (RO ¶ 107).

C. Archeological and Historic Sites

Based on results of cultural resource assessments conducted in 1979, no significant archaeological or historical sites were found or are expected to be found at the Site. A survey conducted in January of 2018 did not identify any previously recorded archaeological sites. In the event any archaeological resources are encountered during construction activities, the Florida Division of Historical Resources will be notified and consulted to determine appropriate actions. (RO ¶ 108).

Safety Issues

Shawn Copeland, vice president of safety for TECO, testified on safety issues associated with Big Bend. Tampa Electric has safety programs at the different generating stations, as well as for the operating areas. The programs are designed to provide a safe environment for workers and compliance with regulations and standards. The safety programs apply to Big Bend and are designed to create a safe work environment and protect the public. (RO ¶ 109).

TECO's Big Bend facility has an Emergency Action Plan. The plan provides: basic information for initial emergency actions, actions and procedures for reporting emergencies, procedures for emergency evacuation, procedures to account for personnel after an evacuation, procedures to be followed by employees performing rescue or medical duties, and procedures to be followed by employees remaining to conduct critical plant operations prior to evacuation.

The Emergency Action Plan focuses primarily on events related to fires, medical, natural gas, and severe weather emergencies. There are specific emergency evacuation plans for each type of event. (RO ¶ 110).

The storm preparedness procedures contained in the Emergency Action Plan do not apply to hurricanes, but rather storms that are more sudden. Hurricane preparedness is addressed in the Big Bend Station Storm Preparedness Procedures, revised May 9, 2018, which consists of approximately 151 pages of information and checklists applicable when hurricanes or hurricane-related events are approaching. Emergencies of all types are addressed by the All Hazard Notification Flowchart, which provides protocols for communications and activities to be taken during the occurrence of suspicious activities or an unexpected emergency at the plants. (RO ¶ 111).

In addition to the foregoing, Big Bend has an Integrated Contingency Plan dated December 2018. The purpose of the Integrated Contingency Plan is to focus on emergency prevention and preparedness and provide rapid, effective protection of human health and the environment during an emergency caused by a chemical release or other physical hazardous release. The objectives of the Integrated Contingency Plan are to establish: (i) means of recognizing an emergency; (ii) rapid notification procedures to avoid delay in response; (iii) an organizational structure for accountability; (iv) initial assessment and response procedures to isolate and stabilize the incident; (v) sustained response procedures to mitigate the consequences of the incident; and (vi) post-incident investigations to document and eliminate the incident causes. The scope of the plan covers hazards or releases associated with hazardous waste, oil, and petroleum products, substances subject to the emergency planning and Community Right-to-Know Act requirements, federal workplace requirements for emergency response plans, Florida

requirements governing release prevention and response for pollutants stored in regulated tanks, radiation hazards, and federal and state requirements for response to an air release of asbestos containing fibers. The plan provides protection from these hazards for both workers and the public. (RO ¶ 112).

The Coal Combustion Residuals Management Manual assists the facility in maintaining compliance with permits and environmental procedures and preventing unauthorized releases to the environment, while maximizing beneficial use of this material and minimizing generation of additional wastes. (RO ¶ 113).

Mr. Stryker detailed the design standards that apply or would be used in the design of the Modernization Project including the natural gas pipeline lateral. The generating facility additions were designed by an internationally recognized engineering firm with significant experience designing similar projects throughout North America and Florida, including one for Tampa Electric. Sound engineering practices will be used, and all applicable laws, regulations and required codes, such as the Florida Building Code and the Hillsborough County Code requirements, would be met. The natural gas lateral, in addition to adhering to good engineering practices and industry requirements, is subject to review by the Florida Public Service Commission (PSC). (RO ¶ 114).

PSA and SCA Process

The PPSA created a centrally coordinated process for review and evaluation of electrical generating facilities at the state and local level on the basis of adopted standards and recommendations of the reviewing agencies. DEP, through the Siting Office, is responsible for coordinating and processing the SCA and maintaining the Site License for the life of the electrical generating facility. (RO ¶ 115).

The SCA was filed with DEP on April 18, 2018. DEP submitted the application to DOAH, along with a proposed schedule for processing the SCA for approval by the ALJ. The SCA was distributed to the reviewing agencies that review the SCA for completeness and ultimately submit agency reports containing recommendations. Each agency conducts a review as to the compliance of the SCA with the statutory and administrative requirements within the respective agencies' jurisdiction and also provides a report containing a recommendation of approval or denial of the Modernization Project, including any proposed Conditions of Certification. (RO ¶ 116).

The Southwest Florida Water Management District (SWFWMD), the FWCC, the Florida Department of Transportation (DOT), the Florida Department of Economic Opportunity (DEO), the Florida Department of State, Division of Historical Resources (DHR), and the DEP were the state and regional agencies reviewing the SCA. (RO ¶ 118).

As required by the PPSA, the local government in whose jurisdiction the project would be located was also included. Hillsborough County, as well as the Environmental Protection Commission of Hillsborough County, reviewed the SCA. The state, regional, and local agencies supported the Modernization Project. The agencies determined that the Modernization Project would comply with all applicable non-procedural requirements when constructed and operate in conformance with the proposed Conditions of Certification. SWFWMD, FWCC, DOT, DHR, and Hillsborough County proposed Conditions of Certification to which Tampa Electric agreed. (RO ¶ 119).

DEP prepared a PAR summarizing the substantive review by the agencies, including DEP's review of the applicable environmental regulations by all the relevant divisions within DEP. The PAR contains DEP's recommendation, which considered the information received

from Tampa Electric and the various reviewing agencies, that the SCA should be approved subject to the proposed Conditions of Certification. Tampa Electric has agreed to accept the proposed Conditions of Certification in the PAR. (RO ¶ 120).

Except for DEP, the reviewing agencies waived their rights to be a party and to participate in the certification hearing by not filing the notice required to do so. (RO ¶ 121).

Need Determination

The SCA was filed and processed under the provisions of section 403.5175, Florida Statutes, which provides for the certification of existing, uncertified units that were not previously subject to the provisions of the PPSA. The SCA requested certification of existing Units 1, 2, and 3, and authorization to repower Unit 1 and retire Unit 2 after continuing to operate until 2021. (RO ¶ 122).

Units 1, 2, and 3 are not subject to the PPSA unless the steam electric generating capacity was expanded after the effective date of the PPSA. The ALJ found that the preponderance of the evidence established that repowering Unit 1 would not result in an expansion of the steam electric generating capacity, Unit 2 would continue to operate as currently operated until its retirement in 2021, and Unit 3 would continue to operate as currently operated into the future, so there is no expansion of steam electric generating capacity at either of those facilities. (RO ¶ 123).

The Unit 1 repowering project would use the existing steam turbine electrical generator that is currently used for Unit 1. The electrical generating rating or capacity of a facility is found on a nameplate on the generator. The nameplate capacity of existing Unit 1 steam turbine electrical generator is 445.5 MW. The maximum steam electric generating capacity of the combined-cycle, after the repowering, would be 360 MW. This is because the steam produced in

the heat recovery steam generators would limit the amount of electricity that can be produced using the steam. The proposed capacity would be well below the existing capacity of the steam turbine electrical generator for Unit 1. There would not be an expansion of steam electrical generating capacity as measured by the nameplate of the existing Unit 1 steam turbine electrical generator. Therefore, the provisions of the PPSA that require a need determination are not triggered. Ms. Mulkey testified that DEP defines "expansion" as an increase in steam generation. (RO ¶ 124).

In addition, early in the process, DEP's Siting Office considered the PPSA applicability issues. DEP evaluated the information provided by Tampa Electric and consulted with PSC staff to determine whether the Modernization Project should be subject to a need determination. Because the combined-cycle facility that would repower Unit 1 has the capacity to produce sufficient steam to generate only 360 MW, no expansion of steam turbine electrical generating capacity would occur. The PSC staff and DEP agreed that proceeding under the provisions of section 403.5175, Florida Statutes, was appropriate. (RO ¶ 125).

Mr. Stryker testified to other projects where repowering did not go through the site certification process. One such project involved the repowering of Tampa Electric's Gannon Station with a combined cycle unit using the existing steam turbine electrical generator for the repowered units. A similar repowering project was carried out by then Progress Energy at the Bartow facility. The Progress Energy project, although not increasing steam electric generating capacity as a result of the repowering, used an entirely new steam electric generator unit. Notwithstanding this difference, DEP concluded that the Bartow repowering project was not subject to the PPSA because it did not increase steam electric generating capacity. (RO ¶ 126).

Sierra Club's expert, Dr. Sahu, testified that Tampa Electric's consideration of only the steam-generated electricity to determine whether a need determination was required was factually incorrect and misleading. He opined that evaluating only the steam component of the generation for purposes of determining the applicability of the PPSA was not appropriate since the PPSA is 40 years old and the manner in which electricity is generated has changed since that time. Instead, he suggested that the entire facility should be looked at, rather than just the steam component. (RO ¶ 127).

However, Ms. Mulkey testified that for purposes of evaluating whether the Modernization Project would be subject to a need determination, the focus was on whether there would be an expansion of steam electrical generating capacity defined as an increase in steam generation. It was appropriate to focus on the steam generation component, and the PSC did not express any concerns with this approach. (RO ¶ 128).

Notice, Outreach, Public Hearing

All notices required by the PPSA were provided. Tampa Electric published the required Notice of Filing for Electrical Power Plant Site Certification on May 7, 2018, Notice of Land Use Consistency Determination on Electrical Power Plants Site on June 20, 2018, Notice of Certification Hearing on November 2, 2018, and Notice of Rescheduled Certification Hearing on January 4, 2019, all in the Tampa Bay Times. DEP notices were published in the Florida Administrative Register. (RO ¶ 129).

Tampa Electric engaged in public outreach for the SCA. The public outreach included newspaper notifications, direct mailing, establishing a website for the SCA, and a phone number to call for questions concerning the SCA. There was one direct mailing consisting of 8,948 direct letters to landowners within three miles of the Site and in accordance with the PPSA.

Tampa Electric representatives also met with various elected officials to discuss the Modernization Project. A copy of the SCA was made available for public inspection at Tampa Electric's main office on Tampa Street in downtown Tampa, and a copy of the SCA was also made available at the John F. Germany Hillsborough County Public Library on Ashley Street in Tampa. Those SCAs were updated as appropriate. (RO ¶ 130).

As part of the certification proceeding, a public hearing was held on March 11, 2019, from 6:00 p.m. until 9:00 p.m. At the hearing, comments were accepted from those who expressed a desire to speak. Thirty-nine members of the public testified. Twenty-six members of the public spoke in opposition, and thirteen members of the public spoke in favor of the Modernization Project. The public hearing was recorded and transcribed as part of the transcript of the certification hearing. (RO ¶ 131).

STANDARDS OF REVIEW OF DOAH RECOMMENDED ORDERS

Section 120.57(1)(l), Florida Statutes, prescribes that an agency reviewing a recommended order (here the Governor and Cabinet sitting as the Siting Board) may not reject or modify the findings of fact of an ALJ, "unless the agency first determines from a review of the entire record, and states with particularity in the order, that the findings of fact were not based on competent substantial evidence." § 120.57(1)(l), Fla. Stat. (2019); *Charlotte Cnty v. IMC Phosphates Co.*, 18 So. 3d 1079, 1082 (Fla. 2d DCA 2009); *Wills v. Fla. Elections Comm'n*, 955 So. 2d 61, 62 (Fla. 1st DCA 2007). The term "competent substantial evidence" does not relate to the quality, character, convincing power, probative value or weight of the evidence. Rather, "competent substantial evidence" refers to the existence of some evidence (quantity) as to each essential element and as to its admissibility under legal rules of evidence. *See e.g., Scholastic*

Book Fairs, Inc. v. Unemployment Appeals Comm'n, 671 So. 2d 287, 289 n.3 (Fla. 5th DCA 1996).

Accordingly, the Siting Board may not reweigh the evidence presented at a DOAH final hearing, attempt to resolve conflicts therein, or judge the credibility of witnesses. *See e.g., Rogers v. Dep't of Health*, 920 So. 2d 27, 30 (Fla. 1st DCA 2005); *Belleau v. Dep't of Envtl. Prot.*, 695 So. 2d 1305, 1307 (Fla. 1st DCA 1997); *Dunham v. Highlands County Sch. Bd.*, 652 So. 2d 894, 896 (Fla. 2d DCA 1995). The ALJ's decision to accept the testimony of one expert witness over that of another expert is an evidentiary ruling that cannot be altered by a reviewing agency, absent a complete lack of any competent substantial evidence of record supporting this decision. *See e.g., Peace River/Manasota Regional Water Supply Authority v. IMC Phosphates Co., 18 So. 3d 1079, 1088* (Fla. 2d DCA 2009); *Collier Med. Ctr. v. State, Dep't of HRS*, 462 So. 2d 83, 85 (Fla. 1st DCA 1985); *Fla. Chapter of Sierra Club v. Orlando Utils. Comm'n*, 436 So. 2d 383, 389 (Fla. 5th DCA 1983).

If the DOAH record discloses any competent substantial evidence supporting a challenged factual finding of the ALJ, the agency is bound by such factual finding in preparing the Final Order. *See, e.g., Walker v. Bd. of Prof'l Eng'rs*, 946 So. 2d 604, 605 (Fla 1st DCA 2006); *Fla. Dep't of Corr. v. Bradley*, 510 So. 2d 1122, 1123 (Fla. 1st DCA 1987). If there is competent substantial evidence to support an ALJ's findings of fact, it is irrelevant that there may also be competent substantial evidence supporting a contrary finding. *See, e.g., Arand Construction Co. v. Dyer*, 592 So. 2d 276, 280 (Fla. 1st DCA 1991); *Conshor, Inc., v. Roberts*, 498 So. 2d 622, 623 (Fla. 1st DCA 1986). In addition, an agency has no authority to make independent or supplemental findings of fact. *See, e.g., Fla. Power & Light Co. v. Siting Bd.*, 693

So. 2d 1025, 1026-1027 (Fla. 1st DCA 1997); *North Port, Fla. v. Consol. Minerals*, 645 So. 2d 485, 487 (Fla. 2d DCA 1994).

Section 120.57(1)(l), Florida Statutes, authorizes an agency to reject or modify an ALJ's conclusions of law and interpretations of administrative rules "over which it has substantive jurisdiction." *See Barfield v. Dep't of Health,* 805 So. 2d 1008, 1012 (Fla. 1st DCA 2001); *Deep Lagoon Boat Club, Ltd. v. Sheridan*, 784 So. 2d 1140, 1141-42 (Fla. 2d DCA 2001). However, the agency should not label what is essentially an ultimate factual determination as a "conclusion of law" in order to modify or overturn what it may view as an unfavorable finding of fact. *See, e.g., Stokes v. State, Bd. of Prof'l Eng'rs*, 952 So. 2d 1224, 1225 (Fla. 1st DCA 2007). Thus, the Siting Board's review of legal conclusions in a recommended order is restricted to those that concern matters within the Siting Board's field of expertise or "substantive jurisdiction." *See, e.g., Charlotte County v. IMC Phosphates Co.*, 18 So. 3d at 1088; *G.E.L. Corp. v. Dep't of Envtl. Prot.*, 875 So. 2d 1257, 1264 (Fla. 5th DCA 2004).

In addition, agencies do not have jurisdiction to modify or reject rulings on the admissibility of evidence. Evidentiary rulings of the ALJ that deal with "factual issues susceptible to ordinary methods of proof that are not infused with [agency] policy considerations," are not matters over which the agency has "substantive jurisdiction." *See Martuccio v. Dep't of Prof'l Regulation*, 622 So. 2d 607, 609 (Fla. 1st DCA 1993); *Heifetz v. Dep't of Bus. Regulation*, 475 So. 2d 1277, 1281 (Fla. 1st DCA 1985); *Fla. Power & Light Co.*, 693 So. 2d at 1028. Evidentiary rulings are matters within the ALJ's sound "prerogative . . . as the finder of fact" and may not be reversed on agency review. *See Martuccio,* 622 So. 2d at 609.

If an ALJ improperly labels a conclusion of law as a finding of fact, the label should be disregarded, and the item treated as though it were actually a conclusion of law. *See, e.g.*,

Battaglia Properties, Ltd., v. Fla. Land and Water Adjudicatory Comm'n, 629 So. 2d 161, 168 (Fla. 5th DCA 1994). However, neither should the agency label what is essentially an ultimate factual determination as a "conclusion of law" to modify or overturn what it may view as an unfavorable finding of fact. *See, e.g., Stokes*, 952 So. 2d at 1225.

RULINGS ON EXCEPTIONS

The case law of Florida holds that parties to formal administrative proceedings must alert reviewing agencies to any perceived defects in DOAH hearing procedures or in the findings of fact of ALJs by filing exceptions to DOAH recommended orders. *See, e.g., Comm'n on Ethics v. Barker,* 677 So. 2d 254, 256 (Fla. 1996); *Henderson v. Dep't of Health, Bd. of Nursing,* 954 So. 2d 77 (Fla. 5th DCA 2007); *Fla. Dep't of Corrs.*, 510 So. 2d at 1124. Having filed no exceptions to certain findings of fact the party "has thereby expressed its agreement with, or at least waived any objection to, those findings of fact." *Envtl. Coalition of Fla., Inc. v. Broward County*, 586 So. 2d 1212, 1213 (Fla. 1st DCA 1991); *see also Colonnade Medical Ctr., Inc. v. State of Fla., Agency for Health Care Admin.*, 847 So. 2d 540, 542 (Fla. 4th DCA 2003). However, even when exceptions are not filed, an agency head reviewing a recommended order is free to modify or reject any erroneous conclusions of law over which the agency has substantive jurisdiction. *See* § 120.57(1)(l), Fla. Stat. (2019); *Barfield,* 805 So. 2d at 112; *Fla. Public Employee Council, 79 v. Daniels*, 646 So. 2d 813, 816 (Fla. 1st DCA 1994).

Finally, in reviewing a recommended order and any written exceptions, the agency's final order "shall include an explicit ruling on each exception." *See* § 120.57(1)(k), Fla. Stat. (2019). However, the agency need not rule on an exception that "does not clearly identify the disputed portion of the recommended order by page number or paragraph, that does not identify the legal

basis for the exception, or that does not include appropriate and specific citations to the record." *Id.*

RULINGS ON SIERRA CLUB'S EXCEPTIONS

I. **Sierra Club's Exception No. 1:** Exceptions to paragraphs 122-28, 176-82 of the RO

Sierra Club takes exception to the findings of fact in paragraphs 122 through 128, and the conclusions of law in paragraphs 176 through 182 of the RO, alleging that review of TECO's Modernization Project cannot proceed under section 403.5175, Florida Statutes.

Sierra Club does not contend that the findings of fact in paragraphs 122 through 128 of the RO are not supported by competent substantial evidence. In fact, Sierra Club only cited to these paragraphs to allege that they are "rife with errors." *See* Sierra Club Exception 1, p. 12. Sierra Club's allegations regarding paragraphs 122 through 128 appear to merely complain that the ALJ did not accept Sierra Club's testimony and evidence over DEP's and TECO's testimony and evidence.

The ALJ found that TECO's Big Bend Units 1, 2, and 3 are "existing" power plants, and the proposed Unit 1 Modernization Project would not result in an increase in steam generating capacity. The ALJ, therefore, found that a determination of need from the PSC is not needed. The ALJ's findings of fact in paragraphs 122 through 128 are supported by competent substantial evidence in the form of testimony and exhibits introduced at hearing. (*See* Joint Ex. 3, pp. 01772, 01776; Mulkey, T. Vol. 3, pp. 14-15; Mulkey, T. Vol. 3, p. 74; Mulkey, T. Vol. 3, pp. 75-86; Joint Ex. 3, p. 01777; Mulkey, T. Vol. 3, pp. 14, 16, 38-39, 94, 95, 103-104, 130-131; Joint Ex. 3, p. 01791; Stryker, T. Vol. 1, pp. 161-167; Sahu, T. Vol. 3 pp. 171-172, 246-258; Mulkey, T. Vol. 3, pp. 14-15, 16-17,17-18, 80-81, 81-83, 85-86, 86-87, 88-89, 106-107).

The weight given to conflicting evidence is a matter reserved for the ALJ, as the trier of fact. "Simply because some evidence is disregarded, that does not mean that the findings themselves are not based on other substantial, competent evidence, which the finder in his [or her] judgment relied upon." *Fla. Chapter of Sierra Club,* 436 So. 2d at 388-89; *see also, Cenac v. Fla. State Bd. of Accountancy*, 399 So. 2d 1013, 1016 (Fla. 1st DCA 1981) ("The hearing officer in an administrative proceeding is the trier of fact, and he or she is privileged to weigh and reject conflicting evidence.").

Sierra Club alleges that TECO's Modernization Project consists of major changes that result in a new plant. Sierra Club contends that major changes require certification under section 403.506, Florida Statutes, but that only minor changes may be processed under section 403.5175, Florida Statutes. *See* Sierra Club's Exception 1, p. 7. Sierra Club's legal allegations are not supported by the requirements of section 403.5175, Florida Statutes, nor any other provision of the PPSA. *See* § 403.5175, Fla. Stat. (2019). In fact, the word "minor" does not appear anywhere in the Florida Electrical Power Plant Siting Act. *See* §§ 403.501 – 403.539, Fla. Stat. (2019).

Sierra Club states that section 403.506(2), Florida Statutes, identifies a threshold for when modification of a power plant requires certification. Sierra Club alleges that TECO's Modernization Plant "would 'increase' electrical energy generation in precisely the way that requires certification under section 403.506." Sierra Club Ex. 1 at p. 10.

We disagree with Sierra Club's legal interpretation of section 403.506(2), Florida Statutes, which provides as follows:

> (2) Except as provided in the certification, modification of nonnuclear fuels, internal related hardware, including increases in steam turbine efficiency, or operating conditions not in conflict with certification, which increase the electrical output of a unit to no greater capacity than the maximum electrical

> generator rating of the existing generator shall not constitute an alteration or addition to generating capacity which requires certification pursuant to this act.

§ 403.506(2), Fla. Stat. (2019) (emphasis added).

Under section 403.506(1), Florida Statutes, the TECO facility at issue is not currently certified, because it was grandfathered as a facility constructed before adoption of the PPSA on October 1, 1973. § 403.506(1), Fla. Stat. (2019). Under section 403.506(2), Florida Statutes, TECO's modifications would not require certification if they would not "increase the electrical output of a unit to no greater capacity than the maximum electrical generator rating of the existing generator." § 403.506(2), Fla. Stat. (2019). The ALJ found in paragraph 124 of the RO that the modification did not increase the output. The ALJ found as follows:

> The electrical generating rating or capacity of a facility is found on a nameplate on the generator. The nameplate capacity of existing Unit 1 steam turbine electrical generator is 445.5 MW. The maximum steam electric generating capacity of the combined-cycle, after the repowering, would be 360 MW. This is because the steam produced in the heat recovery steam generators would limit the amount of electricity that can be produced using the steam. It would be well below the existing capacity of the steam turbine electrical generator for Unit 1.

¶ 124 of RO. *See* Mulkey, T. Vol. 3, pp. 103-104; Sahu, T. Vol. 3, pp. 180-181; Joint Ex. 1, pp. 00031, 00272, which provide competent, substantial evidence in support of the ALJ's findings of fact.

Under section 403.506(2), Florida Statutes, TECO's modifications to its existing facility would not require PPSA certification, because the output capacity will not be increased above the maximum electrical generator rating of the existing generator. As a result, the modifications to TECO's facility would not "constitute an alteration or addition to generating capacity which requires certification" under section 403.506(2), Florida Statutes. § 403.506(2), Fla. Stat. (2019).

The findings of fact in paragraph 124 of the RO are supported by competent substantial evidence; and cannot be rejected by the Siting Board. (Mulkey, T. Vol. 3, pp. 103-104; Sahu, T. Vol. 3, pp. 180-181; Joint Ex. 1, pp. 00031, 00272). If the DOAH record discloses any competent substantial evidence supporting a challenged factual finding of the ALJ, the agency is bound by such factual finding in preparing the Final Order. *See, e.g., Walker,* 946 So. 2d at 605; *Fla. Dep't of Corr.,* 510 So. 2d at 1123.

While TECO's modifications to its existing plant do not require PPSA certification under section 403.506, Florida Statutes, TECO elected to apply for certification of its existing power plant under section 403.5175, Florida Statutes. Section 403.5175(1), Florida Statutes, provides as follows:

> (1) An electric utility that owns or operates an existing electrical power plant as defined in s. 403.503(14) may apply for a certification of an existing power plant and its site in order to obtain all agency licenses necessary to ensure compliance with federal or state environmental laws and regulation using the centrally coordinated, one-stop licensing process established by this part. An application for certification under this section must be in the form prescribed by department rule. Applications must be reviewed and processed using the same procedural steps and notices as for an application for a new facility, except that a determination of need by the Public Service Commission is not required.

§ 403.5175(1), Fla. Stat. (2019) (emphasis added). *See* Joint Ex. 3, pp. 01791 ("Tampa Electric, however, has elected to apply for certification of the Unit 1 Modernization Project.") Under section 403.5175(1), Florida Statutes, a need determination by the PSC is not required for certain existing electrical power plants that apply for siting certification under the PPSA.

Section 403.5175(2), Florida Statutes, identifies the information that must be submitted to support an application for certification of an existing facility. Section 403.5175(2), Florida Statutes, is not a restriction on what activity may be proposed as part of an application for certification of an existing power plant. Instead, it specifies what information must be submitted

with an application for certification of an existing power plant. The process to certify an existing electrical power plant under section 403.5175(1), Florida Statutes, specifically eliminates the determination of need process by the PSC. § 403.5175(1), Fla. Stat. (2019).

If the reviewing agency modifies or rejects a conclusion of law set out in the ALJ's recommended order, it must state with particularity the reasons for the modification or rejection and find that its substituted conclusion of law "is as or more reasonable than that which was rejected or modified." § 120.57(1)(l), Fla. Stat. (2019). Sierra Club has the burden of proof and failed to provide an adequate explanation for how its interpretation of sections 403.506 and 403.5175, Florida Statutes, is as or more reasonable than the ALJ's interpretation of these statutory provisions.

A. Sierra Club's Exception to Paragraph 122 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 122 of the RO is denied.

B. Sierra Club's Exception to Paragraph 123 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 123 of the RO is denied.

C. Sierra Club's Exception to Paragraph 124 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 124 of the RO is denied.

D. Sierra Club's Exception to Paragraph 125 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 125 of the RO is denied.

E. Sierra Club's Exception to Paragraph 126 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 126 of the RO is denied.

F. Sierra Club's Exception to Paragraph 127 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 127 of the RO is denied.

G. Sierra Club's Exception to Paragraph 128 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 128 of the RO is denied.

H. Sierra Club's Exception to Paragraph 176 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 176 of the RO is denied.

I. Sierra Club's Exception to Paragraph 177 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 177 of the RO is denied.

J. Sierra Club's Exception to Paragraph 178 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 178 of the RO is denied.

K. Sierra Club's Exception to Paragraph 179 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 179 of the RO is denied.

L. Sierra Club's Exception to Paragraph 180 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 180 of the RO is denied.

M. Sierra Club's Exception to Paragraph 181 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 181 of the RO is denied.

N. Sierra Club's Exception to Paragraph 182 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 182 of the RO is denied.

II. **Sierra Club's Exception No. 2:** Exceptions to paragraphs 178 and 181 of the RO

Sierra Club takes exception to the conclusions of law in paragraphs 178 and 181 of the RO, alleging that certification under section 403.5175, Florida Statutes, only applies to "minor changes to existing plants." Sierra Club's Exception 2, p. 14. Sierra Club's legal allegations are not supported by the requirements of section 403.5175, Florida Statutes, nor any other provision of the PPSA. § 403.5175, Fla. Stat. (2019). In fact, the word "minor" does not

appear anywhere in the Florida Electrical Power Plant Siting Act. *See* §§ 403.501 – 403.539, Fla. Stat. (2019).

If the reviewing agency modifies or rejects a conclusion of law set out in the ALJ's recommended order, it must state with particularity the reasons for the modification or rejection and find that its substituted conclusion of law "is as or more reasonable than that which was rejected or modified." Sierra Club has the burden of proof and failed to provide an explanation for how its interpretation of section 403.5175, Florida Statutes, is as or more reasonable than the ALJ's interpretation of the Florida Electrical Power Plant Siting Act.

A. Sierra Club's Exception to Paragraph 178 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 178 of the RO is denied.

B. Sierra Club's Exception to Paragraph 181 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 181 of the RO is denied.

III. Sierra Club's Exception No. 3: Exceptions to paragraphs 149-151, 176-182 of the RO

Sierra Club takes exception to paragraphs 149 through 151, and 176 through 182 of the RO, alleging that the Siting Board is required to review "the need" for the Modernization Project, including evidence that was excluded by the ALJ. Sierra Club contends that it was error for the ALJ to exclude such evidence. Sierra Club appears to be attempting to reargue the jurisdictional and evidentiary rulings previously made by the ALJ.

The ALJ ruled in her Order Limiting Issues and Striking Paragraphs, dated February 21, 2019, that matters within the exclusive jurisdiction of the PSC are not applicable to this proceeding. Such matters include, but are not limited to, making a need determination, which is in the exclusive jurisdiction of the Public Service Commission under section 403.519, Florida Statutes, and consideration of costs and setting rates, which is in the exclusive jurisdiction of the

Public Service Commission under sections 366.04 and 366.041, Florida Statutes. The rulings in this order constitute evidentiary rulings of the ALJ. The Siting Board does not have jurisdiction to modify or reject rulings on the admissibility of evidence, since such evidentiary rulings are matters within the ALJ's sound "prerogative . . . as the finder of fact" and may not be reversed on agency review. *See Martuccio*, 622 So. 2d at 609; *Heifetz*, 475 So. 2d at 1281.

Paragraphs 149 and 150 of the RO succinctly summarize the statutes outlining the PSC's jurisdiction over investor-owned electrical utilities and the electrical grid of Florida. *See* Chpt. 366, Fla. Stat. (2019); *see also* §§ 366.04, 366.041, 366.05, 366.051, 366.055, and 366.80-83, Fla. Stat. (2019). Paragraph 151 of the RO merely explains that "The scope of this proceeding under section 403.5175 does not include evidence and argument on matters within the exclusive jurisdiction of the PSC under chapter 366." RO ¶ 151. We agree with the ALJ's conclusions of law in paragraphs 149 through 151 of the RO, particularly since they merely summarize various provisions of Chapter 366, Florida Statutes, that identify the authority of the PSC.

We also agree with the ALJ's conclusions of law in paragraphs 176 through 182 of the RO. Section 403.519, Florida Statutes, limits need determinations to be made exclusively by the PSC. § 403.519, Fla. Stat. (2019) (The PSC "shall begin a proceeding to determine the need for an electrical power plant subject to the Florida Electrical Power Plant Siting Act. . . . The commission shall be the sole forum for the determination of this matter, which accordingly shall not be raised in any other forum or in the review of proceedings in such other forum."). The determination of need made by the PSC is "binding on all parties to any certification proceeding" and "constitutes final agency action." *See Fla. Power Corp. v. State, Siting Bd.*, 513 So. 2d 1341, 1344 (Fla. 1st DCA 1987). The PPSA does not permit a redetermination of the factual finding of

need made by the PSC. Rather, it allows the Siting Board to consider the already established need when evaluating the statutory criteria in section 403.509, Florida Statutes. *Id.*

Here, a need determination was not required pursuant to section 403.5175(1), Florida Statutes. § 403.5175(1), Fla. Stat. ("Applications [under section 403.5175(1), Florida Statutes] must be reviewed and processed using the same procedural steps and notices as for an application for a new facility, except that a determination of need by the Public Service Commission is not required."). We agree with the ALJ's analysis in paragraph 181 of the RO that for existing power plants that "are not undertaking activities that result in expansion of the steam electrical generating capacity, it is logical that a need determination would not be required," because the power is already going to the grid and used by customers. RO ¶ 181. See § 403.506(2), Fla. Stat. (2019). Given this conclusion and the ALJ's findings of positive environmental and other benefits, sections 403.509(3)(d) and (3)(e), Florida Statutes, were properly weighed by the ALJ in favor of issuance.

Sierra Club requests that we reject conclusions of law set out in the ALJ's recommended order. However, if a reviewing agency rejects an ALJ's conclusions of law, it must state with particularity the reasons for the modification or rejection and must find that its substituted conclusion of law "is as or more reasonable than that which was rejected or modified." § 120.57(1)(l), Fla. Stat. (2019). Sierra Club has the burden of proof and failed to provide an adequate explanation for how its interpretations of sections 403.509(3)(d), 403.509(3)(e), and 403.5175, Florida Statutes, are as or more reasonable than the ALJ's interpretation of these statutory provisions.

A. Sierra Club's Exception to Paragraph 149 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 149 of the RO is denied.

B. Sierra Club's Exception to Paragraph 150 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 150 of the RO is denied.

C. Sierra Club's Exception to Paragraph 151 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 151 of the RO is denied.

D. Sierra Club's Exception to Paragraph 176 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 176 of the RO is denied.

E. Sierra Club's Exception to Paragraph 177 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 177 of the RO is denied.

F. Sierra Club's Exception to Paragraph 178 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 178 of the RO is denied.

G. Sierra Club's Exception to Paragraph 179 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 179 of the RO is denied.

H. Sierra Club's Exception to Paragraph 180 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 180 of the RO is denied.

I. Sierra Club's Exception to Paragraph 181 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 181 of the RO is denied.

IV. **Sierra Club's Exception No. 4 :** Exception to paragraph 193 of the RO

Sierra Club takes exception to the last sentence of paragraph 193 of the RO, which concludes that the "preponderance of the competent and substantial evidence established that the Modernization Project will serve and protect the interests of the public." (RO ¶ 193).

Paragraph 193 of the RO reads, *in toto*, as follows:

> The preponderance of the competent and substantial evidence established that the Modernization Project satisfied the certification factors in section 403.509(3)(a) through (f), as applicable to the Modernization Project. Accordingly, the preponderance of the competent and substantial evidence established that the

> Modernization Project will serve and protect the broad interests of the public. See In Re: Fla. Power & Light Co.: Dania Beach Energy Ctr. Project Power Plant Siting Application No. PA89-26A2, Case No. 17-4388EPP.

RO ¶ 193.

Satisfaction of the criteria in section 403.509(3)(a) through (f), Florida Statutes, is uncontested by any party to this proceeding. As recognized by this Board in prior site certification hearings, it is "meeting of all the criteria in Section 403.509(3)(a) through (f)," that serve as the basis for the ALJ's conclusion in paragraph 193 that "preponderance of the competent substantial evidence established that the Modernization Project will serve and protect the broad interests of the public." *See*, *In Re: Florida Power and Light Company Dania Beach Energy Center Project Power Plant Siting Application No. PA 89-26A2*, Case No. 17-4388EPP, at p. 116 (Fla. Siting Bd. Final Order Dec. 13, 2018); and *In Re: Florida Power and Light Company Okeeechobee Clean Energy Center Power Plant Siting Application No. PA15-58*, Case No. 15-0607 (Fla. Siting Bd. Final Order June 29, 2016). Upon reviewing the RO, as a whole, the Siting Board concludes that the ALJ reviewed all the criteria in section 403.509(3), Florida Statutes, before reaching the conclusion in paragraph 193 of the RO that the Modernization Project will "serve and protect the broad interests of the public."

Moreover, Sierra Club cites to the definition of "public interest" located in rule 18-21.003, Florida Administrative Code. Sierra Club Exception 4, fn 82, p. 20. However, rule 18-21.003, Florida Administrative Code, applies to the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), and not the Siting Board. While both the Siting Board and the Board of Trustees are composed of the same officials (i.e., the Governor and Cabinet), each Board constitutes a separate entity under chapter 120, Florida Statutes, with

different powers under Florida law. Therefore, the "public interest" definition in rule 18-21.003, Florida Administrative Code, does not apply to the Siting Board and this proceeding.

For the reasons cited above, Sierra Club's exception to paragraph 193 of the RO is denied.

V. **Sierra Club's Exception No. 5** : Exceptions to paragraphs 10-11 and 13-20 of the RO

Sierra Club takes exception to paragraphs 10, 11, and 13 through 20 of the RO, alleging that the findings are "rife with errors" and ignored "relevant evidence in the record," such as the "site's vulnerability to flooding and other damage from storm surge, sea level rise, wind, and other extreme weather." Sierra Club's Exception 5, p. 22.

First and foremost, the findings of fact contained in paragraphs 10, 11, and 13 through 20 of the RO are supported by competent substantial evidence. Paragraphs 10 and 11 are supported by competent substantial evidence in the form of testimony by Sierra Club's expert Harold Wanless. (Wanless, T. Vol. 4, pp. 128-129; Wanless, T. Vol. 4, p. 26; Wanless, T. Vol. 4, p. 41 Wanless, T. Vol. 4, p. 134; Wanless, T. Vol. 4, pp. 134-135). Similarly, paragraphs 13 through 20 are factual descriptions of the Big Bend Power Station Site and details of TECO's site certification application in this case, all of which are supported by competent substantial evidence in the form of testimony and exhibits introduced at hearing. (Joint Ex. 1, p. 00028; Joint Ex. 3, p. 01773; Joint Ex. 1, p. 00028; Joint Ex. 3, pp. 01773, 01775; Mulkey, T. Vol. 3, pp. 8-9, 13, and 14; Joint Ex. 1, p. 00028; Joint Ex. 3, p. 01776; Mulkey, T. Vol. 3, pp. 12-13; Joint Ex. 1, p. 00028; Joint Ex. 3, pp. 01775-76; Joint Ex. 1, p. 00028; Joint Ex. 3, p. 01776; Mulkey, T. Vol. 3, pp. 14, and 47-48; Joint Ex. 1, p. 00028; Joint Ex. 3, p. 01776; Mulkey, T. Vol. 3, p. 76).

Moreover, Sierra Club contends that the ALJ did not make findings of fact on evidence that was excluded from the record. Sierra Club urges the Siting Board to overrule the ALJ's

evidentiary rulings and issue new findings of fact based on Sierra Club's irrelevant evidence excluded by the ALJ from consideration. *See* Sierra Club's Exception 5, p. 23.

The ALJ ruled in her Order Limiting Issues and Striking Paragraphs, dated February 21, 2019 (Limiting Order), which was reaffirmed in paragraphs 147 through 152 of the RO, that allegations regarding potential damage to the Modernization Project itself and its surrounding vicinity, during the Modernization Project's lifetime from climate-change related impacts are not cognizable allegations under the PPSA. *See* Limiting Order, p. 10. The rulings in this Limiting Order constitute evidentiary rulings of the ALJ. The Siting Board does not have jurisdiction to modify or reject rulings on the admissibility of evidence, since such evidentiary rulings are matters within the ALJ's sound "prerogative . . . as the finder of fact" and may not be reversed on agency review. *Barfield,* 805 So. 2d at 1010 (holding that the Board lacked substantive jurisdiction to reject the ALJ's conclusion of law that the [evidence was] inadmissible); *see Martuccio*, 622 So. 2d at 609; *Heifetz*, 475 So. 2d at 1281. We agree with and adopt the ALJ's legal rulings in her Limiting Order, which were reaffirmed in paragraphs 147 through 152 of the RO.

Sierra Club also urges the Siting Board to issue new findings of fact based on the irrelevant evidence Sierra Club sought to admit, but which were excluded by the ALJ. However, the Siting Board has no authority to make independent or supplemental findings of fact to a RO. *See, e.g., Fla. Power & Light Co.*, 693 So. 2d at 1026-1027; *North Port, Fla.*, 645 So. 2d at 487.

A. Sierra Club's Exception to Paragraph 10 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 10 of the RO is denied.

B. Sierra Club's Exception to Paragraph 11 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 11 of the RO is denied.

C. Sierra Club's Exception to Paragraph 13 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 13 of the RO is denied.

D. Sierra Club's Exception to Paragraph 14 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 14 of the RO is denied.

E. Sierra Club's Exception to Paragraph 15 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 15 of the RO is denied.

F. Sierra Club's Exception to Paragraph 16 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 16 of the RO is denied.

G. Sierra Club's Exception to Paragraph 17 of the RO

For the reason cited above, Sierra Club's exception to paragraph 17 of the RO is denied.

H. Sierra Club's Exception to Paragraph 18 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 18 of the RO is denied.

I. Sierra Club's Exception to Paragraph 19 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 19 of the RO is denied.

J. Sierra Club's Exception to Paragraph 20 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 20 of the RO is denied.

VI. Sierra Club's Exception No. 6: Exceptions to paragraphs 70-84 of the RO

Sierra Club takes exception to paragraphs 70 through 84 of the RO, alleging that the ALJ erroneously failed "to perform a review of the relevant evidence that Sierra Club developed and identified in its proposed order" regarding the "future flood risk at and to the Big Bend site, and the sufficiency of the stormwater management plan," and ignored Sierra Club's evidence on future flood risk." In addition, Sierra Club incorrectly contends that the Siting Board must conduct its own review of TECO's stormwater management plan under section 403.509(3),

Florida Statutes, and "must take into account the evidence developed for the Board's review, including evidence that the agencies below never reviewed." Sierra Club's Exception 6, p. 24. Sierra Club does not contend that paragraphs 70 through 84 of the RO are not supported by competent substantial evidence. Instead, Sierra Club complains that the ALJ did not accept Sierra Club's evidence over TECO's evidence. Moreover, Sierra Club fails to mention or raise any legal or evidentiary argument to paragraph 84 of the RO regarding the economic benefits of the Modernization Project.

Nevertheless, the ALJ's findings of fact in paragraphs 70 through 84 are supported by competent substantial evidence in the form of testimony and exhibits introduced at hearing. (Packard, T. Vol. 2, pp. 14-16; Packard, T. Vol. 2, pp. 17-18; Packard, T. Vol. 2, pp. 18-21; TECO Ex. 12; TECO Ex. 13, p. 000153, 000154; TECO Ex. 14; TECO Ex. 15; TECO Ex. 16; Packard, T. Vol. 2, pp. 61-62; TECO Ex. 14, p. 000235; Joint Ex. 1, p. 00284; Joint Ex. 3, p. 01781; Mulkey, T. Vol. 3, p. 20; Sahu, T. Vol. 3, pp. 266-68). The weight given to conflicting evidence is a matter reserved for the ALJ, as the trier of fact. "Simply because some evidence is disregarded, that does not mean that the findings themselves are not based on other substantial, competent evidence, which the finder in his [or her] judgment relied upon." *Fla. Chapter of Sierra Club*, 436 So. 2d at 388-89; *see also*, *Cenac*, 399 So. 2d at 1016 ("The hearing officer in an administrative proceeding is the trier of fact, and he or she is privileged to weigh and reject conflicting evidence.").

In addition, Sierra Club contends that "future flood risk" of TECO's Big Bend Site is a policy issue solely to be decided by the Siting Board, for which the ALJ's findings are due "no deference." The Siting Board disagrees that the ALJ's findings are due no deference. The PPSA does not contain a requirement that the Siting Board conduct an "independent" review or

analysis of the risk of "future flooding" of an electrical power plant. *See* Sierra Club's Exception 6, pp. 24-25. Findings of fact "susceptible to ordinary methods of proof" are not "infused with policy decisions." *Forehand v. School Bd. Of Washington Co.*, 481, So. 2d 953, 956 (Fla. 1st DCA 1986); *see also*, *Martuccio*, 622 So. 2d at 609 ("factual issues susceptible to ordinary methods of proof that are not infused with [agency] policy considerations," are not matters over which the agency has "substantive jurisdiction.").

Because these structures were in compliance with the regulatory requirements at the time they were constructed, and remain in compliance, there is no regulatory requirement to change them. Even Dr. Sahu, Sierra Club's mechanical engineering expert, did not dispute that the Modernization Project would comply with applicable regulatory requirements. (Sierra Club's Ex. 001, p. 5, fn. 8; Sahu, T. Vol. 3, pp. 266-267).

A. Sierra Club's Exception to Paragraph 70 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 70 of the RO is denied.

B. Sierra Club's Exception to Paragraph 71 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 71 of the RO is denied.

C. Sierra Club's Exception to Paragraph 72 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 72 of the RO is denied.

D. Sierra Club's Exception to Paragraph 73 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 73 of the RO is denied.

E. Sierra Club's Exception to Paragraph 74 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 74 of the RO is denied.

F. Sierra Club's Exception to Paragraph 75 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 75 of the RO is denied.

G. Sierra Club's Exception to Paragraph 76 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 76 of the RO is denied.

H. Sierra Club's Exception to Paragraph 77 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 77 of the RO is denied.

I. Sierra Club's Exception to Paragraph 78 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 78 of the RO is denied.

J. Sierra Club's Exception to Paragraph 79 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 79 of the RO is denied.

K. Sierra Club's Exception to Paragraph 80 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 80 of the RO is denied.

L. Sierra Club's Exception to Paragraph 81 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 81 of the RO is denied.

M. Sierra Club's Exception to Paragraph 82 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 82 of the RO is denied.

N. Sierra Club's Exception to Paragraph 83 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 83 of the RO is denied.

O. Sierra Club's Exception to Paragraph 84 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 84 of the RO is denied.

VII. **Sierra Club's Exception No. 7:** Exceptions to paragraphs 147-152 of the RO

Sierra Club takes exception to paragraphs 147 through 152 of the RO, alleging the ALJ wrongly excluded certain evidence from Sierra Club in her order dated February 21, 2019; which she reaffirmed in paragraphs 147 through 152 of the RO. We agree with and adopt the ALJ's legal analysis in paragraphs 147 through 152 of the RO, for the reasons identified in her order

dated February 21, 2019, which was reaffirmed in the RO. *See, In Re: Florida Power and Light Company Dania Beach Energy Center Project Power Plant Siting Application No. PA 89-26A2*, Case No. 17-4388EPP (Fla. Siting Bd. Final Order Dec. 13, 2018); and *In Re: Florida Power and Light Company Okeeechobee Clean Energy Center Power Plant Siting Application No. PA15-58*, Case No. 15-0607 (Fla. Siting Bd. Final Order June 29, 2016); *Cf. Gen. Dev. Utilities, Inc. v. Pub. Serv. Comm'n,* DOAH Case No. 80-2192 (PSC Final Order June 15, 1990) (PSC has jurisdiction to increase rates); *Mangonia Park Util. Co., Inc. v. Pub. Serv. Comm'n,* DOAH Case No. 80-2082 (PSC Final Order June 15, 1990) (PSC has jurisdiction to increase rates).

The ALJ ruled in her Order Limiting Issues and Striking Paragraphs, dated February 21, 2019, that matters within the exclusive jurisdiction of the PSC are not material to this proceeding. Such matters include, but are not limited to, making a need determination, which is in the exclusive jurisdiction of the Public Service Commission under section 403.519, Florida Statutes, and consideration of costs and setting rates, which is in the exclusive jurisdiction of the Public Service Commission under sections 366.04 and 366.041, Florida Statutes. The rulings in this order constitute evidentiary rulings of the ALJ. The Siting Board does not have jurisdiction to modify or reject rulings on the admissibility of evidence, since such evidentiary rulings are matters within the ALJ's sound "prerogative . . . as the finder of fact" and may not be reversed on agency review. *See Martuccio*, 622 So. 2d at 609; *Heifetz*, 475 So. 2d at 1281.

Sierra Club requests that we reject conclusions of law set out in the ALJ's recommended order. If a reviewing agency rejects an ALJ's conclusions of law, it must state with particularity the reasons for the modification or rejection and must find that its substituted conclusion of law "is as or more reasonable than that which was rejected or modified." § 120.57(1)(l), Fla. Stat.

(2019). However, Sierra Club has the burden of proof and failed to provide an adequate explanation for how its interpretation, is as or more reasonable than the ALJ's interpretation.

A. Sierra Club's Exception to Paragraph 147 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 147 of the RO is denied.

B. Sierra Club's Exception to Paragraph 148 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 148 of the RO is denied.

C. Sierra Club's Exception to Paragraph 149 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 149 of the RO is denied.

D. Sierra Club's Exception to Paragraph 150 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 150 of the RO is denied.

E. Sierra Club's Exception to Paragraph 151 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 151 of the RO is denied.

F. Sierra Club's Exception to Paragraph 152 of the RO

For the reasons cited above, Sierra Club's exception to paragraph 152 of the RO is denied.

RULINGS ON DEP'S EXCEPTIONS:

DEP's Exception No. 1 – Appearances: Exception to page 1 of the RO

DEP takes exception to the spelling of Lawrence N. Curtain's last name in the Appearances section of the RO on page 1. For a correct spelling of Mr. Curtin's name, see the "Service List" of the RO, page 84. The Siting Board accepts this correction of a scrivener's error in Lawrence N. Curtin's last name.

Based on the foregoing reasons, DEP's Exception No. 1 is granted.

DEP's Exception No. 2 - Preliminary Statement: Exception to page 2 of the RO

DEP takes exception to the date specified in the "Preliminary Statement" on page 2 of the RO on which TECO submitted its site certification application that is the subject of this hearing. DEP's exception requests correction of a scrivener's error regarding when TECO's application was filed with DEP. The exhibits and testimony reflect that TECO filed the application on April 18, **2018**, and not April 18, **2019**. (Joint Ex. 3, p. 01772; Joint Ex. 4, pp. 02001, 02003, 02005-02006; and Mulkey, T. Vol. 3, p. 8).

Based on the foregoing reasons, DEP's Exception No. 2 is granted.

DEP's Exception No. 3 - Preliminary Statement: Exception to page 6 of the RO

DEP takes exception to the last sentence of the first paragraph on page 6, lines 6-7, of the RO, which reads: "The deposition [of Tom Fessler] was admitted into evidence as Sierra Club Exhibit SC-209." DEP does not dispute that the deposition of Tom Fessler was admitted into evidence as Exhibit SC-209. Instead, DEP desires to clarify the identification of Exhibit SC-209, because the index of the hearing transcript from March 14, 2019, incorrectly identified Exhibit SC-209 as a "March 1st, 2019, article provided by Dr. Warless, which was admitted in the proceeding. (T. Vol. 4, p. 117). DEP explained that the Dr. Warless' article was dated after Dr. Warless formulated his expert opinion in this matter and had not been disclosed or provided to the parties before the hearing; consequently, the ALJ did not admit the article into evidence. (T. Vol. 4, pp. 117-118). DEP then explained that Sierra Club marked Mr. Fessler's deposition as Exhibit SC-209, which was admitted into evidence without objection. (T. Vol. 4, pp. 205-212). However, DEP noted that Exhibit SC-209 was to be made complete by providing the deposition exhibits after the hearing. DEP contends that "there is no evidence or confirmation" that the exhibits to SC-209 were provided to DOAH after the hearing.

DEP contends that the last sentence of the first paragraph on page 6 of the RO should be amended to add new text to the sentence, so it would read: "The incomplete deposition was admitted into evidence as renumbered Sierra Club Exhibit SC-209." (emphasis in exception).

If the DOAH record contains any competent substantial evidence supporting a challenged factual finding of the ALJ, the agency is bound by such factual finding in preparing the Final Order. *See, e.g., Walker*, 946 So. 2d at 605; *Fla. Dep't of Corr*, 510 So. 2d at 1123. DEP does not contest that the sentence is accurate as written; instead, it desires to clarify the record by adding supplemental information. However, an agency has no authority to make independent or supplemental findings of fact. *See, e.g., Fla. Power & Light Co.*, 693 So. 2d at 1026-1027; *North Port, Fla.*, 645 So. 2d at 487.

Based on the foregoing reasons, DEP's Exception No. 3 is denied.

DEP's Exception No. 4 to Paragraph 35

DEP takes exception to the first sentence of paragraph 35 on page 18 of the RO, which reads: "The air emissions from Big Bend are regulated by state and federally delegated air permitting programs." DEP contends that "In Florida, air emissions from stationary sources, such as power plants, are regulated by the Department's Division of Air Resource Management through its federally 'approved' air permitting program." DEP Exception 4, p. 3. DEP requests that the RO be amended to revise the first sentence of paragraph 35 of the RO so it will read that "The air emissions from Big Bend are regulated by state and federally ~~delegated~~ approved air permitting programs." (emphasis in DEP's exception).

While DEP takes exception to a paragraph containing findings of fact, it has contested a legal issue, claiming that DEP's air program is an "approved" permitting program instead of a "delegated" permitting program from the United States Environmental Protection Agency

(EPA). Section 120.57(1)(l), Florida Statutes, authorizes an agency, such as the Siting Board, to reject or modify an ALJ's conclusions of law and interpretations of administrative rules "over which it has substantive jurisdiction." *See Barfield,* 805 So. 2d at 1012; *Deep Lagoon Boat Club, Ltd.*, 784 So. 2d at 1141-42. Thus, the Siting Board's review of legal conclusions in a recommended order is restricted to those conclusions that concern matters within the Siting Board's field of expertise or "substantive jurisdiction." *See, e.g., Charlotte County*, 18 So. 3d at 1088; *G.E.L. Corp.*, 875 So. 2d at 1264. However, the Siting Board does not implement the Department of Environmental Protection's air permitting program; and thus, the Siting Board does not have substantive jurisdiction over the Department's air permitting program with authority to amend this sentence.

Based on the foregoing reasons, DEP's Exception No. 4 is denied.

DEP's Exception No. 5 to Paragraph 36

DEP takes exception to two scrivener's errors in the second sentence of Paragraph 36 of the RO. This sentence reads that "DEP published a Notice of Intent to Issue Air Construction Permit No. 0570039-119-AC (Air Permit) for the Modernization Project on June 16, 2018." However, DEP clarifies that TECO, not the Department, published the Notice of Intent on June 1, 2018, and not on June 16, 2018. The exhibits reflect that TECO published the Notice of Intent on June 1, 2018. (TEC-WK-22 – Final Determination, p. 1; and TEC-WK-22 – Written Notice of Intent to Issue Air Permit). Accordingly, the second sentence of Paragraph 36 of the RO is corrected to read "*Tampa Electric* published a Notice or Intent to Issue Air Construction Permit No. 0570039-119-AC (Air Permit) for the Modernization Project on June *1*, 2018."

Based on the foregoing reasons, DEP's Exception No. 5 is granted.

DEP's Exception No. 6 to Paragraph 53

DEP takes exception to a phrase in the third sentence of paragraph 53 of the RO, which reads:

> Based upon the evaluation process for systemwide emissions that was conducted in accordance with the applicable requirements, it was determined that the addition of the Modernization Project would result in a substantial net reduction in emissions in most cases, including a net decrease in greenhouse gas emissions of over two million tons per year.

RO ¶ 53 (emphasis added).

DEP does not dispute that an emissions evaluation was conducted, which demonstrated that the Modernization Project would result in a net decrease in greenhouse gas emissions of two million tons per year. However, DEP wants the RO modified to reflect that while an emissions evaluation was conducted for the Modernization Project, a "systemwide" emissions evaluation was not conducted.

DEP does not contend there was no competent substantial evidence to support the ALJ's findings in paragraph 53 of the RO. In fact, the ALJ's findings of fact in paragraph 53 are supported by competent substantial evidence in the form of expert testimony by TECO witness William Karl. (Karl, T. Vol. 3, p. 330). If the DOAH record contains any competent substantial evidence supporting a challenged factual finding of the ALJ, the agency is bound by such factual finding in preparing the Final Order. *See, e.g., Walker*, 946 So. 2d at 605; *Fla. Dep't of Corr*, 510 So. 2d at 1123.

Based on the foregoing reasons, DEP's Exception No. 6 is denied.

DEP's Exception No. 7 to Paragraph 142

DEP takes exception to a scrivener's error in the first sentence of paragraph 142 of the RO, which cites to "Section 403.4175." DEP explains that the citation appears to be a

scrivener's error, because the site certification application in this matter was filed and processed under section 403.5175, Florida Statutes, and moreover section 403.4175, Florida Statutes, does not exist. (Joint Ex. 1, pp. 00023, 00034-36; Joint Ex. 3, pp. 01772, 10791; and Mulkey, T. Vol. 3, pp. 14, 22, and 38).

Based on the foregoing reasons, DEP's Exception No. 7 is granted.

DEP's Exception No. 8 to Paragraph 147

DEP takes exception to a scrivener's error in the third sentence of paragraph 147 of the RO, which cites to "section 403.4175(1)." DEP explains that the citation appears to be a scrivener's error, because the site certification application in this matter was filed and processed under section 403.5175, Florida Statutes; and moreover section 403.4175, Florida Statutes, does not exist. (Joint Ex. 1, pp. 00023, 00034-36; Joint Ex. 3, pp. 01772, 10791; and Mulkey, T. Vol. 3, pp. 14, 22, and 38).

Based on the foregoing reasons, DEP's Exception No. 8 is granted.

CONCLUSION

The ALJ concluded that TECO met its burden of proving that the Modernization Project should be certified, subject to the Conditions of Certification contained in the PAR. (RO ¶ 198 and Recommendation). Thus, the ALJ recommended that the Siting Board enter a Final Order approving the Modernization Project subject to the Conditions of Certification.

Having reviewed the matters of record and being otherwise duly advised, the Siting Board adopts the ALJ's recommendation.

It is therefore ORDERED that:

A. The Recommended Order (Exhibit A) is adopted in its entirety, except as modified by the rulings in this Final Order, and incorporated by reference herein.

B. TECO's Application for Certification to modernize, operate, and maintain the electrical power generation facility, known as the Tampa Electric Company Big Bend Unit 1 Modernization Project, at Tampa Electric Company's existing plant south of Tampa in Hillsborough County, Florida, is APPROVED, subject to the Conditions of Certification, attached as Exhibit B and incorporated by reference herein.

C. Authority to assure and enforce compliance by TECO and its agents with all the Conditions of Certification imposed by this Final Order is hereby delegated to DEP.

JUDICIAL REVIEW

Any party to this proceeding has the right to seek judicial review of this Final Order pursuant to section 120.68, Florida Statutes, by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, 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 Final Order is filed with the clerk of the Department.

DONE AND ORDER this 29th day of July, 2019, in Tallahassee, Florida, pursuant to a vote of the Governor and Cabinet, sitting as the Siting Board, at a duly noticed and constituted Cabinet meeting held on July 25th, 2019.

THE GOVERNOR AND CABINET
SITTING AS THE SITING BOARD

THE HONORABLE RON DESANTIS
GOVERNOR

FILED ON THIS DATE, PURSUANT TO § 120.52, FLORIDA STATUTES, WITH THE DESIGNATED DEPARTMENT CLERK, RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED.

Deputy CLERK 7/29/19 DATE

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing Final Order on Certification has been sent by electronic mail to:

Lawrence N. Curtin, Esquire Kevin W. Cox, Esquire Holland & Knight, LLP 315 South Calhoun Street, Suite 600 Tallahassee, Florida 32301 Larry.curtin@hklaw.com Kevin.cox@hklaw.com Tara.price@hklaw.com	Diana A. Csank, Esquire Julie Kaplan, Esquire Aaron Messing Matthew E. Miller, Esquire Sierra Club 50 F Street Northwest, 8th Floor Washington, DC 20001 Diana.csank@sierraclub.org Julie.kaplan@sierraclub.org Matthew.e.miller@sierraclub.org
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And by U.S. Mail to: Kathleen Riley Sierra Club 50 F Street Northwest, 8th Floor Washington, DC 20003	 Andres Restrepo, Esquire Sierra Club 520 Carpenter Lane Philadelphia, Pennsylvania 19119

this 29th day of July, 2019.

JUSTIN G. WOLFE
General Counsel
Florida Department of Environmental Protection, as counsel for and on behalf of the State of Florida Siting Board.

3900 Commonwealth Blvd., M.S. 35
Tallahassee, FL 32399-3000
Telephone (850) 245-2242

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

IN RE: TAMPA ELECTRIC COMPANY BIG BEND UNIT 1 MODERNIZATION PROJECT POWER PLANT SITING APPLICATION NO. PA79-12A2

Case No. 18-2124EPP

_____/

RECOMMENDED ORDER ON CERTIFICATION

A duly-noticed certification hearing was held on the above-captioned application on March 11 through 15, 2019, in Riverview, Florida. The certification hearing was conducted by Francine M. Ffolkes, a designated Administrative Law Judge (ALJ) from the Division of Administrative Hearings (DOAH). The certification hearing included public testimony taken in the same location on Monday, March 11, 2019, from 6:00 p.m. to 9:00 p.m.

APPEARANCES

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For Intervenor Sierra Club:

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Julie Kaplan, Esquire
Aaron Messing, Qualified Representative
Matthew E. Miller, Esquire
Kathleen Riley, Qualified Representative
Sierra Club
50 F Street Northwest, 8th Floor
Washington, D.C. 20001

STATEMENT OF THE ISSUES

Whether Tampa Electric Company's (Tampa Electric) application for site certification of existing Big Bend Generating Station Units 1, 2, and 3 and authorization to construct and operate the Big Bend Unit 1 Modernization Project should be approved under section 403.5175, Florida Statutes.

PRELIMINARY STATEMENT

On April 18, 2019, Tampa Electric submitted a Site Certification Application (SCA) to the Department of Environmental Protection (DEP) seeking site certification of existing Big Bend Generating Station Units 1, 2, and 3 and authorization to construct and operate the Big Bend Unit 1 Modernization Project at its existing Big Bend Power Station

(Modernization Project) in Hillsborough County, Florida. The Modernization Project consists of repowering the existing coal and natural gas-fired Unit 1 with a natural gas-fired nominal 1,090 megawatt (MW) two-on-one combined-cycle generating facility and retiring existing Unit 2.

The SCA included a copy of Tampa Electric's application to DEP for a separate air permit to construct the Modernization Project under Florida's federally approved Prevention of Significant Deterioration (PSD) preconstruction review program.

Sierra Club filed a Notice of Intent to be a Party on July 2, 2018, and Tampa Electric filed a response in opposition on July 9, 2018. The Sierra Club's Notice of Intent to be a Party did not meet the statutory requirements necessary for party status and was denied on July 18, 2018. The SCA was determined complete by DEP on July 19, 2018. Sierra Club filed a Motion to Intervene in the proceeding on October 2, 2018, which was granted on November 2, 2018.

No other agencies filed a notice of intent to be a party and no other domestic non-profit corporation or association described in section 403.508 filed a notice of intent to be a party to the certification hearing, and none appeared at the hearing. Thus, the parties to the proceeding were Tampa Electric, DEP, and Sierra Club.

On February 21, 2019, the undersigned entered an Order Limiting Issues and Striking Paragraphs. The Order ruled on Tampa Electric's motion to strike filed on February 6, 2019, and Sierra Club's response in opposition filed on February 13, 2019. The Order struck a number of paragraphs from Sierra Club's Motion to Intervene and also limited evidence and argument that could be presented on matters within the scope of the Order. That Order is incorporated into this Recommended Order.

On March 4, 2019, Tampa Electric and DEP filed a detailed pre-hearing stipulation agreeing to numerous findings of fact and conclusions of law. On March 5, 2019, Sierra Club filed a separate unilateral pre-hearing statement.

At the start of the hearing, several outstanding motions were argued and ruled upon. Most of the motions were denied without prejudice to any appropriate objections being made throughout the proceeding. DEP and Tampa Electric Joint Exhibits 1 through 4 were admitted into evidence pursuant to the provisions of section 120.569(2)(p), Florida Statutes, regarding an applicant's prima facie evidence.

At the certification hearing, Tampa Electric presented the testimony of the following six witnesses: Paul Carpinone, a licensed professional engineer (P.E.) and director of environmental services for Tampa Electric; Shawn Copeland, the vice president of safety; William Karl, P.E., expert in air

quality issues; Darrel Packard, P.E., expert in stormwater management systems; R. James Rocha, P.E., expert in resource planning; and Kristopher Stryker, P.E., project manager for the Modernization Project. Tampa Electric Exhibits 1 through 22 and 27 through 36 were admitted into evidence.

DEP presented the testimony of Cynthia Mulkey, the program administrator for DEP's siting coordination office. DEP Exhibit 1 was admitted into evidence.

Sierra Club presented the testimony of Angelina Klanchar; Winston Mark Walters; Daniel Roberts, Jr.; Cristy Costello; and Susannah Randolph, who testified as fact witnesses for purposes of standing. Sierra Club also presented the expert testimony of Harold Wanless, Ph.D., a professor of geological sciences at the University of Miami; and Ranajit "Ron" Sahu, Ph.D., a mechanical engineer and independent consultant. Sierra Club tendered the testimony of Kevin Lucas, director of rate design at Solar Energy Industries Association; Devi Glick, associate with Synapse Energy Economics; and Bruce Biewald, chief executive officer at Synapse Energy Economics. Tampa Electric and DEP objected to Mr. Lucas, Ms. Glick, and Mr. Biewald's testimony, who were excluded from testifying by the undersigned since the oral and written description of their expert testimony violated the scope of the certification hearing as limited by the undersigned's February 21, 2019, Order Limiting Issues and

Striking Paragraphs. Sierra Club proffered their resumes and expert reports, which travel with this record as proffered exhibits SC-85, SC-86, SC-116, SC-117, SC-134, SC-135, and SC-137. Sierra Club also entered the deposition of Tom Fessler, the budget director of Hillsborough County as a result of his absence from the hearing. The deposition was admitted into evidence as Sierra Club Exhibit SC-209.

Sierra Club Exhibits SC-001 through SC-007, SC-024, SC-025, SC-027, SC-028, SC-030 through SC-032, SC-040 through SC-044, SC-046, SC-047, SC-049, SC-050, SC-053, SC-054, SC-056, SC-058, SC-059, SC-063, SC-065 through SC-067, SC-072, SC-074, SC-076, SC-082, SC-084, SC-138 through SC-141, SC-143 through SC-148, SC-150, SC-152 through SC-162, SC-173 through SC-176, SC-179, SC-203, and SC-208 were admitted into evidence. Sierra Club exhibits, SC-34.1 and a document containing Tampa Electric's answer and supplemental answer to Interrogatory 13, were not admitted into evidence but were proffered by Sierra Club.

Public testimony was taken the evening of Monday, March 11, 2019. Members of the public were sworn, testified orally, and submitted written comments on the Modernization Project. Comment letters were also sent to the undersigned by the deadline of 5:00 p.m. on Friday, March 15, 2019. Those comment letters have been made a part of the record of this proceeding.

The five-volume Transcript of the certification hearing and the one-volume Transcript of the public hearing were filed on April 12, 2019, and the parties were allowed to submit proposed recommended orders of up to 75 pages by April 29, 2019. All the parties timely filed their proposed recommended orders, which were carefully considered in the preparation of this Recommended Order on Certification.

References to the Florida Statutes are to the 2018 version, unless otherwise indicated.

FINDINGS OF FACT

Based on the evidence adduced at the hearing within the scope of this proceeding, the following findings of fact are made:

The Parties

1. Tampa Electric is the applicant for site certification of Units 1, 2, and 3, and for approval of the Modernization Project at its Big Bend Power Station (Big Bend). Tampa Electric provides electric service to more than 734,000 residential, commercial, industrial, and governmental customers in west-central Florida. Its service territory includes all of Hillsborough County and portions of Polk, Pasco, and Pinellas counties. Its existing electric generating units are located at five facilities in the service territory, and consist of diverse generating technologies, including coal and natural gas-fired

steam units, natural gas-fired combined-cycle and combustion turbine units, an integrated coal-gasification combined-cycle unit, and renewable solar energy facilities.

2. DEP is the state agency charged with administering the Electrical Power Plant Siting Act (PPSA) contained in part II of chapter 403. DEP's Siting Coordination Office (Siting Office) coordinates the site certification process, receives comments from affected agencies, and prepares the Project Analysis Report (PAR) that contains DEP's recommendation to approve or deny the requested certification and the proposed Conditions of Certification.

3. Intervenor, Sierra Club, is a national non-profit environmental advocacy organization. A key component of Sierra Club's mission is to advocate for the use of clean energy sources.

Standing

4. Sierra Club's members are concerned about continued reliance on fossil fuels and related climate change impacts, including sea level rise, increased storm surge, severe weather events, and coastal flooding.

5. In Florida, Sierra Club has more than 30,000 members, including more than 2,000 members who live, work, and recreate in the Tampa Bay area and some near Big Bend in Hillsborough County. Sierra Club promotes outdoor activities, and many of

its Florida members organize and participate in outdoor recreation for people of all ages.

6. Sierra Club members who testified at the certification hearing take their own kids and others picnicking, kayaking, canoeing, and on service projects throughout South Florida and the Tampa Bay area. Sierra Club members, who testified at the certification hearing live in the vicinity of Big Bend, are Tampa Electric customers and enjoy outdoor recreation, such as boating in Tampa Bay and visiting the beaches.

7. Sierra Club members who testified at the certification hearing have been injured by and suffered the effects of climate change impacts, including sea level rise, increased storm surge, severe weather events, and coastal flooding.

8. The substantial environmental interests of Sierra Club's Florida members in the Tampa Bay area include the potential adverse effects of climate change to which Tampa Electric's greenhouse gas emissions would allegedly contribute. Thus, a substantial number of Sierra Club's Florida members' substantial interests could reasonably be affected by climate change impacts, including sea level rise, increased storm surge, severe weather events, and coastal flooding in the Tampa Bay area.

Climate Change

9. Sierra Club's expert, Harold Wanless, Ph.D., provided testimony on various aspects of the general topic of climate change. Dr. Wanless testified that climate change is a complex, worldwide issue, with contributions from many different sources. The primary is carbon dioxide emissions resulting primarily from human activities, including the combustion of fossil fuels.

10. Dr. Wanless testified about his predictions regarding global sea level rise, storm surge, and hurricane activities in the coming years. He opined that all of this should be taken into account in the design and evaluation of a project such as the Modernization Project, but concurred that there are no current regulatory standards, other than the Hillsborough County Code of Ordinances discussed below, which address these issues.

11. Dr. Wanless conceded that his predictions were more extreme based on a comparison with government data, to which he also cited. He advocated the immediate cessation of burning fossil fuels, and that the solution must happen "one car, one power plant at a time." Dr. Wanless also acknowledged that the timing and landfall of individual storm events, such as hurricanes, cannot be specifically attributed to human-induced global warming.

12. From a regulatory standpoint, the United States Environmental Protection Agency's (EPA) guidance for permitting for greenhouse gases states:

> As a general matter, GHG emissions contribute to global warming and other climate changes that result in impacts in the environment and society. However, due to the global scope of the problem, climate change modeling and evaluations of risks and impacts of GHG emissions currently is typically conducted for changes in emissions orders of magnitude larger than the emissions from individual projects that might be analyzed in PSD permit reviews. Quantifying these exact impacts attributable to the specific GHG source obtaining a permit in specific places is not currently possible with climate change modeling. Given these considerations, an assessment of the potential increase or decrease in the overall level of GHG emissions from a source would serve as the more appropriate and credible metric for assessing the relative environmental impact of a given control strategy.

Tampa Electric Ex. 22, p. 000296, ¶ 2 (quoting PSD and Title V Permitting Guidance for Greenhouse Gases, March 2011).

Big Bend Power Station Site

13. The Big Bend Power Station Site (the Site) is an existing electrical generating facility located on approximately 1,722 acres of property owned by Tampa Electric. It is approximately ten miles south of Tampa in the unincorporated southwestern portion of Hillsborough County, also known as

Apollo Beach. Its address is 13031 Wyandotte Road, Gibsonton, Florida.

14. Approximately 1,096 acres of the Site is currently certified under the PPSA. The SCA sought certification of an additional 92 acres, for a total of 1,188 acres. The Site has been used for power generation since 1970. The main fossil fuel generating facilities are in the northwestern portion of the Site located on land created by spoil materials from dredging the barge access channel to the Site in the late 1960s.

15. The Site contains four coal and natural gas-fired steam electric generating units, a combustion turbine generator peaking unit, and associated facilities. The Site contains the approximately 20 MW Big Bend I Solar Project that was placed into service in 2017 and an area for the approximately 33 MW Solar II Solar Project, which will be constructed in the future.

16. Each of the four coal and natural gas fired steam electric generating units uses what is known as a Rankine process to generate electricity. That process consists of taking high-pressure water and converting it in a boiler to high-pressure, high-temperature steam. The steam is then utilized in a steam turbine to convert the energy in the steam into mechanical energy. The mechanical energy provided by the steam is then used by the electrical generator associated with the steam turbine to create electrical energy. The steam

leaving the steam turbine is condensed back to water by the condenser and pumped back into the boiler to complete the process.

17. Onsite facilities associated with electric generation include: boiler and steam turbine generator buildings; air pollution control equipment; three exhaust stacks; water and wastewater treatment facilities; cooling water intake and discharge structures and canals; coal delivery and storage facilities; gypsum storage areas; coal combustion residuals beneficial use storage and handling facilities; electrical enclosures; transmission lines; substation; natural gas pipeline; and water storage and stormwater management facilities.

18. The Site also contains a Manatee Viewing Center and the Florida Conservation and Technology Center, which is a partnership between Tampa Electric, the Florida Aquarium, and the Florida Fish and Wildlife Conservation Commission (FWCC). Other facilities located on the Site include the STI Ash Beneficiation facility and the Tampa Bay Water desalination plant.

19. Portions of the Site were originally certified pursuant to the PPSA in 1981 for the construction and operation of Unit 4. That certification included associated facilities, which are shared with Units 1, 2, and 3, such as coal delivery

and storage areas. Units 1, 2, and 3 were not subject to the PPSA because those units were constructed and operational in the 1970s prior to the effective date of the PPSA.

20. In addition to the Modernization Project, Tampa Electric sought certification of the associated facilities for Units 1, 2, and 3, and an approximately 92-acre adjacent parcel, which would increase the certified site area to approximately 1,188 acres.

Proposed Modernization Project

21. The Modernization Project would retire Unit 2 and repower Unit 1 as a clean natural gas-fired two-on-one combined-cycle generating facility on an approximately nine-acre portion of the Site. The Unit 1 boiler would be repowered with a new natural gas-fired combined-cycle unit that would utilize Unit 1's existing steam turbine generator. Upon completion, the repowered Unit 1 would have a nominal net generating capacity of 1,090 MW.

22. Tampa Electric selected two General Electric (GE) combustion turbine generators, each with a nominal generating capacity of 370 MW, for the new combined-cycle unit. Hot exhaust gases would be used to generate steam in two heat recovery steam generators, which would be routed to the steam turbine generator. The combustion turbine generators would be capable of operating in simple-cycle mode.

23. The Modernization Project would include construction of new onsite associated facilities, such as electrical equipment enclosures, a gas metering station, water pumps, fin-fan coolers, transformers, an emergency diesel generator, fire protection systems, hydrogen and carbon dioxide storage tanks, an ammonia skid, and stormwater management systems.

24. Existing Unit 1's steam turbine generator, the boiler/turbine structure, once-through cooling system, condenser, intake/discharge structures, the generator step-up transformer, the auxiliary tower, and various electrical and control systems would be refurbished and used for the repowered Unit 1.

25. Other existing infrastructure and systems such as the demineralized water system, potable water and sanitary wastewater onsite service interconnections with Hillsborough County public services, and existing access roads, would also be used.

26. An administration office building would be located on an approximately 1.4-acre area north of the intake canal and southeast of the plant facilities. Temporary use of several areas for construction laydown and parking, barge delivery of larger equipment, and workspace for the gas pipeline horizontal directional drilling (HDD) activities will cover approximately 44 acres.

27. The existing 230 kilovolts (kV) transmission lines to the onsite substation would be upgraded. A new 230 kV transmission line interconnection would be constructed from the combined-cycle facilities to the existing substation.

28. An elevated pipe bridge across the intake canal would be constructed to carry steam from the heat recovery steam generators to the repowered Unit 1 steam turbine generator. The pipe bridge will also be used to support miscellaneous pipes, cable trays, and a personnel access walkway.

29. A new onsite natural gas pipeline interconnection would run east from the combined-cycle plant to a metering station tie-in along the north side of an existing access road located south of the barge canal. From the metering station, the pipeline would continue east to existing gas supply pipeline interconnection, located east of Wyandotte Road within the onsite railroad spur loop.

30. The Unit 1 once-through-cooling water (OTCW) aging circulating water pumps would be replaced in-kind. The cooling water intake structure (CWIS) would be upgraded to include modified traveling water screens and a fish-return system consistent with applicable federal regulations. Fish-holding tanks for the repowered Unit 1 fish return system would be constructed in the deconstructed Unit 2 CWIS area. There would be no changes to the OTCW system serving Units 3 and 4.

31. Construction activities for the Modernization Project would begin in July 2019, with commercial operation of the facility in simple-cycle mode in June 2021. Commercial operation of the combined-cycle plant would begin in January 2023. Unit 2 would continue to operate firing natural gas from the date of certification until 2021 when it would be retired.

Environmental and Other Impacts from Existing Site Utilization

32. Historical aerial photographs of southwestern Hillsborough County showed largely undeveloped lands with agricultural activity. Current land uses include transportation and utilities, agricultural activities along with upland non-forested areas and some wetland areas. The existing Big Bend generating facilities and associated facilities were primarily located on artificial fill dredged from Tampa Bay. These areas were heavily impacted by industrial activities associated with power generation.

33. Other areas of the Site, located south of the existing generating facilities, were less impacted by industrial activities. Those industrial activities began in the 1970s and continue to the present time. The developed nature of the Site resulted in low vegetative diversity, limited wetlands, and limited wildlife habitat.

34. There have been significant air emissions from existing Units 1, 2, 3, and 4 since each began operating. As explained below, the units have been capable of burning natural gas or coal since 2015, and Units 1, 2, and 3 have used only natural gas since mid-2017. Prior to mid-2017, those units' coal emissions were significantly higher than the emissions associated with burning natural gas.

35. The air emissions from Big Bend are regulated by state and federally delegated air permitting programs. Air quality in the area is affected by emissions not only from Big Bend, but from a number of surrounding sources. For example, there are approximately 27 major sources of pollutants in Hillsborough County, including hospitals, airports, transportation, power production, and manufacturing. Ambient air quality standards were established for the protection of health and welfare-related concerns and those standards are currently being met in the area of the Site based on review of recent monitoring information.

36. The SCA included a copy of Tampa Electric's application to DEP for a separate air permit to construct the Modernization Project under Florida's federally approved PSD preconstruction review program. DEP published a Notice of Intent to Issue Air Construction Permit No. 0570039-119-AC (Air Permit) for the Modernization Project on June 16, 2018. Sierra

Club submitted comments on June 15, 2018, regarding the Air Permit, which were received and considered by DEP in the final Air Permit. However, no challenge was filed to the Air Permit, which was subsequently issued in final form on July 16, 2018.

37. Big Bend has regulated wastewater discharges. Units 1, 2, 3, and 4 are steam electric generators that use water for cooling purposes. Cooling water is withdrawn from the man-made intake canal through CWIS 1 for Units 1 and 2 and CWIS 2 for Units 3 and 4. After being pumped through the condensers, the cooling water is discharged through outfalls into the man-made discharge canal on the south side of Big Bend. This activity is regulated in accordance with the requirements of National Pollutant Discharge Elimination System (NPDES) Permit FL000817. This NPDES permit is administered by DEP under a federally approved program.

38. The cooling water discharge is the largest volume of surface water discharge from Big Bend. Preexisting stresses to aquatic systems are associated with the electrical generating operations at Big Bend, particularly effects from entrainment and impingement and the thermal effects of the cooling water discharge. The stresses have diminished with the use of fine mesh screens.

39. The cooling water is heated when discharged as a result of cooling the condensers. When the cooling water is

drawn from the intake canal by pumps and routed into the units, it contains organisms and fish that become trapped in the water and drawn through the intake structures and through the condensers. This causes mortality from entrainment and exposure to heat or impingement on the screens that are associated with the CWIS facilities. The CWIS for Units 1 and 2 has coarse screens that catch large fish and crabs. The CWIS for Units 3 and 4 has coarse and fine mesh screens that trap much smaller organisms that can be returned, alive, to the bay. These aspects are regulated by the federal Clean Water Act and the NPDES permit.

40. Ecological surveys and studies of impingement and entrainment at Big Bend began in 1970 prior to the start-up of Big Bend Unit 1 and have continued through 2013. The thermal limitations were determined to be protective of indigenous shellfish, fish, and wildlife and were permitted to continue. The fine mesh screen system was determined to constitute best technology for reducing entrainment for Units 3 and 4, which satisfied certain federal Clean Water Act requirements. A renewal NPDES permit application is pending and additional review of these aspects will occur.

41. Solid waste materials are produced at Big Bend as a result of the operations. The combustion of coal produces a number of byproducts, including gypsum solids from the flue gas

desulfurization equipment and fly ash from the electrostatic precipitators, both of which are air pollution control devices for the facilities. Bottom ash and slag are also produced. These materials are left over after the combustion process and are the noncombustible materials. Economizer ash is also produced as a result of the process.

42. The fly ash byproduct is conveyed to the Separation Technologies, Inc., facility located on an area leased from Tampa Electric at the Big Bend site. The product is separated and reused by cement companies. Bottom ash is stored in surface impoundments and conveyed hydraulically for beneficial reuse as a raw material for other products. Economizer ash is stored in a surface impoundment, and the slag material is stored for future recycling in bins. Approximately 95 percent of the coal combustion residuals are recycled for beneficial use. Materials that are not useable are sent for disposal to approved landfills.

43. Management of coal combustion residuals, including monitoring and inspection requirements are contained in a Coal Combustion Residuals Management Manual. The manual also contains an emergency response plan, which includes communication protocols for specific local, state, and public notifications. The locations of the facilities for the storage of bottom ash, fly ash, and recycling areas are shown on an

aerial in the manual, as is the east gypsum storage area. The active coal combustion residual materials storage areas are equipped with liners to prevent groundwater discharges. The facilities are subject to the federal coal combustion residuals rule. The south gypsum storage area and the economizer ash impoundments are in the process of being closed.

44. The Coal Combustion Residuals Management Manual was developed as a component of an April 10, 2001, consent order between Tampa Electric and DEP. The consent order implemented projects that resulted in all the coal combustion residuals storage units being lined and fully contained to prevent contact of the coal combustion residuals, process water, and stormwater runoff with the environment. Previously, those areas were identified as potential release points to groundwater. Groundwater monitoring did not show any exceedances.

Environmental and Other Benefits of the Modernization Project

A. Technology and Emissions

45. The Modernization Project includes repowering of Unit 1 into a highly efficient, state of the art, natural gas-fired two-on-one combined-cycle generating power plant using the existing steam turbine generator for Unit 1 along with other equipment. Repowered Unit 1, a combined-cycle generating facility, would consist of two combustion turbine generators,

two heat recovery steam generators, and the existing steam turbine electrical generator from Unit 1.

46. Tampa Electric selected the advanced, large-frame GE Model 7HA.02 combustion turbine generator for the Modernization Project. In combined-cycle mode, these large combustion turbine generators are the most efficient electric generating technology currently available for utility scale power plants. The combined-cycle plants can achieve an efficiency of more than 60 percent, compared to combustion turbine generators alone in simple cycle mode at 35 to 38 percent and coal fired steam electric generating plants at 32 to 42 percent.

47. When a combustion turbine generator is operated alone in simple-cycle mode, hot exhaust gases from the combustion turbine generator are released to the atmosphere. In combined-cycle configuration, the hot exhaust gases from the combustion turbine generator are used to produce steam in the heat recovery steam generator and the steam is used to drive the steam turbine electrical generator to generate approximately 50 percent more electricity without using additional fuel, resulting in the efficiencies.

48. Sierra Club's expert witness, Ranajit Sahu, Ph.D., testified that the use of the existing steam turbine generator would result in a difference in generation compared to the use of a new steam turbine generator. Dr. Sahu testified that the

increase in performance would be 13 MW. Tampa Electric's expert witness, Kristopher Stryker, testified that Dr. Sahu's opinion was not based on the latest study, which showed that the performance differential between the new steam turbine generator and the refurbished steam turbine generator was 5 MW, which is less than one-half of one percent of the total output of the facility. Mr. Stryker further testified that since extensive modifications would be required to the foundation to install a new steam turbine generator, a 5 MW increase in performance did not justify those modifications.

49. Bypass stacks would be located between the combustion turbine generators and the heat recovery steam generators, which would allow the initial simple-cycle operation of the combustion turbine generators and also allow simple cycle operation in the future in the event that there is a reason to do so. The refurbished steam turbine generator would only be used when the facility is operating in combined-cycle mode.

50. The capacity of the combined-cycle unit is a nominal 1090 MW which would be the output at an average ambient temperature of 70 degrees Fahrenheit. Each combustion turbine generator has a nominal capacity of 370 MW, and the steam turbine generator has a nominal capacity of 350 MW.

51. The combined-cycle facility would be designed with technologies to control air emissions. The two combustion

turbine generators would be equipped with dry low-nitrogen oxide combustors to control nitrogen oxide air emissions. The heat recovery steam generators would be equipped with selective catalytic reduction systems to further reduce nitrogen oxide emissions. Emissions of other regulated air pollutants, including sulfur dioxide, volatile organic compounds, and particulate matter, would be controlled through the use of low sulfur, clean burning natural gas as the only fuel fired in the combustion turbine generators, along with advanced combustion equipment and operational practices.

52. The Modernization Project would minimize greenhouse gas emissions through the repowering of Unit 1 with clean burning natural gas, highly efficient combined-cycle electric generating technology, the retirement of Unit 2, and further reductions by dispatching other existing units in the system less often.

53. The Modernization Project was evaluated during the Air Permit process. It was determined that the PSD program was not applicable because the Modernization Project would not result in a net increase in emissions from the Big Bend facility. Based upon the evaluation process for systemwide emissions that was conducted in accordance with the applicable requirements, it was determined that the addition of the Modernization Project would result in a substantial net reduction in emissions in most

cases, including a net decrease in greenhouse gas emissions of over two million tons per year.

54. The Modernization Project is projected to result in significant reductions in emissions compared to the continued operation of Units 1 and 2 firing either coal or natural gas as a primary energy source. R. James Rocha, Tampa Electric's expert in resource planning, prepared projections using a Planning and Risk simulation model showing system-wide yearly energy produced or megawatt-hours (MWh) and the resultant yearly systemwide British Thermal Units (BTUs) or fuel use. First, for the case in which the Modernization Project is not constructed and Units 1 and 2 continue to operate into the future; and second, for the case in which the Modernization Project is constructed and Units 1 and 2 cease operations in 2021. The model is essentially an hourly dispatch simulation of the units in the Tampa Electric generating system taking into account a number of operational, fuel, probabilistic outage and planned maintenance outage scenarios, and other variables to develop a reliable estimate of the future operations of the system to meet the hourly needs of customers. Using a complex model, such as that used by Mr. Rocha, is a standard practice in the utility industry for forecasting the hourly dispatch of the system.

55. Outputs from the modeling and emission limits in existing permits, standard emission factors for natural gas, and

heat input numbers, were then provided to William Karl, an expert in air quality analyses. Mr. Karl developed calculations of projected emissions reflecting continued operation of Units 1 and 2 burning coal and natural gas, or coal only into the future, compared to projected emissions from the operation of the Modernization Project into the future.

56. In Tampa Electric Exhibit 27, Mr. Karl showed the current carbon dioxide emission rates for Units 1 and 2 operating with coal as a primary energy source and operating with natural gas only, compared to the expected performance of the Modernization Project. The emission rates were expressed in pounds per MWh of energy produced. The Modernization Project carbon dioxide emission rate was projected to be 737 pounds per MWh of energy produced. Units 1 and 2 operating on natural gas only, each had a carbon dioxide emission rate of 1,250 pounds per MWh. Units 1 and 2 operating primarily on coal each had a carbon dioxide emission rate of 2,180 pounds per MWh. Both comparisons demonstrated substantial reductions in the carbon dioxide emission rate of the Modernization Project compared to Units 1 and 2.

57. With Tampa Electric Exhibit 28, Mr. Karl showed the projected Tampa Electric systemwide reduction in greenhouse gas and criteria pollutant emissions if the Modernization Project was constructed compared to Units 1 and 2 continuing to operate

primarily on coal during the period of 2017 through 2046. This resulted in a projected reduction in greenhouse gas emissions of 50,500,000 tons and a reduction in emissions of criteria pollutants of 213,000,000 pounds during the period of 2017 through 2046.

58. With Tampa Electric Exhibit 29, Mr. Karl showed the projected Tampa Electric systemwide reduction in greenhouse gas emissions and all criteria pollutants with the Modernization Project constructed compared to operating Units 1 and 2 on natural gas only. This resulted in projected reductions in greenhouse gas emissions of 18,500,000 tons and projected reductions of all criteria pollutants of 21,000,000 pounds over the period of 2017 through 2046.

59. Sierra Club disputed that reduction credit should be given for the comparison of projected emissions from the Modernization Project to projected emissions from Units 1 and 2 continuing to operate using coal as a primary energy source. Sierra Club argued that Tampa Electric's decision to stop using coal in Units 1 and 2 was made prior to filing the SCA, and existing permits were modified to reflect that fact. Therefore, no benefit should be claimed for reduced air emissions resulting from a comparison of emissions of Units 1 and 2 burning coal projected into the future.

60. However, testimony from Paul Carpinone confirmed that if the Modernization Project is not constructed, Tampa Electric intends to continue operating Units 1 and 2, and a return to coal use remains an option. Mr. Rocha explained that based on pricing, it could make sense for the customers to return to coal in Units 1 and 2 if the Modernization Project is not approved. Mr. Carpinone also testified that permit modifications would be required to return the units to coal use.

61. If it is assumed that coal would not be used at all in the future, the construction of the Modernization Project would result in substantial decreases in air emissions. These are projected as decreases of 18,500,000 tons of greenhouse gases and 21,000,000 pounds in all other criteria pollutants as compared to continuing to operate Units 1 and 2 on natural gas only.

62. Although the evidence may support downward adjustment to the projected reductions in emissions resulting from the comparison of the Modernization Project to continuing Units 1 and 2 on coal based on the time it could take to obtain the necessary permit modifications to return to coal, these projected reductions should still be considered as environmental benefits of the Modernization Project.

63. Therefore, the preponderance of the evidence demonstrated that the Modernization Project would operate at a

substantially lower emission rate for greenhouse gases than the emission rates for Units 1 and 2 on natural gas or on coal.

B. Water Use

64. The most substantial water use for the Modernization Project would be the OTCW supply from Hillsborough Bay. The existing station is currently authorized to withdraw a combined 1,440 million gallons per day (MGD) for cooling purposes. Primarily as a result of the retirement of Unit 2 in 2021 eliminating Unit 2's cooling water requirements, the Modernization Project would reduce cooling water withdrawals by 25 percent to a maximum of 1,080 MGD.

65. Environmental benefits associated with the reduced cooling water withdrawals would include reductions in impingement and entrainment associated with reduced intake flows and velocity. Also, reduced fish mortality because of new fish friendly modified traveling screens and fish return system that would be installed at CWIS 1, where there previously were no such facilities. The fish return system would allow aquatic organisms washed from the modified traveling screens to be discharged back into Hillsborough Bay at a location that would minimize the potential for re-impingement.

66. Domestic and sanitary wastewater service for Big Bend with the Modernization Project would be provided by interconnection with the Hillsborough County wastewater system

similar to existing operations. Potable water for the facility would also be provided by Hillsborough County, but the volume of backup service water use would be significantly reduced.

67. There would be a number of changes to the service water uses. These would include elimination of the auxiliary cooling tower associated with Unit 2, reduction of flue gas desulfurization system makeup water from county effluent, use of county effluent for wash down associated with the combined-cycle unit, and rerouting and reuse of several other relatively minor water streams.

C. Wastes

68. Nonhazardous and potentially hazardous waste generated during operation of the Modernization Project would be managed in accordance with applicable federal, state, and local regulations. The use of natural gas, which does not produce solid wastes, would further reduce the need for onsite solid waste management units for disposal areas, and any waste generated would be disposed of at an offsite permitted solid waste or hazardous waste management facility.

69. Eliminating coal use at Units 1 and 2 along with the Modernization Project, there would be a decrease in the use of coal at the Site. This would lead to production of less coal combustion residuals and reduce the need for storage and handling of those residuals.

D. Stormwater Management

70. The Modernization Project would include onsite stormwater management. The stormwater management system would serve areas that include the combined-cycle and combustion turbine generator areas, onsite construction laydown and parking areas, barge unloading and laydown area, new office building area, and remote construction laydown area.

71. Tampa Electric's stormwater system design expert, Darrel Packard, was the lead civil engineer for the Modernization Project. Mr. Packard testified about the purpose of the stormwater management system and its design and benefits. The stormwater management system would convey runoff from developed areas in a controlled manner and attenuate the stormwater peak flow such that the discharge is not greater than the current discharge conditions. The system would provide water quality benefits through retention and Best Management Practices to minimize and control the discharge of nitrogen and phosphorus.

72. The stormwater system would also address the potential for flooding by the use of appropriately sized pipes and ditches to convey runoff from developed areas and discharge runoff into stormwater ponds that meet the regulatory requirements. Offsite flooding would also be prevented by attenuating the peak discharges that might be increased due to development.

73. Regulatory requirements applicable to the stormwater system include required sediment basins, Best Management Practices such as silt fences, the requirement to control a one-inch runoff from the developed areas, provision of a littoral zone of approximately 35 percent of the pond surface area, and the retention of a one-inch volume of runoff for at least 120 hours prior to discharge. Half of that volume would be contained over 60 hours after the rainfall event.

74. In addition, the design would be sufficient to control the 25-year stormwater runoff event, which is roughly 8.2 inches over 24 hours.

75. The Modernization Project would include installation of a floodwall surrounding repowered Unit 1 to protect it from flooding. Mr. Packard's testimony provided details about the design and dimensions of the floodwall.

76. Tampa Electric Exhibit 12 showed the details of the elevation of the floodwall. Beginning from a published datum referred to as NAVD88 or North American Vertical Datum of 1988 reflected at 0.00 elevation on the exhibit, the existing grade was shown at elevation 8.3 feet above NAVD88. The top of the floodwall was depicted at elevation 18.029 feet above NAVD88, meaning that the total elevation of the flood protection would be 18.029 feet above NAVD88.

77. The design basis for the floodwall height took into account the elevation of the 100-year flood for facilities that are in a defined federal Emergency Management Agency (FEMA) AE Zone. Based on current FEMA flood maps, the Modernization Project is in the AE Zone, and the 100-year flood elevation is 12 feet above NAVD88.

78. Another 2.5 feet were added to the 12-foot, 100-year flood elevation. The Hillsborough County Code of Ordinances specified the use of the American Society of Civil Engineers Standard for Flood Resistant Design and Construction (ASCE Standard) 24-05. The Modernization Project would fall into Category 3 for the ASCE Standard 24-05, adding two feet. The applicable Hillsborough County Ordinance required an additional six inches, resulting in a total minimum flood protection height of 14.5 feet.

79. The design of the floodwall was 18.029 feet above NAVD88 and the amount by which it exceeded the 14.5-foot regulatory requirement provides a margin to account for uncertainties such as sea level rise.

80. The FEMA flood maps for the area are under revision and have not yet been finalized. Under section 403.5185, a proposed revised map not yet in effect is not applicable to this SCA. However, a comparison of the currently effective and the

preliminary flood maps showed that the flood zone for the Modernization Project would not change.

81. Sierra Club's expert, Dr. Sahu, opined that since the Modernization Project concerns electric power generation facilities, there should be heightened scrutiny and flood protection requirements. However, Dr. Sahu's testimony did not dispute the Modernization Project's compliance with the applicable regulatory requirements. The Hillsborough County Code of Ordinances defines "critical facilities" as those for which even a slight chance of flooding might be too great. That definition of "critical facilities" does not include power plants.

82. The design details for the floodwall followed ASCE Standard 7-10 for the minimum design load requirements for buildings and other structures. The floodwall was designed considering two design cases. When the cases were considered, essentially three checks were made for wall stability, which included values obtained from the geotechnical report plus calculations performed by the geotechnical engineers.

83. Dr. Sahu questioned the design basis of the floodwall in terms of its ability to withstand the forces that the wall was designed to withstand. His criticism was mainly based on a lack of ability to review final detailed design plans. DEP's witness, Cynthia Mulkey, explained in her testimony that final

design plans are not required for every aspect of the project. Ms. Mulkey testified that it was not unusual that final detailed design plans were not available at the time the application was being processed. The applicable nonprocedural requirement pertaining to this issue was contained in the Hillsborough County Code of Ordinances, Part A, SCC 8-1-Hillsborough County Construction Code, and the FEMA flood map. Dr. Sahu's testimony did not dispute the Modernization Project's compliance with these regulatory requirements.

E. Socioeconomic Benefits

84. Construction and operation of the Modernization Project is expected to provide significant benefits to the economy of Hillsborough County and the State of Florida through increased employment and revenues during construction and operation of the project. Direct benefits from construction will include employment and payroll for an average monthly employment of approximately 250 workers, as well as the purchase of equipment and materials. Approximately $300 million of construction expenditures for materials and services would occur during the construction period from 2019 through approximately mid-2023. Approximately $210 million would be spent in the local area.

85. Once the repowering project begins operations, tax revenues and operational and maintenance expenditures would be

in the range of $18 million per year. The majority of construction wages would be spent within Hillsborough County. Anticipated annual property tax revenue and sales tax revenue would be $8.4 million and $1.26 million respectively. The peak construction employment would be approximately 500 workers, and this would occur in the most labor intensive construction period in 2021.

Land Use and Zoning

86. The applicable Hillsborough County future land use (FLU) map designation for the Modernization Project and barge offloading areas is Heavy Industrial. Electrical generation plants and expansions of electrical power plants are among the allowed uses within this FLU designation. The remote construction laydown area is designated Community Mixed Use-12 which allows for light industrial multipurpose use. Areas associated with the Modernization Project are located within either Manufacturing or Planned Development-Industrial zoning districts.

87. On June 1, 2018, Hillsborough County found the additional 92 acres, as well as the proposed activities, consistent with its existing land use plans and zoning ordinances.

Impacts from Construction of the Modernization Project

A. Environmental Impacts

88. The site certification process includes only state, regional, and local requirements. Federal permits issued by the state under federally approved or delegated permit programs that were sought, or modified, in association with the Modernization Project are processed separately from the SCA. These include the Air Permit, the NPDES Permit, and the United States Army Corps of Engineers (USACE) Section 404 application.

89. Tampa Electric would apply for applicable federally delegated stormwater discharge permit(s), including requirements for a comprehensive Stormwater Pollution Prevention Plan, prior to construction. During construction, stormwater would be managed to meet the requirements of those federal permits. As previously found, the stormwater management system for the Modernization Project would be designed to treat the first inch of runoff from the 25-year, 24-hour storm event and would meet federal, state, regional, and local requirements.

90. During operation, contact stormwater runoff from the power block and equipment areas would be collected and treated through a new oil/water separator and routed to a new contact water transfer sump prior to discharge to the existing coal field pond. Noncontact stormwater runoff from the facility area

would be collected and routed to a stormwater detention pond for treatment prior to discharge to the barge canal.

91. The Modernization Project would create a new internal outfall for the reverse osmosis (RO) concentrate, and the OTCW discharge from Unit 2 would cease. The NPDES discharge compliance point would include the combined cooling water discharge from Units 1, 3, and 4, and the treated effluent from the flue gas desulfurization treatment plant, as well as the RO concentrate to Hillsborough Bay, a Class III marine water, via the onsite discharge canal.

92. Low-volume industrial wastewater generated by the Site primarily includes floor and equipment drains, water treatment equipment waste, and service cooling tower and boiler blowdown. These waste streams are routed to a system of lined ponds, a reclaimed water storage pond, and bottom ash ponds for containment or reuse within the facility, and the same practice would continue with the Modernization Project.

93. Groundwater monitoring around the water storage ponds is required under the facility's industrial wastewater permit No. FLA017047 and would continue to be a requirement of the Site License.

94. The Modernization Project would include construction of stormwater detention ponds during the beginning stages of the Modernization Project development activities to provide

stormwater storage and treatment for onsite runoff during construction. Because of the disturbed nature of the Site, preparation would require minimal clearing and grading.

95. Erosion, sedimentation, and runoff control measures, both pre- and post-construction, will meet applicable nonprocedural requirements of part IV of chapter 373, Florida Statutes, Florida Administrative Code Chapter 62-330, and applicable Hillsborough County land development regulations.

96. Best Management Practices (BMPs) and a sediment control plan would also be implemented during site construction. Monitoring of construction runoff and the operation and maintenance of BMPs for erosion and sediment control would be undertaken as required by applicable construction permits, such as the NPDES Generic Permit for Stormwater Discharge from Large and Small Construction Activities contained in Florida Administrative Code Chapter 62-621.

97. Under current operation, the Site does not withdraw groundwater for plant processes or potable water uses nor will the Modernization Project use groundwater as a source. The Site relies on treated effluent from Hillsborough County and recycled water for its process needs. There would be no consumptive use nor anticipated impact to groundwater supply due to the Modernization Project.

98. Site preparation and facility construction activities may have potential short-term effects on groundwater in the shallow surficial aquifer in the immediate area of the combined-cycle facilities from temporary dewatering activities. Because of the temporary and localized nature of potential dewatering activities and the direction of the flow from east to west of the Floridan aquifer in the area, construction of the Modernization Project is not anticipated to have significant adverse impacts to on or offsite groundwater resources.

99. Construction and operation of the Modernization Project would impact approximately 55 acres of the approximately 1,188-acre certified Site. The Site has been utilized for industrial purposes for the past 50 years. Therefore, most of the land was previously disturbed and not prime habitat for wildlife species. Both uplands and wetlands are located onsite but are considered low-quality and contain a mixture of nuisance exotic and native species.

100. Construction of the Modernization Project would not result in permanent impacts to wetlands. In fact, over 99 percent of the wetlands and surface waters onsite would remain intact. An approximately 0.18-acre portion of a low-quality wetland is proposed to be temporarily cleared for workspace during the construction of the gas pipeline

interconnection. Once construction is complete, this area would be allowed to revegetate naturally.

101. Other potential impacts proposed include: an additional 0.02 acres of permanent impact to surface waters/water bodies for the construction of a new pipe bridge across the existing intake canal; temporary impacts in the barge canal due to the spud columns; and approximately 0.01 acres of a man-made, roadside ditch would be filled for construction of a new culverted driveway for access to the remote construction laydown and/or parking area.

102. The wetland proposed for clearing is considered a lower quality wetland, and impacts would be offset by the purchase of mitigation bank credits or onsite mitigation, if necessary. Secondary impacts to preserved wetland communities would be minimized by maintaining an average 25-foot and minimum 15-foot buffer surrounding wetlands where no construction activities would occur.

103. Impacts from the in-water work during construction of the intake canal pipe bridge would be mitigated with the use of turbidity barriers.

104. Existing Units 3 and 4 and the repowered Unit 1 would continue to discharge through separate outfalls into the Site's 4,500-foot discharge canal that leads to Hillsborough Bay through an inlet at the north end of Apollo Beach. The south

side of the discharge canal is bordered by a sheet pile seawall that serves as a thermal barrier to the adjacent shallow waters in North Apollo Bay, minimizing thermal impacts to surface waters in this area. Adverse changes in hydrologic or water quality conditions in the existing intake and discharge canals or Hillsborough Bay are not expected to result from operation of the Modernization Project.

105. The existing Site's OTCW discharge provides a primary thermal refuge for the local population of West Indian manatees, and seagrass along the southern boundary of the discharge canal provides food for the manatees that winter in the canal. The area outside the discharge canal and the canal itself are designated as manatee protection areas under both state and federal laws. The Site's NPDES permit includes a manatee protection plan that contains requirements for timely communication with manatee recovery program personnel and for production of adequate warm water during the winter months. Because of these required measures, projected reductions in the effluent temperature and total thermal loading in the discharge canal from operation of repowered Unit 1 and retirement of Unit 2 are unlikely to adversely impact manatees.

B. Noise

106. Noise impacts resulting from construction activities are expected to be minimal and mitigated by the distance between the construction area of the power block and the site boundaries, and the fact that the construction activities will take place mainly on an existing power plant site that is currently operational. Average noise levels during the loudest construction activities are projected to be between 62 and 66 A-weighted decibels (dBA) at the northern property boundary, and noise levels from construction activities will be lower at all other property boundaries.

107. Under the rules of the Hillsborough County Environmental Protection Commission, Chapter 1-10, Noise Pollution, construction activities occurring during the hours of 7:00 a.m. and 6:00 p.m. are exempt from the noise rule if reasonable steps are taken to abate the noise. The construction activities, however, are expected to be below the 70 dBA level applicable to industrial land use category. Noise resulting from the operation of the Modernization Project would not have any adverse impact on the existing noise levels in the general vicinity of the Big Bend Power Station.

C. Archeological and Historic Sites

108. Based on results of cultural resource assessments conducted in 1979, no significant archaeological or historical

sites were found or are expected to be found at the Site. A survey conducted in January of 2018 did not identify any previously recorded archaeological sites. In the event that any archaeological resources are encountered during construction activities, the Florida Division of Historical Resources will be notified and consulted to determine appropriate actions.

Safety Issues

109. Shawn Copeland, vice president of safety for Tampa Electric, testified on safety issues associated with Big Bend. Tampa Electric has safety programs at the different generating stations, as well as for the operating areas. The programs are designed to provide a safe environment for workers and compliance with regulations and standards. The safety programs apply to Big Bend and are designed to create a safe work environment and also public protection.

110. There is an Emergency Action Plan for Big Bend. The plan provides basic information for initial emergency actions. Actions and procedures for reporting emergencies, procedures for emergency evacuation, procedures to account for personnel after an evacuation, procedures to be followed by employees performing rescue or medical duties, and procedures to be followed by employees remaining to conduct critical plant operations prior to evacuation. The Emergency Action Plan primarily focuses on events related to fires, medical, natural gas, and severe

weather emergencies. There are specific emergency evacuation plans for each type of event.

111. The storm preparedness procedures contained in the Emergency Action Plan do not apply to hurricanes, but rather storms that are more sudden. Hurricane preparedness is addressed in the Big Bend Station Storm Preparedness Procedures, revised May 9, 2018, which consists of approximately 151 pages of information and checklists applicable when hurricanes or hurricane-related events are approaching. Emergencies of all types are addressed by the All Hazard Notification Flowchart, which provides protocols for communications and activities to be taken during the occurrence of suspicious activities or an unexpected emergency at the plants.

112. In addition to the foregoing, Big Bend has an Integrated Contingency Plan dated December 2018. The purpose of the Integrated Contingency Plan is to focus on emergency prevention and preparedness and provide rapid, effective protection of human health and the environment during an emergency caused by a chemical release or other physical hazardous release. The objectives of the Integrated Contingency Plan are to establish: (i) means of recognizing an emergency; (ii) rapid notification procedures to avoid delay in response; (iii) an organizational structure for accountability; (iv) initial assessment and response procedures to isolate and

stabilize the incident; (v) sustained response procedures to mitigate the consequences of the incident; and (vi) post-incident investigations to document and eliminate the incident causes. The scope of the plan covered involves hazards or releases associated with hazardous waste, oil, and petroleum products, substances subject to the emergency planning and Community Right-to-Know Act requirements, federal workplace requirements for emergency response plans, Florida requirements governing release prevention and response for pollutants stored in regulated tanks, radiation hazards, and federal and state requirements for response to an air release of asbestos containing fibers. The plan provides protection from these hazards for both workers and the public.

113. The Coal Combustion Residuals Management Manual assists the facility in maintaining compliance with permits and environmental procedures and preventing unauthorized releases to the environment, while maximizing beneficial use of this material and minimizing generation of additional wastes.

114. Mr. Stryker detailed the design standards that apply or would be used in the design of the Modernization Project including the natural gas pipeline lateral. The generating facility additions were designed by an internationally recognized engineering firm with significant experience designing similar projects throughout North America and Florida,

including one for Tampa Electric. Sound engineering practice will be utilized, and all applicable laws and regulations and required codes, such as the Florida Building Code and the Hillsborough County Code requirements, would be met. The natural gas lateral, in addition to adhering to good engineering practices and industry requirements, is subject to review by the Florida Public Service Commission (PSC).

The PPSA and SCA Process

115. The PPSA created a centrally coordinated process for review and evaluation of electrical generating facilities at the state and local level on the basis of adopted standards and recommendations of the reviewing agencies. DEP, through the Siting Office, is responsible for coordinating and processing the SCA and maintaining the Site License for the life of the electrical generating facility.

116. The SCA was filed with DEP on April 18, 2018. DEP submitted the application to DOAH, along with a proposed schedule for processing the SCA for approval by the ALJ. The SCA was distributed to the reviewing agencies that review the SCA for completeness and ultimately submit agency reports containing recommendations. Each agency conducts a review as to the compliance of the SCA with the statutory and administrative requirements within the respective agencies' jurisdiction and also provides a report containing a recommendation of approval

or denial of the Modernization Project, including any proposed Conditions of Certification.

117. Following initial agency review, the SCA was determined to be incomplete, and additional information was requested. Tampa Electric submitted the additional information requested on June 27, 2018, and the SCA was determined to be complete on July 19, 2018.

118. The Southwest Florida Water Management District (SWFWMD), the FWCC, the Florida Department of Transportation (DOT), the Florida Department of Economic Opportunity (DEO), the Florida Department of State, Division of Historical Resources (DHR), and the DEP were the state and regional agencies reviewing the SCA.

119. As required by the PPSA, the local government in whose jurisdiction the project would be located was also included. Hillsborough County, as well as the Environmental Protection Commission of Hillsborough County, reviewed the SCA. The state, regional, and local agencies supported the Modernization Project. The agencies determined that the Modernization Project would comply with all applicable non-procedural requirements when constructed and operated in conformance with the proposed Conditions of Certification. SWFWMD, FWCC, DOT, DHR, and Hillsborough County proposed Conditions of Certification to which Tampa Electric agreed.

120. DEP prepared a PAR summarizing the substantive review by the agencies, including DEP's review of the applicable environmental regulations by all the relevant divisions within DEP. The PAR contains DEP's recommendation, taking into account all of the information received from Tampa Electric and the various reviewing agencies, that the SCA should be approved subject to the proposed Conditions of Certification. Tampa Electric has agreed to accept the proposed Conditions of Certification in the PAR.

121. With the exception of DEP, the reviewing agencies waived their rights to be a party and to participate in the certification hearing by not filing the notice required to do so.

Need Determination

122. The SCA was filed and processed under the provisions of section 403.5175, which provides for the certification of existing, uncertified units that were not previously subject to the provisions of the PPSA. The SCA requested certification of existing Units 1, 2, and 3, and the authorization to repower Unit 1 and retire Unit 2 after continuing to operate until 2021.

123. Units 1, 2, and 3 are not subject to the PPSA unless the steam electric generating capacity was expanded after the effective date of the PPSA. The preponderance of the evidence established that repowering Unit 1 would not result in an

expansion of the steam electric generating capacity, Unit 2 would continue to operate as currently operated until its retirement in 2021, and Unit 3 would continue to operate as currently operated into the future, so there is no expansion of steam electric generating capacity at either of those facilities.

124. The Unit 1 repowering project would use the existing steam turbine electrical generator that is currently used for Unit 1. The electrical generating rating or capacity of a facility is found on a nameplate on the generator. The nameplate capacity of existing Unit 1 steam turbine electrical generator is 445.5 MW. The maximum steam electric generating capacity of the combined-cycle, after the repowering, would be 360 MW. This is because the steam produced in the heat recovery steam generators would limit the amount of electricity that can be produced using the steam. It would be well below the existing capacity of the steam turbine electrical generator for Unit 1. There would not be an expansion of steam electrical generating capacity as measured by the nameplate of the existing Unit 1 steam turbine electrical generator. Therefore, the provisions of the PPSA that require a need determination are not triggered. Ms. Mulkey testified that DEP defines "expansion" as an increase in steam generation.

125. In addition, early in the process, DEP's Siting Office considered the PPSA applicability issues. DEP evaluated the information provided by Tampa Electric and consulted with PSC staff to determine whether the Modernization Project should be subject to a need determination. Because the combined-cycle facility that would repower Unit 1 has the capacity to produce sufficient steam to generate only 360 MW, no expansion of steam turbine electrical generating capacity would occur. The PSC staff and DEP agreed that proceeding under the provisions of section 403.5175 was appropriate.

126. Mr. Stryker testified to other projects where repowering did not go through the site certification process. One such project involved the repowering of Tampa Electric's Gannon Station with a combined cycle unit using the existing steam turbine electrical generator for the repowered units. A similar repowering project was carried out by then Progress Energy at the Bartow facility. The Progress Energy project, although not increasing steam electric generating capacity as a result of the repowering, actually used an entirely new steam electric generator unit. Notwithstanding this difference, DEP concluded that the Bartow repowering project was not subject to the PPSA because it did not increase steam electric generating capacity.

127. Sierra Club's expert, Dr. Sahu, testified that Tampa Electric's consideration of only the steam-generated electricity to determine whether a need determination was required was factually incorrect and misleading. He opined that evaluating only the steam component of the generation for purposes of determining the applicability of the PPSA was not appropriate since the PPSA is 40 years old and the manner in which electricity is generated has changed during that period of time. Instead, he suggests that the entire facility should be looked at, rather than just the steam component.

128. However, Ms. Mulkey testified that for purposes of evaluating whether the Modernization Project would be subject to a need Determination, the focus was on whether there would be an expansion of steam electrical generating capacity defined as an increase in steam generation. It was appropriate to focus on the steam generation component, and the PSC did not express any concerns with this approach.

Notice, Outreach, Public Hearing

129. All notices required by the PPSA were provided. Tampa Electric published the required Notice of Filing for Electrical Power Plant Site Certification on May 7, 2018, Notice of Land Use Consistency Determination on Electrical Power Plants Site on June 20, 2018, Notice of Certification Hearing on November 2, 2018, and Notice of Rescheduled Certification

Hearing on January 4, 2019, all in the Tampa Bay Times. DEP notices were published in the Florida Administrative Register.

130. Tampa Electric engaged in public outreach for the SCA. The public outreach included newspaper notifications, direct mailing, establishing a website for the SCA, and a phone number to call for questions concerning the SCA. There was one direct mailing consisting of 8,948 direct letters to landowners within three miles of the Site and in accordance with the PPSA. Tampa Electric representatives also met with various elected officials to discuss the Modernization Project. A copy of the SCA was made available for public inspection at Tampa Electric's main office on Tampa Street in downtown Tampa, and a copy of the SCA was also made available at the John F. Germany Hillsborough County Public Library on Ashley Street in Tampa. Those SCAs were updated as appropriate.

131. As part of the certification proceeding, a public hearing was held on March 11, 2019, from 6:00 p.m. until 9:00 p.m. At the hearing, comments were accepted from those who expressed a desire to speak. Thirty-nine members of the public testified. Twenty-six members of the public spoke in opposition, and 13 members of the public spoke in favor of the Modernization Project. The public hearing was recorded and transcribed as part of the Transcript of the certification hearing.

CONCLUSIONS OF LAW

Jurisdiction

132. DOAH has jurisdiction over the parties to, and the subject matter of, this proceeding pursuant to sections 120.569, 120.57(1), and 403.508(2).

133. In accordance with chapters 120 and 403 and Florida Administrative Code Chapter 62-17, proper notice was accorded to all persons, entities, and parties entitled to such notice, and appropriate notice was provided to the general public by both Tampa Electric and DEP.

134. The preponderance of the competent and substantial evidence demonstrated compliance with the procedural requirements of the PPSA, including the notice requirements for the certification and public hearings. Reports were issued by DEP and the other reviewing agencies in satisfaction of their various statutory duties under the PPSA. See § 403.5175(1), Fla. Stat.

Standing

135. It is well-established that to demonstrate that a person or entity has a substantial interest in the outcome of a proceeding, two things must be shown. First, there must be an injury-in-fact of sufficient immediacy to entitle one to a hearing. Second, it must be shown that the substantial injury is of a type or nature which the proceeding is designed to

protect. The first has to do with the degree of the injury and the second with the nature of the injury. See Agrico Chem. Co. v. Dep't of Envtl. Reg., 406 So. 2d 478, 482 (Fla. 2d DCA 1981), rev. den., 415 So. 2d 1359 (Fla. 1982).

136. Agrico was not intended as a barrier to the participation in proceedings under chapter 120 by persons who are affected by the potential and foreseeable results of agency action. See Peace River/Manasota Reg'l Water Supply Auth. v. IMC Phosphates Co., 18 So. 3d 1079, 1082-83 (Fla. 2d DCA 2009)("[S]tanding is a legal concept that requires a would-be litigant to demonstrate that he or she reasonably expects to be affected by the outcome of the proceedings, either directly or indirectly." (quoting Hayes v. Guardianship of Thompson, 952 So. 2d 498, 505 (Fla. 2006))).

137. Rather, the intent of Agrico was to preclude parties from intervening in a proceeding where those parties' substantial interests are remote and speculative. See Vill. Park v. Dep't of Bus. Reg., 506 So. 2d 426, 433 (Fla. 1st DCA 1987).

138. Sierra Club members who testified at the certification hearing have been injured by and suffered the effects of climate change impacts, including sea level rise, increased storm surge, severe weather events, and coastal flooding. The substantial environmental interests of Sierra

Club's Florida members in the Tampa Bay area include the potential adverse effects of climate change to which Tampa Electric's greenhouse gas emissions would allegedly contribute. Thus, a substantial number of Sierra Club's Florida members' substantial interests could reasonably be affected by climate change impacts, including sea level rise, increased storm surge, severe weather events, and coastal flooding in the Tampa Bay area.

139. Sierra Club must prove its associational standing by satisfying the three-prong test for environmental associational standing test established in Friends of the Everglades Inc. v. Board of Trustees of the Internal Improvement Trust Fund, 595 So. 2d 186 (Fla. 1st DCA 1992). In Friends of the Everglades, the Court held that an environmental organization must meet both the two-pronged test for standing of Agrico and the test for standing of associations under Florida Home Builders Association v. Department of Labor and Employment Security, 412 So. 2d 351 (Fla. 1982)(extended to administrative proceedings under section 120.57(1), Florida Statutes, by Farmworker Rights Organization v. Department of Health and Rehabilitation Services, 417 So. 2d 753 (Fla. 1st DCA 1982)).

140. Sierra Club proved its environmental associational standing by demonstrating (1) that a substantial number of its members were substantially affected by the challenged agency

action; (2) that the agency action it seeks to challenge was within Sierra Club's general scope of interest and activity; and (3) that the relief it requests was of the type appropriate for Sierra Club to receive on behalf of its members. See St. Johns Riverkeeper, Inc. v. St. Johns River Water Mgmt. Dist., 54 So. 3d 1051, 1054 (Fla. 5th DCA 2011).

141. Sierra Club's burden is not whether it has or will prevail on the merits, but rather whether it has presented sufficient proof of injury to its asserted interests within the two-prong standing test. See Bd. of Comm'rs of Jupiter Inlet Dist. v. Thibadeau, 956 So. 2d 529 (Fla. 4th DCA 2007). Sierra Club proved that a substantial number of Sierra Club's Florida members' substantial interests could reasonably be affected by climate change impacts, including sea level rise, increased storm surge, severe weather events, and coastal flooding in the Tampa Bay area.

Scope of This Proceeding

142. Section 403.4175 provides:

> (1) An electric utility that owns or operates an existing electrical power plant as defined in s. 403.503(14) may apply for certification of an existing power plant and its site in order to obtain all agency licenses necessary to ensure compliance with federal or state environmental laws and regulation using the centrally coordinated, one-stop licensing process established by this part. An application for certification under this section must be in the form

prescribed by department rule. Applications must be reviewed and processed using the same procedural steps and notices as for an application for a new facility, except that a determination of need by the Public Service Commission is not required.

(2) An application for certification under this section must include:

(a) A description of the site and existing power plant installations and associated facilities;

(b) A description of all proposed changes or alterations to the site and all new associated facilities that are the subject of the application;

(c) A description of the environmental and other impacts caused by the existing utilization of the site and associated facilities, and the operation of the electrical power plant that is the subject of the application, and of the environmental and other benefits, if any, to be realized as a result of the proposed changes or alterations if certification is approved and such other information as is necessary for the reviewing agencies to evaluate the proposed changes and the expected impacts;

(d) The justification for the proposed changes or alterations;

(e) Copies of all existing permits, licenses, and compliance plans authorizing utilization of the site and associated facilities or operation of the electrical power plant that is the subject of the application.

(3) The land use and zoning determination requirements of s. 403.50665 do not apply to an application under this section if the applicant does not propose to expand the boundaries of the existing site or to add

additional offsite associated facilities that are not exempt from the provisions of s. 403.50665. If the applicant proposes to expand the boundaries of the existing site or to add additional offsite associated facilities that are not exempt from the provisions of s. 403.50665 to accommodate portions of the electrical generating facility or associated facilities, a land use and zoning determination shall be made as specified in s. 403.50665; provided, however, that the sole issue for determination is whether the proposed site expansion or additional nonexempt associated facilities are consistent and in compliance with the existing land use plans and zoning ordinances.

(4) In considering whether an application submitted under this section should be approved in whole, approved with appropriate conditions, or denied, the board shall consider whether, and to the extent to which the proposed changes to the electrical power plant and its continued operation under certification will:

(a) Comply with the provisions of s. 403.509(3).

(b) Result in environmental or other benefits compared to current utilization of the site and operations of the electrical power plant if the proposed changes or alterations are undertaken.

(5) An applicant's failure to receive approval for certification of an existing site or an electrical power plant under this section is without prejudice to continued operation of the electrical power plant or site under existing agency licenses.

143. Section 403.509(3) provides:

(3) In determining whether an application should be approved in whole, approved with

modifications or conditions, or denied, the board, or secretary when applicable, shall consider whether, and the extent to which, the location, construction, and operation of the electrical power plant will:

(a) Provide reasonable assurance that operational safeguards are technically sufficient for the public welfare and protection.

(b) Comply with applicable nonprocedural requirements of agencies.

(c) Be consistent with applicable local government comprehensive plans and land development regulations.

(d) Meet the electrical energy needs of the state in an orderly, reliable, and timely fashion.

(e) Effect a reasonable balance between the need for the facility as established pursuant to s. 403.519 and the impacts upon air and water quality, fish and wildlife, water resources, and other natural resources of the state resulting from the construction and operation of the facility.

(f) Minimize, through the use of reasonable and available methods, the adverse effects on human health, the environment, and the ecology of the land and its wildlife and the ecology of state waters and their aquatic life.

144. Section 403.519 provides that the PSC is the exclusive forum for determination of need:

(1) On request by an applicant or on its own motion, the commission shall begin a proceeding to determine the need for an electrical power plant subject to the Florida Electrical Power Plant Siting Act.

* * *

> (3) The commission shall be the sole forum for the determination of this matter, which accordingly shall not be raised in any other forum or in the review of proceedings in such other forum. In making its determination, the commission shall take into account the need for electric system reliability and integrity, the need for adequate electricity at a reasonable cost, the need for fuel diversity and supply reliability, whether the proposed plant is the most cost-effective alternative available, and whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available. The commission shall also expressly consider the conservation measures taken by or reasonably available to the applicant or its members which might mitigate the need for the proposed plant and other matters within its jurisdiction which it deems relevant. The commission's determination of need for an electrical power plant shall create a presumption of public need and necessity and shall serve as the commission's report required by s. 403.507(4). An order entered pursuant to this section constitutes final agency action.

145. Tampa Electric and DEP argued that based on the above provisions of the PPSA, Sierra Club should not be allowed to present evidence and argument on whether failure to seek a determination of need from the PSC was contrary to the public interest, or that the Siting Board was authorized to conduct its own need determination under section 403.509(3). Tampa Electric and DEP also argued that any disputed issues of fact and law related to project costs and ratepayer costs were matters

for the PSC and not the Siting Board under sections 366.04 and 366.041, Florida Statutes. See § 403.511(4), Fla. Stat. The undersigned agreed and limited the scope of this proceeding in the February 21, 2019, Order Limiting Issues and Striking Paragraphs.

146. The Order and this Recommended Order on Certification recognizes that key tenets of statutory interpretation mandated by the Florida Supreme Court must be applied to the language of the PPSA. The actual language of a statute evinces legislative intent, and effect should be given to every clause in it. See Larimore v. State, 3 So. 3d 101, 106 (Fla. 2008). Also, "[i]f a part of a statute appears to have a clear meaning if considered alone but when given that meaning is inconsistent with other parts of the same statute or others in pari materia," the entire PPSA must be examined to ascertain overall legislative intent. Fla. Dep't of Envtl. Prot. v. ContractPoint Fla. Parks, LLC, 986 So. 2d 1260, 1265-1266 (Fla. 2008).

147. Section 403.519 statutorily commits the need determination exclusively to the jurisdiction of the PSC. Section 403.519(3) even lists areas of inquiry for the PSC. As a result, the Siting Board must follow the unambiguous language of sections 403.4175(1) and 403.519(3) and recognize that it does not have jurisdiction to conduct an independent need determination. The scope of this proceeding under section

403.5175 does not include evidence and argument on matters within the exclusive jurisdiction of the PSC under section 403.519. See State v. Falls Chase Special Taxing Dist., 424 So. 2d 787, 793 (Fla. 1st DCA 1982)(reflecting that as a creature of statute, an agency may not increase its own jurisdiction).

148. The scope of this proceeding also does not include issues of project costs and ratepayer costs, which are matters for the PSC and not the Siting Board under sections 366.04 and 366.041. See § 403.511(4), Fla. Stat. The Siting Board, in its most recent decision, reiterated this interpretation of its own jurisdiction under the PPSA. See In Re: Fla. Power & Light Co.; Dania Beach Energy Ctr. Project Power Plant Siting Application No. PA89-26A2, Case No. 17-4388EPP (Fla. DOAH July 30, 2018; Fla. Siting Bd. Dec. 13, 2018).

149. In addition, under chapter 366, the PSC is charged with jurisdiction over the rates and service of electric and natural gas utilities in Florida. Chapter 366 vests the PSC with "jurisdiction over the planning, development, and maintenance of a coordinated electric power grid throughout Florida to assure an adequate and reliable source of energy for operational and emergency purposes in Florida and the avoidance of further uneconomic duplication of generation, transmission, and distribution facilities." § 366.04(5), Fla. Stat.

150. PSC jurisdiction over the electrical power grid in Florida includes matters relating to electrical generating, transmission and distribution planning needs and reliability, renewable and alternative generating resources, electrical conservation measures, electrical transmission and distribution storm hardening efforts and natural disaster preparedness, and the safety of the electrical grid. See § 366.04, Fla. Stat. (electric power conservation and reliability, rates, territorial agreements, grid, and safety standards); § 366.041, Fla. Stat. (rates and efficiency, sufficiency and adequacy of the facilities and energy conservation, and the efficient use of alternative energy resources); § 366.05, Fla. Stat. (rates, construction standards, and reliability reports); § 366.051, Fla. Stat. (cogeneration, standard-offer contracts, and power purchase agreements); § 366.055, Fla. Stat. (energy reserves and grid reliability); and § 366.80-83, Fla. Stat. (energy conservation and demand-side management).

151. The scope of this proceeding under section 403.5175 does not include evidence and argument on matters within the exclusive jurisdiction of the PSC under chapter 366. See Falls Chase Special Taxing Dist., 424 So. 2d at 787, 793 (reflecting that as a creature of statute an agency may not increase its own jurisdiction).

152. The Order also excluded evidence and argument on matters addressed by the separately issued Air Permit. Any issues that could have been raised in a challenge to the Hillsborough County Land Use and Zoning Determination were excluded. Matters related to the impacts associated with the location, construction, and operation of the natural gas transportation pipeline were excluded. Evidence and argument on issues related to property values and the impact of the Modernization Project on property values were excluded. Matters related to increased costs and risks related to burning fossil fuel which are passed on to Sierra Club members in utility bills were excluded. The potential damage to the Modernization Project itself and its surrounding vicinity during its lifetime from climate-change related impacts were also excluded.

Nature of This Proceeding

153. A power plant site certification proceeding arises under chapter 403. Under section 120.569(2)(p), Sierra Club, as the nonapplicant third-party challenger to the site certification application, has the ultimate burden of persuasion in this proceeding and must demonstrate by competent and substantial evidence that the license should not be granted.

154. The applicable standard of proof for findings of fact is a preponderance of the evidence. See § 120.57(1)(j), Fla. Stat. Section 120.569(2)(p) provides:

> For any proceeding arising under chapter 373, chapter 378, or chapter 403, if a nonapplicant petitions as a third party to challenge an agency's issuance of a license, permit, or conceptual approval, the order of presentation in the proceeding is for the permit applicant to present a prima facie case demonstrating entitlement to the license, permit, or conceptual approval, followed by the agency. This demonstration may be made by entering into evidence the application and relevant material submitted to the agency in support of the application, and the agency's staff report or notice of intent to approve the permit, license, or conceptual approval. Subsequent to the presentation of the applicant's prima facie case and any direct evidence submitted by the agency, the petitioner initiating the action challenging the issuance of the permit, license, or conceptual approval has the burden of ultimate persuasion and has the burden of going forward to prove the case in opposition to the license, permit, or conceptual approval through the presentation of competent and substantial evidence. (Emphasis added).

155. Tampa Electric presented its prima facie case of entitlement to site certification by entering the SCA and PAR, in addition to calling the witnesses described above. DEP presented direct evidence in support of its recommendation that reasonable assurances were provided demonstrating that the Modernization Project can be certified subject to the proposed Conditions of Certification.

156. As discussed below, Tampa Electric's prima facie case demonstrated reasonable assurance of entitlement to the site certification. Reasonable assurance is a standard that requires

the applicant to demonstrate a substantial likelihood that the project, as proposed, will be successfully implemented. This does not require absolute guarantees that the applicable requirements for issuance of a license have been met. Nor does it require that the applicant eliminate all contrary possibilities, however remote, or call for the applicant to address impacts that are theoretical or negligible, or cannot be measured in real life. See In Re: Fla. Power & Light Co.; Dania Beach Energy Ctr. Project Power Plant Siting Application No. PA89-26A2, Case No. 17-4388EPP.

157. Sierra Club had the ultimate burden of persuasion in this proceeding to prove its case in opposition, by a preponderance of the competent and substantial evidence. Sierra Club failed to carry its ultimate burden of persuasion.

Section 403.509(3)(a)-Operational Safeguards

158. The PPSA requires the Siting Board to consider whether, and the extent to which, the location, construction, and operation of the electrical power plant provides reasonable assurance that operational safeguards are technically sufficient for public welfare and protection.

159. Upon certification, existing Unit 1 would be repowered with the combined-cycle unit, existing Unit 2 would be retired after operating until 2021, and existing Unit 3 would continue to operate. As existing facilities, Units 1, 2, and 3

are currently subject to individual permits that will be incorporated into the certification upon issuance. Those regulatory permits contain conditions that were imposed to protect the public health, safety, and welfare. The same, or substantially similar, conditions would apply to the continued operation of these facilities and would continue providing protection for public health, safety, and welfare through compliance with those requirements in the proposed Conditions of Certification.

160. The preponderance of the competent and substantial evidence showed that Tampa Electric has increased its emphasis on safety at its facilities, including in particular at Big Bend, and that safe operations will continue to be a significant priority. The Big Bend Station Emergency Action Plan, the Big Bend Station Storm Preparedness Procedures, the All Hazards Notification Flow Chart Procedures, and the Big Bend Station Integrated Contingency Plan procedures would provide protections to the public and to workers in the event of any emergencies. The Coal Combustion Residuals Management Manual would help to ensure that the materials produced as a result of coal combustion are handled in a safe and environmentally protective manner and that any issues associated with these materials would be minimized.

161. The credible expert testimony established that the information contained in the SCA accurately depicted the Modernization Project from an engineering standpoint. A team of professionals would oversee implementation of all aspects of construction including safety-related issues. The generating facility additions were designed by an internationally recognized engineering firm with significant experience designing similar projects throughout North America and Florida. Good engineering practice would be utilized and all applicable laws, regulations and required codes, such as the Florida Building Code and the Hillsborough County Code, would be met. The natural gas lateral, in addition to adhering to good engineering practices and industry requirements, would be subject to review by the Florida PSC. All proposed Conditions of Certification would be met.

162. Repowered Unit 1 would utilize the cleanest fuels and the latest, most efficient technology available to generate electric power. Existing infrastructure is available at the site to support operations, and there would be sophisticated controls and continuous monitoring systems providing operational safeguards and minimizing environmental impacts to the area.

163. The preponderance of the competent and substantial evidence demonstrated reasonable assurance that operational

safeguards are technically sufficient for public welfare and protection.

Section 403.509(3)(b)-Nonprocedural Requirements

164. Section 403.509(3)(b) requires that the Siting Board consider whether, and the extent to which the location, construction, and operation of the electrical power plant will comply with the applicable nonprocedural requirements of various agencies with jurisdiction.

165. Each of the reviewing agencies that submitted reports to DEP recommended approval of the Modernization Project. SWFWMD, FWCC, DHR, DOT, and Hillsborough County submitted proposed Conditions of Certification, and the DEP Southwest District staff and other regulatory programs with jurisdiction over the Modernization Project provided input for Conditions of Certification. Tampa Electric has stated that it is in agreement with, and would comply with the Conditions of Certification for the Modernization Project.

166. The Environmental Protection Commission of Hillsborough County did not submit a final report, but indicated it had no objections to the Modernization Project and did not submit any proposed Conditions of Certification. DEP in the PAR concluded that the Modernization Project would comply with applicable nonprocedural requirements of agencies, and no agency found otherwise.

167. The preponderance of the evidence demonstrated reasonable assurance that the design of the stormwater management system for the Modernization Project would meet all the nonprocedural requirements of agencies.

168. The preponderance of the evidence demonstrated reasonable assurance that construction and operation of the Modernization Project would comply with all applicable nonprocedural air quality related requirements of DEP and EPA.

169. The preponderance of the competent and substantial evidence in the record demonstrated that reasonable assurance has been provided that the Modernization Project will comply with the applicable nonprocedural requirements of agencies.

Section 403.509(3)(c)-Consistency with Comprehensive Plans and Land Development Regulations

170. Units 1, 2, and 3 at Big Bend are existing facilities, and nearly all activities associated with the repowering of Unit 1 into the combined-cycle generating plant will take place within the boundaries of the existing Big Bend Site. The exception is a 92-acre parcel owned by Tampa Electric that would be added to the Site and utilized for a construction laydown area and temporary parking area during construction. The SCA requested that the 92-acre parcel be added to the certified site.

171. Section 403.50665(2)(a) of the PPSA specifies that a land use consistency review for local land use plans and zoning ordinances is not required for activities carried out within the boundaries of an existing power plant site. Section 403.5175(3) also states that the land use and zoning determination requirements do not apply to an application if the application is not proposing to expand the boundaries of an existing site or add additional offsite associated facilities that are not exempt from the provisions of section 403.50665. It goes on to state that if it is proposed to expand the boundaries of the existing site, a land use and zoning determination is to be made on the sole issue of whether the site expansion is consistent and in compliance with existing land use plans and zoning ordinances.

172. The 92-acre parcel was submitted to Hillsborough County for a land use and zoning consistency determination. On June 1, 2018, Hillsborough County issued its determination that the addition of the proposed 92-acre parcel and the activities proposed to be carried out on that parcel are consistent with existing land use plans and zoning ordinances that were in effect on the date the SCA was filed. The determination was noticed in the Tampa Bay Times on June 20, 2018, and in the Florida Administrative Register on June 22, 2018. No challenge was filed to the land use consistency determination.

173. In addition to the 92-acre parcel, a small portion of the transmission line will go offsite where it crosses Wyandotte Road, and, similarly, a small portion of the natural gas pipeline lateral will go offsite where it crosses under Wyandotte Road. Those portions are not subject to the land use consistency determination under the provisions of section 403.50665(2)(a), which states that the land use consistency determination does not apply to any facilities that are exempt from the requirements of land use plans and zoning ordinances under chapter 163 and section 380.04(3), Florida Statutes.

174. Section 380.04(3)(b) exempts electric and gas transmission and distribution lines from the definition of "development" and that exemption is incorporated into the Community Planning Act in section 163.3164(14), Florida Statutes. As a result, those portions of the transmission line and natural gas pipeline lateral qualify for the exemption contained in sections 403.50665(2)(a) and 403.5175(3).

175. The preponderance of the competent and substantial evidence established that the non-exempt portions of the Modernization Project, which consists of the 92-acre parcel addition and the activities proposed to be carried out thereon, would be consistent with the applicable local government comprehensive plans and land use development regulations.

Section 403.509(3)(d)-Meet Electrical Energy Needs of State and Section 403.509(3)(e)-Effective Balance Between Need Established Pursuant to Section 403.519 and Impacts

176. The SCA was submitted pursuant to section 403.5175(1). The statute permits an electric utility owning and operating an existing electrical plant as defined in section 403.503(14) to apply for certification of the existing plant or plants and the site to obtain agency licenses utilizing the centrally coordinated, one-stop process established by the PPSA. The SCA is reviewed and processed using the procedural steps and notices that are applicable to a new plant, except that "a determination of need by the [PSC] is not required." § 403.5175(1), Fla. Stat.

177. Section 403.5175(2)(b) further provides that the SCA must include a description of proposed changes or alterations and new and associated facilities that are the subject of the SCA.

178. As found above, early in the process, there were discussions between Tampa Electric and DEP representatives, and DEP representatives and representatives of the PSC, concerning the appropriateness of proceeding under section 403.5175. The resulting conclusion was that the Modernization Project SCA was appropriately processed under section 403.5175, and, thus, a need determination from the PSC would not be required.

179. The preponderance of the competent and substantial evidence demonstrated that the Modernization Project activities would not result in an "expansion in steam generating capacity as measured by an increase in the maximum electrical generator rating of any existing electrical power plant" after the applicability date of the PPSA.

180. The preponderance of the competent and substantial evidence established that the Modernization Project repowering activities would utilize the existing steam turbine electrical generator that currently serves Unit 1. The result of the Modernization Project would be a decrease in the steam electric generating capacity of repowered Unit 1. There will be an additional decrease in steam capacity of 445.5 MW at the Big Bend Station with the retirement of Unit 2 in 2021.

181. In the PPSA, the Legislature choose to focus on steam generating capacity, rather than overall generating capacity by any means, and has not chosen to alter that focus. There is no basis under the current statutory regime to deviate from that mandate. Both section 403.509(3)(d) and section 403.509(3)(e) are predicated on a need determination having been obtained from the PSC for a particular facility. For power plants that are "existing" for purposes of the PPSA and are not undertaking activities that result in expansion of the steam electrical generating capacity, it is logical that a need determination

would not be required since the power is already being utilized on the grid. This would continue to be the case.

182. Despite proceeding under section 403.5175 for the Modernization Project, the PSC still retains its regulatory jurisdiction and will review the Modernization Project at the appropriate time under its exclusive authority that is contained in chapter 366. Under section 366.04(1), the PSC has jurisdiction to regulate and supervise public utilities with respect to rates and service. Section 366.04(2) grants the PSC the power to prescribe a rate structure for electric utilities and require conservation and reliability within a coordinated grid in addition to other powers. Conservation and renewable energy issues are a part of the PSC portfolio under sections 366.041, 355.91, and 366.92, Florida Statutes. Thus, the argument that the Siting Board must have a need determination from the PSC prior to fulfilling its statutory duties is not supported by either the terms of the PPSA or the terms of chapter 366.

Section 403.509(3)(f)-Minimize Adverse Effects

183. Section 403.509(3)(f) requires the Siting Board to consider whether, and the extent to which, the location, construction, and operation of the Modernization Project will minimize, through the use of reasonable and available methods, the adverse effects on human health, the environment, and the

ecology of the land and wildlife and the ecology of the state waters and their aquatic life.

184. As previously found, much of the existing infrastructure necessary to support electric generation and distribution is already present and can accommodate the Modernization Project resulting in minimized impacts both on and offsite.

185. Approximately 55 acres would be impacted by the construction activities, much of which would be temporary uses, such as construction laydown and parking on areas previously disturbed that would be reseeded and allowed to revegetate as necessary. Impacts to vegetation and wetland areas have been avoided, and there would be reduced impacts on wildlife habitat based on the prior use of the site and disturbances that have already taken place, again minimizing any new impacts that may occur. The majority of onsite wetlands and surface waters would be avoided and remain intact.

186. The use of existing facilities, such as the CWIS and the discharge structures, would also result in less impacts because no dredging or filling or in-water construction work would need to occur in waters where the structures are located, again minimizing potential impacts.

187. Groundwater would not be utilized and other associated water uses would be reclaimed wastewater and recycled

stormwater from onsite lined ponds, minimizing and eliminating impacts to groundwater. Reduced coal storage onsite as a result of repowering Unit 1 and the ultimate retirement of Unit 2 also would minimize impacts by reducing the activities necessary for handling and storage of coal and associated by-products.

188. There would be substantial reductions in air emissions which would result in minimization of impacts to the environment. The use of natural gas and the use of the most efficient combined-cycle technology along with post combustion emission control technology would help to minimize the adverse impacts that may be associated with air emissions from the Modernization Project and the Big Bend Station. Expected reductions in emissions would be significant and are projected to be a minimum reduction of 18,500,000 tons of greenhouse gases and 21,000,000 pounds of all other criteria pollutants. There will be a net environmental benefit resulting from the operation of the Modernization Project as compared to the continued operation of existing Units 1 and 2 indefinitely.

189. Once-through cooling water withdrawals would be reduced by 25 percent, reducing and minimizing impacts on aquatic organisms that may be adversely affected by the withdrawals and discharges from the cooling water system. The new screen system would allow aquatic organisms washed from the screens to be returned back to Hillsborough Bay at a location

that would minimize the potential for impingement of these organisms. The state and federally designated thermal refuge for manatees in the discharge canal would be maintained to ensure the availability of warm water during the colder winter months.

190. The regulatory requirements addressing discharges of air, water, and other waste materials are designed to prevent and minimize harmful impacts to the environment, and to the public health and welfare. Construction and operation of the Modernization Project, and continued operation of Unit 3, in accordance with these requirements will minimize the impacts and effects on human health, the environment, and the ecology of the land and its wildlife and the ecology of state waters and their aquatic life.

191. The preponderance of the competent and substantial evidence demonstrated that the Modernization Project, including the continued operation of Unit 3 will minimize, through the use of reasonable and available methods, adverse effects on human health, the environment, and the ecology of the land and its wildlife and the ecology of the state waters and their aquatic life.

Section 403.509(3)(g)-Broad Interests of the Public

192. Section 403.509(3)(g) requires the Siting Board to consider whether, and the extent to which the location,

construction, and operation of the Modernization Project will protect the broad interests of the public.

193. The preponderance of the competent and substantial evidence established that the Modernization Project satisfied the certification factors in section 403.509(3)(a) through (f), as applicable to the Modernization Project. Accordingly, the preponderance of the competent and substantial evidence established that the Modernization Project will serve and protect the broad interests of the public. See In Re: Fla. Power & Light Co.; Dania Beach Energy Ctr. Project Power Plant Siting Application No. PA89-26A2, Case No. 17-4388EPP.

Section 403.5175(4)-Comply with Section 403.509(3) and Provide Environmental and Other Benefits

194. This section requires the Siting Board to consider, in determining whether the SCA should be approved, approved with appropriate conditions, or denied, the extent to which the proposed changes to the existing facilities and continued operation under certification will comply with the requirements of section 403.509(3), as applicable, and result in environmental and other benefits compared to the current utilization of the site if the proposed changes or alterations are undertaken.

195. As set forth above, the preponderance of the competent and substantial evidence found that the Modernization

Project will satisfy the certification factors in section 403.509(3), as applicable to the Modernization Project.

196. The environmental benefits of the Modernization Project as compared to the continued utilization of the existing site would include significantly reduced impacts as a result of utilization of existing infrastructure resulting in less disturbance and less impact; use of clean burning natural gas and a highly efficient combined-cycle generator resulting in significantly reduced air emissions, including emissions of greenhouse gas; reduced cooling water withdrawals resulting in reduced impacts from the cooling water intake and the discharge of the cooling water; use of modified traveling screens to reduce impacts to aquatic organisms; reduced utilization of coal resulting in less impacts as a result of the handling and storage of coal and its by-products; reduced impacts to surface waters; and reduced impacts to groundwater.

197. Construction and operation of the Modernization Project would provide significant benefits to Hillsborough County and the State of Florida through increased employment and revenues during construction and operation of the Project. The direct benefits from construction include employment and payroll for an average monthly employment of approximately 250 workers as well as expenditures of approximately $300 million for materials and services during the period of 2019 through

approximately mid-2023. Approximately $210 million of this would be spent in the local area. Once the repowered Unit 1 begins operations, tax revenues and operational and maintenance expenditures are expected to be in the range of $18 million per year. Anticipated property tax revenue and sales tax revenue are $8.4 million and $1.26 million respectively. Peak construction employment will be approximately 500 workers occurring during the most labor-intensive construction period in 2021.

198. The preponderance of the competent and substantial evidence established that the Modernization Project would comply with the applicable provisions of sections 403.509(3) and 403.5175(4), and would result in environmental and other benefits compared to current utilization of the site.

RECOMMENDATION

Based on the foregoing Finding of Facts and Conclusions of Law, it is

RECOMMENDED that the Governor and Cabinet, sitting as the Siting Board, enter a final order approving certification of Tampa Electric Company, Big Bend Power Generating Station's, existing Units 1, 2, and 3; and authorizing the Modernization Project, subject to the Conditions of Certification contained in DEP's Project Analysis Report.

DONE AND ENTERED this 30th day of May, 2019, in Tallahassee, Leon County, Florida.

FRANCINE M. FFOLKES
Administrative Law Judge
Division of Administrative Hearings
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NOTICE OF RIGHT TO SUBMIT EXCEPTIONS

All parties have the right to submit written exceptions within 15 days from the date of this Recommended Order. Any exceptions to this Recommended Order should be filed with the agency that will issue the Final Order in this case.

STATE OF FLORIDA

DEPARTMENT

OF

ENVIRONMENTAL PROTECTION

Conditions of Certification

Tampa Electric Company
Big Bend Power Station

PA 79-12A2

Exhibit B

Table of Contents

ATTACHMENTS

SECTION A: GENERAL CONDITIONS

I. SCOPE

A. Pursuant to the Florida Electrical Power Plant Siting Act (PPSA), Sections 403.501-518, Florida Statutes (F.S.), this certification is issued to Tampa Electric Company (TECO) as owner/operator and Licensee of the Big Bend Power Station. Subject to the requirements contained in these Conditions of Certification (Conditions), TECO currently operates a nominal 1,892-megawatt (MW) facility consisting of four solid fuel-fired steam boiler/steam turbine generator units and two simple cycle combustion turbines 4A and 4B (peaking unit). Unit 1 is being modernized and repowered by replacing the conventional fossil fuel-fired steam unit with a natural gas-fired combined cycle generating unit with a nominal generating capacity of 1,090 MW. Unit 2, which will be retired by 2023, is currently a 445 MW coal- or natural-gas fired unit, as is Unit 3. Unit 4 operates as a 486 MW coal-or natural-gas fired unit. The combined electrical generation output for the facility will be approximately 2,021MW. The facility is located on a 1,188-acre Site within Hillsborough County, Florida. UTM coordinates are: Zone 17; 361.9 km East; 3,075.0 km North. The Department does not intend, solely by the incorporation of these General Conditions, to require the retrofitting of existing certified facilities.

B. The Certified Facility includes but is not limited to the following major associated facilities;

Big Bend Units 1 (with CT 5 & 6), 2, 3 and 4;
Solid fuel yard and coal handling facilities;
Coal combustion products handling and storage systems;
Limestone handling and storage;
Condenser cooling water intake and discharge systems;
Water Settling Recycle System;
FGD wastewater treatment facilities;
Lime silo;
Two emergency diesel engine generators;
Black Start diesel generator;
Big Bend Station dock, coal unloading and gypsum loading facilities;
Rail loop, spur, coal unloading and gypsum rail loading facilities;
No. 2 fuel oil bulk storage and transfer facilities;
Big Bend Station substation/switchyard;
Dredge disposal areas DA-1 and DA-5;
Big Bend Units 3 and 4 Organism Return System;
Big Bend I Solar Facility (20MW);
Big Bend II Solar Facility (33MW);
New Administration Building;
Manatee Viewing Center (MVC).

C. These Conditions, unless specifically amended or modified, are binding upon the Licensee and shall apply to the construction, operation and maintenance of the Certified Facility. If a conflict should occur between the design criteria of this Certified Facility and the Conditions, the Conditions shall prevail unless amended or modified. In any conflict between any of these Conditions, the more specific condition governs.

D. Within 60 days after completion of construction of the electrical power plant as defined by 403.503(14), F.S., but excluding off-site linear and non-linear associated facilities, the Licensee shall provide to the Department in .pdf format: a survey map signed by a professional land surveyor, or acceptable equivalent documentation such as an official legal description, delineating the boundaries of the site as defined by Section 403.503(28), F.S., and an aerial photograph delineating the boundaries of the site. The survey map and aerial photograph shall be identified as the Site Delineation and attached hereto as part of Attachment A (Maps).

The Licensee shall notify the Department of any change to the Site boundary depicted in the site delineation in Attachment A (Maps). The notification shall be accompanied by an updated land survey map (or legal description) or updated site plan and aerial photograph delineating the new boundaries of the Site for review by the Department. Absent the above description/delineation of the Site, the Department will consider the perimeter fence line of the property on which the electrical power plant's generating facility and on-Site support facilities are located to be the boundaries of the Site.

E. Within 60 days after completion of construction of a new generating unit or units or any on-site associated facilities, but excluding off-Site linear and non-linear associated facilities, the Licensee shall provide to the Department in .pdf format: acceptable documentation identifying the certified facilities within the site such as an aerial photograph identifying these. Certified facilities identified within the site shall include both the certified electrical power plant's generating facilities as defined in Section 403.503(28), F.S. and its on-site certified associated facilities (including on-site linear facilities) as defined by Section 403.503(7), F.S. The document shall be known as the Certified Facilities Identification of the Site and attached hereto as part of Attachment A (Maps).

F. Within 120 days after completion of construction of any off-site associated non-linear facilities, the Licensee shall provide to the Department in .pdf format; a survey map signed by a professional land surveyor, or acceptable equivalent documentation such as an official legal description, delineating the boundaries of the Certified Site for each off-site non-linear Certified Facility; and an aerial photograph delineating the boundaries of the Certified Areas for each off-site non-linear Certified Facility. The survey map(s) and aerial photograph(s) shall be known as Delineation of the Certified Off-site Non-linear Facilities and attached hereto as part of Attachment A (Maps).

G. Within 180 days after completion of construction of off-site associated linear facilities, as defined by Section 403.503(7), F.S., the Licensee shall provide; an aerial photograph(s)/map(s) at a scale of at least 1:400, or acceptable equivalent documentation such as an official legal description or survey map(s) signed by a professional land surveyor, delineating the boundaries of the Certified Facilities, following acquisition of all necessary property interests and the corridor narrowing as described in Section 403.503(11), F.S., which shall be known as the Delineation of Certified Off-Site Linear Facilities and attached as part of Attachment A (Maps).

Following any post-certification approvals that require a change to the boundaries of the Certified Facilities depicted in the Delineation of Certified Off-Site Linear Facilities in Attachment A, the Licensee shall submit an updated aerial photograph/map, survey map or legal description.

[Sections 403.511, 403.5113, F.S.; subsections 62-4.160(1-2) and 62-17.205(2), F.A.C.]

II. APPLICABLE DEPARTMENT RULES

The construction, operation and maintenance of the Certified Facility shall be in accordance with all applicable non-procedural provisions of F.S. and Florida Administrative Code (F.A.C.), including, but not limited to, the applicable non-procedural portions of the following regulations, except to the extent a variance, exception, exemption or other relief is granted in the Final Order of Certification or in a subsequent modification to the Conditions, under any federal permit or as otherwise provided under Chapter 403:

Florida Administrative Codes:
18-2 (Management of Uplands Vested in the Board of Trustees)
18-14 (Administrative Fines for Damaging State Lands)
18-20 (Aquatic Preserves)
18-21 (Sovereign Submerged Lands Management)
62-4 (Permits)
62-17 (Electrical Power Plant Siting)

62-40 (Water Resource Implementation Rule)
62-150 (Hazardous Substance Release Notification)
62-160 (Quality Assurance)
62-204 (Air Pollution Control-General Provisions)
62-210 (Stationary Sources-General Requirements)
62-212 (Stationary Sources-Preconstruction Review)
62-213 (Operation Permits for Major Sources of Air Pollution)
62-214 (Requirements for Sources Subject to the Federal Acid Rain Program)
62-256 (Open Burning)
62-296 (Stationary Sources-Emission Standards)
62-297 (Stationary Sources-Emission Monitoring)
62-301 (Surface Waters of the State)
62-302 (Surface Water Quality Standards)
62-304 (Total Maximum Daily Loads)
62-330 (Environmental Resource Permitting)
62-340 (Delineation of the Landward Extent of Wetlands and Surface Waters)
62-345 (Uniform Mitigation Assessment Method)
62-520 (Groundwater Classes, Standards and Exemptions)
62-528 (Underground Injection Control)
62-531 (Water Well Contractor Licensing Requirements)
62-532 (Water Well Permitting and Construction Requirements)
62-550 (Drinking Water Standards, Monitoring and Reporting)
62-555 (Permitting, Construction, Operation, and Maintenance of Public Water Systems)
62-560 (Requirements for Public Water Systems That Are Out of Compliance)
62-600 (Domestic Wastewater Facilities)
62-601 (Domestic Wastewater Treatment Plant Monitoring)
62-604 (Collection Systems and Transmission Facilities)
62-610 (Reuse of Reclaimed Water and Land Application)
62-620 (Wastewater Facility and Activities Permitting)
62-621 (Generic Permits)

62-650 (Water Quality Based Effluent Limitations)
62-660 (Industrial Wastewater Facilities)
62-699 (Classification and Staffing of Water or Domestic Wastewater Treatment Plants and Water Distribution Systems)
62-701 (Solid Waste Management Facilities)
62-710 (Used Oil Management)
62-730 (Hazardous Waste)
62-737 (Management of Spent Mercury-Containing Lamps and Devices Destined For Recycling)
62-740 (Petroleum Contact Water)
62-761 (Underground Storage Tank Systems)
62-762 (Aboveground Storage Tank Systems)
62-769 (Florida Petroleum Liability and Restoration Insurance Program)
62-777 (Contaminated Site Clean-Up Target Levels)
62-780 (Contaminated Site Clean-Up Criteria)
62-814 (Electric and Magnetic Fields)

III. REVISIONS TO DEPARTMENT STATUTES AND RULES

A. The Licensee shall comply with rules adopted by the Department subsequent to the issuance of the certification under the PPSA which prescribe new or stricter criteria, to the extent that the rules are applicable to electrical power plants. Except when express variances, exceptions, exemptions, or other relief have been granted by the conditions of the certification, subsequently adopted Department rules which prescribe new or stricter criteria shall operate as automatic modifications to the certification.

B. Upon written notification to the Department, the Licensee may choose to operate the certified electrical power plant in compliance with any rule subsequently adopted by the Department which prescribes criteria more lenient than the criteria required by the terms and conditions in the certification which are not site-specific.

[Section 403.511(5)(a) and (b), F.S.; subsection 62-4.160(10), F.A.C.]

IV. DEFINITIONS

The meaning of terms used herein shall be governed by the applicable definitions contained in Chapters 373 and 403, F.S., and any regulation adopted pursuant thereto. In the event of any dispute over the meaning of a term used in these Conditions which is not defined in such statutes or regulations, such dispute shall be resolved by reference to the most relevant definitions contained in any other state or federal statute or regulation or, in the alternative by the use of the commonly accepted meaning. As used herein, the following shall apply:

A. "Application" or "SCA" as defined in Section 403.503(6), F.S. For purposes of this license, "Application" shall also include materials submitted for post-certification amendments and petitions for modification to the Conditions of Certification, as well as supplemental applications.

B. "Associated Facilities" is defined by Section 403.503(7), F.S.

C.

"Certified Facility" or "Certified Facilities" means the certified electrical power generation facilities and all certified on- or off-site associated identified/described in the Application, in the Final Order of Certification, or in a post-certification amendment or modification.

D. "DEO" means the Florida Department of Economic Opportunity.

E. "DEM" shall mean the Florida Division of Emergency Management.

F. "DEP" or "Department" means the Florida Department of Environmental Protection.

G. "DHR" means the Florida Department of State, Division of Historical Resources.

H "DOT" means the Florida Department of Transportation.

I. "Emergency conditions" or "Emergency reporting" means urgent circumstances involving potential adverse consequences to human life or property as a result of weather conditions or other calamity.

J. "Feasible" or "practicable" means reasonably achievable considering a balance of land use impacts, environmental impacts, engineering constraints, and costs.

K. "FWC" means the Florida Fish and Wildlife Conservation Commission.

L. "Licensee" means an applicant that has obtained a certification order for the subject project.

M. "NPDES permit" means a federal National Pollutant Discharge Permit System permit issued by DEP in accordance with the federal Clean Water Act.

N. "Post-certification submittal" shall mean a submittal made by the Licensee pursuant to a Condition of Certification.

O. "PSD permit" means a federal Prevention of Significant Deterioration air emissions permit issued by DEP in accordance with the federal Clean Air Act.

P. "ROW" means the right-of-way to be selected by the Licensee within the certified corridor in accordance with the Conditions of Certification and as defined in Section 403.503(27), F.S.

Q. "Site" as defined in Section 403.503(28), F.S.

R. "State Water Quality Standards" shall mean the numerical and narrative criteria applied to specific water uses or classifications set forth in Chapters 62-302, and 62-520, F.A.C.

S. "Surface Water Management System" or "System" means a stormwater management system, dam, impoundment, reservoir, appurtenant work, or works, or any combination thereof. The terms "surface water management system" or "system" include areas of dredging or filling, as those terms are defined in Sections 373.403(13) and (14), F.S.

T. "SWD" shall mean the Southwest DEP district office.

U. "SWFWMD" means the Southwest Florida Water Management District, respectively.

V. "Title V permit" means a federal permit issued by DEP in accordance with Title V provisions of the federal Clean Air Act.

W. "Wetlands" shall mean those areas meeting the definition set forth in Section 373.019(27), F.S., as delineated pursuant to Chapter 62-340, F.A.C.

V. FEDERALLY DELEGATED OR APPROVED PERMIT PROGRAMS

Subject to the conditions set forth herein, this certification shall constitute the sole license of the state and any agency as to the approval of the location of the site and any associated facility and the construction and operation of the proposed electrical power plant, except for the issuance of department licenses required under any federally delegated or approved permit program. This certification is not a waiver of any other Department approval that may be required under federally delegated or approved programs. In the event of a conflict between the certification process and federally required procedures, the applicable federal requirements shall control.

Sections 403.5055, 403.508(8), and 403.511(1), F.S.

VI. DESIGN AND PERFORMANCE CRITERIA

Certification, including these Conditions, is predicated upon preliminary designs, concepts, and performance criteria described in the site certification application (SCA) or in testimony and exhibits in support of certification. Final engineering design will be consistent and in substantial compliance with the preliminary information described in the SCA or as explained at the certification hearing (if any). Conformance to those criteria, unless specifically modified in accordance with Sections 403.516, F.S., and Rule 62-17.211, F.A.C., is binding upon the Licensee in the design, construction, operation and maintenance of the Certified Facility.

[Sections 403.511(2)(a), 403.516, F.S.; Rules 62-4.160(2) and 62-17.211, F.A.C.]

VII. NOTIFICATION

A. If, for any reason, the Licensee does not comply with or will be unable to comply with any condition or limitation specified in this license, the Licensee shall immediately provide the appropriate DEP District and/or Branch Office with the following information:

1. A description of and cause of noncompliance; and

2. 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 recurrence of the noncompliance. The Licensee 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 certification.

All notifications which are made in writing shall additionally be immediately provided to the Siting Coordination Office (SCO) via email to SCO@dep.state.fl.us.

[subsection 62-4.160(8), F.A.C.]

B. The Licensee shall promptly notify the SCO in writing (email acceptable) of any previously submitted information concerning the Certified Facility that is later discovered to be inaccurate.

[subsection 62-4.160(15), F.A.C.]

C. Within 60 days after certification of an associated linear facility the Licensee shall file a notice of the certified route with the Department and the clerk of the circuit court for each county through which the corridor will pass.

The notice shall consist of maps or aerial photographs in the scale of 1:24,000 which clearly show the location of the certified route and shall state that the certification of the corridor will result in the acquisition of rights-of-way within the corridor.

[Section 403.5112, F.S.]

VIII. EMERGENCY CONDITION NOTIFICATION AND RESTORATION

If the Licensee is temporarily unable to comply with any of the conditions of the License due to breakdown of equipment or destruction by hazard of fire, wind or following an emergency as defined by Sections 252.34(2), (4), (7), (8), or (10), F.S., the Licensee shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the Licensee from any liability for failure to comply with Department rules. Any exceedances and/or violations recorded during emergency conditions shall be reported as such, but the Department acknowledges that it intends to use its enforcement discretion during this timeframe. This acknowledgement by the Department does not constitute a waiver or variance from any requirements of any federal permit. Relief from any federal agency must be separately sought.

[Section 62-4.130, F.A.C.]

IX. CONSTRUCTION PRACTICES

A. Local Building Codes

Subject to the conditions set forth herein, this certification constitutes the sole license of the state and any agency as to the approval of the location of the site and any associated facility and the construction and operation of any certified facility. The licensee is not required to obtain building permits for certified facilities. However, this certification shall not affect in any way the right of any local government to charge appropriate fees for and require that construction of installations used by the electric utility that are not an integral part of a generating plant, substation, or control center be in compliance with applicable building construction codes.

[Section 403.511(4), F.S.]

B. Open Burning

Prior to open burning in connection with land clearing, the Licensee shall seek authorization from the Florida Forest Service in accordance with the requirements of Chapters 62-256 and 5I-2, F.A.C.

[Chapters 5I-2 and 62-256, F.A.C.]

C. Vegetation

For areas located in any Florida Department of Transportation (DOT) ROW, Chapter 3.18 of the 2017 Florida DOT *Utility Accommodation Manual* available on the DOT

website (https://www.fdot.gov/programmanagement/utilities/default.shtm) shall serve as guidelines for best management practices.

D. Existing Underground Utilities

The Licensee must follow all applicable portions of the Underground Facility Damage Prevention and Safety Act, Chapter 556, F.S. The Licensee shall provide the affected local government and the SCO with copies of valid tickets obtained from Sunshine State One Call of Florida upon request. Tickets shall be available for request until the underground work is completed for the affected area.

[Chapter 556, F.S.]

E. Electric and Magnetic Fields (EMF)

Any transmission lines and electrical substations shall comply with the applicable requirements of Chapter 62-814, F.A.C.

[Chapter 62-814, F.A.C.]

F. Existing Wells

Any existing wells to be impacted in the path of construction that will no longer be used shall be abandoned by a licensed well contractor. All abandoned wells shall be filled and sealed in accordance with Rules 62-532.500(5), F.A.C., or with the rules of the authorizing agency, or consistent with these Conditions.

[Rules 62-532.400 and 62-532.500(5), F.A.C.]

G. Abandonment of Existing Septic Tanks

Any existing septic tanks to be impacted by construction and that will no longer be used shall be abandoned in accordance with Rule 64E-6.011, F.A.C., unless these Conditions provide otherwise.

[Chapter 64E-6, F.A.C.]

X. RIGHT OF ENTRY

A. Upon presentation of credentials or other documents as may be required by law, the Licensee shall allow authorized representatives of the Department or other agencies with jurisdiction over a portion of the Certified Facility:

1. At reasonable times, to enter upon the Certified Facility in order to monitor activities within their respective jurisdictions for purposes of assessing compliance with this certification; or

2. During business hours, to enter the Licensee's premises in which records are required to be kept under this Certification; and to have access to and copy any records required to be kept under this Certification.

B. When requested by the Department, on its own behalf or on behalf of another agency with regulatory jurisdiction, the Licensee shall within 10 working days, or such longer period as may be mutually agreed upon by the Department and the Licensee, furnish any information required by law, which is needed to determine compliance with the Certification.

[Rules 62-4.160(7)(a) and 62-4.160(15), F.A.C.]

XI. DISPUTE RESOLUTION

A. General

If a situation arises in which mutual agreement between either the Department and the Licensee, or the Department and an agency with substantive regulatory jurisdiction over a matter cannot be reached, the Department can act as a facilitator in an attempt to resolve the issue. If the dispute is not resolved in this initial informal meeting, Licensee may request a second informal meeting in which both Licensee and the agency with substantive regulatory jurisdiction over the matter at issue can participate in an attempt to resolve the issue. If, after such meetings, a mutual agreement cannot be reached between the parties, then the matter shall be referred to the Division of Administrative Hearings (DOAH) for disposition in accordance with the provisions of Chapter 120, F.S. The Licensee or the Department may request DOAH to establish an expedited schedule for the processing of such a dispute. Any filing with DOAH shall state with particularity the specific project and geographic location to which the dispute relates. Work unrelated to the specific project and in areas other than the location to which the dispute relates will not be affected by the dispute.

B. Modifications

If written objections are filed regarding a modification, and the objections address only a portion of a requested modification, then the department shall issue a Final Order approving the portion of the modification to which no objections were filed, unless that portion of the requested modification is substantially related to or necessary to implement the portion to which written objections are filed.

C. Post-Certification Submittals

If it is determined, after assessment of a post-certification submittal, that compliance with the conditions will not be achieved for a particular portion of a submittal, the Department may make a separate assessment of other portions of the submittal, unless those portions of the submittal are substantially related to or necessary to implement that portion for which it has been determined that compliance with the conditions will not be achieved.

[Section 120.57, F.S.; Rule 62-17.211, F.A.C.]

XII. SEVERABILITY

The provisions of this Certification are severable, and if any provision of this Certification or the application of any provision of this certification to any circumstance is held invalid, the remainder of the Certification or the application of such provision to other circumstances shall not be affected thereby.

XIII. ENFORCEMENT

A. The terms, conditions, requirements, limitations and restrictions set forth in these Conditions are binding and enforceable pursuant to Sections 403.141, 403.161, 403.514, 403.727, and 403.859 through 403.861, F.S., as applicable. Any noncompliance by the Licensee with these Conditions constitutes a violation of Chapter 403, F.S., and is grounds for enforcement action, license termination, license revocation, or license revision. The Licensee is placed on notice that the Department may review this Certification periodically and may initiate enforcement action for any violation of these Conditions.

B. All records, notes, monitoring data and other information relating to the construction or operation of the Certified Facility which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the Certified Facility and arising under the Florida Statutes or Department rules, subject to the restrictions in Sections 403.111 and 403.73, F.S. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

[Sections 403.121, 403.131, 403.141, 403.151, 403.161, and 403.514, F.S.; Rules 62-4.160(1) and (9), F.A.C.]

XIV. REVOCATION OR SUSPENSION

The Certification shall be final unless revised, revoked or suspended pursuant to law. This Certification may be suspended or revoked pursuant to Section 403.512, F.S. This Certification is valid only for the specific processes and operations identified in the SCA and approved in the Final Order of Certification and indicated in the testimony and exhibits in support of certification or approved in a subsequent amendment or modification of the certification. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this approval may constitute grounds for revocation and enforcement action by the Department. Any enforcement action, including suspension and revocation, shall only affect the portion(s) of the Certified Facility that are the cause of such action, and other portions of the Certified Facility shall remain unaffected by such action.

[Sections 403.512, F.S.; Rule 62-4.160(2), F.A.C.]

XV. REGULATORY COMPLIANCE

As provided in Sections 403.087(7) and 403.722(5), F.S., except as specifically provided in the Final Order of Certification, a subsequent modification or amendment, or these Conditions, the issuance of this license does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This License is not a waiver of or approval of any other Department license/permit that may be required for other aspects of the Certified Facility which are not addressed in this license. This license does not relieve the Licensee from liability for harm or injury to human health or welfare, animal, or plant life, or public or private property caused by the construction or operation of the Certified Facility, or from penalties therefore.

[Rules 62-4.160(3) and 62-4.160(5), F.A.C.]

XVI. CIVIL AND CRIMINAL LIABILITY

Except to the extent a variance, exception, exemption or other relief is granted in the Final Order of Certification, in a subsequent modification to these Conditions, or as otherwise provided under Chapter 403, F.S, this Certification does not relieve the Licensee from civil or criminal penalties for noncompliance with any Condition of Certification, applicable rules or regulations of the Department, or any other state statutes or regulations which may apply.

[Sections 403.141, 403.161, and 403.511, F.S.]

XVII. USE OF STATE LANDS

A. Except as specifically provided in the Final Order of Certification or these Conditions, the issuance of this License conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless 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.

B. If any portion of the Certified Facility is located on sovereign submerged lands, state-owned uplands, or within an aquatic preserve, then the Licensee must comply with the applicable portions of Chapters 18-2, 18-20, and 18-21, F.A.C., and Chapters 253 and 258, F.S., except as specifically provided in the Final Order of Certification or these Conditions. If any portion of the Certified Facility is located on sovereign submerged lands, the Licensee must submit section F of Form 62-330.060(1), *Application for Individual and Conceptual Approval Environmental Resource Permit and Authorization Use State-owned Submerged Lands* to the Department prior to construction. If any portion of the Certified Facility is located on state-owned uplands, the Licensee must submit an Upland Easement Application to the Department prior to construction.

C. If a portion of the Certified Facility is located on sovereign submerged lands or state-owned uplands owned by the Board of Trustees of the Internal Improvement Trust Fund, pursuant to Article X, Section 11 of the Florida Constitution, then the proposed activity on such lands requires a proprietary authorization. Under such circumstances, the proposed activity is not exempt from the need to obtain a proprietary authorization. Unless otherwise provided in the Final Order of Certification or these Conditions, the Department has the responsibility to review and take action on requests for proprietary authorization in accordance with Rule 18-2.018 or 18-21.0051, F.A.C.

D. The Licensee is hereby advised that Florida law, in 253.77, F.S. states: "A person may not commence any excavation, construction, or other activity involving the use of sovereign or other state lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund under this chapter, until such person has received from the Board of Trustees of the Internal Improvement Trust Fund the required lease, license, easement, or other form of consent authorizing the proposed use." Pursuant to Chapter 18-14, F.A.C., if such work is done without consent, or if a person otherwise damages state land or products of state land, the Board of Trustees may levy administrative fines of up to $10,000 per offense.

E. The terms, conditions, and provisions of any required lease or easement issued by the State shall be met. Any construction activity associated with the Certified Facility shall not commence on sovereign submerged lands or state-owned uplands, title to which is held by the Board of Trustees of the Internal Improvement Trust Fund, until all required lease or easement documents have been executed.

[Chapters 253 and 258, F.S.; Chapters 18-2, 18-14, 18-21, 62-340, and Rules 62-330.060(1) and 62-4.160(4), F.A.C.]

XVIII. PROCEDURAL RIGHTS

Except as specified in Chapter 403, F.S., or Chapter 62-17, F.A.C., no term or Condition of Certification shall be interpreted to preclude the post-certification exercise by any

party of whatever procedural rights it may have under Chapter 120, F.S., including those related to rule-making proceedings.

[Section 403.511(5)(c), F.S.]

XIX. AGENCY ADDRESSES FOR POST-CERTIFICATION SUBMITTALS AND NOTICES

Where a Condition requires post-certification submittals and/or notices to be sent to a specific agency, the following agency addresses shall be used unless the Conditions specify otherwise or unless the Licensee and the Department are notified in writing of an agency's change in address for such submittals and notices:

Florida Department of Environmental Protection
Siting Coordination Office, MS 5500
2600 Blair Stone Road.
Tallahassee, Florida 32399-3000
SCO@dep.state.fl.us

Florida Department of Environmental Protection
Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Florida Department of Economic Development
Bureau of Planning and Growth
107 East Madison Street
Tallahassee, Florida 32399-2100

Florida Fish & Wildlife Conservation Commission
Conservation Planning Services
620 South Meridian Street
Tallahassee, Florida 32399-1600
FWCConservationPlanningServices@myfwc.com

Florida Department of Transportation
District Administration
605 Suwannee Street
Tallahassee, FL 32399-0450

Florida Department of Agriculture and Consumer Services
Office of General Counsel
407 South Calhoun Street
Tallahassee, Florida 32399-0800

Southwest Florida Water Management District
Office of General Counsel

7601 U.S. 301 North

Tampa, Florida 33637-6759

Florida Department of State
R.A. Gray Building 4th Floor
Division of Historical Resources
500 South Bronough Street
Tallahassee, Florida 32399-0250

Hillsborough County
Office of General Council
601 East Kennedy Boulevard
County Center, 27th Floor
Tampa, Florida 33602

[Section 403.511, F.S.]

XX. PROFESSIONAL CERTIFICATION

To ensure protection of public health, safety, and welfare, any construction, modification, or operation of an installation which may be a source of pollution, or of a public drinking water supply, shall be in accordance with sound professional engineering practices pursuant to Chapter 471, F.S.; and all final geological papers or documents involving the practice of the profession of geology shall be in accordance with sound professional geological practices pursuant to Chapter 492, F.S. Where required by Chapter 471 or 492, F.S., applicable portions of amendment requests, petitions for modifications, post certification submittals, and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

[62-4.050, F.A.C.]

XXI. PROCEDURES FOR POST-CERTIFICATION SUBMITTALS

A. Purpose of Submittals

Conditions which provide for the post-certification submittal of information to DEP or other agencies by the Licensee are for the purpose of facilitating the agencies' monitoring of the effects arising from the location of the Certified Facility and the construction and maintenance of the Certified Facility. This monitoring is for DEP to assure, in consultation with other agencies with applicable regulatory jurisdiction, continued compliance with these Conditions, without further agency action. A submittal of information or determination of compliance pursuant to a post-certification submittal under this condition does not provide a point of entry for a third party.

B. Filings

All post-certification submittals of information by Licensee are to be filed with the DEP SWD Office, and any other agency that is entitled to receive a submittal pursuant to these Conditions. The SCO shall be copied on all post-certification submittals in electronic .pdf format only, unless otherwise requested, via email to SCO@dep.state.fl.us. Each submittal shall clearly identify the Certified Facility name, PA#, and the Condition number/s (i.e. Section X, Condition XX.y.(z)) requiring the submittal. As required by Section 403.5113(2), F.S., each

post-certification submittal will be reviewed by each agency with regulatory authority over the matters addressed in the submittal on an expedited and priority basis.

[Section 403.5113, F.S., Rule 62-17.191(3), F.A.C.]

C. Completeness

DEP shall review each post-certification submittal for completeness. This review may include consultation with the other agency/ies receiving the post-certification submittal with regulatory jurisdiction over the matter addressed in the submittal. DEP's finding of completeness shall specify the area of the Certified Facility affected, and, shall not delay further processing of the post-certification submittal for non-affected areas.

If any portion of a post-certification submittal is found to be incomplete, the Licensee shall be so notified. Failure to issue such a notice within 30 days after filing of the submittal shall constitute a finding of completeness. Subsequent findings of incompleteness, if any, shall address only the newly filed information.

[Subparagraph 62-17.191(1)(c) 2, F.A.C.]

D. Interagency Meetings

DEP may conduct an interagency meeting with other agencies that received a post-certification submittal. The purpose of such an interagency meeting shall be for the agencies with regulatory jurisdiction over the matters addressed in the post-certification submittal to discuss whether compliance with these Conditions has been provided. Failure of DEP to conduct an interagency meeting or failure of any agency to attend an interagency meeting shall not be grounds for DEP to withhold a determination of compliance with these Conditions nor to delay the timeframes for review established by these Conditions. At DEP's request, a field inspection shall be conducted with the Licensee and the agency representative in conjunction with the interagency meeting.

E. Determination of Compliance

DEP shall give written notification within 90 days, to the Licensee and the other agency/ies to which the post-certification information was submitted of DEP's determination of whether there is demonstration of compliance with these Conditions. If it is determined that compliance with the Conditions has not been provided, the Licensee shall be notified with particularity of the deficiencies and possible corrective measures suggested. Failure to notify Licensee in writing within 90 days of receipt of a complete post-certification submittal shall constitute a determination of compliance. A post-certification compliance review may be the basis for initiating modifications to the relevant Condition or to other related Conditions.

F. Commencement of Construction

If DEP does not object within the time period specified in paragraph E. above, Licensee may begin construction pursuant to the terms of these Conditions and the subsequently submitted construction details.

G. Revisions to Design Previously Reviewed for Compliance

If revisions to site-specific designs occur after submittal, the Licensee shall submit revised plans prior to construction for review in accordance with the post-certification process specified in this Condition.

[Sections 120.569, 373.413, 373.416, and 403.511, F.S.; Rules 62-17.191 and 62-17.205, F.A.C.]

XXII. POST-CERTIFICATION SUBMITTAL REQUIREMENTS SUMMARY

Within 90 days after certification, and within 90 days after any subsequent modification or certification, the Licensee shall provide the Department a complete summary of those post-certification submittals that are identified in these Conditions when due-dates for the information required of the Licensee have been identified. A summary shall be provided as a separate document for each transmission line, if any. Such submittals shall include, but are not limited to, monitoring reports, management plans, wildlife surveys, etc. The summary shall be provided to the SCO, in a sortable spreadsheet, electronically, in the format shown below or equivalent. For subsequent modifications and certifications, a Post-Certification Submittal Requirements Summary shall be required for only those resulting in new or altered post-certification requirements.

Condition Number	Requirement and Timeframe	Due Date	Name of Agency or Agency Subunit to whom the submittal is required to be provided

[Section 403.5113, F.S.; Rule 62-17.191(3), F.A.C.]

XXIII. POST CERTIFICATION AMENDMENTS

If, subsequent to certification, the Licensee proposes any material change to the SCA and revisions or amendments thereto, as certified, the Licensee shall submit a written request for amendment and a description of the proposed change to the SCA to the Department. Within 30 days after the receipt of a complete request for an amendment, the Department shall determine whether the proposed change to the SCA requires a modification to the Conditions.

A. If the Department concludes that the change would not require a modification to the Conditions, the Department shall provide written notification of the approval of the proposed amendment to the Licensee, all agencies, and all other parties to the Certification.

B. If the Department concludes that the change would require a modification to the Conditions, the Department shall provide written notification to the Licensee that the proposed change to the SCA requires a request for modification pursuant to Section 403.516, F.S.

[Section 403.5113, F.S]

XXIV. MODIFICATION OF CERTIFICATION

A. Pursuant to Sections 403.516(1)(a), F.S., and Rule 62-17.211, F.A.C., the Siting Board hereby delegates the authority to the Department to modify any Condition which would not otherwise require approval by the Siting Board, after notice and receipt of no objection by a party to the certification within 45 days after notice by mail to the party's last address of record, and if no other person whose substantial interests will be affected by the modification objects in writing within 30 days of public notice.

B. The Department may modify Conditions, in accordance with Section 403.516(1)(b), F.S., which are inconsistent with the terms of any subsequent and separately DEP-issued permits, permit amendments, permit modifications, or permit renewals under a federally delegated or federally approved permit program. Such modification may be made without further notice if the matter has been previously noticed under the requirements for any federally delegated or approved permit program.

C. In accordance with Section 403.516(1)(c), F.S., the Licensee may file a petition for modification with the Department, or the Department may initiate the modification upon its own initiative.

D. Any anticipated facility expansions, production increases, or process modifications which may result in new, different or increased discharge or emission of pollutants, change in fuel, or expansion in generating capacity must be reported by submission of an appropriate request for an amendment, modification, or certification.

E. Any anticipated facility change that results in a change to the Site Delineation or the Delineation of the Certified Area, attached hereto as part of Attachment A, must be accompanied by a map or aerial photo showing the proposed new boundaries of the Site and/or Certified Area. Within 120 days after completion of construction of the approved facility change, the Licensee shall provide the information required by Section A. General Conditions, Condition I. Scope, paragraphs D., E., F., or G., as appropriate.

[Section 403.516, F.S.; Rule 62-17.211 F.A.C.]

XXV. INCORPORATION OF EXISTING STATE AND LOCAL PERMITS/LICENSES

The operation of the Certified Facility shall be in accordance with all applicable non-procedural provisions of any state or local government regulation. All state and locally issued permits are intended to be incorporated herein, such that the Licensee shall comply with the substantive provisions and limitations set forth in those permits. The inadvertent omission of any state or locally issued permit/approval from these Conditions can be remedied by a modification of the Conditions to include provisions from the state or locally issued permit/approval.

At any time following certification, should the Licensee become aware of any state or locally issued permit/approval not included herein, the Licensee shall promptly notify the SCO for incorporation into these Conditions. Likewise, when the Department is made aware of any separately issued permits/approvals that were inadvertently not included in the Conditions, the Conditions will be modified to incorporate the substantive provisions and limitations of any such permit/approval.

XXVI. COASTAL ZONE CONSISTENCY

Pursuant to Sections 373.428 and 403.511, F.S., certification of the Facility constitutes the State's concurrence that the licensed activity or use is consistent with the federally approved program under the Florida Coastal Management Act.

[Sections 373.428, 380.23, and 403.511(7), F.S.]

XXVII. WATER QUALITY CERTIFICATION

Pursuant to the Operating Agreement between the Department, Water Management Districts and U.S. Army Corps of Engineers, a written Final Order granting 'certification' constitutes certification by the Department that the project activities comply with applicable state water quality standards.

[2012 Operating Agreement, Jacksonville District USACOE, DEP and Water Management Districts, Section II.A.1.(f)]

XXVIII. TRANSFER OF CERTIFICATION

A. This Certification is transferable in whole or in part, upon Department approval, to an entity determined to be able to comply with these Conditions. A transfer of certification of all or part of the Certified Facility may be initiated by the Licensee's filing of a Notice of Intent to Transfer Certification with the Department. The Notice of Intent shall: identify the intended new certification holder or Licensee; identity current and new entity responsible for compliance with the certification; and include a written agreement from the intended Licensee/Transferee to abide by all Conditions of Certification and applicable laws and regulations. Upon receiving a complete notice of intent, the transfer shall be approved by the Department unless the Department objects to the transfer on the grounds that the new Licensee will be unable to comply with the Conditions of Certification, specifies in writing its reasons for its objections, and gives notice and an opportunity to petition and administrative hearing pursuant to Section 120.57, F.S. Upon approval, the Department will initiate a modification to the Conditions to reflect the change in ownership in accordance with Rule 62-17.211, F.A.C.

B. In the event of the dissolution of the Licensee, the Department may transfer certification to successor entities which are determined to be competent to construct, operate and maintain the Certified Facility in accordance with the Conditions of Certification and which are proper applicants as defined by the PPSA. Upon determination that such a successor entity complies with the requirements for transfer of certification, the Department will initiate a modification to the Conditions to reflect the change in ownership in accordance with Rule 62-17.211, F.A.C.

[Chapter 120, F.S.; Rule 62-17.211, F.A.C]

XXIX. LABORATORIES AND QUALITY ASSURANCE

Chemical, physical, biological, microbiological and toxicological data collected as a requirement of these Conditions must be reliable and collected and analyzed by scientifically sound procedures. Unless otherwise specified in these Conditions, the Licensee shall adhere to the minimum field and laboratory quality assurance, methodological and reporting requirements of the Department as set forth in Chapter 62-160, F.A.C.

[Rule 62-160, F.A.C.]

XXX. ENVIRONMENTAL RESOURCES

A. General

1. Submittals for Construction Activities

a. Prior to the commencement of construction of new facilities and/or associated facilities the Licensee shall provide to the appropriate DEP District for review, all information necessary for a complete *Application for Individual and Conceptual Approval Environmental Resource Permit and Authorization Use State-owned Submerged Lands* , DEP Form 62-330.060(1), F.A.C. A copy of the submittal shall also be provided to the SCO. Information may be submitted by discrete portions of the Certified Facilities for a determination of compliance with these COC.

This form may: a) have been submitted concurrently with a SCA; b) be submitted as part of an amendment request or a petition for modification; or c) be submitted as a post-certification submittal following approval of a Project through certification, modification or amendment. Post-certification submittal information may be submitted by discrete portions of the Certified Facilities for a determination of compliance with these Conditions of Certification. Such Environmental Resource Permit (ERP) submittals, once received, shall be reviewed in accordance with the non-procedural standards and criteria for issuance of an ERP, including all the provisions related to reduction and elimination of impacts, conditions for issuance, additional conditions for issuance, and mitigation contained in Chapter 62-330, F.A.C., as applicable unless otherwise stated in these Conditions. While the information is provided for review via submittal of the ERP form, pursuant to Section 403.511, F.S., issuance of a separate ERP is not required for Certified Facilities.

Those forms submitted as part of a site certification application, an amendment, or modification, shall be processed concurrently with, and under the respective certification, amendment, or modification procedures. Those forms submitted as a post-certification submittal (after certification, modification, or amendment and prior to construction) shall be processed in accordance with Section A. Condition XXI. Procedures for Post-Certification Submittals.

No construction shall commence on a Project feature, or in a particular segment for a linear facility, until the Department has determined that there is a demonstration of compliance with these Conditions. For post-certification submittal reviews, the Department's determination is governed by Section A. Condition XXI. Procedures for Post-Certification Submittals.

b. Concurrent with submittal of the DEP form required in subparagraph A.1.a., above, the Licensee shall submit, as applicable, a survey of wetland and surface water areas as delineated in accordance with Chapter 62-340, F.A.C., and verified by appropriate agency staff for Department compliance review. Available DEP-approved wetland and surface water delineations within the boundaries of a Certified Site or a portion thereof may be used and reproduced for this delineation submittal and verification.

[Section 373.416, F.S.; Chapters 62-330 and 62-340, F.A.C.]

2. Construction, operation and maintenance of the proposed Project (including any access roads and structures constructed within wetlands and other surface waters,

and/or associated facilities) shall satisfy any applicable non-procedural requirements in the Department rules.

[Section 373.414(1)(a), F.S.]

3. Any delineation of the extent of a wetland or other surface water submitted as part of the DEP ERP Application Form required by subparagraph A.1.a., above, including plans or other supporting documentation, shall not be considered binding on the Department unless a specific condition of this Certification or a formal wetlands jurisdictional determination under Section 373.421(2), F.S., provides otherwise.

[Sections 373.421 and 403.504, F.S.]

B. Surface Water Management

1. Information regarding surface water management systems (SWMS) will be reviewed for consistency with the applicable non-procedural requirements of Part IV of Chapter 373, F.A.C. following submittal of Form 62-330.060(1), F.A.C., to the appropriate office of the Department.

2. All construction, operation, and maintenance of the SWMS(s) for the Certified Facilities shall be as set forth in the plans, specifications and performance criteria contained in the SCA and other materials presented during the certification proceeding, post-certification submittals, and as otherwise approved. If specific requirements are necessary for construction, operation and/or maintenance of an approved SWMS, those requirements shall be incorporated into a SWMS Plan for that system and included in Attachment B (Surface Water Management System Plans). Any alteration or modification to the SWMS Plan or the SWMS as certified requires prior approval from the Department.

3. To allow for stabilization of all disturbed areas, immediately prior to construction, during construction, and for the period of time after construction of the SWMS, the Licensee shall implement and maintain erosion and sediment control best management practices, such as silt fences, erosion control blankets, mulch, sediment traps, polyacrylamide (PAM), temporary grass seed, permanent sod, and floating turbidity screens to retain sediment on-site and to prevent violations of state water quality standards. These devices shall be installed, used, and maintained at all locations where the possibility exists of transferring suspended solids into the receiving waterbody due to the licensed work, and shall remain in place at all locations until construction in that location is completed and soils are permanently stabilized. All best management practices shall be in accordance with the guidelines and specifications described in *the State of Florida Erosion and Sediment Control Designer and Reviewer Manual* (Florida Department of Transportation and Florida Department of Environmental Protection, by HydroDynamics Incorporated in cooperation with Stormwater Management Academy, June 2007) unless a project-specific erosion and sediment control plan is approved as part of this License. If project-specific conditions require additional measures during any phase of construction or operation to prevent erosion or control sediments beyond those specified in the approved erosion and sediment control plan, the Licensee shall implement additional best management practices as necessary, in accordance with the guidelines and specifications in *the State of Florida Erosion and Sediment Control Designer and Reviewer Manual.* The Licensee shall correct any erosion or shoaling that causes adverse impacts to the water resources as soon as feasible. Once project construction is complete in an area, including the re-stabilization of all

side slopes, embankments and other disturbed areas, and before conversion to the operation and maintenance phase, all silt screens and fences, temporary baffles, and other materials that are no longer required for erosion and sediment control shall be removed.

4. The Licensee shall complete construction of all aspects of the SWMS described in the ERP Application Form, submitted as part of a post-certification submittal, amendment, modification, or certification application including water quality treatment features, and discharge control facilities prior to use of the portion of the Certified Facility being served by the SWMS.

5. At least 48 hours prior to the commencement of construction of any new SWMS for any part of a Certified Facility authorized by this certification, the Licensee shall submit to the Department a written notification of commencement using an "Environmental Resource Permit Construction Commencement Notice" (DEP Form 62-330.350(1), F.A.C.), indicating the actual start date and the expected completion date.

6 Each phase or independent portion of the approved system must be completed in accordance with the submitted DEP Form prior to the operation of the portion of the Certified Facility being served by that portion or phase of the system.

7. Within 30 days, or such other date as agreed to by DEP and the Licensee, after completion of construction of any new portions of the SWMS, the Licensee shall submit to the SWD, and copy the SCO, a written statement of completion and certification by a registered professional engineer (P.E.), or other appropriate registered professional, as authorized by law, utilizing the required "As-Built Certification and Request for Conversion to Operation Phase" (DEP Form 62-330.310(1), F.A.C.). Additionally, if deviations from the approved drawings are discovered, the As-Built Certification must be accompanied by a copy of the approved drawings with deviations noted.

8. Any substantial deviation from the approved drawings, exhibits, specifications or Conditions, may constitute grounds for revocation or enforcement action by the Department.

9. The operation phase of any new SWMS approved by the Department shall not become effective until the Licensee has complied with the requirements of the conditions herein, the Department determines the system to be in compliance with the approved plans, and the entity approved by the Department accepts responsibility for operation and maintenance of the system.

10. The DEP District must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in offsite discharge or sediment transport into wetlands or surface waters, a written dewatering plan must be submitted to and approved by the Department prior to the dewatering event. Additional authorizations may be required for certain dewatering activities.

[Section 373.414, F.S.; Chapters 62-302, 62-330, F.S., and Rule 62-4.242, F.A.C.]

C. Wetland and Other Surface Water Impacts

1. All Certified Facilities shall be constructed in a manner which will eliminate or reduce adverse impacts to on-site and/or adjacent wetlands or other surface waters to the extent practicable or otherwise comply with substantive criteria for elimination or reduction.

When impacts to wetlands will occur as a result of a future amendment, modification, or certification, and cannot be practicably eliminated or reduced, the Licensee may propose, and the Department or Board shall consider mitigation to offset otherwise unpermittable activities under the ERP review process pursuant to Condition XXVIII.A.1, "Submittal for Construction Activities," above.

2. Proposed mitigation plans submitted with the DEP ERP Application forms required in Condition XXVIII. A.1.a. above, or submitted and approved as part of an amendment, modification, or certification, and that are deemed acceptable by DEP, shall include applicable construction conditions, success criteria and monitoring plans, and shall be incorporated into these Conditions as Attachment C (Mitigation Plans).

[Sections 373.413, 373.414, 373.4145, 403.511, 403.814(6), and F.S.; Chapters 62-330, 62-340 62-342, and 62-345, F.A.C.]

XXXI. THIRD PARTY IMPACTS

The Licensee is responsible for maintaining compliance with these Conditions even when third party activities authorized by the Licensee occur in or on the Certified Site.

[Section 403.506(1), F.S.]

XXXII. FACILITY OPERATION

The Licensee shall properly operate and maintain the Certified Facility and systems of treatment and control (and related appurtenances) that are installed and used by the Licensee to achieve compliance with these Conditions, as required by the Final Order of Certification, these Conditions, or a post-certification amendment or modification. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the Final Order of Certification, these Conditions, or a post-certification amendment or modification. Further, the Licensee shall take all reasonable steps to minimize any adverse impact resulting from noncompliance with any limitation specified in this certification, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying event.

[Rule 62-4.160(6), F.A.C.]

XXXIII. RECORDS MAINTAINED AT THE FACILITY

A. These Conditions or a copy thereof shall be available in either hardcopy or electronic form at the Site.

B. The Licensee shall have available at the Site, or other location designated by these Conditions, records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation required by these Conditions, copies of all reports required by these Conditions, and records of all data used to complete the SCA for this approval. These materials may be maintained in either hardcopy or electronic form and shall be retained at least three (3) 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; and

6. the results of such analyses.

[Rules 62-4.160(12) and (14)(b), F.A.C.]

XXXIV. WATER DISCHARGES

A. Discharges

1. Except as otherwise authorized by a permit issued by the Department under a federally approved or delegated program or to the extent a variance, exception, exemption or other relief is granted or authorized by these Conditions, the Licensee shall not discharge to surface waters wastes which are acutely toxic, or present in concentrations which are carcinogenic, mutagenic, or teratogenic to human beings or to significant locally occurring wildlife or aquatic species. The Licensee shall not discharge to ground waters wastes in concentrations which, alone or in combination with other substances, or components of discharges (whether thermal or non-thermal) are carcinogenic, mutagenic, teratogenic, or toxic to human beings (unless specific criteria are established for such components in Rule 62-520.400, F.A.C.) or are acutely toxic to indigenous species of significance to the aquatic community within surface waters affected by the ground water at the point of contact with surface waters.

2. Except as otherwise authorized by a permit issued by the Department under a federally approved or delegated program or to the extent a variance, exception, exemption, or other relief is granted or authorized by these Conditions, all discharges and activities must be conducted so as to not cause a violation of applicable water quality standards set forth in Chapters 62-4, 62-302, 62-520, 62-550, and, 62-620, F.A.C., including the provisions of Rules 62-4.243, 62-4.244, and 62-4.246, F.A.C., the antidegradation provisions of Rules 62-4.242(1)(a), (2), and (3), F.A.C., and Rule 62-302.300, F.A.C., and any special standards for Outstanding Florida Waters and Outstanding National Resource Waters set forth in Rule 62-4.242(2) and (3), F.A.C. and for which an effluent limitation has been included in Facility NPDES Permit FL0000187. All discharges to groundwater and activities must be conducted so as to not cause a violation of the applicable groundwater standards in Chapters 62-520 and 62-550, F.A.C., except as provided in Consent Order No. 00-1275 and the Big Bend Remedial Action Plan being implemented thereunder. In accordance with Rule 62-520.520(1), F.A.C., the Department considers TEC's Big Bend Station to be an "existing installation" that is exempt from compliance with secondary standards for Class G-II ground water referenced in Rule 62-520.420(1), F.A.C., at the property boundary

3. All dewatering discharges must be in compliance with Rule 62-621.300, F.A.C.

[Chapters 62-4, 62-302, 62-520, 62-550, and 62-620, F.A.C., and Rule 62-621.300, F.A.C.]

B. Wastewater Incident Reporting

1. The Licensee shall report to the appropriate district office any noncompliance with industrial wastewater requirements which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Licensee becomes aware of the circumstances.

The Licensee shall provide the following information, to the extent known, to the applicable DEP District Office in the 24-hr oral report:

a. Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,

b. Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,

c. Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and

d. Any unauthorized discharge to surface or ground waters.

A written submission shall also be provided within five days of the time the Licensee 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 time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

2. For unauthorized releases or spills of treated or untreated wastewater reported that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WARNING POINT NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the Licensee becomes aware of the discharge. The Licensee, to the extent known, shall provide the following information to the State Warning Point:

a. Name, address, and telephone number of person reporting;

b. Name, address, and telephone number of Licensee or responsible person for the discharge;

c. Date and time of the discharge and status of discharge (ongoing or ceased);

d. Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);

e. Estimated amount of the discharge;

f. Location or address of the discharge;

g. Source and cause of the discharge;

h. Whether the discharge was contained on-site, and cleanup actions taken to date;

i. Description of area affected by the discharge, including name of water body affected, if any; and

j. Other persons or agencies contacted.

3. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department shall waive the written report.

[Chapter 403, F.S.; Rule 62-620.610(20), F.A.C.]

XXXV. SOLID AND HAZARDOUS WASTE

A. Solid Waste

The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-701, F.A.C., for any solid waste generated within the Certified Facility during construction, operation, and maintenance.

[Chapter 62-701, F.A.C.]

B. Hazardous Waste and Used Oil

The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-730, F.A.C., for any hazardous waste generated within the Certified Facility. An EPA identification number must be obtained before beginning hazardous waste activities unless the facility is a Conditionally Exempt Small Quantity Generators (CESQGs). CESQGs generate no more than 100 kg (220 lbs) of hazardous waste in any month.

The Licensee shall comply with all applicable provisions of Chapter 62-710, F.A.C., for any used oil and used oil filters generated within the Certified Facility.

The Licensee shall comply with all applicable provisions of Chapter 62-737, F.A.C., for any spent mercury-containing lamps and devices generated within the Certified Facility.

The Licensee shall comply with all applicable provisions of Chapter 62-740, F.A.C., for any petroleum contact water located within the Certified Facility.

[Chapters 62-710, 62-730, 62-737, and 62-740, F.A.C.]

C. Hazardous Substance Release Notification

1. Any owner or operator of a facility who has knowledge of any release of a hazardous substance from a Certified Facility in a quantity equal to or exceeding the reportable quantity in any 24-hour period shall notify the Department by calling the STATE WATCH OFFICE, (800) 320-0519, as soon as possible, but not later than one working day of discovery of the release.

2. Releases of mixtures and solutions are subject to these notification requirements only where a component hazardous substance of the mixture or solution is released in a quantity equal to or greater than its reportable quantity.

3. Notification of the release of a reportable quantity of solid particles of antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver,

thallium, or zinc is not required if the mean diameter of the particles released is larger than 100 micrometers (0.004 inches).

[Chapter 62-150, F.A.C.]

D. Contaminated Site Cleanup

The Licensee shall comply with all applicable provisions of DEP Chapter 62-780, F.A.C., for any violations of relevant provisions of Chapter 376 or 403, F.S., that result in legal responsibility for site rehabilitation pursuant to those chapters. This responsibility for site rehabilitation does not affect any activity or discharge permitted or exempted pursuant to Chapter 376 or 403, F.S., or rules promulgated pursuant to Chapter 376 or 403, F.S.

[Chapter 62-780, F.A.C.]

XXXVI. STORAGE TANK SYSTEMS

Registration, construction, installation, operation, maintenance, repair, closure, and disposal of storage tank systems that store regulated substances shall be in accordance with Chapters 62-761 and 62-762, F.A.C., in order to minimize the occurrence and environmental risks of releases and discharges. Mineral acid storage tank systems are subject only to Rule 62-762.891, F.A.C.

A. Incident Notification Requirements.

Notification of any condition or situation indicating that a release or discharge may have occurred from a storage tank system or system component shall be made to the County on Incident Notification Form 62-761.900(6) or 62-762.901(6) within 24 hours of discovery or before the close of the County's next business day.

B. Discharge Reporting Requirements

Notification of the discovery of a discharge of a regulated substance shall be made to the county in writing or electronic format on Form 62-761.900(1), Discharge Report Form (DRF) within 24 hours of the discovery or before the close of the County's next business day, except as provided in subsection 62-761.440(5), F.A.C.

C. Discharge Cleanup

If a discharge of a regulated substance occurs at a Certified Facility, actions shall be taken immediately to contain, remove, and abate the discharge under all applicable Department rules. The Licensees is advised that other federal, state, or local requirements may apply to these activities. If the contamination present is subject to the provisions of Chapter 62-780, F.A.C., corrective action, including free product recovery, shall be performed in accordance with that Chapter.

D. Out of Service and Closure Requirements

Storage tank systems shall be taken out-of-service and/or closed as necessary in accordance with Rules 62-761.800 and 62-762.801, F.A.C., as applicable.

[Chapters 62-761, 62-762, and 62-780, F.A.C.]

SECTION B. SPECIFIC CONDITIONS

I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

A. Industrial Wastewater Ground Water Monitoring

1. Ground water monitoring is required around all Industrial Wastewater sites described in Attachment F, Ground Water Monitoring, Operation and Maintenance Requirements (GWMOMR), hereto incorporated and enforceable. The Licensee shall install and maintain an industrial wastewater ground water monitoring well network to monitor the water quality of the aquifer(s) around the Industrial Wastewater sites, in accordance with Chapter 62-520, F.A.C.

2. During the period of operation authorized by this Site Certification, the Licensee shall conduct ground water monitoring at the specified monitor wells for the parameters and frequency identified in Attachment F and the Big Bend Remedial Action Plan to comply with the requirements [at the "Solid Waste related" storage/management areas] and [at the "Industrial Wastewater related" areas]. The Licensee shall report to the Department the required parameters at the stated frequencies to comply with the Remedial Action Plan and Attachment F. The existing monitoring requirements may be modified in accordance with the ECAP Groundwater Monitoring Termination Process contained in the Remedial Action Plan, if requested prior to Closure of CO 00-1275.

A site-wide monitoring plan shall be submitted to the Department for review prior to closure of CO 00-1275. The site-wide monitoring plan shall include, but not be limited to, the following:

- discharge limitations,
- monitoring requirements,
- monitoring well construction requirements,
- updated aerial showing all monitoring wells (existing and new).
- a description of the complete IWW system including IWW treatment systems, monitoring wells, and ponds,
- a description of the coal combustion by-products management/storage areas,
- sampling locations and parameters to be sampled at each monitoring well,
- monitoring frequencies,
- reporting and recordkeeping requirements, and

operational requirements such as testing requirements, impoundment operation and maintenance, and impoundment integrity.

3. For any new or revised industrial wastewater site, the Licensee shall submit a revised GWMOMR to the DEP-SWD Ground Water Section with an electronic copy to the DEP Siting Office mailbox for review and approval at least 90 days prior to operation of a new or revised site. In addition to the items for the updated plan listed in the above condition, the revised plan shall include new monitor well locations and designs, seasonal ground water depths and flow directions at the site through preparation of seasonal water table contour maps, based upon water level data obtained during the pre-operational and existing monitoring programs, location of potable wells located within one quarter mile of a new site, history of activity,

geology, soil borings, mounding analysis of any new ponds, wastewater application of rate, and analysis or characterization of Industrial Wastewater to be discharged to the new site. Based on the contour maps, and in accordance with Chapter 62-520, F.A.C., a revised ground water monitoring well network shall be located. An initial ground water sample shall be conducted prior to operation of any new industrial wastewater site.

4. Any revisions to the GWMOMR shall be submitted, reviewed and approved through the post-certification process referred to in "Procedures for Post-Certification Submittals" of Section A., and Attachment F will be amended to reflect any changes.

5. The GWMOMR shall be revised to comply with the provisions contained in Rules 62-620.325 and 62-620.345, F.A.C., if applicable, or to comply with any applicable effluent standard or limitation issued or approved under Section 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, by change in the effluent standards, limitations, or water quality standards previously issued or approved.

6. At a minimum, projects which involve any one of the following shall be reviewed by the Department for a determination on the requirement of a modification to these Conditions and if a modification is required, it shall be processed in accordance with Section 403.516(1)(c), F.S., and Rule 62-17.211, F.A.C., as applicable.

a. New major sources or deletion of existing major sources of wastewater;

b. Improvements made to existing, or new wastewater treatment facilities including those which provide for a new or expanded land application system which will result in an increase in the permitted capacity;

c. Pollutants not addressed in the GWMOMR or these Conditions;

d. Other projects that cause or may cause changes to the quantity and/or quality of discharges to groundwater as a result of solid waste disposal or industrial wastewater treatment.

7. Upon Department approval of the site-wide monitoring plan and closure of CO 00-1275, the Conditions of Certification, and/or Attachment F, shall be modified to incorporate the site-wide monitoring plan and any additional requirements based on the site conditions at the time of modification.

8. If the concentration for any constituent listed in Attachment F, in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative natural background quality shall be the prevailing standard.

9. For the land application system G-001, all ground water quality criteria specified in Chapter 62-520, F.A.C., shall be met at the edge of the zone of discharge. The zone of discharge for this project shall hydrologically defined and shall extend to the boundary established by the placement of compliance monitor wells as depicted, and to the base of the surficial aquifer.

a. TECO Big Bend is an existing installation as defined by Rule 62-520.200(10), F.A.C., thus the ZOD has been established per the discretion of the Department in consideration of the property extent and site-specific hydrology. Accordingly, the ZOD is

defined by the downgradient terminus of the upland ground water regime prior to transition to a surface water regime. This ground water, surface water ZOD boundary is delineated by the location of compliance monitor wells. The vertical limit of the ZOD as defined by Rule 62-520.200(27), F.A.C., is the base of the Floridan aquifer.

10. Every 5 years the licensee shall submit a proposal identifying the IWW wells in the Department-approved monitoring requirements that will be sampled for the Primary drinking water parameters included in Chapter 62-550, F.A.C., (excluding radionuclides, asbestos, acrylamide, Dioxin, butachlor, epichlorohydrin, pesticides, and PCBs, unless reasonably expected to be a constituent of the discharge or an artifact of the site). The selection of the wells should include at least one background well, one intermediate well and one compliance well. Compliance well selections should be based on recent groundwater conditions. Sampling results should be submitted sixty days [60] upon Department's approval of the well proposal sampling.

[Rules 62-520.420(2), 62-520.200(26), 62-520.465, and 62-520.600(5)(b), F.A.C.]

11. The licensee shall report to the Department all wastewater discharges from the Culbreath Bayside Station into the settling/recycle pond system. The report should include flows, duration and water quality analyses results for the parameters listed in Part II. C of Attachment F, every time wastewater is diverted to the Big Bend Facility. The Department's approval is required prior to diverting the flow.

12. There shall be no discharge of industrial wastewater from this facility to ground or surface waters, except as authorized by the COC including this GWMOMR or by NPDES Permit No. FL0000817.

13. The Licensee shall provide verbal notice to the Department's Southwest District Office as soon as practical after discovery of a sinkhole or other karst feature within an area for the management or application of wastewater, or wastewater sludges. The licensee shall immediately implement measures appropriate to control the entry of contaminants and shall detail these measures to the Department's Southwest District in a written report within 7 days of the sinkhole discovery.

14. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the license, if that discharge will exceed the highest of the following levels;

(1) One hundred micrograms per liter,

(2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2, 4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter for antimony, or

(3) Five times the maximum concentration value reported for that pollutant in the license application; or

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the license, if that discharge will exceed the highest of the following levels;

(1) Five hundred micrograms per liter,

(2) One milligram per liter for antimony, or

(3) Ten times the maximum concentration value reported for that pollutant in the license application.

[Rules 62-620.320(6) and 62-620.625(1), F.A.C.]

15. The licensee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility or activity and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment.

[Rule 62-620.610(15), F.A.C.]

16. Bypass Provisions.

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment works.

b. Bypass is prohibited, and the Department may take enforcement action against a licensee for bypass, unless the licensee affirmatively demonstrates that:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The license submitted notices as required.

c. If the licensee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The licensee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Section A. Condition VII. Notification. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.

d. The Department shall approve an anticipated bypass, after considering its adverse effect, if the licensee demonstrates that it will meet the three conditions listed in the following "Upset Provisions" paragraphs b. (1) through (3).

e. A licensee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure

efficient operation. These bypasses are not subject to the provisions of the following "Upset Provisions" paragraphs b. through d.

[Rule 62-620.610(22), F.A.C.]

17. Upset Provisions.

a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the licensee.

(1) An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation.

(2) An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based license effluent limitations if the requirements of upset provisions of Rule 62-620.610, F.A.C., are met.

b. A licensee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:

(1) An upset has occurred, and that the licensee can identify the cause(s) of the upset;

(2) The licensed facility was at the time being properly operated;

(3) The licensee submitted notice of the upset as required in Section A. Condition XV. Regulatory Compliance, of this license; and

(4) The licensee complied with any remedial measures required under Section A. Condition XV. Regulatory Compliance.

c. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the licensee.

d. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[Rule 62-620.610(23), F.A.C.]

18. Best Management Practices

a. BMP Plan: For purposes of this part, the terms "pollutant" or "pollutants" refer to any substance listed as toxic under Section 307(a)(1) of the Clean Water Act (the "Act"), oil, as defined in Section 311(a)(1) of the Act, and any substance listed as hazardous under Section 311 of the Act. The licensee shall develop and implement a Best Management Practices (BMP) plan which prevents, or minimizes, the potential for the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations; and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

b. Implementation: The BMP plan shall be developed and implemented in accordance with the schedule in Attachment F.

c. General Requirements: The BMP Plan shall:

(1) Be documented in narrative form, and shall include any necessary plot plans, drawings or maps.

(2) Establish specific objectives for the control of pollutants.

(a) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(b) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural conditions (e.g., precipitation), or other circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

(3) Establish specific best management practices to meet the objectives identified under paragraph (b) of this subsection, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented.

(4) Be reviewed by plant engineering staff and plant manager.

d. Documentation: The licensee shall maintain the BMP plan at the facility and shall make the plan available to the Department upon request.

e. BMP Plan Revision(s): The licensee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility that materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

f. Revision for Ineffectiveness: If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of significant amounts of pollutants to surface waters and the specific objectives and requirements under paragraphs (b) and (c) of item 3, the Attachment F shall be subject to revision pursuant to rule 62-620.325, F.A.C., to incorporate revised BMP requirements.

[Chapter 62-620, F.A.C.]

B. Industrial Wastewater Discharges

1. Plant Effluents and Receiving Body of Water

a. Coal Pile

Coal pile runoff shall be routed to the lined Recycle Pond System and shall not be directly discharged to surface waters. The stormwater pond associated with the coal pile shall be lined no later than December 31, 2019.

b. Gypsum Storage Area

There shall be no direct discharge of contact stormwater runoff to surface waters from the proposed gypsum storage area after the new facility has been placed in service. Discharges in compliance with the provisions of the Big Bend Generic Permit for Stormwater Discharges from Large and Small Construction Activities will be allowed during construction after the timely filing of a Notice of Intent in accordance with the provisions of Chapter 62-621, F.A.C. Groundwater monitoring at the existing gypsum storage area [referred to as the "FGD By-Product Storage Area"] shall comply with the requirements of the Big Bend Remedial Action Plan until closure or lining of the area is approved in accordance with Consent Order No. 00-1275.

c. Storm Water Runoff

During plant operation, necessary measures shall be used to settle, filter, treat, or absorb silt-containing or pollutant-laden stormwater runoff to limit the suspended solids to 50 mg/l or less at the point of discharge (POD) during rainfall periods less than the 10-year, 24-hour rainfall, and to prevent an increase in turbidity of more than 50 Nephelometric Turbidity Units above background in waters of the State beyond 150 meters from the POD at Station E 4500 and N 3712.

Control measures shall consist at the minimum of filters, sediment traps, barriers, berms or vegetative planting. Exposed or disturbed soil shall be protected as soon as possible to minimize silt- and sediment-laden runoff. The pH shall be kept within the range of 6.0 to 8.5 at the POD.

The POD will be determined by the Department to be where the effluent physically enters the waters of the State as defined in NPDES Permit No. FL0000817 at Outfall D-001 at approximate Latitude 27°47'37" North, Longitude 82°24'39" West.

d. Recycle (Water) Pond System Overflow

Discharges from the lined recycle pond system identified in Attachment F, are subject to the bypass conditions and requirements identified in Section B. Condition I. paragraph 16.

C. Sludge/Solids Management Requirements

The Licensee shall submit an updated Coal Combustion Product/Solid Waste Management Manual (Manual) for all solid waste and byproducts that details the unit-specific BMP's and material management practices that will be implemented to assure compliance with 403.7045(1), F.S., and to provide reasonable assurance that environmental standards will not be violated. The final version of the Manual will be contingent on and modified by completion of all corrective actions in accordance with the Big Bend Remedial Action Plan to meet the requirements of Paragraph 20 of CO 00-1275.

1. Disposal of sludge in a solid waste management facility permitted by the Department shall be in accordance with the non-procedural requirements of Chapter 62-701, F.A.C. Storage, transportation, and disposal of sludge/solids characterized as hazardous waste shall be in compliance with requirements of Chapter 62-730, F.A.C.

2. The licensee shall keep records of the amount of sludge disposed, transported, and incinerated. If a person other than the licensee is responsible for sludge transporting, disposal, or incineration, the licensee shall also keep the following records:

a. name, address and telephone number of any transporter, and any manifests or bill of lading used;

b. name and location of the site of disposal, treatment or incineration;

c. name, address, and telephone number of the entity responsible for the disposal, treatment, or incineration site.

3. This license does not authorize the facility to store, process, or dispose of solid waste except at a permitted solid waste management facility or a facility exempt from permitting under Chapter 62-701, F.A.C.

[Rule 62-701.300 (1) (a), F.A.C.]

4. This license does not authorize the facility to store, process, or dispose of solid waste in a manner or location that causes air quality standards to be violated or water quality standards or criteria of receiving waters to be violated.

[Rule 62-701.300 (1) (b), F.A.C.]

5. Storage, process or dispose of solid waste are regulated under Chapter 62-701, except for the activities listed under Chapter 62-701.220 (2) F.A.C. The following exceptions are applicable to this site only.

a. Recovered materials or recovered materials processing facilities, if:

(1) A majority of the recovered materials at a facility are demonstrated to be sold, used, or reused within one year;

(2) The recovered materials or the products or byproducts of operations that process recovered materials are not discharged, deposited, injected, dumped, spilled, leaked, or placed into or upon any land or water that such products or byproducts or any constituent thereof may enter other lands or be emitted into the air or discharged into any waters, including ground water, or otherwise enter the environment such that a threat of contamination in excess of applicable water quality standards and criteria or air quality standards is caused;

(3) The recovered materials are not hazardous wastes; and

(4) The facility is registered as required in Section 403.7046, F.S., and Chapter 62-722, F.A.C.;

b. Industrial byproducts, if

(1) A majority of the industrial byproducts are demonstrated to be sold, used, or reused within one year;

(2) The industrial byproducts are not discharged, deposited, injected, dumped, spilled, leaked, or placed into or upon any land or water so that such industrial byproducts or any constituent thereof may enter other lands or be emitted into the air or discharged into any waters, including ground water, or otherwise enter the environment such that

a threat of contamination in excess of water quality standards and criteria or air quality standards is caused.

6. In the event that Coal Combustion residuals (CCR) are encountered during excavation activities not conducted under an approved closure plan, the licensee shall cease excavation and shall immediately (within 24 hours) notify the Department's Solid Waste Section of such occurrence. Excavated CCR shall be removed from the site and disposed of as Class I waste.

D. Additional Land Application Requirements.

1. Routine aquatic weed control and regular maintenance of storage pond embankments and access areas are required.

2. The bottoms for the settling basins shall be cleaned out periodically, or when necessary, to remove the excess buildup of sediments. Solids and sludges from this system shall be recovered and disposed at a Class I landfill site authorized by the Department to accept solid waste under Chapter 62-701, F.A.C

3. During normal plant operation, the freeboard of the settling basins shall not be less than three feet except after rainfall events exceeding the 25-year, 24-hour storm event.

4. The licensee shall not discharge water from the basins to surface waters of the State.

[Chapter 62-620, F.A.C.]

E. Potable Water Supply System

The potable water supply system shall be designed and operated in conformance with Chapter 62-555, F.A.C. Information as required in Chapter 62-555, F.A.C., shall be submitted to the Department prior to construction and operation. The operator of the potable water supply system shall be certified in accordance with Section 403.067, F.S., and rules promulgated thereunder.

[Chapter 62-555, F.A.C.]

F. Mineral Oil Dielectric Fluid Emergency Response Action Protocol

The foundations for the addition of any new transformers, capacitors, and switching gear necessary to connect Big Bend Station to the existing distribution system shall be constructed of an impervious material and shall be constructed in such a manner as to allow complete collection and recovery of any spills or leakage of oily, toxic, or hazardous substances. Should a spill occur, the following steps shall be taken:

1. The spill will be assessed, and cleanup activities will be initiated;

2. Equipment will be isolated, if necessary, and the source of the spill will be stopped;

3. Gravel and mineral oil will be removed, and clean gravel will be replaced; and

4. Measures will be implemented as necessary in accordance with the Oil Spill Prevention Control and Countermeasures Plan for Big Bend Station and the Mineral Oil Dielectric Fluid Emergency Response Action Protocol revised May 2016 (incorporated hereinto as Attachment D).

[Chapter 62-780, F.A.C.]

F. ERP

The volume and pressure level of bentonite in the drill string will be monitored at all times during the directional drilling operation. Should a drop-in volume and pressure level of bentonite occur, the following measures will be taken:

1. Immediately conduct a visual inspection of the Horizontal Directional Drilling (HDD) corridor and any adjacent areas/communities lying within 500-ft. of the corridor. Notify the DEP-SW District Environmental Resource Compliance Assurance Program Staff at 813-470-5700 if a frac-out is detected.

2. Should the release of drilling materials occur in wetlands, a sediment fence or turbidity barrier shall be installed around the site and the material shall be removed by vacuum truck.

3. Should the release of drilling materials occur on the bay bottom, a cleanup vessel will be dispatched immediately to the frac-out site to vacuum pump the material from the bottom into filter bags for disposal.

[Chapter 62-330, F.A.C.]

II. FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

A. Listed Species

The following table contains state and federally listed species that occur in the State of Florida and may occur within the TECO's Big Bend Unit 1 Modernization Project Site. The table contains species that are potentially impacted by the activities proposed on the TECO's Big Bend Unit 1 Modernization Project Site. Therefore, these recommended conditions of certification apply to the species listed in this table:

Table 1

Common Name	Scientific Name	Status
Little blue heron	*Egretta caerulea*	State Threatened
American oystercatcher	*Haematopus palliates*	State Threatened
Roseate spoonbill	*Platalea ajaja*	State Threatened
Tricolored heron	*Egretta tricolor*	State Threatened
Wood stork	*Mycteria Americana*	Federally Threatened
American alligator	*Alligator mississippiensis*	Federally Threatened

Eastern indigo snake	*Drymarchon couperi*	Federally Threatened
Florida manatee	*Trichechus manatus*	Federally Threatened
Gulf sturgeon	*Acipenser oxyrinchus desotoi*	Federally Threatened

[Article IV, Sec. 9, Florida Constitution; Chapters 68A-27 and 68A-16, F.A.C.]

B. General Listed Species Survey

1. The Licensee shall coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) to obtain and follow the current survey protocols for all listed species that may occur within the Big Bend Unit 1 Modernization Project Site and associated supporting facilities, as well as accessible appropriate buffers within the TECO property or rights-of-way as defined by the listed species' survey protocols, prior to conducting detailed surveys. Basic guidance for conducting wildlife surveys may be found within the Imperiled Species Management Plan's species-specific Permitting Guidelines (http://myfwc.com/wildlifehabitats/imperiled/plan/) or in the Florida Wildlife Conservation Guide (http://myfwc.com/conservation/value/fwcg/). Neither of these documents provide survey guidelines for Gulf sturgeon. Appropriate survey methodology for this species and this project will be developed and coordinated between the permit holder, FWC and NOAA's National Marine Fisheries Service.

2. Surveys shall be conducted for the species listed in Table 1 above prior to clearing and construction in accordance with the survey protocols. Surveys may be initiated prior to receiving certification as long as all appropriate survey protocol timing requirements are met. The results of those detailed surveys shall be provided to the FWC in a report, and coordination shall occur within the FWC on appropriate impact avoidance, minimization, or mitigation methodologies.

[Article IV, Sec. 9, Florida Constitution; Sections 379.2291, 403.507, 403.526, and 403.5113(2), F.S.; and Rule 68A-27, F.A.C.]

C. Specific Listed Species Surveys

Before land clearing and construction activities within the TECO Big Bend Unit 1 Modernization Project Site and associated supporting facilities, the Licensee shall conduct an assessment for all terrestrial listed species and shall note all habitat, occurrence or evidence of listed species. Wildlife surveys shall be conducted during the reproductive or "active" season for each species that falls before the projected clearing activity schedule unless otherwise approved by the FWC. For species that are difficult to detect, the Licensee may make the assumption that the species is present and plan appropriate avoidance/mitigation measure for FWC post-certification review and approval at least 60 days prior to commencing clearing or construction activities within the surveyed area. The surveys required by these conditions of certification may be conducted prior to issuance of the final order of certification, in which case this condition would be considered satisfied.

1. This survey shall be conducted in accordance with the U.S. Fish and Wildlife Service (USFWS) or FWC guidelines and methodologies by a person or firm that is knowledgeable and experienced in conducting flora and fauna surveys for each potentially occurring listed species.

2. This survey shall identify locations of breeding sites, nest, and burrows for listed wildlife species. Nest and burrows shall be recorded with global positioning system (GPS) coordinates, identified on an aerial photograph, and submitted with the final listed species report. Although nests and burrows may be recorded individually with GPS, the FWC prefers that any applicable protection radii surrounding groups of nest sites and burrows be included on a site-specific basis, rather than around individual nests and burrows, and be physically marked so that clearing and construction shall avoid impacting them.

3. This survey shall include an estimate of the acreage and percent cover of each existing vegetation community (Florida Land Use, Cover and Forms Classification System, or FLUCFCS, at the third degree of detail) that is contained within the TECO Big Bend Unit 1 Modernization Project Site prior to land clearing and construction activities using geographic information system (GIS). Examples of such wildlife-based habitat classification schemes include Florida's State Wildlife Action Plan (FWC 2012), Descriptions of Vegetation and Land Cover Types (FWC 2004), or Natural Communities Guide (Florida Natural Areas Inventory 2010)*.

[Article IV, Sec. 9, Florida Constitution; Sections 379.2291 F.S.; and Rules 68A-27, 68A-4, and 68A-16, F.A.C.]

*Florida Fish and Wildlife Conservation Commission. 2012. Florida's State Wildlife Legacy Initiative: Florida's State Wildlife Action Plan. Tallahassee, Florida.

Florida Natural Areas Inventory. 2010. Guide to the natural communities of Florida: 2010 edition. Florida Natural Areas Inventory, Tallahassee, Florida.

Stys, B., R. Kautz, D. Reed, M. Kertis, R. Kawula, C. Keller, and A. Davis. 2004. Florida vegetation and land cover data derived from 2003 Landsat ETM+ Imagery. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida.

D. Listed Species Locations

Where any suitable habitat or evidence is found of the presence of listed species, including but not limited to those specified in A above, within the TECO Big Bend Unit 1 Modernization Project Site, the Licensee shall report those location to, and confer with, the FWC to determine whether additional pre-clearing surveys are warranted, and to identify potential mitigation or avoidance recommendations. If additional pre-clearing surveys are required by the FWC as appropriate and as specified in these conditions of certification, they shall occur in the reproductive season prior to the anticipated date for the start of construction within the TECO Big Bend Unit 1 Modernization Project Site. The Licensee shall not construct in areas where evidence of listed species was identified during the initial survey until the particular listed species issues have been resolved as follow:

1. Listed Wildlife Species: If listed wildlife species are found, their presence shall be reported to the DEP Siting Coordination Office, the FWC, and the USFWS.

2. Species Management Plan: If total avoidance of state-listed wildlife species is not feasible, the Licensee shall consult with the FWC to determine the steps appropriate for the species potentially impacted to avoid, minimize, mitigate, or otherwise

appropriately address potential impacts. For wildlife species, these steps shall be memorialized in a Species Management Plan and submitted to the FWC for review and approval.

[Article IV, Sec. 9, Florida Constitution; Sections 379.2291 F.S.; and Rule 68A-27, F.A.C.]

E. Florida Manatee

The following conditions are intended to address manatee protection during the winter months while Unit 1 is off-line for construction during its modernization. The following conditions are not intended to affect or replace the conditions of the existing Manatee Protection Plan.

1. Biological Monitoring

The following monitoring requirements for manatee distribution and abundance are applicable during the Big Bend Unit 1 modernization project construction during the winter months of 1 December through 31 March when Unit 1 is offline:

a. The Licensee shall submit to FWC a Biological Monitoring Plan, which shall be reviewed and approved by FWC. The Final Biological Monitoring plan shall be in place a minimum of 3 months prior to Unit 1 going off-line for construction. The Licensee shall submit the final Biological Monitoring Plan to FWC and the DEP Siting Office. The Biological Monitoring Plan shall include at a minimum the following components:

(1) On-site Visual Monitoring of Manatees

(a) The Licensee shall be prepared to provide prior to 1 December of the relevant season(s), one or more manatee observers who have been trained by an approved FWC trainer or by FWC staff, so they can detect indications of cold stress in manatees. The monitoring protocols and information requirements will be described in the Biological Monitoring Plan.

(b) The manatee observer(s) will be required to conduct a visual assessment of the condition and general distribution of manatees using the warm-water refuge during the winter months of 1 December through 31 March. The visual assessment shall be conducted for a sufficient length of time to assess most of the manatees present at the plant and accessible to the observer on that day.

(c) The frequency of visual assessments for distribution and abundance of manatees during the winter months of 1 December through 31 March will be agreed upon during the development of the Biological Monitoring Plan.

(2) Aerial Surveys

(a) Aerial surveys, including photo-documentation, may be required during the winter months of 1 December and 31 March while Unit 1 is off-line for modernization.

(b) Specific aerial survey paths, sampling frequencies, methodologies and criteria that will trigger aerial surveys must be identified and described in the Biological Monitoring Plan.

(c) Aerial survey data shall be analyzed and summarized after each winter season to provide an evaluation of manatee abundance and distributional changes within the survey area.

(3) Temperature Monitoring

(a) FWC requires a temperature monitoring and reporting plan during the modernization. Such a plan will be developed, approved, and implemented prior to the manatee protection season(s) associated with Unit 1 being off-line and will include specific locations for the temperature monitoring station(s), sampling frequencies, station depths, data collection methods, and reporting frequencies.

(b) Temperature monitoring stations within the thermal refuge shall include monitoring of ambient air and water temperatures measured at multiple locations.

(c) The Licensee shall include a plan to convey the data from the temperature monitoring stations to the appropriate agencies on a timely basis to be agreed upon during the development of the Biological Monitoring Plan.

(4) Reporting

The Licensee will prepare a Biological Monitoring Report that includes all data (made available in electronic form) as set forth in the Biological Monitoring Plan. This report will be submitted each year by the date(s) designated in the Biological Monitoring Plan. All annual reports shall be submitted as directed in the Biological Monitoring Plan.

[Section 403.507, F.S.; Section 379.1025, F.S.; Section 379.2291, F.S.; Section 379.2431 (2), F.S.; Section 20.331, F.S.]

2. Standard Biological Monitoring Plan Conditions

a. The Biological Monitoring Plan, including the proposed monitoring techniques and monitoring locations that will be used to assess manatee health, distribution and habitat during the modernization process, shall be approved by FWC.

b. If, in the review of the annual biological monitoring report, FWC, in consultation with the DEP, determines the need to modify the Monitoring Plan, FWC will notify the Licensee to discuss the findings. At that time, FWC, in consultation with the DEP and the Licensee, will determine what, if any, modifications need to be made to the Biological Monitoring Plan.

c. If the Licensee determines the Biological Monitoring Plan is in need of modifications, the Licensee will contact the agencies to discuss the proposed modifications. At that time, FWC, in consultation with the DEP and the Licensee, will determine what if any modifications need to be made.

d. The Licensee will provide personnel from the FWC, USFWS, or a designee of these agencies, access to the Big Bend power station property to conduct manatee monitoring activities. Reasonable notice shall be given to the Licensee by the agencies. Access would be limited to normal weekday business hours (8:00 a.m. - 5:00 p.m.) unless arrangements are made in advance with the Licensee.

e. All FWC and USFWS visitors to TECO's Big Bend power station will be required to comply with TECO's safety and security requirements. Personnel will receive an orientation from TECO or its contractor prior to commencing observations or other activities.

[Section 403.507, F.S.; Section 379.1025, F.S.; Section 379.2291, F.S.; Section 379.2431 (2), F.S.; Section 20.331, F.S.]

3. Contingency Plan

FWC and USFWS' Letter of Authorization (LOA) network responders will be responsible for all efforts related to manatee rescues, rehabilitation activities, and carcass recovery during the Big Bend Unit 1 modernization. In order to effectively implement contingency plans during the plant modernization and to address manatee health-related issues, the following conditions are required:

a. If the observer (pursuant to Biological Monitoring Plan) identifies manatees with apparent signs of cold stress disease, digital photographs should be taken of the animal(s) and the FWC shall be called as soon as possible on the day of the observations through the protocols described in the Biological Monitoring Plan.

b. The Licensee will notify FWC and USFWS immediately if there is an interruption in the generation and thermal discharge of either Unit 3 or 4 during the period when Unit 1 is under construction, or if, for any other reason either Unit 3 or 4 is not operating in a manner that will provide warm-water sufficient to keep the warm- water refuge at a temperature of 68° F or greater.

c. The Licensee shall provide in-kind services and financial assistance, not to exceed $100,000 in total value, to FWC for manatee rescue or recovery in the event that there is a failure to maintain the warm-water refuge at or above 68° F resulting in manatees experiencing cold stress related issues within the refuge. This condition would apply during the winter months of 1 December through 31 March while Unit 1 is off-line for modernization. The in-kind assistance and funds would only be used to address manatee-related cold stress issues in thermal refuge.

[Sections 403.507 F.S., Section 379.1025 F.S., Section 379.2291, F.S., Section 379.2431 (2) F.S., Section 20.331 F.S.]

4. Development of a Long-Term Manatee Strategy

In the future, the warm-water habitat created by TECO's Big Bend Power Station will diminish or be terminated; in that event the FWC and USFWS believes it is in the best interest of the Licensee, FWC, USFWS, DEP, and the Florida manatee population to begin strategic long-term planning to reduce the adverse effects to the Florida manatee population before this occurs. The FWC must be notified, in writing, within 30 days of any sale, conveyance, or other transfer of the facility. Conditions of the current MPP relevant to notifications of pending unit retirement remain in effect.

[Section 403.507, F.S.; Section 379.1025, F.S.; Section 379.2291, F.S.; Section 379.2431 (2), F.S.; Section 20.331, F.S.]

5. Manatee Construction Conditions for In-Water Work

a. The current Standard Manatee Conditions for In-Water Work are required for all in-water work in or adjacent to waters accessible to manatees. During the facility modernization construction, these waters include the intake canal and barge canal. If the licensee is unsure if a certain activity qualifies as in-water work, it will contact the FWC to discuss and determine applicability of these conditions for the proposed activity. Blasting or pile hammering activities to break rock shall be prohibited in waters accessible to manatees. If no other alternative exists, a modification of these conservation measures can be requested. An adequate Blast and Protected Species Watch Plan must be submitted to and approved by the Imperiled Species Management Section of the FWC prior to these methodologies being used.

b. To reduce the possibility of injuring or killing a manatee during construction, in-water work shall not be performed between November 15 and March 31 in the TECO Big Bend discharge canal unless essential to support the Big Bend Unit 1 modernization project's schedule or the safety of employees or reliability of the electric power system would be compromised. If in-water work during the winter cannot be avoided, the Licensee will contact the agencies to determine alternative conditions that will be implemented to address the proposed activity. This prohibition against in-water work from November 15 to March 31 does not extend to the intake and barge canals which do not serve as manatee thermal refuges.

c. At least one person shall be designated as a manatee observer when in-water work is being performed. That person shall have experience in manatee observation and be equipped with polarized sunglasses to aid in observation. The manatee observer must be on site during all in-water construction activities and will advise personnel to cease operation upon sighting a manatee within 50 feet of any in-water construction activity. Movement of a work barge, other associated vessels, or any in-water work shall not be performed after sunset, when the possibility of spotting manatees is negligible.

d. The Licensee will include as part of its safety orientation manatee awareness training for full-time permanent construction personnel at the Big Bend Unit 1 modernization Site. This training will be designed to educate the construction work force about the legal requirements to avoid manatees and to provide them with contact information if they should spot an injured manatee.

e. To reduce the risk of entrapment and drowning of manatees, grating shall be installed over any proposed pipes or culverts greater than 8 inches, but smaller than 8 feet in diameter that are submerged or partially submerged and reasonably accessible to manatees. Bars or grates no more than 8 inches apart shall be placed on the accessible end(s) during all phases of the construction process and as a final design element to restrict manatee access.

[Section 403.507, F.S.; Section 379.1025, F.S.; Section 379.2291, F.S.; Section 379.2431 (2), F.S.; Section 20.331, F.S.]

6. Force Majeure

If there is an act of God, terrorism, or war that prevents Licensee from providing the requisite warm water conditions, Licensee will notify FWC expeditiously and coordinate efforts to resume compliance with the certification conditions.

[Sections 403.507, F.S.; Article IV, Sec. 9, Fla. Const.; Section 20.331, F.S.]

III. DEPARTMENT OF TRANSPORTATION

A. Access Management to the State Highway System

All access modifications to State roadway facilities will be subject to the access management standards pursuant to Rule Chapters 14-96, State Highway System Connection Permits, and 14-97, Access Management Classification and Standards, F.A.C., in accordance with Sections 334.044(2) and 335.182 to 335.188, F.S.

[Sections 334.044(10)(a), 335.18 - 335.188, F.S.]

B. Overweight or Overdimensional Loads

Operation of overweight or overdimensional loads by the Licensee on State transportation facilities during construction and operation of the utility facility will be subject to safety and permitting requirements of Chapter 316, F.S., and Rule Chapter 14-26, Safety Regulations and Permit Fees for Overweight and Overdimensional Vehicles, F.A.C.

[Chapter 316, F.S.; Chapter 14-26, F.A.C.]

C. Use of State of Florida Right of Way or Transportation Facilities

All usage of State of Florida right of way will be subject to the applicable non-procedural requirements of: Rule Chapter 14-46, Utilities Installation or Adjustment, Florida Administrative Code; and Florida Department of Transportation's Utility Accommodation Manual (Document 710-020-001); Design Standards for Design, Construction, Maintenance and Utility Operation on the State Highway System; Standard Specifications for Road and Bridge Construction; and pertinent sections of the Florida Department of Transportation's Project Development and Environmental Manual.

[Sections 337.403 and 337.404, F.S.; Rules 14-15 and 14-46, F.A.C.]

D. Standards

The Manual on Uniform Traffic Control Devices; Florida Department of Transportation's Design Standards for Design, Construction, Maintenance and Utility Operation on the State Highway System; Florida Department of Transportation's Standard Specifications for Road and Bridge Construction; Florida Department of Transportation's Utility Accommodation Manual; Florida Department of Transportation's Plans Preparation Manual; and pertinent sections of the Department of Transportation's Project Development and Environment Manual will be adhered to in all circumstances involving the State Highway System and other State-owned transportation facilities.

[Rule 14-15, F.A.C.]

E. Drainage

Any drainage onto State of Florida right of way and transportation facilities will be subject to the applicable non-procedural requirements of Rule Chapter 14-86, Drainage Connection, F.A.C.

[Rule 14-86, F.A.C.]

F. Use of Air Space

Any newly proposed structure or alteration of an existing structure will be subject to the applicable non-procedural requirements of Chapter 333, F.S., and Rule 14- 60.009, Airspace Protection, F.A.C. Additionally, notification to the Federal Aviation Administration (FAA) is required prior to beginning construction, if the structure exceeds notification requirements of 14 CFR Part 77, Objects Affecting Navigable Airspace, Subpart B, Notice of Construction or Alteration. Notification will be provided to FAA Southern Region Headquarters using FAA Form 7460-1, Notice of Proposed. Construction or Alteration in accordance with instructions therein. A subsequent Determination by the FAA stating that the structure exceeds any federal obstruction standard of 14 CFR Part 77, Subpart C, for any structure that is located within a 10-nautical-mile radius of the geographical center of a public use airport or military airfield in Florida will be required to submit information for an Airspace Obstruction Permit from the Florida Department of Transportation as a post-certification submittal under Condition of Certification XXI. or variance from local government depending on the entity with jurisdictional authority over the site of the proposed structure. The FAA Determination regarding the structure serves only as a review of its impact on federal airspace and is not an authorization to proceed with any construction. However, FAA recommendations for marking and/or lighting of the proposed structure are made mandatory by Florida law. For a site under Florida Department of Transportation jurisdiction, application will be made by submitting Florida Department Transportation Form 725-040-11, Airspace Obstruction Permit Application, in accordance with the instructions therein as a post-certification submittal under Condition of Certification XXI.

[Chapter 333, F.S.; Rule 14-60.009, F.A.C.]

G. Traffic Control Plan

A temporary traffic control plan for handling construction related traffic is needed subject to the requirements and standards prior to construction affecting State-owned transportation facilities. The plan will be submitted as a post-certification submittal under Condition of Certification XXI and will need to be approved by Florida Department of Transportation prior to construction affecting State-owned transportation facilities.

H. Best Management Practices

Traffic control during facility construction and maintenance on State-owned transportation facilities will be subject to the standards contained in the US Federal Highway Administration's Manual on Uniform Traffic Control Devices; Florida Department of Transportation's Design Standards for Design, Construction, Maintenance and Utility Operation on the State Highway; Florida Department of Transportation's Standard Specifications for Road and Bridge Construction; and Florida Department of Transportation's Utility Accommodation Manual, whichever is more stringent. It is recommended that the Licensee encourage transportation demand management techniques by doing the following:

- Placing a bulletin board on site for car-pooling advertisements.
- Requiring that heavy construction vehicles remain onsite for the duration of construction to the extent practicable.

[Chapter 334, F.S; Rule 14-96, F.A.C.]

IV. DEPARTMENT OF STATE – DIVISION OF HISTORICAL RESOURCES

A. Any alterations associated with the reconfiguration of this plant may need to have a survey as determined in consultation with the Department of State, Division of Historical Resources (DHR). A qualified cultural resources consultant will identify an appropriate work plan for this project based on a thorough review of the certified facility. Prior to beginning any field work, the work plan will be reviewed in consultation with DHR. Upon completion of the survey, the results will be compiled into a report which shall be submitted to DHR. If feasible, sites considered to be eligible for the National Register shall be avoided during construction of the project and access roads, and subsequently during maintenance. If avoidance of any discovered sites is not feasible, impact shall be mitigated through archaeological salvage operations or other methods acceptable to DHR, as appropriate.

B. If historical or archaeological artifacts or features are discovered at any time within the Certified Facility, the Licensee shall notify the appropriate DEP District office(s) and the DHR, R.A. Gray Building, 500 S. Bronough Street, Rm 423, Tallahassee, Florida 32399-0250, telephone number (850) 245-6333, and the Licensee shall consult with DHR to determine appropriate action.

[Sections 267.061, 403.531, and Chapter 872, F.S.]

V. DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

Only herbicides registered by the U.S. Environmental Protection Agency and the Florida Department of Agriculture and Consumer Services shall be used at certified facilities. Herbicide applications will be in accordance with label directions and will be carried out by a licensed applicator, in compliance with all federal, state and local regulations. Herbicide applications shall be selectively applied to targeted vegetation. Broadcast application of herbicide shall not be used unless effects on non-targeted vegetation are minimized.

[Chapter 487, F.S.]

VI. SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

A. General Conditions

1. Use of Water

The Licensee shall use the lowest quality water which is available and is environmentally, technically and economically feasible for all or a portion of the proposed use.

[Sections 373.016, 373.219 and 373.223, F.S; Rules 40D-2.091 and 40D-2.301, F.A.C.; Water Use Permit Applicant's Handbook Part B (WUP Applicant's Handbook)]

2. Consumptive Use of Groundwater

a. This certification authorizes standby quantities of 234,000 gallons per day (gpd) of groundwater on a rolling annual average basis and 2,000,000 gpd of groundwater on a peak month basis for Units 1, 3, 4 and 2, until decommissioned, should the supply of reclaimed water provided by Hillsborough County be interrupted, and as specified in the Standby Water Supply Specific Conditions in Attachment A of these Conditions of

Certification. In the event fresh groundwater in excess of the quantities permitted by the SWFWMD should be required for the operation of Big Bend, the Licensee shall demonstrate to the satisfaction of the SWFWMD that such a consumptive use of groundwater will be in compliance with the regulations and policies of the SWFWMD and will have no significant adverse effect on regional water supplies.

[Sections 373.016, 373.219 and 373.223, F.S; Rules 40D-2.091 and 40D-2.301, F.A.C.; WUP Applicant's Handbook]

b. In the event that use of brackish groundwater should become necessary, an intensive investigation and aquifer testing program shall be performed by TECO. The aquifer testing program shall be submitted to the SWFWMD and approved prior to commencement of the investigation. The investigation should include but need not be limited to the following:

(1) The geology encountered while drilling the well, with emphasis placed on the depth, thickness and hydraulic characteristics of formations encountered.

(2) The aquifer systems that are encountered, along with the discussion on water quality and availability.

(3) Performance of a pump test, description of aquifer characteristics and evaluation procedure.

(4) Interpretations of geophysical logs.

(5) Discussion of aquifer recharge and ultimate source.

Upon completion of the investigations, TECO shall submit a report on the feasibility of utilizing brackish groundwater for cooling tower make-up, and at that time the SWFWMD may authorize withdrawals. If SWFWMD should authorize withdrawals of brackish water, TECO shall submit monthly pumpage reports and chlorides, sulfate and TDS analysis on the production well to the SWFWMD.

[Sections 373.016, 373.219 and 373.223, F.S; Rules 40D-2.091 and 40D-2.301, F.A.C.; WUP Applicant's Handbook]

d. All standby groundwater withdrawals associated with Big Bend Units 1, 2, 3 & 4 are intended to be consolidated and authorized under these Conditions of Certification rather than under a separate water use permit. Therefore, within 30 days after the expiration of the time for filing an appeal of the Final Order of Certification for the Big Bend 1 Modernization Project, which includes this Condition of Certification consolidating the facility water use or, if appealed, within 30 days after the final resolution of all appeals, the Licensee shall submit a request to administratively cancel Water Use Permit No. 20006233.007 issued by the SWFWMD pursuant to rule 40D-2.341(3), Florida Administrative Code.

[Sections 373.016, 373.219 and 373.223, F.S; Rule 40D-2.341, F.A.C.; WUP Applicant's Handbook]

B. Standard Conditions

1. With advance notice to the Licensee, SWFWMD staff with proper identification shall have permission to enter, inspect, collect samples, take measurements, observe permitted and related facilities and collect any information deemed necessary to protect the water resources of the area and to determine compliance with the approved plans, specifications and conditions of this certification. The Licensee shall either accompany SWFWMD staff onto the property or make provision for access onto the property. The SWFWMD may require the Licensee to submit water samples when the SWFWMD determines there is a potential for adverse impacts to water quality.

2. This certification is contingent upon continued ownership or legal control of all property on which pumps, wells, diversions or other water withdrawal facilities are located.

3. When necessary to analyze impacts to the water resource or existing users, the SWFWMD shall require the Licensee to install flow metering or other measuring devices to record withdrawal quantities and submit the data to the SWFWMD.

4. The SWFWMD shall collect water samples from any withdrawal point listed in the certification or shall require the Licensee to submit water samples when the SWFWMD determines there is a potential for adverse impacts to water quality.

5. A SWFWMD identification tag shall be prominently displayed at each withdrawal point that is required by the SWFWMD to be metered or for which withdrawal quantities are required to be reported to the SWFWMD, by permanently affixing the tag to the withdrawal facility.

6. The Licensee shall mitigate any adverse impacts to environmental features or offsite land uses as a result of withdrawals. When adverse impacts occur or are imminent, the SWFWMD shall require the Licensee to mitigate the impacts. Examples of adverse impacts include the following:

a. Significant reduction in levels or flows in water bodies such as lakes, impoundments, wetlands, springs, streams or other watercourses; or

b. Damage to crops and other vegetation causing financial harm to the owner; and

c. Damage to the habitat of endangered or threatened species.

7. The Licensee shall mitigate any adverse impacts to existing legal uses caused by withdrawals. When adverse impacts occur or are imminent, the SWFWMD may require the Licensee to mitigate the impacts. Adverse impacts include:

a. A reduction in water levels which impairs the ability of a well to produce water;

b. Significant reduction in levels or flows in water bodies such as

lakes, impoundments, wetlands, springs, streams or other watercourses; or

c. Significant inducement of natural or manmade contaminants into a water supply or into a usable portion of an aquifer or water body.

8. Licensee shall notify the SWFWMD in writing within 30 days of any sale, transfer, or conveyance of ownership or any other loss of permitted legal control of the site and / or related facilities from which the permitted consumptive use is made. Where Licensee's control of the land subject to the certification was demonstrated through a lease, the Licensee must either submit documentation showing that it continues to have legal control or transfer control of the permitted system / project to the new landowner or new lessee. All transfers of ownership are subject to the requirements of Rule 40D-1.6105, F.A.C. Alternatively, the Licensee may surrender the authorization to the SWFWMD, thereby relinquishing the right to conduct any activities under the authorization.

9. All consumptive uses authorized by the Conditions of Certification shall be implemented as set forth in these conditions, including any documents incorporated by reference in a specific condition. The SWFWMD may request that DEP revoke this certification, in whole or in part, or take enforcement action, pursuant to sections 373.136 or 373.243, F.S., unless a modification has been obtained.

10. Water use authorized under the SWFWMD's conditions do not convey to the Licensee any property rights or privileges other than those specified herein, nor relieve the Licensee from complying with any applicable local government, state, or federal law, rule, or ordinance.

11. The Licensee shall cease or reduce surface water withdrawal as directed by the SWFWMD if water levels in lakes fall below the applicable minimum water level established in Chapter 40D-8, F.A.C., or rates of flow in streams fall below the minimum levels established in Chapter 40D-8, F.A.C.

12. The Licensee shall cease or reduce withdrawal as directed by the SWFWMD if water levels in aquifers fall below the minimum levels established by the SWFWMD.

13. The Licensee is advised that the substantive provisions of Section 373.239, F.S., and Rule 40D-2.331, F.A.C., are applicable to modifications relating to SWFWMD conditions for water use.

14. The Licensee shall practice water conservation to increase the efficiency of transport, application, and use, as well as to decrease waste and to minimize runoff from the property. At such time as the SWFWMD adopts specific conservation requirements for the Licensee's water use classification, these conditions shall be subject to those requirements upon notice and after a reasonable period for compliance.

15. The SWFWMD may establish special regulations for Water-Use Caution Areas. At such time as the SWFWMD adopts such provisions, this certification shall be subject to them upon notice and after a reasonable period for compliance.

16. Nothing in these conditions should be construed to limit the authority of the SWFWMD to declare a water shortage and issue orders pursuant to Chapter 373, F.S. In the event of a declared water shortage, the Licensee must adhere to the water shortage restrictions, as

specified by the SWFWMD. The Licensee is advised that during a water shortage, reports shall be submitted as required by SWFWMD rule or order.

17. The SWFWMD-related conditions of certification are based on information provided by the Licensee demonstrating that the use of water is reasonable and beneficial, consistent with the public interest, and will not interfere with any existing legal use of water. If, during the term of the certification, it is determined by the SWFWMD that a statement in the application and in the supporting data are found to be untrue and inaccurate, the use is not reasonable and beneficial, in the public interest, or does impact an existing legal use of water, the SWFWMD shall seek modification of this certification. The Licensee shall immediately notify the SWFWMD in writing of any previously submitted information that is later discovered to be inaccurate.

[Sections 373.016, 373.219 and 373.223, F.S; Rules 40D-2.091, 40D-2.301 and 40D-2.381, F.A.C.; WUP Applicant's Handbook]

C. Specific Conditions

The Licensee is authorized to withdraw up to 234,000 gallons per day (annual average) and 2,000,000 gpd (peak demand) of groundwater from District ID No. 3 on a standby basis for construction, operation, maintenance, decommissioning, and/or demolition of facilities at Big Bend. The groundwater available on standby shall be used in the event of a temporary interruption of reclaimed water supply from Hillsborough County.

1. Withdrawal Quantities and Facilities

				Water Allocation	
District ID/Licensee ID	**Diameter (in)**	**Total Depth (ft. bls)**	**Cased Depth (ft. bls)**	**Annual Average Gallons per Day**	**Peak Month**
3/3 (Standby)	10	250	119	234,000	2,000,000
8/8 (reuse)	10	---	---	3,500,000	3,500,000
Total				234,000*	2,000,000

*Measured on a rolling annual average daily flow (RAADF) basis

[Sections 373.016, 373.219 and 373.223, F.S.; Rules 40D-2.091 and 40D-2.301, F.A.C.; WUP Applicant's Handbook]

2. Submit Reports/Data

All reports and data required by condition(s) shall be submitted to the SWFWMD according to the due date(s) contained in the specific condition. If the condition specifies that a SWFWMD-supplied form is to be used, the Licensee should use that form in order for its submission to be acknowledged in a timely manner. The Licensee may use the SWFWMD Permit Information Center (www.swfwmd.state.fl.us/permits/epermitting/) to submit data, plans or reports online. There are instructions at the SWFWMD website on how to register to set up an account to do so. If the report or data are received on or before the tenth day of the month following data collection, it shall be deemed to be a timely submittal.

All mailed reports and data are to be sent to:

Southwest Florida Water Management District

Tampa Regulation Department, Water Use Permit Bureau

7601 U.S. Hwy. 301 North

Tampa, Florida 33637-6759

Submission of plans and reports: Unless submitted online or otherwise indicated in the Conditions of Certification, the original and two copies of each plan and report, such as conservation plans, environmental analyses, aquifer test results, per capita annual reports, etc. are required.

Submission of data: Unless otherwise indicated in the Conditions of Certification, an original (no copies) is required for data submittals such as crop report forms, meter readings and/or pumpage, rainfall, water level evapotranspiration, or water quality data.

[Sections 373.016, 373.219 and 373.236, F.S; Rules 40D-2.301 and 40D-2.381, F.A.C.; WUP Applicant's Handbook]

3. Implement Leak Detection & Repair Program

The Licensee shall implement a leak detection and repair program as an element of an ongoing system maintenance program. This program shall include a system-wide inspection at least once per year.

[Sections 373.016, 373.219 and 373.223, F.S; Rules 40D-2.091, 40D-2.301 and 40D-2.381, F.A.C.; WUP Applicant's Handbook]

4. Modify Certification Based on Reuse Quantity

Within 90 days of the replacement of any or all withdrawal quantities from ground water or surface water bodies with an Alternative Water Supply, the Licensee shall apply to modify this certification to place equal quantities of permitted withdrawals from the ground and/or surface water resource on standby. The standby quantities can be used in the event that some or all of the alternative source is not available.

[Sections 373.016, 373.219 and 373.223, F.S; Rules 40D-2.091, 40D-2.301 and 40D-2.381, F.A.C.; WUP Applicant's Handbook]

5. Water Conservation Plan

The Licensee shall immediately implement the SWFWMD-approved water conservation plan. Conservation measures that the Licensee has already implemented shall continue, and proposed conservation measures shall be implemented as proposed in the plan. Progress reports on the implementation of water conservation practices indicated as proposed in the plan as well as achievements in water savings that have been realized from each water conservation practice shall be submitted to the SWFWMD by August 1, 2024.

[Sections 373.016, 373.219 and 373.223, F.S; Rules 40D-2.091, 40D-2.301 and 40D-2.381, F.A.C.; WUP Applicant's Handbook]

6. Capping of Wells

Any wells not in use, and in which pumping equipment is not installed, shall be capped or valved in a water tight manner in accordance with Rule 62-532.500, F.A.C.

7. Activation of Standby Quantities

In the event that an alternative water supply (AWS) for which there are standby quantities authorized under this certification become wholly or partially unavailable, insufficient or unsuitable, the Licensee shall access authorized standby quantities as follows, depending upon the length of time the AWS is not available, sufficient or suitable. At no time will the Licensee utilize standby quantities to exceed authorized use or allocations.

Less than 30 days: No SWFWMD notification is required if the AWS is unavailable, insufficient, or unsuitable for the 30-day period or less. The Licensee may access authorized standby quantities to meet authorized use or an authorized irrigation allocation rate from the date of the first loss up to 30 days.

Greater than 30 days but less than one year: The Licensee shall notify the SWFWMD in writing within 45 days of the first day the AWS became unavailable, insufficient or unsuitable. The notification shall identify the standby withdrawal sources that were or will be activated, and the Licensee shall continue to submit written notification monthly for each subsequent 30-day period where the standby delivery of AWS is unavailable, insufficient or unsuitable, for up to one year from the date of first loss, insufficiency, or unsuitability. The Licensee may access authorized standby quantities to meet authorized use or allocations from the date of the first loss up to one year. If the loss of the AWS exceeds one year, the Licensee shall apply for a modification of the site certification to reinstate the standby quantities as active quantities.

Permanent Loss: Upon verbal or written notice from an alternative water supply provider that delivery of all or part of the alternative water supply is to permanently cease, the Licensee shall submit information to the SWFWMD explaining the reason(s) for the cessation. If the cessation was not caused by actions of the Licensee and is beyond the control of the Licensee, the Licensee shall apply for a modification of the site certification to reinstate the standby quantities as active quantities.

[Sections 373.016, 373.219 and 373.223, F.S; Rules 40D-2.091 and 40D-2.301, F.A.C.; WUP Applicant's Handbook]

8. Southern Water Use Caution Area Recovery Strategy

The certified facilities are located within the Southern Water Use Caution Area (SWUCA). Pursuant to Section 373.0421, Florida Statutes, the SWUCA is subject to a minimum flows and levels recovery strategy, which became effective on January 1, 2007. The Governing Board may amend the recovery strategy, including amending applicable water use permitting rules based on an annual assessment of water resource criteria, cumulative water withdrawal impacts, and on a recurring five-year evaluation of the status of the recovery strategy up to the year 2025, as described in Chapter 40D-80, Florida Administrative Code. This certification is subject to modification to comply with new rules.

9. Metering of Withdrawals

a. The Licensee shall continue to record and report monthly meter

readings and pumpage from SWFWMD ID No. 8, Licensee ID No. 8.

[Sections 373.016, 373.219 and 373.223, F.S; Rules 40D-2.301 and 40D-2.381, F.A.C.; WUP Applicant's Handbook]

b. The following existing standby withdrawal facility (those that provide back-up water for an alternative water supply in the event the alternative water supply becomes unavailable or unusable) shall continue to be metered: SWFWMD ID No. 3, Licensee ID No. 3. Meter reading and reporting, as well as meter accuracy checks every five years shall be in accordance with the instructions in Attachment E, incorporated herein.

[Sections 373.016, 373.219 and 373.223, F.S; Rules 40D-2.301 and 40D-2.381, F.A.C.; WUP Applicant's Handbook]

VII. HILLSBOROUGH COUNTY

A. Screening

The Licensee shall comply with applicable local government requirements concerning the screening of the Certified Facility.

[Article VI, Part 6.11.71, Hillsborough County Land Development Code]

B. Flood Control Protection

The plant and associated facilities shall be constructed in such a manner as to comply with the Hillsborough County flood protection requirements, as applicable.

[Article V, Hillsborough County Land Development Code]

C. Access Management

TECO shall contact and coordinate with the departments within the County that are responsible for managing the planning, design and construction of Capital Improvement Programs, infrastructure projects, and resurfacing programs. At a minimum, the following departments should be contacted: Public Utilities and Public Works (within Public Works – Engineering; Transportation Maintenance; Resurfacing; Road and Bridge Maintenance; Storm Water Management; Right-of-Way Management; Design Engineering Services; and Traffic).

[Hillsborough County Code of Ordinances and Laws, Part A, Chapter 42, Section 42. 62; Hillsborough County's Land Development Code, Part 6.04 et seq., and Hillsborough County's Utility Accommodation Guide and Rights-of-Way Use Procedures Manual Section 2.1 and Section 3.6]

D. Traffic and Road Use

1. TECO shall utilize and adhere to the applicable non-procedural standards referenced in the County's Utility Accommodation Guide, Rights-of-Way Use Procedure Manuals, Transportation Technical Manual, Hillsborough County Ordinances 3-29 and 4-36, including but not limited to, the provisions relating to County design and construction standards, protection of existing traffic controls, overhead and underground power lines installations procedures, permanent restorations for areas, beyond the edge of pavement, and permanent pavement restorations.

[Hillsborough County Code of Ordinances and Laws, Part A, Chapter 42, Section 42. 62 and Hillsborough County's Land Development Code Sections 5. 02. 00 and 10.01.06]

2. Truck drivers transporting equipment and materials for the project shall be respectful of residential neighborhoods and surrounding land uses when traveling to and from the construction site. Construction vehicles must adhere to weight requirements provided in the applicable the County's ordinance. A truck may leave a designated truck route and drive on a County road that is restricted to truck traffic, only if the truck can reach its destination without crossing another truck route. Truck routes can be found on the Truck Route Plan Map and in County Resolution R05-022. Copies of both are available on the 20th floor of the County Center at 601 East Kennedy Blvd., Tampa, FL 33601.

[Hillsborough County Resolution R05-022]

3. In the event that TECO anticipates closing any public road during the project, TECO shall contact the County's Right-of-Way Management office to coordinate the work and, if applicable, obtain approval whenever TECO plans to impede traffic in any manner whatsoever and/or when TECO is working within 15 feet of the edge of the pavement. TECO may also need to submit a signed, sealed, site specific Maintenance of Traffic (MOT) plan to the County for review and approval. Additionally, TECO will provide County with a MOT plan for the construction of entrances and exits. This process will also apply to all lane or road closures requests from TECO. Notwithstanding the foregoing, TECO shall refrain from closing any lanes or roads in the traffic patterns of schools (while in session), hospitals, emergency facilities, and fire stations.

[Hillsborough County's Utility Accommodation Guide and Rights-of Way Use Procedures Manual, Section 5.3.1 and Section 5.3.2: Hillsborough County Public Works Standard Specifications for Construction Section 01500-1.03-1.05]

E. Greater Tampa Utilities Group (GTUG)

TECO shall coordinate the design and construction of the proposed natural gas lines with the Greater Tampa Utilities Group (GTUG) as well as individual private and public utilities located within the County's right-of-way. TECO shall provide the County's Right-of-Way Management office with dates of attendance to the GTUG meetings and coordination efforts with GTUG. TECO shall resolve any and all conflicts with the afore-mentioned departments and sections for both existing and future infrastructure and utilities.

[Administrative Directive #CS-04: Utility Coordination Procedures for Hillsborough County Construction Projects Within County Rights-of-Way: Hillsborough County's Utility

Accommodation Guide and Rights-of-Way Use Procedures Manual Section 5. 0 et. seq. and Section 5. 2]

F. Professional Certification

When performing engineering work such as civil, structural, mechanical, and soil for the various aspects of the projects including, but not limited to, roadway design and construction, structural design and construction, and drainage systems in the County's rights-of-way, TECO shall employ and/or utilize the services of professional engineers certified or registered by the Construction Industry Licensing Board in the State of Florida.

[Section 471. 003, F.S.]

G. Rights-of-Way

1. If TECO anticipates clearing in unused County rights-of-way, TECO must comply with the applicable non-procedural requirements of the County's Tree Protection Regulations in Section 4.01.06 of the County's Land Development Code.

2. Any drainage onto County's right-of-way and roads will be subject to the applicable non-procedural provisions of the County's Land Development Code.

[Section 4.01.06, Article IV. Natural Resources and Adequate Public Facilities, Hillsborough County Code of Ordinances; Hillsborough County's Utility Accommodation Guide and Rights-of-Way Use Procedures Manual Section 2.8.1]

H. Underground Utilities and Natural Gas Pipeline

1. TECO shall contact Sunshine One Call and obtain a listing (design and construction tickets) of all of the existing underground utilities within the proposed Right-of-Way in the County. TECO shall provide the County with a copy of the utility companies with facilities located within the County's right-of-way. TECO shall follow safe digging practices and the Underground Facility Damage Prevention and Safety Act, Chapter 556, Florida Statutes.

[Hillsborough County Utility Accommodation Guide Section 2.2]

2. When constructing the natural gas pipeline, TECO shall coordinate with the Florida Department of Transportation (FDOT) and the County regarding a bridge culvert replacement project that is being undertaken by FDOT/County approximately 750 feet west of Wyandotte Road within the next two years. TECO shall ensure that the pressure gas and fuel pipelines conform to the current applicable sections of "ANSI Standard Code for Pressure Piping" of the American National Standards Institute, the Code of Federal Regulations, Parts 192, 193 and 195, and all other applicable industrial codes.

[Hillsborough County Utility Accommodation Guide Section and Rights-of Way Use Procedures Manual, Section 3.1.1 and Section 5.2.2.3]

I. Final Design Plan Submittal

TECO shall provide the County with a final design plan, in accordance with Section A. Condition XX. Procedures for Post-Certification Submittals, showing the following:

1. The type, size, and location of its natural gas pipelines to be placed within County right-of-way and that TECO complied with FDOT's Title 48 requirements.

[Hillsborough County's Utility Accommodation Guide and Rights-of-Way Use Procedures Manual, Section 5.1.2.4]

2. Construction time-tables, phasing, and construction traffic to be generated by the project.

[Hillsborough County's Utility Accommodation Guide and Rights-of Way Use Procedures Manual, Section 5.3]

VIII. ENVIRONMENTAL PROTECTION COMMISSION OF HILLSBOROUGH COUNTY

A. Wetland Integrity

Any activity interfering with the integrity of a wetland, such as clearing, excavating, draining or filling, without prior authorization from the Executive Director of the Environmental Protection Commission (EPC) or authorized agent, pursuant to Section 1-11.07, Rules of the EPC, will be considered a violation of Section 17 of the Environmental Protection Act of Hillsborough County, Chapter 84-446, Laws of Florida, as amended, and Chapter 1-11, Rules of the EPC.

[Section 17, Environmental Protection Act of Hillsborough County; Chapters 84-446, Laws of Florida, as amended, and Chapter 1-11, Rules of the EPC]

B. Noise

Pursuant to Chapter 1-10, Rules of the Environmental Protection Commission (EPC), Noise Rule "Exceptions" exempts construction activities occurring between the hours of 7 a.m. and 6 p.m. Monday through Friday, 8 a.m. and 6p.m. Saturday, and 10 a.m. and 6 p.m. Sunday if reasonable precautions are taken to abate the noise from those activities. Reasonable precautions shall include but not be limited to noise abatement measures such as enclosure of a noise source, use of acoustical blankets, and change in work practice. Construction activities occurring at all other times shall be subject to the standards in the EPC Noise Rule Chapter 1-10.

[Chapter 1-10, Rules of the EPC]

C. Open Burning

Open burning in connection with initial land clearing shall be conducted in accordance with the non-procedural requirements of Chapter 1-4, Rules of the EPC, specifically with the requirements of Section 1-4.06, which pertain both to pile burning or burning by air curtain incinerator for initial land clearing. TECO shall not burn any materials specifically prohibited by Section 1-4.03. TECO shall provide notice to EPC prior to commencing open burning for initial land clearing and shall indicate in the notice how it intends to comply with the provisions of Chapter 1-4. Burning shall not occur if not approved by the EPC or if the Division of Forestry has issued a ban on burning due to air pollution conditions or due to fire safety.

[Chapter 1-4, Rules of the EPC]

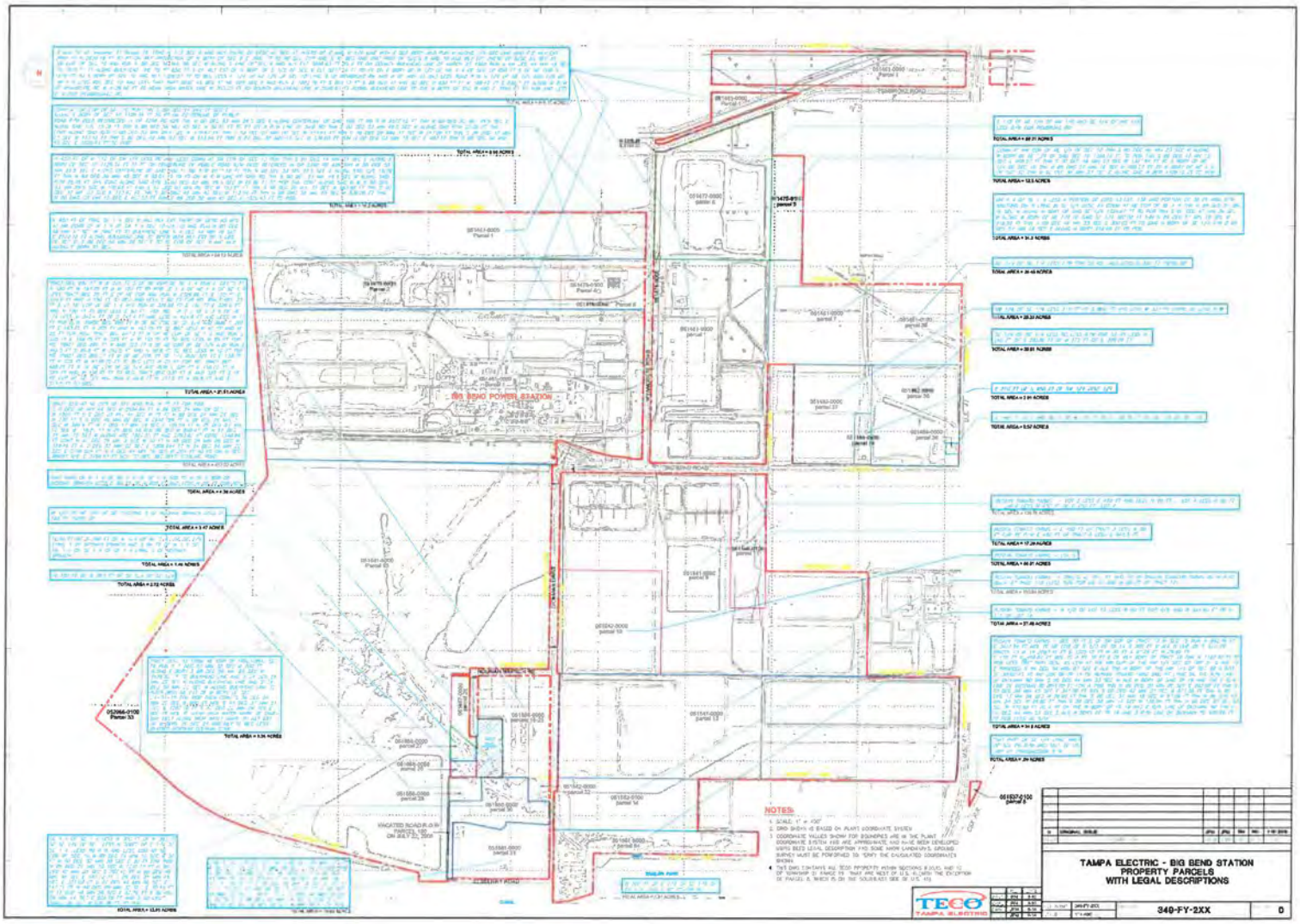
IX. HISTORY

Certification issued 08/17/81; signed by Governor Graham
Modified 09/17/81; signed by Secretary Tschinkel

Modified 11/18/82; signed by Governor Graham
Modified 03/19/84; signed by Governor Graham
Modified 03/16/87; signed by Secretary Twachtmann
Modified 10/12/87; signed by Governor Martinez
Modified 06/06/90; signed by Secretary Twachtmann
Modified 04/06/94; signed by Secretary Wetherell
Modified 06/19/95; signed by Secretary Wetherell
Modified 09/18/95; signed by Secretary Wetherell
Modified 02/07/00, signed by Secretary Struhs
Modified 05/17/01; signed by Deputy Secretary Green
Modified 07/29/03, signed by Program Administrator Oven
Modified 09/13/05, signed by Program Administrator Oven
Modified 12/23/08; signed by Program Administrator Halpin
Modified 01/28/09; signed by Program Administrator Halpin
Modified 07/22/12; signed by Program Administrator Mulkey
Modified 3/27/18; signed by Program Administrator Mulkey

Attachment A

Maps


BIG BEND POWER STATION
BIG BEND ROAD
NOTES:
1. SCALE: 1" = 400'
2. GRID SHOWN IS BASED ON PLANT COORDINATE SYSTEM
3. COORDINATE VALUES SHOWN FOR BOUNDARIES ARE IN THE PLANT COORDINATE SYSTEM AND ARE APPROXIMATE AND HAVE BEEN DEVELOPED USING BLEE LEGAL DESCRIPTION AND SOME MINOR SANDHILL'S GROUND SURVEY MUST BE PERFORMED TO VERIFY THE EVALUATED COORDINATES SHOWN
4. THIS DWG CONTAINS ALL TECO PROPERTY WITHIN SECTIONS 8 (EXCL NW 1/4 OF TOWNSHIP 31 RANGE 19 THAT ARE WEST OF U.S. 41) AND 17 EXCEPTION OF PARCEL B, WHICH IS ON THE SOUTHEAST SIDE OF U.S. 41)
TECO TAMPA ELECTRIC
TAMPA ELECTRIC - BIG BEND STATION
PROPERTY PARCELS
WITH LEGAL DESCRIPTIONS
340-FY-2XX
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LEGEND

CERTIFIED AREAS

Includes-

Solid fuel yard and coal handling facilities,
Coal combustion products handling and storage systems.
Limestone handling and storage,
Condenser cooling water intake and discharge systems,
Water Cooling Recycle System,
FGD wastewater treatment facilities,
Limestone Storage Building,
Two emergency diesel engine generators,
Black Start diesel generator,
Big Bend Station dock, coal unloading and gypsum loading facilities,
Rail loop, spur, coal unloading and gypsum rail loading facilities,
No. 2 fuel oil bulk storage and transfer facilities,
Big Bend Station substation/switchyard,
Dredge disposal areas DA-1 and DA-6,
Big Bend Units 3 and 4 Organics Return System.
Gas Pipeline Units 1-4

NON CERTIFIED AREAS

Includes-

Units 1-3 and Associated Equipment,
Separation Technologies Ash Beneficiation Plant.
Manatee Viewing Center
Big Bend Peakers,
Desalination Facility,
Recently Acquired Property East and South

0 ORIGINAL ISSUE

TECO TAMPA ELECTRIC

TAMPA ELECTRIC CO. - BIG BEND STATION
PPSA CERTIFIED VS NON CERTIFIED
AREAS - PA 79-12R

349-FY-53A

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ATTACHMENT B

Surface Water Management System Plan

DRAINAGE FACILITIES

All surface water management system pipes, trench drains, inlets, catch basins, manholes, flumes, pond inflow and outfall structures (including oil skimmers), and discharge pipes should be inspected on a regular basis (monthly or quarterly) and following significant storm events. They should be maintained by removing built- up debris and vegetation and repairing deteriorating structures.

Ditches will be checked as required for erosion, scour, sediment deposits, and other impediments to ensure proper drainage. If ditches require cleaning, this will be performed with small equipment such as bobcats and pickups. Culverts will also be cleaned of sediment as needed. This will be accomplished by vacuum or water-jet trucks.

TEMPORARY EROSION CONTROL FACILITIES

Silt fencing will be inspected after rainfalls greater than 0.5 inch, or at a minimum frequency of once per week during the construction phase. Ditch checks will be inspected at the same frequency as silt fencing. Sediment deposits greater than 4-inches deep will be removed. Broken ditch checks or torn silt fencing will be replaced as needed until final surface stabilization is achieved for the site. Sediment tracking prevention devices such as rock-surfaced construction entrances will be inspected daily for sediment depth, and replaced if needed to prevent sediment from leaving the site. Sediment deposits greater than 4-inch deep will be removed from temporary sediment ponds.

TEMPORARY LAYDOWN/STAGING AREA

The following construction sequence and reporting requirements shall be followed for temporary placement of fill in laydown areas or other stockpile areas:

a. Prior to the placement of fill material for temporary access, the Licensee shall flag and stake the areas to be filled and photograph the areas to show the pre-construction conditions. Photograph locations shall be identified on a drawing. The photographs and location drawing shall be submitted to the Department prior to placement of fill in these areas.

b. Prior to placement of the temporary fill, best management practices (i.e., hay bales, silt fences, etc.) shall be installed along the perimeter of the fill area to prevent erosion of the material into surface waters or wetlands.

c. Within 14 days of the completion of construction, the temporary fill shall be removed, and the ground elevation contours shall be restored to pre-existing elevations to promote natural re-vegetation of the area.

d. Photographs of the area shall be taken from the same locations as required in (a) within 72 hours of grading of the fill area. These photographs shall be combined with the photographs required in (a) and the location map required in (a) and shall be submitted to the Department within 14 days of the completion of the regrading.

Photographs of the area shall be taken from the same locations as required in (a), to show the condition of vegetation and substrate within the temporary fill areas one year after grading has been completed. The photographs and a map showing the photograph locations shall be submitted to the Department within 14 days of being taken.

STORMWATER

1. Littoral Zone

The littoral zones of the wet detention ponds shall be constructed according to the following criteria:

a. The littoral zones shall be gently sloped (6:1 Horizontal: Vertical or flatter).
b. The littoral zones shall be planted with aquatic and wetland vegetation suitable for the specific anticipated hydroperiod of the pond.
c. Within 24 months of completion of the system, the littoral zones shall consist of 80% coverage with suitable aquatic and wetland vegetation.
d. The littoral zones shall be stabilized by either mulching or other means to ensure the stability of the native plants and soils.

The littoral zones shall be inspected to ensure that the 80% coverage of suitable aquatic and wetland vegetation within 24 months of system completion criteria is met. If necessary, additional planting shall be conducted to meet success criteria.

If utilizing wetland topsoil as an alternative to planting portions of the littoral zone, the wetland topsoil shall be at least four inches in depth.

If utilizing wetland topsoil as an alternative to planting portions of the littoral zone, the portion of the littoral zone within 25 feet of the inlet and outlet structures shall be planted with suitable aquatic and wetland vegetation.

The licensee shall notify the Department of any sinkhole development in the SWMS within 24 hours after discovery and must submit a detailed sinkhole evaluation and repair plan for Department approval within 30 days of discovery.

2. Operation and Maintenance

The approved SWMS shall only be used for the purpose of controlling surface water runoff from the site and shall not be used to dispose of or store any solid/liquid waste or products generated or used during operation or construction of the facility.

The SWMS shall be inspected by a registered professional to evaluate whether the system is functioning as designed. Percolation performance should specifically be addressed. The registered professional may record his or her inspection on Form No. 62-330.311(1), Operation and Maintenance Inspection Certification or may provide his evaluation in any other format; however, any report must be signed and sealed by the registered professional. Submittal of the inspection report to the Department is not required; but the report shall be made available to the Department upon request. Inspections shall be made by the registered professional in accordance with this schedule:

a. On the first anniversary of the date of conversion to Operation and Maintenance Phase.

b. Every fifth year on the anniversary of conversion to Operation and Maintenance phase, after the first year of successful operation.

Within 30 days of any failure of a SWMS or deviation from the approved design, a report shall be submitted to the Department on Form 62-330.311(1), Operation and Maintenance Inspection Certification, describing the remedial actions taken to resolve the failure of deviation. This report shall be signed and sealed by a registered professional.

Once project construction has been deemed complete, including the re-stabilization of all side slopes, embankments, and other disturbed areas, and before the transfer to the Operation and Maintenance phase, all obsolete erosion control materials shall be removed.

The Licensee shall be responsible for keeping records documenting that relevant conditions are met. This documentation shall include, at a minimum, the date of each inspection, the name and qualifications of the inspector, any maintenance actions taken, and a determination by the inspector as to whether the system is operating as intended. Inspection documentation must be readily available and shall be provided at the Department's request. Submittal of the inspection documentation to the Department is not required.

ATTACHMENT C

Wetland Mitigation Plan

History and Project Description

Tampa Electric Company (TEC) operates a nominal 1,892 MW facility consisting of four solid fuel-fired steam boiler/steam turbine generator units and two simple cycle combustion turbines A and B. Unit 1 is being modernized and repowered by replacing the conventional fossil fuel-fired steam unit with a natural gas-fired combined cycle generating unit with a nominal generating capacity of 1,090 MW. Unit 2, which will be retired by 2023, is currently a 445 MW coal- or natural-gas fired unit, as is Unit 3. Unit 4 operates as a 486 MW coal-or natural-gas fired unit. The combined electrical generation output for the facility will be approximately 2,021MW. These units/lines are located on a 1,188-acre Site which is located in Hillsborough County, Florida.

TEC shall comply with the following conditions prior to commencement of any construction activities:

1. Submittals required herein shall include the Licensee's name and Siting Certification Number PA79-12 and shall be directed by e-mail to SW_ERP@dep.state.fl.us with a subject line of permitting/compliance PA No. 79-12/SWD 29-0126191, or by mail to:

Department of Environmental Protection
Southwest District
Submerged Lands and Environmental Resource Program
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

2. Wetland Impacts and Mitigation

Project Phase	Date	SWD Tracking #	Wetland Impacts	Mitigation	Completed
Mod R-Gypsum Storage Area	FO issued 7/22/2013	29-0126191-006	0.34 acres of disturbed, freshwater herbaceous (marsh) wetlands (FLUCCS Code 641	Purchase 0.13 oligohaline/freshwater herbaceous (marsh) credits from the Tampa Bay Mitigation Bank. Prior to any construction or impacts authorized by this	

			with inclusions of 511 and 619)	permit, the Licensee shall provide the Department with documentation that 0.13 oligohaline/freshwater herbaceous (marsh) credits have been deducted from the credit ledger of the Tampa Bay Mitigation Bank Southwest Florida Water Management District permit number 43020546.000.	
AM16-119 Solar Facility (20MW)	Approval issued 5/9/16	29-0126191-010	0.444 acre and 7.31 acres of permanent fill and shading impacts to nonforested freshwater wetlands	Purchase of 0.86 freshwater herbaceous mitigation credits from Tampa Bay Mitigation Bank	

ATTACHMENT D

GUIDANCE FOR
MINERAL OIL DIELECTRIC FLUID
EMERGENCY RESPONSE ACTION PROTOCOL

Florida Department of Environmental Protection (FDEP)
Division of Waste Management
Tallahassee, FL

May 2016

Introduction

This guidance document outlines emergency response actions that may be followed to respond to highly/severely refined mineral oil dielectric fluid (MODEF) (e.g., CAS Nos. 64742-53-6, 64742-46-7, 64742-54-7, and 64741-88-4) discharges from transformers and other MODEF filled electrical equipment. The protocol is founded on certain of the requirements of 40 CFR Section 761.125(b), which applies to cleanup of spills from equipment containing concentrations of PCBs ranging from 50 to 499 parts per million (ppm), (however this protocol is only to be used for spills where the concentration of PCBs is less than 50 ppm). The proposed protocol is also based on the toxicological profile of MODEF, provided in Attachments "A" and "B", which concludes that MODEF used in transformers and other electrical equipment exhibit a negligible degree of toxic potential. This protocol adequately protects human health and the environment while allowing operational flexibility to utilities as necessary. This document provides guidance on complying with the de minimis discharge provisions of Chapter 62-780, F.A.C. In responding to MODEF discharges, including those into or near waters of the state, responders should also comply with all other applicable laws and regulations, including applicable notification requirements.

Emergency response to electric equipment outages consists of mobilization of utility company personnel and/or its contractors to assist with the immediate restoration of electrical service including remediation of any newly released MODEF to the environment that may have occurred during the equipment failure. During emergency response, remediation of newly released MODEF typically occurs during the time period in which the failed electrical equipment is being replaced. This activity is normally initiated no later than 48 hours from the time the failed electrical equipment is discovered or reported and is completed within 30 days.

Non-emergency response to MODEF discharges is a planned process that may require an electrical outage so that the electrical equipment may be removed or safely worked around (i.e., in substations) so that remediation of the MODEF discharge may be completed. Non-emergency response actions may take longer than 48 hours to initiate but are completed within 30 days of discovery. Non-emergency response activities may include newly released MODEF discharges as well as any older MODEF discharges that are identified.

Responses should only be made after a determination regarding whether the MODEF release is believed to have resulted from a PCB transformer or other PCB-contaminated electrical equipment as defined in 40 CFR part 761, based on company knowledge, records search, screening (e.g., Clor-N-Oil), etc. MODEF releases containing PCB concentrations of 50 ppm or greater should be remediated in accordance with all applicable sections of the U.S. Environmental Protection Agency regulations contained in 40 CFR Part 761. MODEF releases containing PCB concentrations greater than 0 and less than 50 ppm may be remediated according to this protocol and disposed of in accordance with applicable solid waste laws and regulations.

The MODEF discharge response process under an "emergency" response scenario should

consist of the following:

(1) Removal of all soil contaminated with freshly released MODEF within the spill area (i.e., visible traces of oily soil and a buffer of 1 lateral foot around the visible traces) and the ground restored to its original configuration; and

(2) Physically removing all visible traces of oil/oil sheen observed in the groundwater with oil absorbent pads/material or via vacuum assisted equipment.

(3) Solid surfaces should be washed and rinsed and the rinse water collected, or such surfaces should be cleaned using appropriate chemical, sorbent or absorbent materials;

(4) These emergency response actions are initiated within 48 hours after the Florida electric utility is notified or becomes aware of the electrical outage, unless such actions are delayed in case of circumstances including but not limited to civil emergency, adverse weather conditions, lack of access to the site, or emergency operating conditions.

The MODEF discharge response process under a "non-emergency" response scenario consists of the following:

(A) If the MODEF spill is 25 gallons or less and not resulted in contact with groundwater, follow items (1), (2) and (3) above.

(B) If the MODEF spill is greater than 25 gallons, or (regardless of quantity discharged) if MODEF is found to be in groundwater or a sheen is removed from groundwater, follow (1), (2) and (3) above. Confirmatory field screening should be conducted via approved field test kits to ensure/verify that impacted soil has been removed. Verification (e.g., Petroflag) may be confirmed by ensuring the TRPH levels remaining in the soil are below the lower of the direct exposure or leachability soil cleanup target level for TRPH. For MODEF found to be in groundwater or where a sheen is removed from groundwater, confirmatory laboratory analysis should be conducted to ensure that TRPH levels are below the groundwater cleanup target level stated in Chapter 62-777, F.A.C., or an alternative number agreed to with the Department. Removal should continue until TRPH levels are below the aforementioned concentrations, unless prevented by a physical obstacle such as a tree, building, etc. To the extent such removal cannot take place within 30 days, then the responder should contact the relevant Department district office to develop an appropriate discharge response in accordance with Chapter 62-780, F.A.C.

(C) Non-emergency response actions may be initiated more than 48 hours after the utility is notified or becomes aware of the MODEF discharge.

(5) Upon completion of response action activities, the following records should be maintained for a period of at least 5 years constituting adherence to the Interim Source Removal Report requirement found in Rule 62-780.525(7), F.A.C.:

(a) Date of discharge or date of discovery of discharge;

(b) Location of discharge (e.g., street address of discharge, if known).
(c) A statement regarding whether the MODEF release is believed to have resulted from a PCB transformer or other PCB-contaminated electrical equipment as defined in 40 CFR Part 761, based on company knowledge, records search, screening, etc.
(d) Estimate of quantity of MODEF released;
(e) Estimate of free MODEF collected, if any;
(f) Estimate of volume of impacted soil excavated or groundwater recovered; and
(g) Name and address of facility where free MODEF, impacted soil or groundwater was disposed or treated, including disposal and/or treatment manifests or certifications.
(h) For non-emergency cleanups greater than 25 gallons,
    (1) Narrative description or illustration indicating where discharge occurred;
    (2) Narrative description or illustration indicating where samples were taken;
    (3) Screening method used;
    (4) TRPH information and a description of any physical obstacles, if applicable, preventing removal to levels below the lower of the direct exposure or leachability soil cleanup target level for TRPH (or the groundwater cleanup target level for TRPH stated in Chapter 62-777, F.A.C.), or an alternative number agreed to with the Department;
    (5) Narrative description or illustration of the limits of the excavation.

Toxicological Synopsis for Mineral-based Transformer Oils (CAS#64742-53-6)

(November, 2004)

Technical Evaluation

Mineral oils, specifically those defined as "hydrotreated light naphthenic petroleum distillates" and assigned Chemical Abstract Service Number (CAS#) 64742-53-6 (also known as transformer oil or mineral oil dielectric fluid (MODEF)) commonly are used as lubricants and heat transfer agents in transformer applications. A mineral oil of this CAS # complies with ASTM specifications for mineral insulating oil used in electrical apparatus (ASTM, 2001). As a result of widespread transformer applications, there are potential environmental issues related to the release of these transformer oils to soils following damage to, or a malfunction of, in-service equipment. This synopsis reviews relevant toxicological information for this class of mineral oils, as distinguished by CAS # 64742-53-6 including a Texaco Material Safety Data Sheet (MSDS; Texaco, 1999) on transformer oils, prepared by Equilon Enterprises and dated 01/04/99, as well as additional references from the toxicological literature. The Texaco MSDS, which was essentially unchanged from the 1993 version (Texaco, 1993), concluded that the transformer oil was "practically non-toxic" for oral and dermal exposures, was "slightly irritating" following dermal application, and exhibited "no appreciable effect" following application to the eyes. Similar MSDS documents from other petroleum manufacturers draw essentially equivalent conclusions regarding this product (e.g., Chevron MSDS for Texaco Transformer Oils, no date).

When evaluating the toxicological profile of mineral transformer oils, it is useful to consider why this product should be viewed differently from other petroleum distillates, and why it should be considered in a separate category. As a practical

matter, the literature is clouded by use of the term "mineral oil" in a way that includes products ranging from used vehicle lubricating oils to industrial cutting oils (NTP, 2002). In contrast, the transformer oil used by most electric utility companies is required to conform to carefully articulated ASTM specifications that are in place to ensure the oil's stability to oxidation, good electrical insulating properties, and ability to maintain low-temperature fluidity (ASTM, 2001).

The refining process for transformer oils typically includes hydrogenation of the distillate under pressure and in the presence of a catalyst, followed by steam stripping, and may include final treatment with Fuller's earth. Recent alternative treatment methods use a combination process with an initial solvent extraction to remove aromatics, resins and sulfur compounds, that is then followed by hydrogenation. This specifically removes undesirable constituents including nitrogen and oxygen compounds, most sulfur compounds, tars and unsaturated hydrocarbons, as well as solid hydrocarbons, particularly amorphous and crystalline waxes. The product resulting from these specifications is a highly refined mineral oil with properties and toxicity potential that distinguish it from other petroleum distillates. The high level of refining may account for the U.S. Food and Drug Administration (FDA) approval of mineral oil for certain common medicinal purposes, such as laxatives and as a delivery vehicle for application of drugs to nasal mucous membranes (HSDB, 2004), and for "contact uses" as food additives (Klaassen, 2001). As a point of interest, it has been estimated that an average person in a developed country ingests approximately 50 grams per year of mineral oil from food products (Heimbach et al., 2002).

Three studies published prior to 1993 that were not referenced in the Texaco MSDS contain important relevant information. Evans et al. (1989) tested mineral oil used in a large manufacturing facility. Samples taken at yearly intervals over five years

were independently tested for skin irritation in New Zealand rabbits, sensitizing potential in guinea pigs, and carcinogenic potential in the mouse. No evidence of skin irritancy, sensitizing potential or carcinogenicity was observed in any of the samples.

Leighton (1990) tested the effects of ingestion of up to 16 ml/kg per day of several types of petroleum oils, including mineral oil, on laboratory mice. Liver enlargement was pronounced in the test animals, along with atrophy of thymus and spleen, following ingestion of all petroleum oils except mineral oil. No adverse effects were reported for mineral oil except for a small reduction in thymus weight. The authors concluded that the thymus reduction was a non-specific response to stress imposed by the forced ingestion of the treatment oils. Neither of these references would result in a conclusion different from that presented in the Texaco MSDS documents.

A topical 90-day study conducted by the National Toxicology Program (NTP, 1992), exposed male and female F344/N rats and C3H mice to "Mineral Oil, USP." The NTP concluded that the only treatment-related dermal effect was cutaneous irritation in the mouse. An increase in liver and kidney weights was observed in the male and female F344/N rats and liver weights were increased in both sexes of C3H mice treated topically with mineral oil. These effects were not reported consistently in other published studies.

Several relevant studies have been published subsequent to the development of the original toxicological information section of the 1993 MSDS on Texaco transformer oils. Using C3H mice in a 2-year study, Freeman et al. (1993) investigated the influence of chronic skin irritation on the tumorigenic potential of several middle distillate petroleum products with and without use of a highly refined mineral oil as a diluent and control. A few of the animals (e.g., 2 to 22%) that were treated with mineral oil

evidenced some skin irritation (e.g., rated "minimal to moderate"); however, none of the mineral oil treated mice developed tumors or any other reported effects in what was essentially a lifetime duration study.

Nash et al. (1996), published a toxicological review regarding topical exposure to white mineral oils, that were described by those authors as "highly refined", being produced by processes similar to those defined earlier as hydrotreatment and hydrogenation in the formation of transformer oils. Those processes are designed to remove the PAH components that have been implicated in toxic effects of other types of mineral oils. Those authors concluded that "there is no evidence of any hazard identified for topical exposure to white mineral oils at any dose in multiple species." They pointed out that oral studies of white mineral oils in rats have suggested toxicity (Firriolo et al., 1995), including microgranulomata in the liver and histiocytosis in the mesenteric lymph nodes. No tumors were noted in the latter study. It should be noted that the material tested in that latter study was a paraffinic, hydrotreated mineral oil, not a naphthenic, hydrotreated mineral oil. Two other oral studies in F344 rats cited by Nash et al. (1996), that implicate mineral oils in toxic responses, have shown a much less significant effect for the white mineral oil (transformer-oil-like) product as opposed to a different mineral oil product (Baldwin et al., 1992; BIBRA, 1992). Of equal importance is the fact that, in contrast to the F344 rats, adverse effects were not observed in dogs or in two other strains of rats (Nash et al., 1996). The strain-specific nature of the effect lessens its importance.

Smith et al. (1995) studied the effects of four different highly refined mineral oils on Long-Evans rats and beagle dogs. The oils were administered at levels ranging from 300 to 1500 parts per million (ppm) in the diet for 90 days. No adverse treatment-related effects were reported from any of the mineral oils tested on mortality rate,

physical appearance, behavior, organ weights or histopathology of tissues in the rats. In dogs, other than a slight laxative effect, no adverse effects were observed in the analyses of body weights, hematology, clinical chemistry, red/white blood cell counts and histopathology of the tissues. The authors concluded that "repeated exposure to relatively high levels of white mineral oil in the diets does not produce significant subchronic toxicity" in dogs or rats.

Chronic dermal studies in mice, performed by Broddle et al. (1996) with various petroleum streams, included hydrotreated light naphthenic petroleum distillate (CAS No. 64742-53-6). These authors reported that this hydrotreated light naphthenic distillate caused low levels of alopecia (hair loss), erythema (inflammatory reddening of the skin) and scabbing after approximately one year of repetitive exposure, and was a "dermal carcinogen of low potency." The number of mice with tumors (e.g., incidence was 15% with a mean latency of 94 weeks) was relatively low, but statistically significant when compared to the sham-treated controls. The authors attributed the carcinogenic potential to the presence of polynuclear aromatic hydrocarbons (PNAs) in the product. Hydrotreatment is intended to reduce or eliminate unsaturation and aromaticity of PNAs and to cleave heterocyclic compounds with consequent reduction or elimination of carcinogenicity. However, the authors state that the degree of hydrotreatment of the stream used in this study was undetermined. Therefore, it is possible that the carcinogenicity was a result of inadequate hydrotreatment of the stream which would otherwise have eliminated the PNAs.

More recently, NTP listed mineral oils (untreated and mildly treated) in the category of "known human carcinogens" in the 10th Report on Carcinogens (NTP, 2002). The determination was based on the occurrence of squamous cell carcinoma of the skin and scrotum, sinonasal cancers, and possibly lung cancer among workers in a

variety of occupations. Experimental studies with these mineral oils in animals have shown variable results (NTP, 2002). While this NTP classification shouldn't be ignored, there are two reasons why it doesn't apply strictly to the case of transformer oils in soil. First, the NTP classification [and the IARC (1984) and IARC (1987) which it cites in support] addresses primarily occupational circumstances where inhalation, ingestion and dermal exposure to mineral oil mists and concentrated liquids were the medium of direct exposure. That circumstance is quite different from the conditions encountered with soils that may be impacted by what typically are small volume releases from transformer equipment. Second, the term "mineral oils" in that document is used to describe a much broader category of oils, many of which are much less refined than the highly refined naphthenic transformer oils.

Although most mineral oils are generally considered nontoxic, it should be noted that some authors have demonstrated immune system effects from mineral oil components (e.g., pristane; Shaheen et al., 1999). Such demonstrations of immunotoxicity from hydrotreated, light naphthenic mineral transformer oils are lacking. The specific mineral oil identified as Bayol F (also known as Incomplete Freund's Adjuvant), and certain mineral oil components (e.g., squalene and η-hexadecane), have been reported to induce lupus-related autoantibodies in nonautoimmune mice (Kuroda et al., 2004). All hydrocarbons tested in that study, including medicinal mineral oils, induced hypergammaglobulinemia, as well as autoantibodies. The data of these authors suggest that the induction of autoantibodies correlated with the amount of C15 - C25 hydrocarbons present in an oil. The significance of these findings for pathogenesis of human disease is unclear, and the authors correctly note that hydrocarbon exposure via the intraperitoneal route may be

different from other routes of exposure, and thus may pose less risk (Kuroda et al., 2004).

Another condition that reportedly was associated with mineral oil exposure is exogenous lipoid pneumonia. This pneumonia is an uncommon condition resulting from aspirating or inhaling fatlike material, such as mineral oil found in laxatives and various aerosolized industrial materials. Acute toxicity of this type can occur, but the disease is usually slow to develop (Spickard and Hirschmann, 1994). While there may be some occupational application for that information, the significance to environmental exposures (e.g., soil) is negligible.

Peristianis (1989) reported on an unconventional assay for possible carcinogenic activity of mineral oils, termed the short-term "sebaceous gland suppression" (SGS) test. The cutaneous carcinogenic activity of mineral oils reportedly could be estimated effectively by the SGS test. However, the test has not been routinely reported in the literature as a validated methodology in the 15 years since this paper was published. Thus, its applicability and predictive relevance are not clear.

Summary and Conclusions

As judged from the body of available toxicological data from standard tests, the hydrotreated, light naphthenic mineral oils, such as those typically used in utility transformer applications, exhibit a negligible degree of toxic potential. The only reproducible effect appears to be slight irritation following repetitive dermal application. The existing classification of "mineral oils" as carcinogens by NTP and IARC appears to be based upon inhalation, ingestion and dermal exposure under occupational scenarios to mists and liquids of a wide variety of refined and unrefined oil products, and is not directly applicable to the subset of mineral oils represented by

the electric utility transformer oils. U.S. EPA does not presently classify "mineral oils" as carcinogens.

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Attachment B

Hopping Green & Sams

Attorneys and Counselors

December 14, 2006

By Electronic Mail

Doug Jones
Chief, Bureau of Waste Cleanup
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, FL 32399-2400

Re: Mineral Oil Dielectric Fluid (MODEF)
Emergency Response Action Protocol

Dear Doug:

As we previously discussed by telephone, I am enclosing the response of Dr. Christopher Teaf of Hazardous Substance and Waste Management Research (HSWMR) to the August 7, 2006, letter from the University of Florida's Drs. Stephen Roberts and Leah Stuchal. The letter from Drs. Roberts and Stuchal addressed HSWMR's July 19, 2006 toxicological evaluation of additional mineral oil products that may be used in transformers and other oil-filled electrical equipment. I am also enclosing those letters for your ease of reference.

As you know, the FCG tasked HSWMR's evaluation to determine whether the use of the existing Department-approved MODEF protocol might be appropriate for the additional mineral oil products that were evaluated. As was the case in HSWMR's original 2004 toxicological evaluation of mineral oil products similar to those products having Chemical Abstract Service (CAS) number 6474253-6, the most recent HSWMR investigation concludes that the additional mineral oil products evaluated do not pose a significant degree of toxic potential. That conclusion was concurred in by Drs. Roberts and Stuchal.

As a result of the foregoing and consistent with its original request of July 27, 2006, the FCG respectfully requests that the Department provide its written concurrence that FCG member use of the existing MODEF protocol is appropriate for the general category of "highly/severely refined mineral oils" (e.g., CAS # 64742-46-7, CAS #

64742-54-7, and CAS # 64741-88-4). Thank you in advance for your prompt consideration of this request.

Sincerely,

Hopping Green & Sams, P.A.

Michael P. Petrovich

MPP/rlh

cc: Dr. Christopher Teaf, HSWMR
Tanya Portillo, FCG

HSWMR

Hazardous Substance & Waste Management Research, Inc.

2976 Wellington Circle West
Tallahassee, Florida 32309
Phone: (850) 681-6894
Fax: (850) 906-9777
e-mail: staff@hswmr.com

December 7, 2006

Dr. Stephen M. Roberts, Director
Center for Environmental & Human Toxicology
University of Florida
P.O. Box 110855
Gainesville, FL 32611-0885

Re: Comment Letter to Florida Department of Environmental Protection (FDEP) on Mineral Oil Dielectric Fluid (MODEF) Emergency Response Action Protocol

Dear Steve:

I have reviewed your letter to Ligia Mora-Applegate dated August 7, 2006, regarding the "Mineral Oil Dielectric Fluid (MODEF) Emergency Response Action Protocol". I appreciate the comments that you and Dr. Stuchal presented, and your concurrence with our human-health-based conclusion that "highly/severely refined" mineral oils are non-carcinogenic and essentially "non-toxic".

In response to your comment regarding potential effects that might be relevant if a MODEF spill occurred in or near surface water, I would acknowledge that those considerations may apply in some cases; however the protocol is focused exclusively on MODEF releases to soil or groundwater "on residential, commercial, and industrial properties". While the letter does not specifically address MODEF releases in or near surface water, if a MODEF release occurred in such a situation, the MODEF protocol already provides that "FCG members will also comply with all other applicable laws and regulations, including applicable notification requirements." On balance, that latter provision may adequately address the concern such that if a release occurred in or near surface water, then "all other applicable laws and regulations", including relevant technical elements, would apply.

As always, thanks for taking the time to review the protocol letter, and I look forward to talking with you soon.

Regards,

Christopher M. Teaf, Ph.D.
President & Drector of Toxicology

cc: *Doug Jones, FDEP*
Ligia Mora-Applegate, FDEP
Tanya Portilla, FCG
Mike Petrovich, Esq., HG&S

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August 7, 2006

Ligia Mora-Applegate
Bureau of Waste Cleanup
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Mineral Oil Dielectric Fluid (MODEF) Emergency Response Action Protocol

Dear Ms. Mora-Applegate:

We have reviewed at your request the letter from Hazardous Substance & Waste Management Research, Inc. (HSWMR) dated July 19, 2006 for the Florida Electric Power Coordinating Group, Inc. (FCG). The letter is a supplement to the HSWMR November 2004 report entitled *Toxicological Synopsis for Mineral-based Transformer Oils (CAS# 64742-53-6)*. In that report, HSWMR concluded that hydrotreated, light naphthenic mineral oils exhibit a negligible degree of toxic potential. We concurred with this conclusion in a review letter dated January 11, 2005, and provided some additional literature citations. In our review letter, we cautioned that the toxicological review was directed to human health, and that it is conceivable that mineral oil dielectric fluids might have effects in aquatic ecosystems that would be relevant if a spill were to occur in or near surface water.

The current letter requests that other "highly/severely refined" mineral oils (CAS# 64742-46-7, CAS# 64742-54-7, and CAS# 64741-88-4) be added to the substances that can be safely addressed by the provisions contained in the existing MODEF Protocol dated February 25, 2005. As the letter points out, current literature has concluded that "severely" refined minerals oils are non-carcinogenic and are essentially nontoxic pertaining to human health. The only reproducible effect of "severely" refined mineral oils appears to be skin irritation following repeated dermal application, and the toxic potential appears to be negligible. We agree with this assessment of the human toxicology of severely refined mineral oils.

The issue of potential effects on aquatic ecosystems from a spill near surface water remains. We recommend revision of the MODEF Emergency Response Action Protocol to address explicitly this possible scenario. If sufficient data on aquatic toxicity of these mineral oils are available, risk-based criteria to evaluate surface water impacts could be developed and included in the emergency response action protocol. We suspect, however, that the ecotoxicology literature on this class of compounds may be too limited to develop sound risk-based criteria. In this situation, part of the emergency response when a spill occurs in or near a surface water body should include empirical testing using standard aquatic toxicity bioassays. The results of these bioassays could be used to show compliance with Chapter 62-302.500(4) and 62-302.530(62), F.A.C.

Sincerely,

Stephen M. Roberts, Ph.D.

Leah D. Stuchal, Ph.D.

HSWMR

Hazardous Substance & Waste Management Research, Inc.

2976 Wellington Circle West
Tallahassee, Florida 32309
Phone: (850) 681-6894
Fax: (850) 906-9777
e-mail: staff@hswmr.com

July 19, 2006

Mr. Michael Petrovich, Esq.
Hopping Green & Sams
123 South Calhoun Street
Tallahassee, FL 32301

Dear Mike:

As we discussed recently with Florida Electric Power Coordinating Group (FCG) representatives, this letter report is presented as a supplement to our November 2004 report (HSWMR, 2004) entitled *Toxicological Synopsis for Mineral-based Transformer Oils (CAS#64742-53-6)*. In that report, we concluded that:

> *"As judged from the body of available toxicological data from standard tests, the hydrotreated, light naphthenic mineral oils, such as those typically used in utility transformer applications, exhibit a negligible degree of toxic potential."*

In that original evaluation, we narrowly addressed the Chemical Abstract Service Number (CAS#) 64742-53-6 ("hydrotreated light naphthenic petroleum distillates") as an appropriate representative for the mineral-based transformer oils. The Florida Department of Environmental Protection (FDEP) concurred with the conclusion of the November, 2004 report, as indicated by agency approval in February, 2005 of the Mineral Oil Dielectric Fluid Emergency Response Action Protocol ("MODEF Protocol") that was proposed by FCG. More recently, the FCG has expressed an interest in including additional similar mineral oils in the MODEF Protocol. The FCG wishes to ensure that these other materials that are used in some transformers and other electrical equipment also "... exhibit a negligible degree of toxic potential." Toward that end, we have reviewed many material safety data sheets (MSDS) that were submitted by FCG members and have conducted literature reviews on mineral oil components of those products.

The MSDSs identify by CAS# several individual or, in other cases, multiple chemical compounds grouped generally as either "lubricant base oils" or "petroleum distillates." Of the many CAS #s presented for these groups, three of them (CAS# 64742-46-7, CAS#64742-54-7, and CAS# 64741-88-4) appear repeatedly and also have sufficient toxicological information on which to base an opinion that may be applicable to the mineral oil group as a whole.

Although the compounds present in commercial products identified in the MSDSs vary in such characteristics as carbon chain length, viscosity, and refinement method, they are all classified as "highly/severely refined mineral oils", a definition with distinct toxicological significance. As demonstrated by the following literature synopses, mineral oil products of the "highly/severely refined" type are essentially nontoxic.

Kane et al. (1984) demonstrated that, although unprocessed petroleum refinery distillates have the capacity to cause tumors, conventional solvent refining is a sufficient process to remove the tumorigenic components as verified by their mouse skin painting bioassay. In another study using the standard mouse skin painting bioassay on C3H/HeJ mice, the authors concluded that the refining processes commonly used to produce lubricating oils with viscosity indexes (VIs) of 85-100 (which are levels normally used in commercial operations), were sufficient to effectively eliminate dermal carcinogenic activity in mice (Halder et al, 1984). It also was reported that severe hydroprocessing alone can be used to reduce or eliminate many of the troublesome aromatic compounds and the associated carcinogenic potential.

In a review by Mackerer et al. (2003) the authors concluded that it is appropriate to consider a non-carcinogenic base oil to be one that is "severely" refined. Beck et al. (1984) tested the acute toxicity of nineteen untreated petroleum hydrocarbons and found that the paraffinic and naphthenic oils were the least toxicologically reactive of all materials tested. The middle distillates did not produce a sensitization reaction in guinea pigs, did not exhibit acute dermal toxicity, nor did they produce serious ocular lesions even upon direct instillation to the eye.

Dalbey et al. (1991) studied the effects of three lubricant base oils on Sprague-Dawley rats. The rats were exposed to varying concentrations of either a solvent refined oil, a white oil or a hydrotreated base oil (CAS # 64742-54-7) for 6 hours/day, 5 days/week, for a total of 4 weeks. Based on laboratory findings, the authors concluded that, aside from ambiguous accumulation of "free cells" in the lung, exposure to high concentrations of aerosols of severely treated oils resulted in a low degree of toxicity.

The solvent extraction process for petroleum distillates selectively removes undesirable compounds, solubilizing first the aromatics, then olefins, naphthenes, and (least soluble) the paraffins. In the 1980's, approximately 74% of lubricant base oils produced in the US and Canada were "highly refined" (IARC, 1984). Kane et al. (1984) performed skin tumorigenicity studies on male C3H mice and found CAS # 64741-88-4 followed by dewaxing to be noncarcinogenic. Gerhart et al. (1988) demonstrated that, comparing lifetime skin-painting assays lasting 2-2.5 years and initiation/promotion assays in male CD-1 mice, the solvent-extracted lubricant base oil having the CAS# 64741-88-4 exhibited no carcinogenic activity, tumor initiator activity or tumor promoter activity.

Long-term topical application studies using female CF1 mice concluded that hydrotreatment or solvent extraction methods can yield oils with no carcinogenic potential (Doak et al., 1983).

With respect to the classification of "highly/severely refined" mineral oils (e.g., CAS# 64742-46-7, CAS# 64742-54-7, and CAS# 64741-88-4) that are the focus of this letter and the subject of the cited literature, one can conclude that they are of limited toxicological significance. The same conclusion was reached for the original "severely refined" substance of interest (CAS# 64742-53-6). In that light, it would be reasonable to include "highly/severely refined" mineral oils as substances which can be safely addressed by the provisions contained in the existing MODEF Protocol dated February 25, 2005.

A list of cited technical references is included as an Attachment to this letter.

Please call Doug Covert or me at (850) 681-6894 when you have had an opportunity to review these materials, so that we can decide how best to proceed.

Regards,

Christopher M. Teaf

Christopher M. Teaf, Ph.D.
President & Director of Toxicology

Attachment

REFERENCES CITED

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IARC. 1984. IARC monographs on the evaluation of the carcinogenic risk of chemicals in humans: Polynuclear aromatic compounds; Part 3, Industrial exposures in aluminum production, coal gasification, coke production, and iron and steel founding. Vol 34, Lyon, France. As cited in Rothman and Emmett, 1988.

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Mackerer, C.R. et al. 2003. Petroleum mineral oil refining and evaluation of cancer hazard. Appl. Occup. Environ. Hyg. 18(11):890-901.

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Metering Instructions

The Licensee shall meter withdrawals from surface waters and/or the ground water resources, and meter readings from each withdrawal facility shall be recorded on a monthly basis within the last week of the month. The meter reading(s) shall be reported to the SWFWMD Water Use Permit Bureau on or before the tenth day of the following month for monthly reporting frequencies. For bi-annual reporting, the data shall be recorded on a monthly basis and reported on or before the tenth day of the month following the sixth month of recorded data. The Licensee shall submit meter readings online using the Permit Information Center at http://www.swfwmd.state.fl.us/permits/ or on SWFWMD-supplied scanning forms unless another arrangement for submission of this data has been approved by the SWFWMD. Submission of such data by any other unauthorized form or mechanism may result in loss of data and subsequent delinquency notifications. Call the Water Use Permit Bureau in Tampa at (813) 985-7481 if difficulty is encountered.

The meters shall adhere to the following descriptions and shall be installed or maintained as follows:

1. The meter(s) shall be non-resettable, totalizing flow meter(s) that have a totalizer of sufficient magnitude to retain total gallon data for a minimum of the three highest consecutive months permitted quantities. If other measuring device(s) are proposed, prior to installation, approval shall be obtained in writing from the Water Use Permit Bureau Chief.

2. The Licensee shall report non-use on all metered standby withdrawal facilities on the scanning form or approved alternative reporting method.

3. If a metered withdrawal facility is not used during any given month, the meter report shall be submitted to the SWFWMD indicating the same meter reading as was submitted the previous month.

4. The flow meter(s) or other approved device(s) shall have and maintain an accuracy within five percent of the actual flow as installed.

5. Meter accuracy testing requirements:
A. For newly metered withdrawal points, the flow meter installation shall be designed for inline field access for meter accuracy testing.
B. The meter shall be tested for accuracy on-site, as installed according to the Flow Meter Accuracy Test Instructions in this Exhibit, every five years in the assigned month for the county, beginning from the date of its installation for new meters or from the date of initial issuance of this certification containing the metering condition with an accuracy test requirement for existing meters.
C. The testing frequency will be decreased if the Licensee demonstrates to the satisfaction of the SWFWMD that a longer period of time for testing is warranted.
D. The test will be accepted by the SWFWMD only if performed by a person knowledgeable in the testing equipment used.
E. If the actual flow is found to be greater than 5% different from the measured flow, within 30 days, the Licensee shall have the meter re-calibrated, repaired, or replaced, whichever is necessary. Documentation of the test and a certificate of re-calibration, if applicable, shall be submitted within 30 days of each test or re-calibration.

6. The meter shall be installed according to the manufacturer's instructions for achieving accurate flow to the specifications above, or it shall be installed in a straight length of pipe where there is at least an upstream length equal to ten (10) times the outside pipe diameter and a downstream length equal to two (2) times the outside pipe diameter. Where there is not at least a length of ten diameters upstream available, flow straightening vanes shall be used in the upstream line.

7. Broken or malfunctioning meter:
A. If the meter or other flow measuring device malfunctions or breaks, the Licensee shall notify the SWFWMD within 15 days of discovering the malfunction or breakage.

B. The meter must be replaced with a repaired or new meter, subject to the same specifications given above, within 30 days of the discovery.
C. If the meter is removed from the withdrawal point for any other reason, it shall be replaced with another meter having the same specifications given above, or the meter shall be reinstalled within 30 days of its removal from the withdrawal. In either event, a fully functioning meter shall not be off the withdrawal point for more than 60 consecutive days.

8. While the meter is not functioning correctly, the Licensee shall keep track of the total amount of time the withdrawal point was used for each month and multiply those minutes times the pump capacity (in gallons per minute) for total gallons. The estimate of the number of gallons used each month during that period shall be submitted on SWFWMD scanning forms and noted as estimated per instructions on the form. If the data is submitted by another approved method, the fact that it is estimated must be indicated. The reason for the necessity to estimate pumpage shall be reported with the estimate.

9. In the event a new meter is installed to replace a broken meter, it and its installation shall meet the specifications of this condition. The Licensee shall notify the SWFWMD of the replacement with the first submittal of meter readings from the new meter.

FLOW METER ACCURACY TEST INSTRUCTIONS
1. Accuracy Test Due Dates - The Licensee is to schedule their accuracy test according to the following schedule:
A. For existing metered withdrawal points, add five years to the previous test year, and make the test in the month assigned to your county.
B. For withdrawal points for which metering is added for the first time, the test is to be scheduled five years from the issue year in the month assigned to your county.
C. For proposed withdrawal points, the test date is five years from the completion date of the withdrawal point in the month assigned to your county.
D. For the Licensee's convenience, if there are multiple due-years for meter accuracy testing because of the timing of the installation and/or previous accuracy tests of meters, the Licensee can submit a request in writing to the Water Use Permit Bureau Chief for one specific year to be assigned as the due date year for meter testing. If Licensee has many meters to test it may also request the tests to be grouped into one year or spread out evenly over two to three years.
E. The months for accuracy testing of meters are assigned by county. The Licensee is requested but not required to have their testing done in the month assigned to their county. This is to have sufficient SWFWMD staff available for assistance.

January	Hillsborough
February	Manatee, Pasco
March	Polk (for odd numbered permits)*
April	Polk (for even numbered permits)*
May	Highlands
June	Hardee, Charlotte
July	None or Special Request
August	None or Special Request
September	DeSoto, Sarasota
October	Citrus, Levy, Lake
November	Hernando, Sumter, Marion
December	Pinellas

* The Permittee or Licensee may request their multiple permits be tested in the same month.

2. Accuracy Test Requirements: The Licensee shall test the accuracy of flow meters on permitted withdrawal points as follows:
A. The equipment water temperature shall be set to 72 degrees Fahrenheit for ground water, and to the measured water temperature for other water sources.

B. A minimum of two separate timed tests shall be performed for each meter. Each timed test shall consist of measuring flow using the test meter and the installed meter for a minimum of four minutes duration. If the two tests do not yield consistent results, additional tests shall be performed for a minimum of eight minutes or longer per test until consistent results are obtained.
C. If the installed meter has a rate of flow, or large multiplier that does not allow for consistent results to be obtained with four- or eight-minute tests, the duration of the test shall be increased as necessary to obtain accurate and consistent results with respect to the type of flow meter installed.
D. The results of two consistent tests shall be averaged, and the result will be considered the test result for the meter being tested. This result shall be expressed as a plus or minus percent (rounded to the nearest one-tenth percent) accuracy of the installed meter relative to the test meter. The percent accuracy indicates the deviation (if any), of the meter being tested from the test meter.

3. Accuracy Test Report: The Licensee shall demonstrate that the results of the meter test(s) are accurate by submitting the following information within 30 days of the test:
A. A completed Flow Meter Accuracy Verification Form, Form LEG-R.014.00 for each flow meter tested. This form can be obtained from the SWFWMD's website (http://www.swfwmd.state.fl.us/) under "Permits and Rules" for Water Use Permits.
B. A printout of data that was input into the test equipment if the test equipment is capable of creating such a printout;
C. A statement attesting that the manufacturer of the test equipment, or an entity approved or authorized by the manufacturer, has trained the operator to use the specific model test equipment used for testing;
D. The date of the test equipment's most recent calibration that demonstrates that it was calibrated within the previous twelve months, and the test lab's National Institute of Standards and Testing (N.I.S.T.) traceability reference number.
E. A diagram showing the precise location on the pipe where the testing equipment was mounted shall be supplied with the form. This diagram shall also show the pump, installed meter, the configuration (with all valves, tees, elbows, and any other possible flow disturbing devices) that exists between the pump and the test location clearly noted with measurements. If flow straightening vanes are utilized, their location(s) shall also be included in the diagram.
F. A picture of the test location, including the pump, installed flow meter, and the measuring device, or for sites where the picture does not include all of the items listed above, a picture of the test site with a notation of distances to these items.

ATTACHMENT F

GROUNDWATER MONITORING, OPERATION AND MAINTENANCE REQUIREMENTS

Tampa Electric Company - Big Bend Station
13031 Wyandotte Road
Apollo Beach, FL 33572
Hillsborough County
Latitude: 27°47' 41.3827" N Longitude: 82°24' 3.5451" W

These Groundwater Monitoring, Operation and Maintenance Requirements (GWMOMR) were developed by the Licensee, Tampa Electric Company, in conjunction with the Florida Department of Environmental Protection Southwest District's Industrial Wastewater (IWW) program to incorporate the groundwater (GW) monitoring requirements into the Licensee's Conditions of Certification (COC or License). The GWMOMR incorporates Units 1, 2, 3 and 4 as well as 7 active IWW lined ponds, the concrete settling basins and a stormwater pond at the coal field . The GWMOMR will also continue to include 3 out of service CCR Impoundments, which will be monitored until completion of the closure project for these ponds under the provisions of 40 CFR Part 257 (the "CCR Rule"). The Department's Southwest District IWW program is responsible for reviewing and approving all revisions to this document in accordance with Section A, Condition XXI. Procedures for Post-Certification Submittals and Section B.I.A Industrial Wastewater Ground Water Monitoring.

New major sources or deletion of existing major sources of wastewater; improvements made to existing or new wastewater treatment facilities including those which provide for a new or expanded land with increase in the permitted capacity; pollutants not addressed in this Attachment or the Conditions of Certification; and, other projects that cause or may cause changes to the quantity and/or quality of discharges to groundwater as a result of industrial wastewater treatment or solid waste disposal are considered modifications to the existing license. The licensee shall submit a petition for modification to the Conditions of Certification to the Department for review and approval in accordance with Section 403.516, F.S. and 62-17.211, F.A.C., as outlined in Section A. XXIV. Modification of Certification, of the Conditions of Certification.

WASTEWATER TREATMENT:

Industrial wastewater (IWW) generated at the facility is composed of contact storm water including coal pile runoff, plant floor drain water, reverse osmosis reject water, demineralizer wastes, boiler blowdown and chemical cleaning wastewater, coal unloading hopper wash water, turbine compressor wash water, equipment wash water, ash and slag sluice water and cooling tower blowdown. The industrial wastewater is routed to the lined wastewater settling and recycle pond system. Recycled wastewater is then utilized throughout the plant for equipment wash down, in the FGD system, slag and ash sluicing, and to prewash gypsum. The FGD process wastewater is treated separately and discharged either with the once-though cooling water (NPDES discharge) or to the IWW pond system. Reclaimed water provided by Hillsborough County is treated by reverse osmosis and/or demineralizer systems prior to use in critical plant processes. Wastes from these treatment systems are sent the recycle pond system. Treatment of the recycled water includes settling, pH adjustment and disinfection. Storm water or wastewater that has the potential to come into contact with oil, grease, or similar materials is sent to an oil/water separator before being sent to the recycle water system.

The IWW pond system includes the following ponds and basins:

1. Long Term Fly Ash/Reclaimed Water Pond (lined)
2. South Bottom Ash Pond (lined)
3. North Bottom Ash Pond (lined)
4. Bottom Ash Suction Pond (lined)

5. Settling Basins (concrete)
6. Settling Pond (lined)
7. South Recycle Pond (lined)
8. North Recycle Pond (lined)
9. Storm Water Pond (to be lined - at the coal field)

Out of Service (Under Closure per 40 CFR Part 257)

10. South Economizer Ash Pond (lined, solids storage area for combustion residuals)
11. North Economizer Ash Pond (lined)
12. Economizer Suction Pond (lined)

Wastewater from the Culbreath Bayside Station, permit FLA184713 may be discharged to the recycle pond system, provided all conditions and requirements of this license are satisfied.

I. SITE GROUNDWATER MONITORING

A. Construction Requirements

1. New monitoring well. If a new monitoring well approved by the Department is constructed, a revision of this attachment will then be prepared to incorporate the well with proper well designation. *[62-4.070]*

2. The licensee shall give at least 72-hour notice to the Department's Southwest District Office, prior to the installation of any monitoring wells detailed in this license including the GWMOMR. *[62-520.600(6)(h)]*

3. All field work done in connection with this GWMOMR regarding the collection of ground water samples shall be conducted in accordance with the Standard Operating Procedures (SOPs) (http://www.dep.state.fl.us/water/sas/sop/sops.htm). All laboratory analyses done in connection with this GWMOMR shall be conducted by firms that hold certification from the Department of Health, Environmental Laboratory Certification Program under Chapter 64E-1, F.A.C. *[Rule 62-160.300(1), F.A.C.]*.

4. Before construction of new groundwater monitoring wells, a soil boring shall be made at each new monitoring well location to properly determine monitoring well specifications such as well depth, screen interval, screen slot, and filter pack. *[62-520.600(6)(g)]*

5. Location Requirements. Within 60 days after completion of construction of new IWW ground water monitoring wells, the following information shall be submitted.

a. A properly scaled figure depicting monitor well locations (active and abandoned) with identification numbers shall be submitted to the Southwest District IWW Section. The figure shall also include (or attach) the monitoring well, top of casing, and ground surface elevations referenced to National Geodetic Vertical Datum (NGVD) of 1929 to the nearest 0.01 foot, along with monitor well location latitude and longitude to the nearest 0.1 second. *[62-520.600(6) (i)]*

6. Well Construction Detail Requirements. Within 30 days after completion of construction or abandonment of ground water monitoring wells, the following information shall be submitted.

a. For both IWW and SW wells, a copy of the Southwest Florida Water Management District (SWFWMD) State of Florida Permit Application to Construct, Repair, Modify, or Abandon a Well (LEGR.040.01 (June 2010) 40D-3.101(1), F.A.C.) and

b. IWW Wells, the Department's Southwest District Office well completion reports and soil boring/lithologic log on DEP Form 62-520.900(3), Monitor Well Completion Report, for each well. The DEP form can be accessed at 62-532.410 and 62-520.900(2)

7. Initial Sampling Requirements. Within 30 days of installation of a new IWW well (other than a replacement for the wells listed in Table B.2. below), the licensee shall conduct initial ground water sampling events as follows:

Sample the new well for the Primary and Secondary Drinking Water parameters included in Rule 62-550, Florida Administrative Code, Public Drinking Water Systems (excluding asbestos, acrylamide, Dioxin, butachlor, epichlorohydrin, pesticides, and PCBs, unless reasonably expected to be a constituent of the discharge or an artifact of the site). In addition, volatile organics and extractable semivolatile organics shall be analyzed. Results of this initial

sampling shall be submitted to the Southwest District IWW Section and the SCO within 60 days after sampling. *[62-520.600(5)(a)2]*

B. Operational Requirements

1. During the period of operation authorized by this Certification the licensee shall continue to sample ground water at the existing monitoring wells identified in item.I.B.2 below, in accordance with the COC and GWMOMR prepared in accordance with Rule 62-520.600, F.A.C. *[62-520.600]*

2. The following monitoring wells shall be sampled for Groundwater Monitoring requirements for the lined settling and recycle pond system:

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Latitude			Longitude			Aquifer Monitored	New or Existing
		°	'	"	°	'	"		
MWB-4R	Background	27	47	2	82	23	7	Surficial	Existing
MWB-56UF	Background	27	48	22	82	23	1	Floridian	Existing
MWC-16R**	Coal Stockpile Compliance Well	27	47	51	82	24	31	Surficial	Existing
MWC-31UF	Recycle Pond Compliance well	27	47	40	82	23	38	Floridian	Existing
MWC-45***	Recycle Pond Compliance well	27	47	34	82	23	40	Surficial	Existing
MWC-46***	Recycle Pond Compliance well	27	47	37	82	23	47	Surficial	Existing
MWC-47***	Recycle Pond Compliance well	27	47	38	82	23	33	Surficial	Existing
MWC-55**	Coal Stockpile Compliance Well	27	47	40	82	24	43	Surficial	Existing
MWC-9***	Recycle Pond Compliance well	27	47	34	82	23	33	Surficial	Existing

MWC = Compliance; MWB = Background; MWI = Intermediate; MWP =Piezometer

[62-520.600]

3. The monitor wells specified in I.B.2 above, shall be sampled for the parameters listed below except for wells MWB-56UF and MWC-31UF:

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Chloride (as Cl)	Report	mg/L	Grab	Semi-Annually; twice per year
pH*	Report	s.u.	In Situ	Semi-Annually; twice per year
Radium 226 + Radium 228, Total**	5	pCi/L	Grab	Semi-Annually; twice per year
Specific Conductance*	Report	umhos/cm	In Situ	Semi-Annually; twice per year
Turbidity*	Report	NTU	In Situ	Semi-Annually; twice per year
Water Level Relative to NGVD	Report	ft	In Situ	Semi-Annually; twice per year
Arsenic, Total Recoverable	0.010	mg/L	Grab	Semi-Annually; twice per year

ATTACHMENT F

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Alpha, Gross Particle Activity	15	pCi/L	Grab	Semi-Annually; twice per year
Fluoride, Total (as F)	4.0	mg/L	Grab	Semi-Annually; twice per year
Iron, Total Recoverable	Report	mg/L	Grab	Semi-Annually; twice per year
Temperature (C), Water*	Report	Deg C	In Situ	Semi-Annually; twice per year
Boron, Total Recoverable	Report	mg/L	Grab	Semi-Annually; twice per year
Oxygen, Dissolved (DO) *	Report	mg/L	In Situ	Semi-Annually; twice per year
Sulfate, Total	Report	mg/L	Grab	Semi-Annually; twice per year

*The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Ground Water Sampling, Figure FS 2200-2 Ground Water Purging Procedure (http://www.dep.state.fl.us/water/sas/sop/sops.htm) and recorded on Form FD 9000-24, Ground Water Sampling Log (http://www.dep.state.fl.us/water/sas/qa/forms.htm). The sampling logs shall be submitted with each ground water Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24. *[62-520.600(11)(b)]*

** MWC-16R and MWC-55 at the coal stockpile area have a limit of Report Only for Radium 226 + Radium 228, Total and Gross Alpha.

***Wells MWC-9, MWC-45, MWC-46 and MWC-47 have been incorporated into the Consent Order Remedial Action Plan (RAP) and have a limit of Report Only for all parameters.

4. The following parameters shall be analyzed for wells MWB-56UF and MWC-31UF identified in I. B.2 above.

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
pH*	Report	s.u.	In Situ	Semi-Annually; twice per year
Radium 226 + Radium 228, Total	5	pCi/L	Grab	Semi-Annually; twice per year
Specific Conductance*	Report	umhos/cm	In Situ	Semi-Annually; twice per year
Turbidity*	Report	NTU	In Situ	Semi-Annually; twice per year
Water Level Relative to NGVD	Report	ft	In Situ	Semi-Annually; twice per year
Alpha, Gross Particle Activity	15	pCi/L	Grab	Semi-Annually; twice per year
Temperature (C), Water*	Report	Deg C	In Situ	Semi-Annually; twice per year
Oxygen, Dissolved (DO) *	Report	mg/L	In Situ	Semi-Annually; twice per year

*The field parameters shall be sampled per DEP–SOP-001/01, FS 2200 Ground Water Sampling, Figure FS 2200-2 Ground Water Purging Procedure (http://www.dep.state.fl.us/water/sas/sop/sops.htm) and recorded on Form FD 9000-24, Ground Water Sampling Log (http://www.dep.state.fl.us/water/sas/qa/forms.htm). The sampling logs shall be submitted with each ground water Part D DMR. The field parameters to be reported on Part D of GW DMR shall be the last sample recorded on FD 9000-24. *[62-520.600(11)(b)]*

5. Water levels shall be recorded prior to evacuating the well for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NGVD allowable) at a precision of plus or minus 0.01 feet. *[62-520.600(11)(c)]*

6. Ground water monitoring wells shall be purged prior to sampling to obtain a representative sample. *[62-160.210]*

7. Analyses shall be conducted on un-filtered samples, unless filtered samples have been approved by the Department as being more representative of ground water conditions. *[62-520.310(5)]*

8. If any monitoring well becomes inoperable or damaged to the extent that sampling or well integrity may be affected, the licensee shall notify the Department's SWD office within two business days from discovery, and a detailed written report shall follow within ten days after notification to the Department. The written report shall detail what problem has occurred and remedial measures that have been taken to prevent recurrence or request approval for replacement of the monitoring well. All monitoring well design and replacement shall be approved by the Department before installation. *[62-520.600 and 62-620.320(6)]*

9. Ground water monitoring test results for the IWW wells shall be submitted on Part D of DEP Form 62-620.910(10) (attached) and shall be submitted as required under Section II C below.

10. All piezometers and monitoring wells not part of the approved ground water monitoring plan is to be plugged and abandoned in accordance with Rule 62-532.500(4), F.A.C., unless future use is intended. *[62-532.500(4)]*

ATTACHMENT F

II. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS:

A. REUSE OR DISPOSAL:

Lined Settling and Recycle Pond System: An existing lined recycle pond system is located approximately at latitude 27°47' 43" N, longitude 82°24' 17" W.

1. During the period beginning on the issuance date and lasting through the expiration date of this license, the licensee is authorized to discharge industrial wastewater, such as contact storm water including coal pile runoff, plant floor drain water, reverse osmosis reject water, demineralizer wastes, boiler blowdown and chemical cleaning, coal unloading hopper wash water, turbine compressor wash water, equipment wash water, ash and slag sluice water, and cooling tower blowdown to a lined storage and recycle pond system. Recycled wastewater shall be limited and monitored by the licensee as specified below and reported in accordance with II.C.1 below:

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
pH	s.u.	Max Min	Report Report	Daily Maximum Daily Minimum	Quarterly	In-situ	EFF-1	
Specific Conductance	umhos/cm	Max	Report	Daily Maximum	Quarterly	Grab	EFF-1	
Fluoride, Total (as F)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	EFF-1	
Boron, Total Recoverable	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	EFF-1	
Arsenic, Total Recoverable	ug/L	Max	Report	Daily Maximum	Quarterly	Grab	EFF-1	
Solids, Total Suspended	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	EFF-1	
Iron, Total Recoverable	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	EFF-1	
Chloride (as Cl)	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	EFF-1	
Radium 226 + Radium 228, Total	pCi/L	Max	Report	Daily Maximum	Quarterly	Grab	EFF-1	
Alpha, Gross Particle Activity	pCi/L	Max	Report	Daily Maximum	Quarterly	Grab	EFF-1	
Sulfate, Total	mg/L	Max	Report	Daily Maximum	Quarterly	Grab	EFF-1	

2. Effluent samples shall be taken at the monitoring site locations listed in II.A.1. above and as described below:

Monitoring Site Number	Description of Monitoring Site
EFF-1	Effluent from the recycle pond return line

3. The following setback distances shall be maintained between the outside toe of the ponds: Potable Water Supply Wells- 500 feet; Property Line 100 feet; Swales, Ditches, Wetlands and other bodies of surface water connected to State waters- 50 feet.

4. The licensee shall continue to monitor flows into and out of the recycle pond system using runtime meters and makes these records available during compliance inspections or upon requests by the Department.

There is no discharge from the IWW system so there are no flow measuring devices.

B. Sampling Methods

1. The sample collection, analytical test methods, and method detection limits (MDLs) applicable to this license shall be conducted using a sufficiently sensitive method to ensure compliance with applicable water quality standards and effluent limitations and shall be in accordance with Rule 62-4.246, Chapters 62-160 and 62-600, F.A.C., and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs and PQLs (practical quantitation limits), which is titled "FAC 62-4 MDL/PQL Table (April 26, 2006)" is available at https://floridadep.gov/dear/quality-assurance/content/quality-assurance-resources. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this license. Any method included in the list may be used for reporting as long as it meets the following requirements:

(1) The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;

(2) The laboratory reported MDL for the specific parameter is less than or equal to the license limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the license shall use methods that provide an MDL, which is equal to or less than the applicable water quality criteria stated in 62-302, F.A.C.; and

(3) If the MDLs for all methods available in the approved list are above the stated license limit or applicable water quality criteria for that parameter, then the method with the lowest stated MDL shall be used.

When the analytical results are below method detection or practical quantitation limits, the licensee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report.

Where necessary, the licensee may request approval of alternate methods or for alternative MDLs or PQLs for any approved analytical method. Approval of alternate laboratory MDLs or PQLs are not necessary if the laboratory reported MDLs and PQLs are less than or equal to the license limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Approval of an analytical method not included in the above-referenced list is not necessary if the analytical method is approved in accordance with 40 CFR 136 or deemed acceptable by the Department. *[62-4.246, 62-160]*

2. The licensee shall provide safe access points for obtaining representative influent and effluent samples which are required by this license. *[62-620.320(6)]*

C Monitoring and Reporting Requirements – Industrial Wastewater Components

ATTACHMENT F

1. During the period of operation authorized by the Condition of Certification, the Licensee shall complete and submit to the Southwest District IWW program Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e. monthly, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this license. Unless specified otherwise in this license, monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below. DMRs shall be submitted for each required monitoring period including periods of no discharge.

REPORT Type on DMR	Monitoring Period	Submit by
Monthly	first day of month - last day of month	28th day of following month
Quarterly	January 1 - March 31 April 1 - June 30 July 1 - September 30 October 1 - December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 - June 30 July 1 - December 31	July 28 January 28
Annual	January 1 - December 31	January 28

The licensee may submit either paper or electronic DMR forms. If submitting electronic DMR forms, the licensee shall use the electronic DMR system approved by the Department (EzDMR) and shall electronically submit the completed DMR forms using the DEP Business Portal at http://www.fldepportal.com/go/. Reports shall be submitted to the Department by the twenty-eighth (28th) of the month following the month of operation. Data submitted in electronic format is equivalent to data submitted on signed and certified paper DMR forms.

If submitting paper DMR forms, the licensee shall make copies of the attached DMR forms, without altering the original format or content unless approved by the Department and shall mail the completed DMR forms to the Department's Southwest District Office at the address specified below by the twenty-eighth (28th) of the month following the month of operation.

[62-620.610(18)] [62-600.680(1)]

Unless specified otherwise in this GWMOMR, all reports and notifications required by this GWMOMR, including twenty-four-hour notifications, shall be submitted to or reported to the Southwest District Office at the address specified below:

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

Phone Number - (813) 470-5700
FAX Number - (813) 470-5995
Email – swd_iw@floridadep.gov

An Electronic copy of all submittals required by this Plan shall also be sent to the Siting Coordination Office by email to SCO@floridadep.gov . If electronic copies are not available, copies can be mailed to:

Siting Coordination Office
3900 Commonwealth Boulevard
Tallahassee, FL 32399
Phone Number- (850) 245-2002
Fax Number-(850) 245-2020

[62-620.305]

D. Other Limitations

1. All reports and other information shall be signed in accordance with requirements of Rule 62-620.305, F.A.C.

2. The Licensee shall provide safe access points for obtaining representative samples which are required by this attachment.

3. If there is no discharge from the facility on a day scheduled for sampling, the sample shall be collected on the day of the next discharge.

4. Any bypass of the treatment facility which is not included in the monitoring specified in Sections.I.B.3 and II.A. 2 above, is to be monitored for flow and all other required parameters. For parameters other than flow, at least one grab sample per day shall be monitored. Daily flow shall be monitored or estimated, as appropriate, to obtain reportable data. All monitoring results shall be reported on the appropriate DMR.

III. DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE OF WASTEWATER FACILITIES REQUIREMENTS

A. During the period of operation authorized by this license, the wastewater facilities shall be operated under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control. *[62-620.320(6)]*

B. The licensee is authorized to discharge a solution of ammonia into the recycle pond. The discharge quantity is not to exceed 10 gallons of ammonia during maintenance activities. This procedure is only authorized during maintenance activities or if a leak/release of anhydrous ammonia occurred during the operation of the emergency ammonia unloading station. Notification to the Department is required if the quantity exceeds 10 gallons of anhydrous ammonia. *[62-620.350]*

IV. GENERAL CONDITIONS

1. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246 and Chapters 62-160, 62-601, and 62-610, F.A.C., and 40 CFR 136, as appropriate.

a. Monitoring results shall be reported at the intervals specified elsewhere in this license and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10), or as specified elsewhere in the license.

b. If the licensee monitors any contaminant more frequently than required by the license, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR), DEP Form 62-620.910(10).

c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this license.

d. For domestic wastewater facilities, testing for parameters listed in Rule 62-160.300(4), F.A.C., shall be conducted under the direction of a certified operator.

2. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this license shall be submitted no later than 14 days following each schedule date. *[62-620.610(19)]*